Forest Service
U.S. DEPARTMENT OF AGRICULTURE

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Gila National Forest Revised Forest Plan

Final Environmental Impact Statement

Catron, Grant, Hidalgo, and Sierra Counties, New Mexico

Volume 2: Appendix A. Response to Comments

Cover Photo: Grandpa's Heaven by Viktoriea Thomas (Mimbres Valley)

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Volume 2: Appendix A. Response to Comments

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Abstract: To comply with the National Forest Management Act and address changes that have occurred over the past 30 years, the Gila National Forest leadership and staff revised the existing land and resource management plan. This programmatic environmental impact statement documents analysis of impacts of five alternatives developed for programmatic management of the 3.3 million acres administered by the Gila National Forest. The analysis displays anticipated progress toward proposed desired conditions, as detailed in the plan, as well as the potential environmental and social consequences of implementing each alternative. Alternative 1 is the no-action alternative, which is the 1986 Gila National Forest Land and Resource Management Plan as amended. Alternative 2 is the proposed action that addresses the needs for change identified through the assessment phase of plan revision. Alternative 3 maximizes mechanical restoration of grassland and open-canopy woodlands, while alternative 4 maximizes mechanical restoration of forests. Both alternatives 3 and 4 limit the use of fire as a management tool. Alternative 5 emphasizes fire as a management tool, restricts mechanical treatments, and maximizes wilderness recommendations. The final action alternatives include elements that are responsive to feedback and recommendations received from stakeholders on the draft documents.

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Volume 2: Appendix A. Response to Comments

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Appendix A. Response to Comments

Introduction

This appendix includes responses to the comments received on the Gila National Forest's draft revised forest plan and draft environmental impact statement (DEIS) during the 90-day comment period. The draft documents were made available on the Gila National Forest's website on December 23, 2019. The notice of availability for these documents was published on January 17, 2020. This notice initiated the comment period, which ended April 16, 2020.

Gila National Forest staff received comment letters or emails from agencies, tribes, groups, and individuals through the agency's online comment submission tool (CARA), by email, in person, over the phone, or in physical mail. We received approximately 27,000 comment letters, of which 1,290 contained unique and substantially different comments. We received nine different form letters. The original comments are included in the project record.

Project-Level Herbicide Use Proposal Removed from Draft

The DEIS contained a separate proposal and analysis for herbicide use under the provision in final agency directives for the 2012 Planning Rule (Forest Service Handbook (FSH) 1909.12 Chapter 20 Section 21.7) that authorizes the forest supervisor to include project or activity-specific proposals, analyses, and decisions concurrent with plan decisions. The separate herbicide use analysis was included in the DEIS because the forest supervisor determined it was more efficiently conducted alongside the revised plan analysis (FSH 1909.12 Chapter 20 Section 21.7). Consistent with the intent discussed on page 1 of the DEIS, the project-level herbicide use analyses were removed from the revised forest plan's final environmental impact statement (FEIS). The herbicide proposal and its alternatives could be part of a separate, standalone process in the future.

We received many comments on the herbicide use. A few specifically addressed plan content related to herbicide use. Others specifically addressed the herbicide use proposal, its alternatives, or those analyses. Most did not specifically reference either making it impossible to know the intent of the commenter. Staff determined that these comments could reasonably be construed as relevant to the forest plan. The plan could be responsive to many concerns about herbicide use because it provides strategic guidance for future project-level work. In this appendix, we respond to all herbicide use comments in context of the forest plan and only in that context. These comments will also inform the separate, standalone process for herbicide use and would be responded to in that context within a separate DEIS.

Content Analysis Process

The comment content analysis followed a systematic process reading and summary. Comment summaries are meant to capture the predominant thoughts, ideas, and the supporting reasoning. They can represent the view of one or many commenters. Comment summaries aid the planning team in characterizing the issues to be analyzed and provide the framework for preparing responses.

The interdisciplinary planning team prepared responses for each comment summary based on its merits, regardless of the source or whether expressed by many people or one person. All comments and responses are listed in this appendix. Comments are addressed as prescribed in 40 Code of Federal Regulations (CFR) section 1503.4 in the following ways or any combination of them:

- Modifying the proposed plan and alternatives;
- Developing or analyzing alternatives not given detailed consideration in the draft documents;

- Supplementing, improving, or modifying the analysis;
- Making factual corrections; or
- Explaining why the comments need no further agency response.

List of Commenters

The following tables list the agencies, tribes, groups, and individuals who provided comments and their comment letter numbers. To find a response to a specific comment, search the appendix for the number appearing in the "Letter Number(s)" column. These lists are organized alphabetically by the commenter's last name if it was provided to us. If no first or last name was provided, the comment letter is listed as "Anon" or "Anonymous." Tribes that commented during the official comment period were provided a personalized response to comment letter. Responses to tribal comments are not included here to honor tribal expectations of privacy.

Letter numbers are whole numbers unless the letter was a form letter. The form letter was assigned a whole number. Where the organization that developed the content of the form letter could be identified, that whole number is listed with that organization. Additionally, everyone submitting the form letter was assigned a unique number that appears after a decimal point. Individuals submitting a form letter without including unique, substantive comments of their own can search for the letter's whole number to find the response to comment. Their individual letter number is not listed in the tables. Individuals submitting form letters with their own unique, substantive comment(s) are listed in the tables and may search for the response to comment based on their own letter number.

Comments were also solicited during the official comment period in a round of public meetings. These comments were collected in a worksheet format. Worksheets were analyzed like comment letters, with each worksheet submission being identified by the prefix "OWS," indicating that is came from an "Options WorkSheet," followed by a whole number.

Government Agencies and Elected Officials

Last Name	First Name	Agency or Governing Body	Position Title	Letter Number(s)
Bauer	Skylar	USDI National Park Service	Archeologist, RPA, Heritage Partnerships Program	229
Browne	Harry	Grant County Commission	District 5 Commissioner	601
Day	Travis	Sierra Soil and Water Conservation District	Former Board Member	247
Downs	Susan	Caballo Soil and Water Conservation District	District Manager	182
Edwards	Alicia	Grant County Commission	District 3 Commissioner	186
Green	Bill	Catron County Commission	County Manager	631
Hansen	Anna	Santa Fe County Commission	District 2 Commissioner	728.309
Hutchinson	Howard	San Francisco Soil and Water Conservation District	Chairman	164
King	Susan	U.S. Department of the Interior, Office of Environmental Policy and Compliance	Regional Environmental Officer	700
Merino	John	Grant Soil and Water Conservation District	Supervisor	24, 100
McQuillan	Dennis	New Mexico Environment Department	Chief Scientist	242

Last Name	First Name	Agency or Governing Body	Position Title	Letter Number(s)
Parker	Dara	Office of U.S. Senator Martin Heinrich of New Mexico	Former Field Representative	236, 252
Paxon	Jim	Sierra County Commission	District 1 Commissioner	244
Roth	Daniela	New Mexico Department of Forestry	Former State Botanist and Rare Plants Program Manager	47
Witte	Jeff	New Mexico Department of Agriculture	Director/Secretary	38
Wunder	Matt	New Mexico Department of Game and Fish	Chief, Ecological and Environmental Planning Division	151

Individuals

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
	Anon	734	Koenig	John	718.3849
	Anon-solana420	693	Kohler	C	727.4318
	Anonymous	527	Kolb	James	729.13
	Anonymous	730.8	Koniszewski	Tatiana	718.3859
	Anonymous adventureinlife	728.427	Kopin	Marie	727.4319
	Anonymous drenos	728.426	Kramarz	Walt	726.12448
	Anonymous dustyclarinet	728.425	Krebs	Satyna	728.329
	Anonymous ellajoan	728.429	Kubichan	Colette	395
	Anonymous jkeefe6	728.423	Kuhnert	Bob	726.12449
	Anonymous job1club	728.422	Kunnecke	Mike	718.3689
	Anonymous margo.mckormick	728.433	Kuhnert	Bob	726.12449
	Anonymous paluinesian	728.428	Kunnecke	Mike	718.3689
	Anonymous nmgeezer	728.419	Kutz	Julie	730.41
	Bob	257	Lacome	Michael	727.4320
	CS	718.3705	LaComette	Ted	284
	de	696	Lacy	Gwendolyn	101
	Foster	219	Lacy	Janet	285
	Lisa	401	LaFrance	Diane	31
	thinkingoutloud	321	Lambert	Rick	643
Abel	Crista	718.3834	Lambeth	Larry	726.12450
Ackerly	Neal	452	Lamm	Jessica	644
Adkinson	Frederica	720.8	Lamoreaux	Lynn	728.330
Alexander	Deborah	730.5	Lanan	Dale	718.3813
Alexis	B.J.	727.4249	Lancaster	Jane	489
Alina	Heidi	453	Lancaster	Tom	396
Alfreds	Artie	728.239	Landrum	Cass	18

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Allen	Maureen	726.12351	Landgren	Cheryl	141
Allen	Vicki	591	Laniado	Eddie	397
Almanza	Fernanda	41	Landrum	Cass	18
Ambler	Susan	718.3836	Lannon-Baudino	Elizabeth	286
Amdahl	Sammi	333	Laudicinia	Laurence	728.332
Angora	Andria	726.12355	Lawton	Peter	728.333
Andersen	Glenn	718.3760	Leavitt	Laura	490
Andersen	Kathy	718.3824	LeBlanc	Charlie	564
Anderson	Christopher	728.240	LeBlanc	Diane	565
Anderson	Glen	720.9	Leck	Thomas	728.334
Anderson	JoMarie	334	Leeson	William	491
Anderson	Julie	454	Lehman	Jack	79
Anderson	Sandy	718.3806	Leibowitz	Max	51
Andes	John	727.4250	Lemon	Ka	718.3717
Androski	Antonia	730.11	Leo	Michael	730.19
Angley	Judith	719.6	Letherer	Ann	701
Apple	Neal	55	Levi	Carl	492
Arel	Courtney	125	Lewis	Melinda	398
Arnold	John	592	Lightmoon	Diana	399
Aronson	Murray	727.4251	Lin	Denise	288
Armijo	Esther	728.241	Lindberg	Ken	287
Arterburn	Jeffrey	173	Lindenau	William	367
Arthur	Denise	455	Lindsey	Randy and Denise	227
Ash	Chiemi	335	Lindsley	Pete	645
Aster	Richard	96	Lineham	Victoria	400
Athow	Kathryn	97	Lish	Christopher	142
Atkinson	Paula	456	LoGalbo	Krisanne	566
Auayang	Aurora	528	Lohr	Marilyn	718.3811
Austin-Allen	Toni	718.3797	Lopez	Matthew	728.335
Baba	Sunny	593	Love	Betty	493
Baca	Marjorie	253	Lucas	Sandra	730.58
Bales	Clarice	718.3862	Ludwig	Melanie	289
Ball	Bob	254	Luehrmann	Paul	718.3704
Ballo	John	726.12359	Luhrsen	Candy	647
Baker	Deana	728.258	Lukachy	Tami	727.4326
Baker	Denise	728.243	Lund	Urszula	726.12458
Baker	Steve	336	Lundeen	Douglas	86
Ballew	Richard	728.244	Lute	Michelle	190
Banks	Glen	730.12	Lyndsong	Gwen	729.14
Barker	Lynn	728.245	M	Michael	720.28
Barlow	Bonita	457	Mabry	Kathy	648

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Barnbarum	Bruce	726.12360	MacCallum-Crawford	John	290
Barnes	Linda	726.12361	MacDonald	Victoria	649
Barreras	Trudie	728.247	Macfarlane	Gary	102
Barrett	Jay	458	MacFerrin	Tiffany	494
Bartham	William	726.12363	MacLaren	Catherine	728.337
Baten	Jimmie	337	MacNab	Tom	451
Baumhefner	Allison	255	MacNaughton	Cori	650
Beatty	Dorothy	126	MacRaith	Bonnie	718.3730 and 726.12462
Beavers	Bonne	529	Mackin	Diana	291
Beaumont	Deborah	338	Mader	Thomas	720.26 and 727.4327
Belford	David	256	Magnum	V	718.3769
Belknap	Douglas	594	Mahuna	Karin	720.55
Belleto	Peter	728.248	Malone	James	651
Bender	Kae	726.12367	Malven	Tania	718.3783
Bender	Karen	728.249	Mancha	Celestina	292 and 728.339
Benjamin	Debra	530	Manlowe	Teresa	495
Benoist	Frankie	531	Mann	Jeffrey	53
Benson	Melinda	730.27	Marek	Shila	496
Bentley	Kenneth	727.4257	Margerum	Jake	402
Bergman	Phyllis	595	Margot	Lee	720.27
Berkman	Budd	16 and 727.4258	Markgraf	Vera	191
Berman	Siegrid	726.12369	Marks	Diane	720.41
Bermel	Ryan	459	Marnel	Lorraine	727.4328
Bess	Jim	726.12370	Marlatt	Weston	497
Bethel	JoAnn	729.10	Martin	Carol	23, 231, 233 and 718.3871
Bever	John	127	Martin	Chase	293
Bickel	Bettina	720.11	Martin	Patricia	726.12542
Biebelle	Joyce	532	Martin	Richard	103 and 718.3871
Bielecki	James	339	Martin	Simona	730.20
Billy	Martha	726.12371	Martinez	Flora	728.34
Binnie	Robert	718.4	Martinez	Gabriello	220
Biolo	Sarah	340	Martucci	Sondra	724.11
Bird	Zoe	461	Maschan	Sandy	727.4243
Birkhead	Lucy	462	Mary	Kate	727.4330
Bjeletich	Sheila	721.2	Mastandrea	Karen	726.12467
Blackstone	Linore	719.7	Mattke	Lisa	294

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Blair	Laurence	718.3864	Matula	Kathleen	718.3735
Blake	George	341	Maunders	William	143
Blankenship	Tiska	342	Mavis	Scott	295
Blasingame	Deanna	343	May	Hannah	221
Blitzer	Mark	727.4259	May	Paula	726.12469
Bloyd	Tara	728.251	Mayer	David	718.3772
Blurton	Jim and Jackie	568	Mayfield	Teresa	499
Boardman	Danielle	728.253	McBride	Pamela	653, 705 and 717
Boblett	Thomas	596	McCarthy	Sallie	728.341
Boettcher	Steve	258	McClendon	Kelly	730.72
Bodner	Robert	726.12374	McCollough	Rayo	500
Boice	Ruth	718.3805	McConaha	Lynnae	703
Booth	John	718.3817	McCorkell	Kathleen	654
Bonner	Tracey	718.3860 and 720.12	McCormick	Margo	501
Borg	Carolyn	720.48	McCreary	Jan	718.3844
Borsato	Peter and Kathy	533	McCreery-Robins	Kim and Robert	192
Borninski	Jack	720.37	McGill	Ann	720.42
Boxer	Juliana	729.15	McGuire	Henry	403
Boyd	Jeff	15, 25, 35	McIntosh	Jim Chris	656
Boyle	Madeleine	718.3688	McKee	Lary	718.3790
Bradford	Sonya	728.254	McKeon	Renae	726.12470
Bradley	Howard	730.13	McKimmie	Timothy	13, 26, 27, 28, 29, 30, 36, 80, 144, 193, 214, 230
Bradley	Marya	726.12375	McKinney	Roy	728.345
Bragalone	Andrew	724.1	McLaughlin	Michael	718.3868
Bray	Harold	49	McMaster	Liz	728.347
Breen-Lee	Candace	6	McMillan	Sarah	725.5
Brennan	Hallie	727.4238	McNaughton	Timothy	502
Brennan	Nancy	57	McNew	Roger	296
Brethauer	Dorothy	597	McNulty	Tim	727.4333
Brinkman	Theresa	598	Meeks	Mark	727.4387
Brody	Jed	727.4260	Melendez	Michael	728.348
Broska	Tisha	730.75	Melik	Sibel	404
Brown	Becky	259	Mendoza	Ruben	217
Brown	Ed	600	Mercer	Theresa	194
Brown	Kate	602	Merchant	Mike	2
Brown	Kathryn	728.256	Merwin	Constance	727.4335
Brown	Regina	344	Mess	Susan	297

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Browne	Candace	599	Messick	Scott	718.3777
Breusch	Jane	727.4261	Metzler	Caroline	87, 658 and 730.50
Brister	Bob	730.35	Meyer	Donald	728.350
Brundage	Joan	718.3804	Mikhailas	Maria	503
Brunt	Will	260	Miles	Ted	405
Buchofsky	Marci	534	Miles Gunn	Diane	504
Buchser	John	603	Miller	Aaron	727.4336
Buchser	Linda	730.42	Miller	Adam John	332
Buck	Marjorie	728.434	Miller	Arlette	298
Bullock	Larry	720.2	Miller	Barbara	704
Buls	Patricia	345	Miller	Jane	54
Burgess	Diane	535	Miller	Terry	728.351
Burick	Jodi	462	Milligan	Michael	104
Burke	K	727.4262	Milz	Mary Jane	568
Burnett	Celia	463	Mitchell	Cheryl	718.3861
Burwell	Henry	727.4263	Mitchell	Kate	299
Butler	Lane	718.3848	Monda	Joe	407
Byatt-Ballantine	Evelyn	604	Minor	Joseph	705
Bylinowski	Catherine	727.4264	Moceus	Lindy	727.4337
Bynum	Shelbie	346	Moehlman	Bruce	718.15
Caine	Aaron	536	Montgomery	Leonard	408
Caldie	Cathy	719.3	Mooney	DeAnna	105
Calhoun	David	537 and 730.66	Moore	Alice	727.4388
Callen	Peter	730.34	Morgan	Lin	659
Campbell	Griffon	464	Morgan	Marie	728.353
Cantua	Robert	728.258	Morgan	Pamela	569
Caponera	Phyllis	538	Morris	Kathryn	300
Cardona	Patricia	728.259	Morris	Kevin	660
Carlton	Christine	694	Morris	Melissa	301
Carpenter	Amy	32 and 539	Morrison	David	728.354
Carpenter	Barbara	727.4265	Morton	Nancy	145
Carpenter	James	465	Morton	Nanette	661
Carpenter	Scott	723.2	Mosimann	Edward	728.355
Carroll	Linda	727.4266	Moss	James	146
Carter	Ben	732	Motto	Amy	728.356
Carter	James Gregory	728.260	Mulcahy	Kathryn	718.3863
Casey	Gene and Lizbeth	727.4267	Muller	Kim	570
Casler	Maria	128	Mullikin	Joseph	409
Castiano	Judith	720.13	Mullis	Ron	302
Castle	Stuart	730.14	Munday	Mary	726.12476

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Castner	Emily	718.3738	Munsen	K	718.3825
Cato	Judy	347	Munson	Terri	727.4244
Cawood	Anne	727.4268	Murphy	Lucinda	718.3789 and 726.12478
Chairez	Ciro	246	Murphy	Mary Alice	10
Champion	James	348	Muscarella	Anita	303
Chase	Jayni	727.4269	Myrick	Brett	147
Chavez	Taylor	728.262	Nafey	Linda	730.59
Cherniak	Rose	261	Nagel	Clinton	69
Chestnut	Mary Jane	606	Naples	Jean	718.3872
Chojnacky	Cindy	3	Nakakihara	Karen	505
Chrisp	Eric	728.263	Neft	Robin	728.357
Christ	James	726.12380	Nelson	Carolyn	7 and 208
Christensen	Gary	730.15	Nelson	Cheryl	728.358 and 730.8
Christensen	Deborah	607	Nelson	RJ	506 and 529
Chulick	Randy	608	Neskauskas	Nancy	718.3814
Ciosici	Stephan	718.3699	Neuendorff	David	727.4339
Clark	Barbara	349	Neville	John	149
Clark	Jeanne	588	Newell	Sally	727.4340
Clark	Jeff	728.264	Newton	Marion	150
Clark	Matthew	730.36	Nickles	Carolyn	727.4341
Clennon	David	720.5	Nohl	Lindsay	21
Cliff	Nancy	45	Norkus	Edward	727.4342
Clifford	Lisa	181 and 609	Norman	Jody	106
Clifford	Nancy	726.12381	Norton	Jim	730.60
Clifton	Jordynn	218	Norton	Peggy	663
Clifton	Kirk	33	Nowlin	Lou	664
Clothier	Van	466	Nyman	June	718.3786
Clough	Nancy	74	Ogren	Tom	507
Coates	Nancy	50 and 467	Okroi	Robert	727.4344
Cobb	Nathaniel	58	Oldknow	Tina	107
Cockerill	Joanne	718.3779	Olea	Jacqui	410
Codianni	Simon	728.265	Olson	Lynn	665
Cody	William	468	Ondo	Andrew	728.361
Coffman	Charles	695	Orlofsky	Debra	304
Coghlan	Patricia	718.3818	Ortega	Sadie	222
Coha	Peter	730.52	Ortega	Sheila	305
Colchamiro	Jodi	610	Ortiz	Jeannie	571
Cole	A.T. and Lucinda	75	Osborne	Erika	646
Cole	Terri	76	Ostlie	Susan	152
Coleman	Jillian	350	Otero	Benjamin	196

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Colgan-Davis	John	727.4270	Overton	Elke	726.12483
Coll	Elizabeth	730.53	Overlock	Christopher	61, 70, 81, 82, 88, 89, 90, 91, 108-117, 153-158, 197, 237, 238, 667
Collins	Kenneth	730.2	Owens	Carol J.	718.3837
Collis	Tori	351	Owens	Carolyn	718.3782
Comerci	Cheryl	540	Pacheco	Anthony	306
Comyford	Robert	129 and 729.11	Pacheco	Felix	307
Cone	JL	720.14	Pafford	Linda	508
Conger	Debbie	262	Page	Ann	411
Conley	Heather	469	Palma-Glennie	Janice	727.4345
Conlin	Gregory	541	Pappas	Katherine	730.61
Collins	JoAnn	729.12	Parker	Janice	308
Connoly	User	263	Parker	Reese	728.362
Connors	Joanie	130 and 542	Parry	Ronald	48
Constable	Isabel	63 and 611	Parsons	Pam	726.12485
Contreras	Kiko	264	Patchett	Steven	723.5
Coonridge	Nancy	470	Patterson	Ellen	412
Cooper	Tom	612	Patton	David	730.44
Cordle	Michael	613	Patton	Therese	718.3851 and 728.364
Coss	David	728.266	Paul	Alydia	44
Cotter	Justina	718.3840	Pavlakovich	Hank	5
Coughlin	J	726.12387	Payne	Andy	92
Councell	Sarah	99	Peacock-Lopez	Jodi	668
Courtney	Carol	728.267	Pealer	Renate	718.9
Courtney	Nichole	42	Pearlman	Cindi	728.366
Cowley	Jessie	718.3775	Pearson	Martyn	136
Craig	Ella	727.4272	Perea	Aaron	223
Cramp	Liz	726.12388	Perea	Lorenzo	730.21
Crist	Kathy	727.4273	Perinchief	Jana	720.30
Crockett	Zack	131	Perry	Neda	414
Croft	Denise	718.3873	Pesquera	Yvonne	728.368
Cronshaw	F	730.76	Pevarnik	Shirley	71
Cross	Mary	718.3763	Peyton	CC	509
Crouse	Wyatt	728.269	Phillips	Scott	724.5
Crowner	Lisa	730.48	Phoenix	CoYoTe	363, 364 and 614
Cruz	Brandon	51	Pickard	Jaclyn	669
Cunico	Juliette	365	Pickman	Phillip	309

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Curfman	Ben	265	Pierce	Becky	415
Cumby	Elizabeth	730.54	Pilley	Elisa	722.1
Curry	Karen	720.15	Pitchford	Gary	727.4348
Curtis	Richard	718.3857	Pockman	William	416
Cutler	Trish	183	Pomeroy	Paul	159
Dahl	Kevin	720.16	Portago	Carolina	572
Dahl	Tracy	727.4275	Porterfield	Donivan	670
Dalton	Colton	366	Porterfield	Katherine	730.51
Danaher	Ed	615	Potter	David	720.6
Dash	Howard	728.270	Potts	Randall	727.4349
David	Peter	730.33	Potucek	Terry	726.12488
Davis	Christine	43	Powers	William	310
Davis	Hara	707	Plagge	Angela	720.31
Davis	Lydia	728.271	Prendergrast	David	417
Davis	Mary Rose	51	Prentice	Alex	727.4350
Davis	Philip	266	Price	John	418
Day	Bill	184	Proctor	Teresa	311
Day	David	728.273	Pruitt	Carolyn	728.369
Deacon	Joan	733	Public	Jean	207 and 241
Dean	M	240 and 730.3	Puckett	Brian	722.5
Decker	Christina	727.4239	Quinn	Joan	419
DeJaegher	Veronique	367	Raasch	Carolyn	198
Dellios	Delese	728.274	Raepple	Eva Maria	728.37
Delome	Rick	588	Radloff	Roger	420
DeLuca	Nicholas	726.12394	Ramrath	Jeri	573
Delucas	Ed	267	Randolph	Rebecca	730.31
DePrez	David	718.18	Rankaitis	Peter	118
Derby	Susanna	728.279	Rau	Pam	421
Derman	Ellyn	728.276	Rawlings	Gloria	510
Derr	Simona	268	Ray	Fonda	728.371
DGaia	Claire	618	Ray	MK	730.23
DiCara	Sue	727.4276	Raymond	Amelia	716
Dick	Marshall	368	Raymond	Carol	67
Dietzel	Daniel	132	Reaber	Doug	248
Dillon	Sandy	726.12396	Reade	Deborah	728.372
Dine	Heather	471	Redford	Rebecca	422
Dobrinski	Jason	543	Redline	Erica	511
Dole	Albert	728.277	Reed	Mary	423
Doll	Barbara	472	Reese	Diane	574
Dominguez-Sevigny	Andrea	721.3	Reeves	Bill	728.373

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Dominguez	Ralph	544	Rein	Gail	729.8
Donaldson	Susan	726.12398	Remy	Linda	727.4353
Doner	Robin	620	Rennie	Edwyna	726.12491
Donner	Jennifer	730.67	Reyes	Josiah	575
Donnino	Laura	369	Rich	Barbara Anne	577
Donovan	Robert	727.4277	Riger	Jane	424
Dow	Rick	730.55	Riley	Debbie	728.374
Doyle	Elizabeth	269	Rinker	Robert	72
Drees	Elaine	621 and 727.4240	Rittchen	Chelsea	724.10
Dry	Barbara	723.3	Ritter	Paul	312
Dryden	James	185	Roberts	Susan	728.375
Ducotey	Richard	473	Robertson	Susan	718.3845
Dunivan	Alaina	545	Robinson	Lawrence	671
Dupray	Rosemary	270 and 708	Rockwell	David	120
Duval	Kara	64	Rodriguez	Sue	720.43
Eaton	Terry	726.12402	Rogers	Roz	726.12497
Eberhardt	Marty	65	Roh	Marian	718.8
EdadiRad	Elizabeth	41	Rohan	Patricia	718.3866
Edelman	William	720.7	Rolstad	Jacqulyn	728.376
Egbert	John	697	Romero	Jeanne	728.377
Einig	Celina	728.278	Romero	Sandra	728.378
Elders	Pam	726.12403	Ronstadt	Lauren	41
Elliot	Alyssa	728.279	Rose	Donna	425
Emons	Tim	370 and 371	Ross	Lisa	729.6
Engel	Gerry	474	Ross	Megan	161
Engle	Ivan	728.280	Rossin	Linda	727.4277
English	Ann	726.12405	Rothman	Linda	426
Ennis	Emily	728.281	Rowe	Dennis	427
Estok	Karen	720.51	Rubin	Robert	512
Eszterhas	Elizabeth	718.3858	Ruebelmann	Lorna	209
Evans	Steven	728.282	Ruhnka	Ann	728.379
Evans	Tom	372	Russell	Peter	121
Everist	Sarah	374	Russell	Sharman	62 and 729.1
Fachini	Ken	546	Rutland	Nancy	428
Faich	Ron	547	Sadow	Emily	730.24
Falcon	Britt	476	Sagbakken	May	313
Farrington	Michael	133	Sage	Lily	727.4358
Faust	John	718.3784	Sailer	Randy	720.44
Fay	Chrysta	375	Sakash	Michael	727.4359
Fenter	Evelyn	718.3795	Salaiz	Mike	429
Ferret	Juan	730.55	Salas	Beverly	513

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Ferland	Linda	730.16	Salas	Glen	514
Fielder	John	726.12408	Salinas	Ana	720.32
Fields	Lisa	548	Salvaggio	Ruth	728.381
Fischer	Marlene	728.284	Sanchez	Charlie Jr.	430
Fischer	Susan	271	Sanchez	Ignacio	314
Fischoff	Robert	728.285	Sandoval	Renee	315
Fitzgerald	Ardell	477	Sauber	Michael	673
Fitzgerald	Michael	478	Savage	Melissa	19
Flint	Alison	727.4282	Savage	Ronald	162
Floyd	Ashley	376	Schandelmaier	Krissa	726.12544
Foley	LaraLy	272	Scherbarth	Ilene	515
Forester	Michael	720.18	Scherer	Michael	163 and 244
Fort	Mike	549	Scherpenisse	Carol	727.4237
Fortier	Ron	727.4283	Schickedanz	Jerry	93
Forward	Hayden	213	Schilling	Francis	726.12502
Foschi	Patricia	728.287	Schippe	C	735
Foster	Dawn	726.12409	Schlies	Dianne	728.382
Fouche	David	727.4284	Schmidt	Kurt	516
Francis	E	623	Schmidt	Stephen	728.383
Frank	Roberta	616	Schneider	Steven	727.4361
Frank-Supka	L	728.289	Schultz	Judy	726.12505
Freeman	Joe	187	Schuler	Andrew	728.384
Freeman	Joseph	718.3838	Scott	James	730.49
Freeman	Marilynn	134	Scott	Jeanie	727.4362
Freeman	Suzanne	709	Selbin	Susan	728.385
Freeman-Valerio	Cynthia	728.290	Sellers	Billy	224
Freer-Parsons	Christiane	718.3781	Shamosh	Judyth	728.386
Freese	Lisanne	718.23	Sharman	Mary	727.4364
Frey	Brenda	720.19	Sharples	Roberta	578
Fried	Rona	726.12538 and 727.4285	Shaver	John	431
Friedman	Elisa	723.4	Shaw	Barbara	720.33
Frigon	Camerson	728.291	Shelendich	Steven	165
Frishman	Andrew	135	Shelley	Jerrell	676
Frost	Richard and Barbara	728.292	Shelley	Kenneth	674
Frostenson	Candace	66	Shelley	Tom	675
Fry	Barbara	726.12411	Shepherd	Aileen	677
Fugagli	Carol Ann	624	Shine	Stephanie	728.388
Fugagli	Mike	210, 235 and 550	Shirk	David	432
Fuge	Lisbeth	729.9	Shoup	Lonnie	22, 228 and 245

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Funk	Justin	728.293	Shuster	Charles	724.8
Funk	Sarah	728.294	Shuster	Geoff	517
Furman	Michael	625	Siavelis	George	211
Gaddis	Erin	730.38	Sickafoose	Munro	728.389
Gale	James	730.68	Simmons	Gayle	706
Galewsky	Jessica	626	Simon	Elaine	730.73
Gallagher	Brendan	720.50	Singaraju	Camille	728.39
Gallaher	Susan	728.296	Skelton	William	166
Gamache	Stephanie	727.4286	Skinner	Marty	212
Gandert	June	377	Slobin	Jan and Larry	718.3820
Garcia	Milagros Vera	721.1	Slocum	Scott	718.29
Gardiner	Connor	728.297	Small	Maureen	518
Gardner	Michael	12, 273, 478, 479	Small	Sue	167 and 579
Garnant	Cheryl	727.4287	Smith	Dee	589
Gedgaudas	Thomas	730.45	Smith	Diane	168
Gendron	Joseph	627	Smith	Donna	727.4365
Gendron	Marilyn	628 and 629	Smith	Harlan	727.4366
Gentile	Allison	728.300	Smith	Jeff	680
George	EM	698	Smith	Lee	433
Gervers	John	378	Smith	Suzanne	317
Getz	Dewey	730.17	Smith	Victoria	726.12505
Giannini	Sally	274	Snell	Heidi	731
Gibson	Duane	718.3736	Snyder	Damon	726.12510
Gieringer	Michael	480 and 724.4	Snyder	Linda	435
Gilbert	Bill	83	Soerens	Stephen	169
Gilbert	Linda	726.12414	Solari	Susan	436
Gilliam	Shari	727.4288	Soloman	Alan	720.34
Gillono	Mark	727.4289	Sommer	Jean	726.12545
Gilmartin	Elaine	551	Sopoci-Belknap	Elena	681
Gilmore	Lorraine	728.301	Sorensen	Elli	437
Gingras	Brian	726.12415	Sorrells	James	718.3833 and 719.5
Glover	Larry	730.28	Soussan-Watt	Tania	580
Goddin	Lesley	728.302	Southwick	Celia and Robert	723.6
Goin	Jeff	729.4	Sowanick	Paul	438
Goodman	Arifa	728.304	Spalding	Julian	519
Goodwin	Marissa	630	Speicher	Jo	730.62
Goppert	Donald	718.3842	Spence	Taylor	728.392
Gordon	Carol	720.1	Spenger	Constance	718.3846
Gordon	Nancy	39	Spensely	Susan	318

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Gordon-Brown	Deborah	726.12416	Spitzer	Gigi	682
Gorman	Michael	59	Spotts	Richard	683
Gomez	Marielle	275 and 276	Spring	Jennifer	718.3854
Glover	Elizabeth	727.4291	Squires	Janet	714
Graf	Marsha	379	Stafford	Evan	732.7
Granias	Susan	726.12418	Stages	John and Mary	728.393
Grassi	Dan	727.4292	Stages	Phoebe	728.395
Grathwohl	Marya	727.4293	Stall	Corey	439
Graziano	Dr.	728.420	Stanger	A	727.4389
Green	James	552	Stanley	William	729.7
Green	Melissa	52	Stayner	Diane	728.396
Greenberg	Corinne	718.3816	Starck	Desarae	95
Gresens	Susan	730.37	Starr	Linda	684
Griffin	Glenn	632	Stauffer	Jerry	520
Griffin	Tami	380	Steele	Donna	726.12513
Gritman	Patricia	727.4294	Steele	William	726.12514
Grove	Paul	726.12539	Stelloh-Quesada	Lisa	521
Guerra	Armando	730.29	Steensma	Monica	726.12515
Guest	Ellen	481	Stephan	Renee	718.13
Gumtow-Farrior	Catherine	727.4295	Stephens	Judy	727.4369
Guthrie	Taza	381	Stevens	Donna	727.4246
Haake	Darin	382	Stewart	Sara	730.63
Hadderman	Margaret	60	Stimac	Trent	42
Hafer	Sarah	730.10	Stockdale	Kit	440
Hahn	Fletcher	553	Stockton	Marie	728.397
Hakola	Jo Ann	728.308	Stout	Marcia	685
Halfin	Clara	720.38	Stravers	Andrew	199
Hall	Debbie	633	Strelau	Nancy	727.4371
Hallmark	Shelby	634	Streng	Sarita	728.398
Hammar	Shi	42	Stribling	Marty	730.25
Hampton	Glen	727.4296	Struminger	Bruce	611
Hanlon	Moira	728.421	Stukas	Dee	581
Harmon	Nancy	635	Stumpff	Linda	718.3831
Harmon	Roger	636	Summer	Rebecca	122 and 729.3
Harrie	Susan	727.4298	Sundquist	Sandy	726.12520
Harrington	Fred	727.4299	Switzer	Dennis	170
Harris	Donna	718.3856 and 720.21	Szydlowski	Marilyn	582
Harrison	Paula	138	Tafenelli	Robert	730.64
Hart	Diane	383 and 554	Talbot	Thomas	718.3855 and 719.10

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Hart-Mann	Jeanette	482	Tapley	Dennis	319
Harvey	Jeff	726.12422	Tappan	Beau	320
Harwell	Claire	277	Taylor	Brittney	41
Hasenick	Carol	727.4301	Taylor	Carolyn	727.4372
Hassey	Nan	77	Temple	Deborah	727.4373
Hatchett	Stephen	727.4302	Tepper	Jennifer	687
Havey	Maureen	718.3716, 720.49 and 726.12424	Thacher	Kris	583
Hawthorn	Virginia	555	Thayer	John	728.399
Hazynski	Chris	730.1	Thomas	Chant	584
Hefele	Lynn	139, 483	Thomas	Paul	200
Hefernan	Ryan	725.1	Thompson	Jeff	718.3787
Hemphill	James	249 and 722.4	Thompson	Lauren	688
Henckel	Judith	727.4304	Tonne	Philip	585
Henning	Blake	119	Torrez	Teri	522
Henry	Alexandra	556	Towle	Nancy	726.12525
Henry	Virginia	557	Treon	Janet and Phil	728.400
Hernandez	Martin	728.310	Trivedi	Subir	718.3800
Hersman	William	37	Trizinsky	Denise	322
Helzer	Grace	718.3751	Trott	Kristine	718.3865
Helzner	Ronnie-Sue	14	Trudel	JM	441
Herzig	Paul	727.4306	Tyler	Jonathan	718.3829
Hester	Thomas	730.69	Tynan	Annie	586
Hickerson	James	188	Tytler	Linn	323
Hickman	Kent	728.311	Unger	Linda	718.3826
Hill	Genevieve	278	Uran	Donna	727.4374
Hitt	Sam	728.312	Valentine	Karen	11
Hoak	Mary Jo	279	Valerio	Sarah	730.26
Hoffman	Don	637	VanAuken	Susan	689
Hoffman	Janice	730.7 and 730.39	VanNatta	Tina	718.16
Hogue	Kelly	727.4308	Varbel	Kristen	726.12527
Holdson	John	17	Vaughn	Elizabeth	718.3812
Holguin	Jacob	722.2	Verhoog	Jennifer	587
Hollenberg	Mareyna	638	Vernon	David	730.65
Hollender	Thomas	639	Vigus	Meagan	728.402
Holley	Thomas	728.313	Villalobos	Myra	324
Holloway	Margaret	280	Von Huene	Ariadne	588
Hollyfield	Ann	727.4309	Wahl	Doris	727.4247
Holmes	Doug	730.30	Wait	David	123

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Holstrom	Sue	558	Waites	Susan	722.3
Hood	Mary	718.3853	Walker	Karen	728.403
Hosier	Shirley	726.12427	Wall	Debbie	726.12547
Houde	Kristi	715	Wallace	Susan	718.3756
Housley	Dale	685	Wallet-Ortiz	Janet	234
Howard	Melissa	484	Wallsby	Steward	325
Hudlow	Roberta	727.4311	Ward	Jayme	171
Hudson	John	730.9	Ward	Jeanie	442
Hughes	Ryan	728.315	Warner	John	239
Huntley	Lynne	718.3852	Warren	Dan	690
Humphrey	Sandra	281	Warren	Greg	73
Huffman	John	51	Waterman	Allison	728.405
Hurst	Rose	730.57	Waters	Susan	728.406
Hurteau	Matthew	78	Watson	Paul	443
Huse	Kendra	485	Watson	Ray	728.407
Husar	Emma	46, 726.12428 and 728.316	Watt	Raymond	444
Huth	Graciela	726.12429	Webb	Dean	730.32
Hyatt	Alexander	726.12430	Weber	Cynthia	728.408
Ingham	Kenneth	730.46	Weber	Robin	720.46
Irwin	Beth	718.3803	Weidemann	Tamryn	523
Isaacs	Jenny	384	Weigle	Peggy	445
Ives	Berry	559	Weinberg	Laurence	727.4377
J	Susan	728.418	Weiland	Anna	724.6
Jackson	Jim	728.318	Weir	Jeanine	726.12531
Jacox	Holly	726.12435	Weiss	Cynthia	446
James	Dahna	718.3757	Weiner	Elizabeth	718.3771
James	Debaura	728.319	Weissman	Joan	326
Jarosh	Dean	68	Welch	John	718.14 and 728.409
Jasper	Marilyn	718.3870	Welch	Lynn	718.3776
Jaquez	Andrea	560	Wells	Barbara	727.4378
Jessen	Robert	561	Wertheim	Sybil	327
Jewell	Darren	728.320	West	Gordon	202 and 203
Jillson	Teri	282	Westlund	Harry and Kathlee	728.410
Johns	Bridgette	730.70	Wheeler	Joanne	726.12532
Johns	Karen	730.71	Whipkey	Ben	328
Johnson	Jamie	718.3841	White	Nat	720.4
Johnson	Rachel	562	Whitney	Annie	447
Johnson	Richard A	710	Wiesel	Anne	728.424
Johnson	Sarah	84	Wilcox	Duane	726.12533

Last Name	First Name	Letter Number(s)	Last Name	First Name	Letter Number(s)
Jones	Ilah	385	Wild	Aeron	726.12534
Jones	Cherie	728.321	Williams	Cheryl	730.47
Jones	Neal	718.3799 and 730.4	Williams	Neil	728.411
Jones	Richard	728.322	Williams	Nicole	448
Jones	Scott	730.40	Williams	Susan	727.4381
Jones	Tammy	486	Williams	Tsianina	524
Jump	Jerry	206	Williams	Wendy	727.4382
Jurczewski	Carol	718.3721	Williamson	Catherine	728.412
Just	James	727.4314	Wilmot	Terry	329
Kaczmarzyk	Sara	387	Wingle	Dennis	718.3867
Kahlstrom	Lain	641	Wilson	John and Carolyn	727.4383
Kalish	Mia	390 and 718.3807	Wilson	Judith	728.413
Kalishman	Norton	388	Wilson	Julie	330
Kalishman	Summers	389	Wise	Sally	718.3832
Kannard	Michael	730.18	Witt	David	40
Karlson	Heather	391	Wolff	Pat	718.3758
Kates	Daisy	726.12540	Wolters	Renee	692
Kebill		283	Woods	Adam	449
Keener	Will	9	Wool	Gale	525
Kellam	Marcia	728.324	Wojcikiewicz	Robert	728.414
Kellerman	Sunny	140	Wolph	Pat	34
Kennedy	Linda	720.39	Woltjen	Ann	4
Kepner	Dennis and Susan	726.12442	Worden	Susan	720.47
Kidd	Andrea	487	Worthen	Jeanette	124
Kindscher	Kelly	8	Wright	Daniel	726.12536
King	Curtis	148	Wright	Jonathan	172
Kinsey	RG	727.4385	Wyse	Margo	728.416
Kiriaty	Susanne	727.4316	Yaeger	Kathleen	723.1
Kirkland	Travis	392	York	James	20
Kirkpatrick	R	728.326	Zacharias	Lilynn	226
Kisor	Dave	720.22	Zagula	Loraine	718.3702
Klapper	Regina	728.327	Zalesak	Randy	450
Klick	Andrea	488	Zanger	Margaret	718.3843
Knapp	Harry	727.4317	Zollars	Jean Anne	590
Knoblauch	Charles	393	Zrakovi	Clark	728.417
Knoblauch	Susi	394	Zuckerman	Andrea	331
Knoche	Jayne	718.3809	Zummach	Joseph	526

Non-governmental Organizations

Last Name	First Name	Organization(s)	Letter Number(s)
		Mimbres Farms	406
		WildEarth Guardians	719 and 720
		Gila Conservation Coalition	729
Bower	Erich	Freeport-McMoRan Tyrone Mining LLC	205
Caucaus	Michael	The Wilderness Society	605 and 727
Caucaus	Michael	American Whitewater, Arizona Wild, Audubon New Mexico, Back Country Horsemen of New Mexico, Center for Biological Diversity, Defenders of Wildlife, Gila Conservation Coalition, Gila Resources Information Project, New Mexico Horse Council, New Mexico Sportsmen, New Mexico Wild, New Mexico Wildlife Federation, Sierra Club Rio Grande Chapter, Southwest Environmental Center, Southwestern New Mexico Audubon Society, The Pew Charitable Trusts, The Rewilding Institute, The Wilderness Society, Trout Unlimited, Upper Gila Watershed Alliance, Western Watersheds Project, White Mountain Conservation League, WildEarth Guardians	232
Cook	Joseph	University of New Mexico	362
Cooper	Martha	The Nature Conservancy	201
Conners	Joanie	Great Old Broads for Wilderness	361
Donaldson	Hazel	Heritage Waters Coalition	619
Downs	Susan	Jornada Resource Conservation and Development Council	189
Engel	Gerry	Gila Chapter Backcountry Horsemen	475
Feibig	Michael	American Rivers Southwest River Protection Program	94
Keeler	Ray	National Speleological Society	699
King-Flaherty	Miya	Sierra Club Rio Grande Chapter	642 and 728
Knowles	Cybelle	Center for Biological Diversity	718
Jankowitz	Rachel	New Mexico Native Plant Society	640
Jones	Scott	Trail Preservation Alliance and Off-Road Business Association	386
Lane	Patrick	The Pew Charitable Trusts	85
Lurhsen	Donald	Mimbres Local Farm and Livestock Bureau	204 and 646
Luzier	Maresa	Backcountry Horseman of New Mexico Chapter	56
Martinez	Teresa	Continental Divide Trail Coalition	180
Maxwell	Laramie	Center for Large Landscape Conservation	652
McCain	Lauren	Defenders of Wildlife	726
McCoy	Dave	Citizen Action New Mexico	567 and 655
Mutchnick	Patrice	Gila Native Plant Society	137
Price	Kimeka	Environmental Protection Agency	251
Rhodes	Rhonda	Save the Honeybee Foundation	576
Romero	Kerrie	New Mexico Council of Outfitters and Guides	160
Roper	Dan	Trout Unlimited	672

Last Name	First Name	Organization(s)	Letter Number(s)
Sidder	Aaron	Bat Conservation International	678
Siwik	Allson	Gila Resources Information Project	679
Stevens	Donna	Nuestra Gila	721 and 722
Taylor	Dan	Bat Conservation International	686
Trudeau	Joe	Center for Biological Diversity	215 and 216
Trudeau	Joe	Gila Coalition: Center for Biological Diversity, Upper Gila Watershed Alliance, Defenders of Wildlife, WildEarth Guardians, New Mexico Wild, The Wilderness Society, The Rewilding Institute, Heart of the Gila, Wild Arizona, American Whitewater, White Mountain Conservation League, Sierra Club, Audubon New Mexico, Southwest New Mexico Audubon, New Mexico Wildlife Federation, Western Environmental Law Center, Southwest Environmental Center, New Mexico Horse Council, New Mexico Sportsmen, Gila Resources Information Project, Gila Conservation Coalition, and Great Old Broads for Wilderness	174-179, 195, and 712
Tuell	Cyndi	Western Watershed Project	713
Werkmeister	Mark	New Mexico Off -Highway Vehicle Association	250

Common Acronyms and Abbreviations Used

When the response to a comment references plan components, abbreviations are sometimes used. These are: DC-desired condition; O-objective; G-guideline; S-standard. These are followed by number(s) indicating which one in the named section of the plan the response is referring to.

Comments and Responses

Air Quality

Comment 1: The plan should provide consideration of smoke impacts from prescribed fire on local communities, especially for those residents who have health conditions that make them particularly sensitive to smoke. **Associated Letter: 39**

Response: Although the Gila's prescribed fire program must comply with the State's smoke management plan by law regardless of what is contained in the plan, there are additional provisions in the plan. These include the air quality desired conditions, standards, guidelines, and the smoke management approach in the Air Quality section of the plan. A reference to this management approach is also included in the Wildland Fire and Fuels Management section of the plan. Smoke from prescribed and naturally ignited wildfire, whether within the urban interface that is near the Gila National Forest, or as far away as Mexico or the Pacific Northwest can, have, and will continue to periodically settle in Silver City and surrounding communities. We agree that human health impacts associated with smoke are an important consideration that should be in the forefront of fire manager's decision-making process.

Comment 2: Commenter describes the purpose and requirements of the state’s Smoke Management Program as it pertains to the use of prescribed fire in alternative 2 and requests close coordination in advance of prescribed fire as required by regulation. This coordination should ensure the desired conditions for air quality are met and air quality monitoring issues addressed. Commenter states that this close coordination and

compliance with regulatory requirements will ensure the effects on air quality because of prescribed fire are short-term and localized. **Associated Letter: 242**

Response: We agree that coordination with the Air Quality Bureau's Smoke Management Program is critical to the success of the revised plan and the forest's prescribed fire program and is already addressed by existing regulation. There is no requirement to reiterate existing law, regulation, or policy and generally plan components do not. In some cases, the plan does repeat this higher-level direction to add emphasis or foster shared understanding. Such is the case with Air Quality S1, which reiterates compliance with applicable regulations is required. The Forest Service will continue to work with the New Mexico Environment Department Air Quality Bureau, maintaining and improving relationships around air quality and prescribed fire issues.

Comment 3: Commenter notes that the potential exists for temporary increases in dust and emissions from any activities that involve road construction, mechanical harvesting, earthmoving, construction equipment and other vehicles. Commenter recommends that dust control measures should be taken to minimize the release of particulates due to vehicular traffic and any construction or harvesting type of activities. Furthermore, areas disturbed by these activities, within and adjacent to the project area should be reclaimed to avoid long-term problems with erosion and fugitive dust. **Associated Letter: 242**

Response: The draft and final EIS analyzes these effects in the Air Quality section. The draft and final plan contains requirements for dust control measures during these projects (Air Quality G3). Reclamation or rehabilitation of disturbed sites would be evaluated at the project or incident level under revised plan direction. Best management practices required by the Clean Water Act and supported by draft plan direction (Soils S1, Watersheds S1, Riparian and Aquatic Ecosystems S1, Livestock Grazing S1, Timber, Forest, and Botanical Products S4, Roads S2 and G3, Facilities S1 and 2, Sustainable Recreation Ss 3 and 4 and Renewable Energy S2) will also benefit air quality concerns over erosion and dust abatement as the emphasis for these practices is to maintain adequate groundcover and drainage to keep soil in place. These draft plan components have been retained in the final plan.

Comment 4: Commenter notes that the draft EIS states the Forest Service will comply with State's Smoke Management Program and suggests the discussion should also include related criteria and hazardous air pollutants emissions and any impacts to air quality and visibility for any Class I Federal Areas identified in 40 CFR Part 81, Subpart D. **Associated Letter: 251**

Response: The affected environment for Air Resources provides a detailed description of criteria, hazardous pollutant emissions and compliance with air quality and visibility for class I areas, including the status and trend. The effects analysis provides a disclosure of impacts to air quality and visibility, including Class I airsheds.

Comment 5: Commenter notes that the plan states the goal of Air Quality is to achieve visibility goals in areas of high scenic value, and Class I areas like the Gila Wilderness are subject to the highest visibility requirements. How do the con trails from military aircraft impact visibility? **Associated Letter: 608**

Response: Aviation emissions can contribute to local and regional visibility impacts (USDOT-FAA 2015), within or outside Class I areas. Additional discussion of these cumulative effects has been added to the Air Quality section of the final EIS.

Literature Cited in Response:

USDOT FAA (U.S. Department of Transportation – Federal Aviation Commission). 2015. Aviation Emissions, Impacts and Mitigation: A Primer. U.S. Department of Transportation, Federal Aviation Commission, Office of Environment and Energy. Washington, D.C. 42 pp.

Comment 6: There is a concern about the air quality impacts of fire season and how it adds to the pollution generated by burning coal to produce the electricity that powers the air conditioners people use to keep cool during fire season. Commenter is also concerned that the flares dropped during military training flights will increase fire activity and thereby air quality impacts. **Associated Letter: 728.348**

Response: We acknowledge that smoke can and does have air quality impacts**.** The management approach titled "Smoke" in the Air Quality section of the plan describes how Gila National Forest leadership and staff will continue to address smoke issues in accordance with air quality regulations. The cumulative effects of smoke, industrial sources of air pollutants including coal burning power plants and flares dropped during military training flights are discussed in the Air Resources Cumulative Effects section of the FEIS.

Alternative Comparisons

Comment 1: There is a suggestion that the alternative comparison tables in the EIS should indicate relative differences among the alternatives in the expected quantity or density of snags, coarse woody debris, and components for landscape connectivity. There is support for management direction within the various alternatives that maximizes the occurrence of these valuable wildlife habitat features. **Associated Letter: 151**

Response: A summary of effects section has been added to the FEIS. The quantity of snags and coarse woody debris are projected to exceed desired conditions under all alternatives.

Comment 2: There is a suggestion that the alternative comparison tables should describe the Continental Divide National Scenic Trail miles and management corridor acres. **Associated Letter: 73**

Response: The Continental Divide National Scenic Trail miles and management corridor acres do not vary by alternative. The corridor is designated by Congress. There may be site-specific realignments of the trail within the corridor to move the route off open roads or motorized trails, or to provide for safety or resource concerns.

Analysis Assumptions

Comment 1: Commenter is concerned that errors were made in developing analysis methodology and assumptions affecting watershed, riparian and aquatic ecosystems, livestock grazing and listed species. The analysis assumptions of concern are located on page 155 and 321 of the DEIS and are:

1) Where riparian exclosures are deemed necessary, they are maintained in functional condition
2) Unauthorized use will be incidental to non-existent

Commenters state that it is common knowledge that the majority of designated critical habitat for riparian obligate listed species suffers from unauthorized use, including but not limited to feral cattle in the Gila Wilderness. Commenters state that it is also common knowledge that the Gila National Forest is being sued over this use. Commenters would like to know why these assumptions are made when the opposite has been the case for the last 20 plus years and ask if anyone from the interdisciplinary team ground-truthed these assumptions.

Commenters make one or more of the following assertions about these analysis assumptions: undermine the agency's credibility and erode public trust; create inconsistencies between plan components and current conditions and activities; invite expensive lawsuits; violate the Endangered Species Act; weaken the agency's ability to administer and manage grazing; encourage Bundy-like behavior on public lands; necessitates other lies in the draft plan; sabotage efforts to achieve desired conditions; and conflicts with other plan components and management approaches.

Commenters provided several suggestions to remedy their concerns. There is a suggestion that we provide monitoring reports that document the continued efficacy of exclosure fencing, or other exclusionary methods

required by the Master Framework for Streamlining Consultation on Livestock Grazing Activities as referred to on page 146 of the draft plan. There is another suggestion that the plan should require range personnel to document and address unauthorized and excess use. Also, there is a suggestion that all sections of the EIS affected by these assumptions need to be re-analyzed and re-written using accurate information reflecting past and present management activities and current habitat conditions as the new assumptions.

Alternately, the final documents could disclose all previous violations of the Endangered Species Act, correct all errors and false statements appearing in the draft documents, and include:

1) objectives to restore degraded critical habitat above and beyond the requirements of the recovery plans;

2) verifiable steps taken to enforce the recovery plans and permittee agreements, such as letters of non-compliance, permit suspensions or cancellations, if necessary, documentation of repaired exclosure fencing or vacating pastures containing critical habitat; and

3) third party monitoring plans to verify presence or absence of livestock in critical habitat and timely removal of trespass animals, rate of recovery or loss of listed species, extent of habitat and documentation of new occupied habitat.

Commenter states "The Draft Revised Forest Plan as it exists right now contains a lie and a cover-up for illegal activity that threatens the existence of species, degrades our water quality, degrades and destroys the functioning of our watersheds, and widens the rift between our ranching and environmental communities."
Associated Letters: 612 and 673

Response: The purpose of the EIS is to disclose the effects of plan direction and explore trade-offs between alternatives. Compliance with the plan is a necessary assumption that keeps the analysis focused and relevant to the decisions to be made, which are the plan's desired conditions, objectives, standards, and guidelines. Both analysis assumptions the commenters take issue with are necessary compliance assumptions.

Non-compliance with the plan is an implementation and enforcement issue, not an analysis issue. Clarifying language discussing the general purpose and importance of analysis assumptions is included the introductory section of Chapter 3: Affected Environment and Environmental Consequences. All resource- and activity-specific analysis assumptions related to compliance have been removed because with the clarification of assumptions that apply to the entire analysis, they are no longer necessary to articulate individually. Range personnel document and address non-compliance as part of permit administration.

The draft plan language regarding the Master Framework for Streamlining Grazing Consultations wasn't entirely accurate and has been clarified in response to this comment. Regarding the numbered items in the comment summary:

1) All approved recovery plans are incorporated into the plan by reference (Wildlife, Fish, and Plants final S4) and we will implement those plans consistent with the provisions in the Endangered Species Act. The plan contains objectives that can be met by recovery efforts (Wildlife Fish, and Plants Os 2-4, Riparian and Aquatic Ecosystems O1, and Watersheds O1). If there are resources to accomplish more, we will, but the plan must be consistent with the planning rule's requirement that plans must be constrained by reasonably foreseeable budgets (36 CFR 219.7 Section 3(e)(ii)).

2) Documentation of steps taken to implement recovery plans and enforce grazing permit requirements is compiled as part of program management under the policy direction found in Forest Service Handbook 2209.13. This information can be obtained by a Freedom of Information Act request. The feral cattle issue is addressed more specifically and in greater depth under its own topic heading.

3) Section 219.12(c)(3)(i and ii) of the 2012 Planning Rule and Forest Service Handbook 1909.12 Chapter 40 Section 42.14a specifically direct the forest supervisor to consider existing National

Forest System and non- National Forest System inventory, monitoring and research programs, and to take into account opportunities to design and carry out multi-party monitoring with other Forest Service units; federal, state, or local government agencies; scientists; partners; members of the public; and federally recognized tribes.

The draft and final plan's monitoring program provide the opportunity for multi-party monitoring associated with the watershed condition classification indicators (Minimum Required Monitoring Question 1), which include riparian and aquatic habitat conditions and species, whether they are federally listed under the Endangered Species Act or not. More information about multi-party monitoring efforts will be available to the public during implementation when these opportunities will take shape. In addition, the Livestock Grazing section of the plan includes a guideline (final G9) that states: "All monitoring data collected by non-Forest Service personnel that adhere to protocol identified in the plan-level monitoring implementation guide should be accepted for consideration and made available to permit holders for allotment management." This section of the plan also contains several management approaches describing how forest leadership and staff intend to engage in collaborative monitoring to improve relationships and resources. Furthermore, the plan recognizes the importance of engaging diverse stakeholders and volunteers to develop shared understanding of management issues and implement projects and programs (Community Relationships DC1), like the monitoring program.

Best Available Science

Comment 1: There is a request that science be used in plan development. **Associated Letter: 706**

Response: We used the best available science to develop the plan as required by the 2012 Planning Rule (36 CFR 219.3). Development of the plan included extensive consideration of such science as evidenced by citations included in the plan and EIS, and the assessment report. There is also an Excel file in the project record documenting scientific publications we reviewed but did not reference in the planning documents.

Comment 2: Commenters state they have made every attempt throughout the planning process to provide best available science for consideration and have been dismissed. Commenters point to the 2012 Planning Rule requirements for the use and documentation of best available science (36 CFR 219.3(a)(3) and 219.6(a)(4)) and suggest that documentation requirements have not been met. Moreover, they state that National Environmental Policy Act requirements for taking a "hard look," scientific and professional integrity, disclosure of conflicting science and rationale for choosing one viewpoint over another have not been met because planning staff summarily dismissed the peer-reviewed literature they submitted. Commenters are concerned that the dismissal of this science has let to certain assumptions being made in the draft plan that are wrong, and as a result, the draft plan does not account for species viability and persistence.

Specifically, commenters take issue with the regionally consistent desired conditions for vegetation communities as they are based on Rocky Mountain Research Station's General Technical Report 310. Commenters assert that the desired conditions cannot be relied upon to address species viability because "…(a) may not be achieved for decades to centuries, (b) cannot, and need not, be achieved by projects, and most importantly, (c) are directly contrary to the needs of vulnerable wildlife (e.g., as discussed elsewhere in this letter, by promoting low canopy cover, low basal area, low snag density, etc.). Second, viability cannot be deferred to project-level decisions—plans must provide viability per the planning rule. Third, not only does the Draft Plan seek to achieve outcomes that are contrary to the viability of many at-risk species, the Plan does not address or account for this problem, and thus do not contain standards or guidelines to ensure viability…" **Associated Letter: 712**

Response: The interdisciplinary team of resource professionals reviewed and evaluated the peer-reviewed publications provided by stakeholders. Those publications have been incorporated into the project record. The

2012 Planning Rule requires the responsible official to use the best available scientific information to inform the planning and decision-making process. It is the commenter's responsibility to provide cited documents, not just bibliographic information, to be considered for review (36 CFR 218.24). Ultimately, a determination is made by the forest supervisor that the best scientific information was used based on accuracy, reliability, and relevance. This information informs but does not dictate the decisions. The final decisions reflect other relevant factors such as budget, legal authorities, traditional ecological knowledge, agency policy, public input, and the experience of land managers (FSH 1909.12, zero code, section 07). Resource professionals do have a responsibility to disclose and discuss conflicting science, but not all scientific controversy around every subject must be disclosed and discussed. The environmental analysis and the plan do not—and are not intended to—describe in detail every scientific perspective. For many of the issues addressed there is a clear scientific consensus obtained through research and represented in the literature cited. As science is an iterative process where each new study can reveal a new detail, scientific consensus on some issues is still evolving. This might be because the topic is not yet well researched or existing research has yielded surprising or confusing results. In some cases, conflicting science is not included as best available scientific information based on the study methods or because it is not considered relevant to ecosystems, hydrologic systems, or species within the forest.

It is true that the desired conditions referred to by the commenter may not be achieved for decades to centuries, but progress toward them can be made over the life of the plan, which meets planning rule requirements. These desired conditions are based on the best available scientific information and include a diversity of developmental stages with a range of canopy cover, basal area, snags, and other important habitat characteristics. Along with the rest of the plan's desired conditions supporting ecosystem integrity and diversity, they fulfill the planning rule's "coarse-filter" requirements for the diversity of plant and animal species (36 CFR 219.9 (a)). The planning rule establishes the forest supervisor's responsibility to determine whether the plan's coarse-filter provisions contribute to the recovery, conservation, and viability of at-risk species (36 CFR 219.9 (b)). If the forest supervisor determines the coarse filter is insufficient, then additional, "fine-filter," species-specific plan components are required. For more information on how the plan provides for at-risk species, please see appendix G in the FEIS, which documents the analysis of at-risk species and identifies coarse- and fine-filter plan components.

Alternatives-General

Comment 1: There are differing perspectives on the alternatives and the differences between them. Some commenters express opposition to all the alternatives stating that they negatively impact grazing, timber harvest, mining, and private property rights with the addition of Wild and Scenic River rules and more wilderness. These commenters state there is faulty science and a bias toward recreation and environmentalist positions at the expense of multiple uses in both the plan and the draft EIS.

Other commenters assert there is no acceptable alternative because none adequately address climate change. Some find none of the alternatives acceptable because there was no consideration of the cumulative effects of having a non-native species such as domestic livestock on the landscape and suggest this requires a no grazing alternative or at least no grazing in riparian areas.

Others express support for elements of alternatives 2 and 3 that are beneficial to livestock grazing, and where there are differences between alternatives 2 and 3, general support for the plan content as it exists in alternative 3. One commenter questions the design of alternatives 3 and 4, which appear to pit ranchers and loggers against one another, questioning why there could not be an alternative that benefits both. Others suggest extractive uses are demonized as being bad for the environment when there are things that can be done so that these activities benefit the forest with minimal to no damage. Further, there is a question about why there is emphasis on prescribed fire throughout all alternatives and why alternative 3 contains so many areas of recommended wilderness when it is supposed to favor grazing permittees. Some commenters express support for alternative 1 because it does not recommend any areas to Congress for wilderness designation.

Some commenters express general support for alternative 2 and the environmental analysis stating that it is a reasonable compromise between extremes and the analysis is comprehensive and thorough. Some express support for alternative 2 because it supports multiple use, which is the main function of the Forest Service. Some specifically mention the plan direction related to vacant allotments and the flexibility it provides in support of grazing permittees. Others prefer alternative 2 because it supports species viability and persistence while providing needed flexibility for managing fire on the landscape. Some of these commenters point to alternative 2 as the action alternative most likely to reduce potential for stand-replacement fire and associated impacts. Some state their support because alternative 2 provides the needed flexibility to manage through changing technology, economics, social values, and climate.

Some express support for either alternative 2 or 5, but specifically oppose alternative 3 because it would result in declining ecological conditions due to increases in livestock and mechanical treatments. Others suggest the vegetation communities alternative 3 emphasizes are the wrong ones considering the vegetation changes predicted to accompany a warmer, drier climate. Those who prefer alternative 5 over all other alternatives state it is in the best interest of people, critters, and plants because it contains more recommendations or proposals for special designations, which are protective in nature and consistent with an emergency response plan. Many of these commenters state that an emergency response plan is needed due to predicted climate change and related biodiversity loss. **Associated Letters: 38, 39, 41, 48, 49, 51, 63, 81, 127, 140, 151, 152, 180, 182, 184, 196, 233, 270, 362, 415, 561, 646, 647, 673, 684, 696, 726.0 through 726.12547, 728.256, 728.345, 728.351, 728.393**

Response: The draft range of alternatives was designed to address the findings of the assessment, needs for change, and to respond to issues the public raised. Alternatives and potential alternative elements that were considered but not analyzed in detail are identified in chapter 2 of the environmental analysis, including the reasons why forest staff and leadership determined more detailed study was not warranted. Clarifying detail has been added to this section in the final EIS as well as additional content related to specific proposals and suggestions received on the draft plan and range of alternatives.

The purpose of alternative development and analysis is to explore different ways of addressing the identified needs for change and public concerns within the constraints of law, regulation, policy, and foreseeable budgets. The alternatives were not developed to pit the primary interests of forest users against each other. They were developed to explore a range of possible alternatives for addressing the purpose and need and evaluating their trade-offs. The effects of the alternatives vary amongst the alternatives. The FEIS includes a section that summarizes the effects of the alternatives on key ecosystem characteristics and other analysis indicators. Domestic livestock grazing is one of the multiple uses for which the Forest Service must manage National Forest System lands. The effects of plan direction for permitted and authorized domestic livestock grazing are analyzed in the EIS. Unauthorized domestic livestock grazing is not addressed in the plan because non-compliance is not a planning issue, it is an implementation and enforcement issue.

The plan recommends eligible Wild and Scenic River segments and new wilderness areas, but only Congress can designate them. For more detailed discussion of these issues and their relevance to the plan, please refer to response to comments under the Wild and Scenic River heading, especially response to comments 2 and 8; and response to comments under the Wilderness heading, especially response to comment 53. The forest supervisor will consider public input and the analysis in the final EIS before determining what areas will or will not be recommended to Congress for wilderness designation.

Not all alternatives emphasize prescribed fire. Alternatives 3 and 4 limit the use of prescribed fire and emphasize mechanical vegetation treatments intended to move toward desired conditions for vegetation communities, within the constraints of foreseeable budgets, and provide products to people. All alternatives address climate change. Please refer to response to comments 2, 4 and 20 in the Climate, Carbon and Adaptation section of this appendix.

All views expressed by commenters, and the "why" behind those views, were carefully considered during the development and evaluation of the alternatives. The effects of the different combination of plan components for each alternative are analyzed in the draft and final EIS and summarized in table 2 of the FEIS. The rationale supporting the forest supervisor's decisions are documented in the draft record of decision.

Botanical Areas

General

Comment 1: There are differing perspectives on whether the plan should establish botanical areas or not and if so, how large they should be. Some state they need more information on the criteria used to develop botanical areas. Those that support botanical areas state that more protections are needed in our changing environment, plants are important, and these areas would function as climate refugium. They state plants have not been given adequate attention in the past and are concerned about threatened and endangered species, species of conservation concern, those species that do not grow anywhere else, and those species that haven't been discovered yet. Their rationale is that maximizing the size of botanical areas would accommodate the spread of rare plants, limit habitat disturbance, maintain important migration corridors, conserve species, increase ecosystem and watershed resilience, and provide more opportunities for solitude. Some of the commenters that support alternative 5 state "These areas host regional and globally significant rare plant populations that need enhanced protection and stewardship. The Important Plant Area polygons were not drawn willy-nilly, but according to a rigorous process and in a manner such that the areas would contribute to a science-based plan to avoid plant species extinctions…The Forest should ensure that the size of the botanical areas meets the recommendation of the best available science provided by botanical experts associated with the Gila Native Plant Society and as documented in the Rare Plant Conservation Strategy."

Supporters also state that designated areas focus more attention at a national level and would likely provide better rationales for research and grant opportunities, and garner greater public awareness and attention. Designation could provide support for maintaining and opening trails to facilitate research and education, which would benefit hikers, mountain bikers, and people riding horses or mules. Some cannot see a downside to making them as large as possible and state that this would be advantageous to better understanding of habitat and processes. Others think a smaller area would be easier to manage and starting small might be best. Botanical area supporters also state that if they are created, there needs to be clarification on how they would be managed with protections from grazing, logging, and high-severity wildfire.

Others would prefer no botanical areas are established by the plan. Some of these commenters would be amenable to botanical areas if the direction for their management did not affect their uses in any way, particularly livestock grazing. Commenters state that the plan's support of the agency's multiple-use sustained-yield mandate and local custom and culture should be the priority.

Some commenters state that if designation does not change management of the land, enhance protection, or come with additional funding, there is no reason to establish botanical areas. Some are concerned that establishment would lead to more regulation, rules, restrictions, and the exclusion of some groups of people, even if it doesn't start out that way. It could also lead to higher management costs, more Endangered Species Act listings, and more lawsuits from environmental groups. Others argue that overlapping designations, such as establishing a botanical area within a wilderness area, is pointless because it is already protected from any management activity. Others argue that universities and botanical groups can already do research and education in these areas, and everywhere else on the forest. **Associated Comments: 8, 23, 47, 85, 105, 107, 113, 167, 227, 231, 233, 234, 247, 579, 638, 712, 726.0 through 726.12547, 727.1 through 727.4389, OWS-1 through OWS-144**

Response: The alternatives analyzed in the draft and final EIS explore a range of options from zero to 150,590 acres of botanical areas. Those alternatives that include botanical areas contain some forestwide plan

components for all rare and endemic plant species and more restrictive plan components for botanical areas. Those alternatives that do not include botanical areas contain forestwide plan components for all rare and endemic species because these plant species are important wherever they occur, not just in specific areas (for example: All Upland Ecological Response Units Landscape-Scale DCs7 and 8; Cliffs and Rocky Features G1; Wildlife, Fish, and Plants DCs1-4 and 8, Ss2 and 3, Gs8 and 10; and Roads G3). Limitations on disturbance and avoidance measures can also be established at the project level.

The 2012 Planning Rule requires the forest supervisor to identify existing designated areas and determine whether to recommend additional areas for designation, or if the authority exists, designate additional areas as part of the plan revision process (36 CFR 219.7(c)(2)(vii)). The forest supervisor and the planning team first received the proposal to establish botanical areas from a representative of the Gila Native Plant Society after the notice of intent to revise the plan was published in the Federal Register. That proposal was based on the New Mexico Forestry Division's New Mexico Rare Plant Conservation Strategy. Appendix I of the FEIS describes development of the range of alternatives based on the original submission. Additional detail has been added for clarity.

We agree that these plant species and populations the original proposal intended to protect are important. There are also other at-risk, rare, and endemic plant species and populations that are important outside of the proposed botanical areas. We also acknowledge that there may be both species and populations within the forest that have not been documented yet. Botanical area designation would not establish these areas as climate refugia or dispersal corridors. A separate analysis would be needed to determine whether refugial conditions exist and the extent to which conditions affect dispersal. The conditions needed to support refugia and dispersal are likely to vary by species.

Habitat disturbance associated with recreation facilities, special uses, roads, and trails are limited to an extent by policy direction for the management of special recreation area designations, like botanical areas. Policy direction requires other occupancy and use of the area's resources be allowed to the extent that they neither interfere with the primary values for which the area was established, nor negatively affect the visitor's experience (Forest Service Manual (FSM) 2372.4).

Whether any type of designation limits habitat disturbance, enhances resilience, or conserves species depends on several things, some of which are outside the scope of the forest plan. Natural disturbance regimes play an important role in species, population, and community dynamics. Limiting human disturbance may or may not be beneficial over the long term. For illustration, consider the following example. Plan direction that places limitations on mechanical vegetation treatments might limit habitat disturbance associated with those activities. However, if the area has a high likelihood of experiencing stand-replacement fire and the species or community did not evolve with a stand-replacement fire regime, limiting vegetation management may lead to a more detrimental disturbance over the long term. Resilience and species persistence could be compromised because of restrictive plan direction. Even if the plan provides the flexibility to conduct mechanical treatments, budget-related issues, which are outside the scope of the plan, may prevent that necessary work from being accomplished before the area experiences fire.

We agree it is possible that designation could increase interest within the research community, improve competitiveness for some types of grant funding, and grow the public's interest and value placed on rare plant species. However, designation is not required to accomplish these desired outcomes and does not ensure them either. These areas, and others, are already established by New Mexico State Rare Plant Conservation Strategy. This designation could be leveraged in the same way as a botanical area designation.

Additional Endangered Species Act listings, additional restrictions on management and use, and the potential for related lawsuits would not result from designation. These things could occur independent of designation as we learn more about the occurrence, distribution, and ecology of these species. Botanical area designation would result in minimal cost increases to the agency associated with the interpretive services required by policy direction (FSM 2372.4). This cost would be incurred initially, and then again only when signage

needed to be updated or replaced. Costs could increase associated with additional Endangered Species Act listings and recovery plan provisions independent of designation. The forest supervisor's decision and supporting rationale regarding botanical area designations and plan direction for rare and endemic plants is documented in the draft record of decision.

Comment 2: Respondents request detailed justification for alternative 2's additional reductions in the size of the proposed botanical areas from what the Gila Native Plant Society provided, preferring the boundaries proposed in alternative 5. These commenters assert that the reductions in size based on established uses or the location of roads defeats the objectives of the original proposal because it excludes species identified by the State of New Mexico as "strategic species," populations of species of conservation concern, and does not meet the obligation the agency has to use the best available science, provide for multiple uses, and species viability and persistence. **Associated Letters: 113, 137, 640, and 653**

Response: Alternative 5 includes the botanical areas as delineated in the original proposal submitted to the planning team. Boundaries were adjusted in the proposed action at the discretion of the forest supervisor to provide for a range of alternatives, rather than limiting the analysis to comparing "all" or "nothing" scenarios. The basis and rationale on which boundary adjustments were made is described in appendix K of the FEIS, which provides more detail than was provided at draft. The forest supervisor may select any individual area, or combination of areas from any of the alternatives analyzed in detail. The forest supervisor's decision and supporting rationale regarding botanical area designations and plan direction for rare and endemic plants is documented in the draft record of decision.

Comment 3: There is a concern that the purpose of botanical areas is focused on outreach and education when the intent the proponents envisioned was to contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of conservation concern while providing for multiple uses. Commenters state that these should be priority areas for inventory and population trend and threat monitoring, as well as focus areas for conservation actions, habitat improvements and vegetation treatments. Some commenters would like to see wilderness and recommended wilderness overlap botanical areas to further reduce the impact of human disturbance, particularly roads and herbicide use.

Commenters also state that the plan components provided in the draft plan are not sufficient to protect the rare plants that occur in the forest, including those proposed as species of conservation concern. There is concern about the lack of clarity around the use of the word "promoted" because it is not defined and there is no indication of how it will be implemented. Commenters suggest that whether it is alternative 2's Rare and Endemic Vegetation Management Areas or alternative 5's Botanical Areas, they need to be afforded special management that protects imperiled species rather than vaguely "promoting" them. If that language is retained, commenters request that it be defined in the final plan. **Associated Letters: 47, 137, 231, 234, 640, 653, and 712**

Response: See response to comment 1 related to the purpose of the botanical area designation. The plan alternatives also contain *forestwide* plan components and management approaches for all rare and endemic plant and animal species and their habitats that are focused on maintenance, conservation, and recovery (draft plan Rare and Endemic Plant and Animal Species and Habitat section; final plan All Upland Ecological Response Units Landscape-Scale DCs7 and 8; Cliffs and Rocky Features G1; Wildlife, Fish, and Plants DCs1-4 and 8, Ss2 and 3, Gs8 and 10; and Roads G3). The whole forest is important for these purposes. Plan content for botanical areas promotes stakeholder engagement and education and provides additional guidelines for herbicide use, road maintenance and recreation facilities based on material provided by the Gila Native Plant Society. Interactions between botanical areas proponents and forest leadership and staff are discussed in detail in the FEIS Appendix K: Documentation of the Botanical Area Evaluation. Where that material overlapped with plan direction that applied forestwide (draft plan Rare and Endemic Plant and

Animal Species and Habitat, Livestock Grazing and Non-native Invasive Species sections), it was not repeated. The forestwide direction would apply to botanical areas as well.

Decision makers consider many factors when prioritizing areas for habitat improvements and vegetation treatments. The presence of at-risk species is one of those factors. The Important Plant Areas identified by New Mexico State Forestry Division, which include the proposed botanical areas, are already priorities for inventory and population trend monitoring as demonstrated by the New Mexico Rare Plant Conservation Strategy. The draft and final plan contain a management approach that describes how forest staff and leadership intend to work with partners to accomplish the goals and objectives of the New Mexico Rare Plant Conservation Strategy (draft Rare and Endemic Species Conservation and Relationships management approach; final Adaptation, Restoration and Relationships management approach).

We agree that the term "promoted" is vague. Non-specific suggestions for additional protection measures in the plan cannot be accommodated, because "protect" is also vague. All alternatives have been revised in response to comment to include clearer and more detailed desired conditions, standards and guidelines that specifically include rare and endemic plant species, in response to comment (for example see final plan: All Upland Ecological Response Units Landscape-Scale DCs7 and 8; Cliffs and Rocky Features G1; Wildlife, Fish, and Plants DCs1-4 and 8, Ss2 and 3, Gs8 and 10; and Roads G3). More information on that content can be found throughout the remainder of this section of this appendix.

Comment 4: Commenters request clarification of the designation process and authority, and recommend specific formal names be used. **Associated Letters: 137 and 712**

Response: The recommended names for these areas are adopted in alternatives 2 and 5. The process and authority are outlined in Forest Service Manual 2372. Any of the areas contained in any of the alternatives analyzed could be recommended to the regional forester if they are less than 100,000 acres each. If approved, designation would occur when the forest supervisor signs the final record of decision. No additional process is needed. Because it is an administrative designation established by the plan, the designation could also be removed by a plan amendment or future revision effort following the appropriate National Environmental Policy Act procedures.

Comment 5: There is a concern that the draft plan does not mention partnership with the New Mexico State Forestry Division and the Rare Plant Conservation Strategy in the Wildlife, Fish, and Plants section. Commenters suggest that due to the lack of botanical expertise on the forest, and because the planning rule requires plan components to maintain or restore rare aquatic and terrestrial plant and animal communities and the use of best available science, the final plan should (1) include the New Mexico State Forestry Division Rare Plant Program as a partner; (2) add a standard to the Wildlife, Fish, and Plants section that instructs the Forest Service to consult with the New Mexico State Forestry Division Rare Plant Program during any project proposed within an Important Plant Area, and (3) incorporate the findings and recommendations of the New Mexico Rare Plant Conservation Strategy. **Associated Letter: 712**

Response: The draft plan discusses partnership with the New Mexico State Forestry Division and incorporates the New Mexico Rare Plant Conservation Strategy in the Rare and Endemic Plant and Animal Species and Habitats section of the draft plan in the management approach titled "Rare and Endemic Species Conservation and Relationships." This content has been moved and to the Wildlife, Fish, and Plants section of the final plan to a management approach titled Adaptation, Restoration and Relationships. The plan specifically provides for rare and endemic species forestwide (see All Upland Ecological Response Units Landscape-Scale DCs7 and 8; Cliffs and Rocky Features G1; Wildlife, Fish, and Plants DCs1-4 and 8, Ss2 and 3, Gs8 and 10; and Roads G3).

Comment 6: Commenter states that since the draft plan fails to provide any framework for monitoring plant species of conservation concern, it is logical to encompass as many rare plant locations as possible inside of

sufficiently large botanical areas. Management area designation can easily be "undone" when the forest plan is next revised. Official designation as a botanical area, rather than rare and endemic plant management areas as proposed in alternative 2, protects these areas for a longer duration, provides areas for long-term research and monitoring sites for species of conservation concern, provides a venue for educational and interpretive opportunities, and attracts the interest of research institutions. **Associated Letter: 712**

Response: The forest plan is the designating mechanism. A future revision or amendment could "undo" the designation. There is no mechanism to ensure this type of special area designation would remain in place forever. Although it is not required by the 2012 Planning Rule, the plan does provide a framework for monitoring rare plant species, whether they are species of conservation concern or not. Draft monitoring question 70 (final monitoring question 65) asks "What is the status and trend of rare plants across the forest?" This question is included as capacity-dependent monitoring, which signals both a need and an opportunity for collaborative monitoring and partner and other stakeholder involvement (plan chapter 5 Coordination, Collaboration and Capacity Building and first paragraph under Monitoring and Evaluation Program heading). The draft and final plan includes a management approach describing how forest staff are likely to partner with New Mexico State Forestry Division and other groups and individuals with botanical expertise to accomplish this work forestwide. See also response to comment 4.

Comment 7: Commenter states that the Gila Native Plant Society would be happy to work with the planners and mappers to make specific adjustments to the forest plan and alternative 2 to capture important documented populations of rare species. Commenter states that in some cases, this could avoid having to draft up independent management plans for each species. **Associated Letter: 137**

Response: Because the range of alternatives includes the much larger polygons of the original proposal in alternative 5, the forest supervisor may choose to have planners and mappers work with the commenter to modify the boundaries as suggested if one or more of these areas are carried forward to designation in the final plan.

Comment 8: Commenter points to the draft map of alternative 2's botanical areas and asks if these are the only areas with rare plants or plants that only grow on the Gila National Forest, threatened or endangered and species of concern or at-risk species? **Associated Letter: 233**

Response: There are other known areas where these plants and other at-risk plant species occur as documented in the New Mexico State Forestry Division's New Mexico Rare Plant Conservation Strategy. There may also be other areas, and species that are not known, because inventory surveys are limited to those places people have gone to look. Survey and inventory are not forestwide.

Comment 9: There is a concern that the draft plan does not contain special management for these areas. Commenters point to the draft plan's admission that there is a lack of information about the requirements for many rare and endemic species and the environmental analyses that do not analyze botanical area direction because that direction does not substantially change the types of activities, disturbances, or associated effects. Commenters are concerned that if harmful activities are not curtailed by plan direction, any form of designation is a meaningless "feel good" exercise that will not protect these imperiled species. They suggest that species-specific plan components must be included in the final plan to address impacts to at-risk plants arising from timber harvesting, thinning and prescribed burning treatments, off-road vehicles, herbicides, recreation, livestock grazing, unauthorized uses, and other ground-disturbing activities. Furthermore, standards and guidelines must be more fully developed in the plan to reflect potential threats as well as the purposes of plant conservation, study, and education. **Associated Letter: 712**

Response: Under the alternatives that would designate botanical areas, management would be compliant with direction found in Forest Service Manual 2372, forestwide draft plan direction under the heading Rare and Endemic Plant and Animal Species and Habitats (moved to Wildlife, Fish, and Plants section in the final), as

well as the plan direction specific to the botanical areas. This direction includes provisions for rare and endemic plant species, whether they are recognized as at-risk or not, related to vegetation management and other ground-disturbing activities. Those alternatives that do not designate botanical areas still contain the forestwide direction that provides for these species (for example: Wildlife, Fish, and Plants S2 and G7 as related to roads, S3 as related to herbicides, G4 related to collection, G10 as related to recreation, study and education; Cliffs and Rocky Features G1 as it relates to all management activities, Timber, Forest, and Botanical Products S1 as it relates to timber harvesting, thinning and prescribed fire, and Roads G3 as it relates to roads). Unauthorized uses, including motor vehicle use off the designated road system, are a compliance issue, not a planning issue.

While the Rare Plant Conservation Strategy identifies likely threats and we have received suggestions about what direction the plan should contain for these species, none of those suggestions have been species-specific or compliant with the final directives implementing the 2012 Planning Rule (FSH 1909.12 Chapter 20 section 22). Planning staff have made best efforts to translate suggestions into plan components that are compliant with all requirements and implementable, while maintaining the stated intent of the commenters. There is simply not enough information upon which to identify a need for more species-specific plan direction or what that direction should be other than what the final plan contains. It is noteworthy that a fair amount of the direction suggested by commenters was taken verbatim from Forest Service Manual 2372, which would apply to all alternatives that designate botanical areas and does not require repetition in the plan. See also response to comment 3.

Comment 10: Commenter states that in 2018, the Gila Native Plant Society submitted a set of proposed plan components for their proposed botanical areas. Commenter observes that these appear to have been disregarded without explanation, in violation of the National Environmental Policy Act. Commenter recommends that, at a minimum, this submission should be used as a starting point for a fully developed management plan, or the documents need to include a full explanation for why they were not used. **Associated Letter: 712**

Response: This submission was used as a starting point for developing draft plan direction. Because it was not worded in a way that met planning rule requirements, planning staff had to adapt the language while striving to preserve the intent. The starting point provided by botanical area proponents (verbatim) and a full explanation of how it was used to produce the draft plan direction is now provided in appendix K: Documentation of the Botanical Area Evaluation to the FEIS. For changes made between draft and final see response to comment 9 above.

Suggested Background Information

Comment 11: There is concern that the background information for Rare and Endemic Vegetation Management Areas in the draft plan is insufficient. Commenters suggest specific language to be added and slight changes to the names of the areas. **Associated Letter: 137**

Response: Commenter's suggestions for additional background information have been incorporated into the final plan under the consolidated Wildlife, Fish, and Plants heading.

Desired Condition 1

"Where there are concentrations of rare and endemic plant populations, these species are promoted, and provide opportunities for stakeholder engagement and education. See also the Rare and Endemic Plant and Animal Species and Habitats section."

Comment 12: There is support for this desired condition because it describes the purpose for which proponents would like to see these areas designated; however, some commenters prefer it be revised into two desired conditions as follows:

"Habitats and refugia for rare and endemic plants are intact, functioning, and sufficient for species persistence. This desired condition takes precedence over others."

"Where there are concentrations of rare and endemic plant populations, these species are promoted, and provide opportunities for stakeholder engagement and education."

Others are concerned about the use of the word "promoted" because it is not clear what it means or how it will be implemented. Commenters state that these species need to be afforded special management that protects them, not just "promotes" them and recommend that if the word "promotion" is to be retained, it must be defined in the plan. If it is not, the agency cannot take the hard look at the effects. **Associated Letters: 85, 137, and 712**

Response: A modified version of this desired condition applies forestwide (Wildlife, Fish, and Plants DCs 4 and 8). Wording was modified for clarity and some of the suggested language was adopted. However, the following suggested language is not included: "This desired condition takes precedence over others." One desired condition cannot take precedence over others or preclude progress toward desired conditions for other resources and uses. They all must work together to provide for sustainable ecosystems with ecological integrity in the context of multiple-use management. This language is not appropriate for a desired condition (FSH 1909.12 Chapter 20 section 22.11).

Suggested Desired Conditions

Comment 13: There is a suggestion that the following desired conditions be included:

1) "Sustain populations of and minimize negative impacts to, rare and endemic flora including, but not limited to, FS Species of Conservation Concern. See also the Rare and Endemic Plant Species and Habitats section."
2) "Protection and maintenance of natural conditions for the conservation of plant biological diversity and sustenance of rare and endemic plant populations."
3) "Maintaining habitat conditions, including natural unique topographic features of specific rare plant habitat."
4) "On-going non-manipulative research and monitoring of rare and endemic plants and species of conservation concern."

Associated Letters: 137, 640, 653, and 712

Response: None of the suggested desired conditions describe desired states. Desired conditions are aspirational descriptions of what the area should look like in the future and should be described in sufficient detail that progress toward their attainment can be measured (FSH 1909.12 Chapter 20 Section 22.11). As written by the commenter, these suggested desired conditions do not comply with the agency directives but could be modified to do so. All Upland Ecological Response Units Landscape-scale draft and final DC7, draft Rare and Endemic Plant and Animal Species and Habitat DC2 and draft Wildlife, Fish, and Plants DCs 1-6 apply forestwide and address suggestions 1-3. While reorganized and refined based on staff and stakeholder comment, the final plan retains the substance of draft Rare and Endemic Plant and Animal Species and Habitat and Wildlife, Fish, and Plants desired conditions in the Wildlife, Fish, and Plants section. A desired condition for collaborative research and monitoring related to rare and endemic plants has been added to accommodate the commenters' fourth suggestion.

Suggested Objectives

Comment 14: There is a suggestion that the plan contain the following objectives for botanical areas:

"Maintain suitable habitat conditions including unique features (topographic, etc.) of particular rare plant species habitats."

"Implement land and visitor management that includes considerations for maintaining populations and minimizing negative impacts to targeted flora and associated habitat."

Associated Letters: 640, 653, and 712

Response: A plan objective is a concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions based on reasonably foreseeable budgets (FSH 1909.12 Chapter 20 Section 22.13). The first suggestion does not contain enough specificity to meet these requirements and is better suited to a desired condition (such as the one discussed in comment 12 and its response above). The second suggestion is also lacking enough specificity to meet requirements for a plan objective. However, the intent is accomplished by management directed toward desired conditions with standards and guidelines providing constraints as needed. Project-level planning can also provide necessary constraints when the specific site, species, and activities are known.

Standard 1

"New motorized routes will not be constructed, except for temporary routes. These routes will be closed when no longer needed."

Comment 15: There is support for this standard. **Associated Letters: 137, 640, and 653**

Response: Thank you for your comment. A modified version of this standard is retained in the final plan under the Wildlife, Fish, and Plants section, which applies forestwide.

Standard 2

"The use of non-selective herbicides or herbicides that may have activity on rare and endemic plant species will not occur unless it is to control or eradicate noxious weed species, and other integrated pest management efforts have failed or are unlikely to succeed."

Comment 16: Some commenters support this standard. Others suggest herbicide applications in botanical areas should be limited to spot treatments or prohibited entirely and that roads and dispersed camping should also be prohibited. **Associated Letters: 39, 41, 137, 233, 640, and 653**

Response: A modified version of this standard is retained in the final plan under the Wildlife, Fish, and Plants section, which applies forestwide. Alternative 5 now restricts the use of any herbicide in these areas with the same caveat as provided in alternative 2 and requires that in those exceptional cases, only spot treatment methods may be used. These methods are defined as backpack sprayer on individual plants, painting it on cut stumps, or hack and squirt.

However, a prohibition on herbicide use was not incorporated into an alternative analyzed in detail because it could prohibit management's ability to maintain or achieve desired conditions. Non-native and noxious plant species could threaten rare, endemic, and at-risk species populations in the future. For some noxious plant populations, the size, density, or nature of the species may require the application of herbicides for effective treatment. For example, Canada thistle has an extensive lateral root system. Digging them up does not work because root fragments are left behind, from which new plants can sprout. Although such manual treatment can be successful in preventing seeding, it is unlikely to result in a reduction in the size and density of the infestation.

The suggestion to prohibit roads entirely was not incorporated into any alternative because there are existing roads that are necessary for management and there may be a need for temporary routes. However, there are provisions for rare and endemic plants related to roads in the draft and final plan (see response to comment

15, above). The suggestion to prohibit dispersed camping in botanical areas was not incorporated into any alternative. This is because the special botanical area designation is specifically a recreation designation and there are already popular dispersed camping sites within the proposed areas. We do not know of, nor has anyone mentioned an instance where dispersed camping is threatening rare and endemic plant populations, but if that changes in the future, there are a variety of things that could be done to address it without prohibiting dispersed camping across the entire area such as barriers, fencing and signage.

Suggested Standards

Comment 17: A commenter suggests adding the following as botanical area standards:

1) "Maintain suitable habitat conditions including unique features (topographic, etc.) of particular rare plant species habitats."
2) "Implement land and visitor management that includes considerations for maintaining populations and minimizing negative impacts to targeted flora and associated habitat."
3) "The ecological features and values for which the management area was established are protected. Genetic plant diversity is preserved and maintained."
4) "Vegetation management activities should be allowed only when necessary to achieve or maintain the ecological conditions for which the area was designated."

Associated Letter: 137

Response: All Upland Ecological Response Units draft and final DC7, draft and final DCs for Riparian and Aquatic Ecosystems and Cliffs and Rocky Features, draft Wildlife, Fish, and Plants DCs1-4 and final DCs 1-6, draft Rare and Endemic Plant and Animal Species and Habitat DC2, and draft and final Livestock Grazing DC3 meet the intent of the first and third suggestion. Final Wildlife, Fish, and Plants S2, S3, G4, G7 and G10; Cliffs and Rocky Features G1, Timber, Forest, and Botanical Products S1 and Roads G3 are just some of the plan standards and guidelines that would help management move toward the desired conditions applicable to rare and endemic plants throughout the forest, which is consistent with the intent of the second suggestion. Additional constraints on management activities that might be necessary to achieve desired conditions will depend on the activity, site conditions, and the species. Given the number of variables and possible combinations of these variables, the need for additional constraints is best identified, evaluated, and provided for at the project level. The last suggestion is unnecessary because vegetation management activities that created a trajectory away from desired conditions would not be consistent with the plan.

A standard is a mandatory constraint on project or activity decision making, established to help achieve or maintain the desired condition(s), to avoid or mitigate undesirable effects, or to meet legal requirements. They must be stated in a precise manner with mandatory wording such as "must" or "must not." They must be written clearly and without ambiguity so that project consistency can be easily determined (FSH 1909.12 Chapter 20 Section 22.13).

Guideline 1

"Maintenance of existing motorized routes should avoid ground disturbance outside of the existing road prism and associated drainage features."

Comment 18: There is support for this guideline, but some commenters would like to see this elevated to a standard. **Associated Letters: 137, 640, and 653**

Response: The intent of this guideline is to minimize disturbance to rare and endemic plant species near existing roads that occur within these areas. However, there may be scenarios where ground disturbance outside the existing road prism and associated drainage features could not be avoided. In these cases, if a

survey determined individuals or populations were not present, the necessary maintenance work could go on. If a survey determined individuals or populations were present, then ways to avoid those plants and accomplish the intent of maintenance would be necessary. For example, if a population were associated with a drainage feature such as a lead-out ditch, that feature could be avoided rather than maintained and a new drainage feature designed and installed at another location or locations as determined appropriate. This guideline is retained in the final plan as Wildlife, Fish, and Plants G7 because it would allow from some deviation if the intent of the guideline is met.

Guideline 2

"Trailheads and other gathering areas (i.e., parking areas, campsites) should include educational and interpretive signage."

Comment 19: There is support for this guideline. **Associated Letter: 137**

Response: A modified version of this guideline is retained in the final plan as Wildlife, Fish, and Plants G8.

Guideline 3

"See also the Livestock and Non-native Invasive Species sections for certified weed-free materials plan direction."

Comment 20: There is support for this guideline. **Associated Letters: 137, 640, and 653**

Response: The reference to the Livestock section was in error. This direction was provided by the forestwide standard in the Non-native Invasive Species section which stated: "The forest's horse and packstock program must use and special use permits must require the use of certified weed-free feed products. Pastures used by forest stock will be surveyed for noxious weed species annually." Because standards and guidelines cannot compel action and be compliant with the agency directives for implementing the 2012 Planning Rule, the requirement for annual monitoring was removed. Further, this direction was moved to a guideline because of the 2021 regional certified weed-free hay shortage. The guideline now states: "Permitted activities and the forest's saddle and pack stock program should use certified weed-free feed products to prevent the introduction of noxious weeds." This allows for deviation from the guideline if measures are taken to prevent the introduction and spread of noxious weeds, which could be done through monitoring and treatments.

Suggested Guidelines

Comment 21: Commenter suggests timber harvest should be restricted or not permitted in botanical areas. **Associated Letter: 47**

Response: Timber harvest or other thinning methods may be necessary to maintain or move toward desired conditions. Such vegetation management activities would be designed to achieve or maintain desired conditions that apply to the project area. If they were not, they would not be consistent with the plan. This may include site-specific provisions to mitigate potential impacts to rare, endemic, or at-risk plant populations, including avoidance.

Comment 22: There is a suggestion the following be added as guidelines:

1) "Plan and conduct all uses and activities in a manner which are in harmony with the purpose for which the Areas were designated."

2) "Work with other agencies, and state entities (such as the New Mexico Department of Transportation), to manage roadside areas in accordance with the protection of native plant habitat and the minimization of invasive species introduction."

3) "Maximize opportunities for visitor engagement, research, education and promote values of unique plant populations."

4) "Place campgrounds or other overnight recreation developments outside of known rare plant habitat whenever possible." Or "Manage camping in Botanical Area to prevent impacts to rare plants."

5) "Locate roads, trails, sanitary facilities, picnic grounds, and parking spaces without disturbing known habitat of rare, endemic, or species of conservation concern."

6) "Build no roads or other improvements on or through geological formations, or special habitat features unless these are the only alternative to meet management objectives for the area."

Associated Letters: 137, 640, 653 and 712

Response: The first three suggestions are appropriate content for a goal or management approach and are addressed in the draft management approach "Rare and Endemic Species Conservation and Relationships" and the final management approach "Rare, Endemic and Non-Native Plant Species Management." A guideline is a constraint on project or activity decision making that allows for departure from its terms so long as the purpose of the guideline is met. They use the words "should" and "should not." They should clearly describe the circumstances and way the guidelines apply so that other options may be carried out if they meet the purpose of the guideline. They must not restate other plan components (FSH 1909.12 Chapter 20 Section 22.14).

Suggestions 4 through 6 are redundant with policy direction for the management of botanical areas and other special recreation designations (FSM 2372.4). The intent of suggestion 4 is met in the final plan by modifying Developed Recreation G1 (final Sustainable Recreation G7), and Wildlife, Fish, and Plants Gs8 and 10, which apply forestwide. The intent of suggestions 5 and 6 is also met by these plan components and draft Rare and Endemic Plant Management Area S2, which has been retained with modification in the final plan as Wildlife, Fish, and Plants S2, so that it can be applied forestwide. The Roads Gs1 and 3 also help meet this intent.

Constraints on management activities that might be necessary to achieve desired conditions will depend on the activity, site conditions, and the species. Given the number of variables and possible combinations of these variables, the need for additional constraints is best identified, evaluated, and provided for at the project level.

Comment 23: There is a suggestion the following be added as a guideline: "Minimize or eliminate grazing impacts in and around locations of rare plants and in Botanical Areas." **Associated Letter: 712**

Response: Draft plan Livestock Grazing DC3 states: "Livestock grazing and use is compatible with the desired conditions for ecosystems, soils, watersheds, native plant and animal species, and other activities and resources." This desired condition applies forestwide and includes the desired conditions relevant to rare and endemic plants. The revised plan Livestock Grazing section also contains standards and guidelines that apply forestwide that minimize impacts to at-risk plant species (S1, S4, G1, and G2). Inclusion of this suggested guideline would not provide additional benefit. In alternatives 2 and 5, Forest Service Manual direction for designated special recreation areas would also be followed. This direction requires that the agency "Allow other occupancy and use of the area's resources to the extent they neither interfere with the primary values for which the area was established nor negatively affect the visitor's experience" (FSM 2372.4).

Comment 24: There is a suggestion the following be added as a guideline: "Reduce ATV use in habitats of rare plants and in Botanical Areas." **Associated Letter: 712**

Response: The travel management decision signed in 2014 restricted motorized use to designated National Forest System roads and motorized trails. The draft plan supports the restriction on cross-country travel forestwide, including habitats of rare plants and in the areas proposed for designation. If designated, Forest

Service Manual direction for designated special recreation areas would also be followed. This direction requires that the agency "Allow other occupancy and use of the area's resources to the extent they neither interfere with the primary values for which the area was established nor negatively affect the visitor's experience" (FSM 2372.4).

Comment 25: There is a suggestion the following be added as a guideline: "Consider issues particularly in non-wilderness areas such as off-road vehicle use, and interface with highways and human environments." **Associated Letter: 712**

Response: See response to comment 24 about off-road vehicle use. Concerns about highway rights-of-way are addressed by a management approach as described in response to comment 22. About "human environments," we assume the commenter refers to the wildland-urban interface. Where conflict between rare and endemic plant species habitat needs and the desired conditions for the urban interface are identified, projects would have to be designed in such a way to comply with plan direction for both and avoid or mitigate impacts.

Comment 26: There is a suggestion the following be added as a guideline: "Decision making should include minimizing habitat exposure to non-native plant species." **Associated Letter: 712**

Response: The Non-native Invasive Species (Ss1-5) and Wildland Fire and Fuels Management (S4) sections of the plan include provisions for minimizing habitat exposure to noxious weeds that apply forestwide, including wash stations on fire incidents and the use of certified weed-free products.

Comment 27: There is a suggestion the following be added as a guideline: "Focus on long term monitoring of plant populations and understanding of plant distributions." **Associated Letter: 712**

Response: The plan's monitoring program includes a question (draft MQ70 and final MQ65: What is the status and trend of rare plants across the forest?) and provides an opportunity for multi-party monitoring by the nature of this question being "capacity dependent." Guidelines may not direct or compel processes such as inventory or monitoring (FSM 1909.12 Chapter 20 section 22.14). The final Wildlife, Fish, and Plants management approach titled Adaptation, Restoration and Relationships discusses inventory and monitoring needs and the collaborative environment forest leadership and staff seek to cultivate to meet those needs.

Suggested Management Approaches

Comment 28: There are suggestions to add specific language as one or more management approaches. This includes:

1) "Develop programs to collect and preserve seeds and other propagules of SCC, and rare and endemic plants, within the existing legal and regulatory framework, as a proactive and protective approach to providing for rare and endemic plant persistence"

2) "Recognize sensitive species habitats and manage activities that could threaten or damage plant populations that occur in non-wilderness areas, such as mowing, road construction, ATV use and grazing, among other uses."

3) "Special area designation could help manage potentially detrimental activities allowed inside wilderness, such as mulching and seeding after fires, which can affect rare plant regeneration and survival. Designation can promote restorative and protective activities as well, making resources available for the inventory and monitoring of rare species and potential seed collection and banking of vulnerable species."

Associated Letter: 137

Response: Management approaches are optional plan content to describe the principal strategies and program priorities the forest supervisor intends to use to carry out projects and activities under the plan. They should relate to desired conditions and may indicate the future course or direction of change, recognizing budget trends, program demands, and accomplishments. They may discuss potential processes such as analysis, assessment, inventory, project planning or monitoring. They must not include or appear to include a "to do" list of tasks or actions (FSH 1909.12 Chapter 20 section 22.4).

The plan-wide Management Approach to Change and Uncertainty includes discussion on the importance of a seed collection strategy for rare, endemic, and at-risk plant species (draft plan Species and Populations and final plan Natural Systems items 7 and 8). The second suggestion is covered in the draft forestwide Rare and Endemic Plant and Animal Species and Habitat management approach "Rare and Endemic Species Conservation and Relationships" and final management approach to Change and Uncertainty item 5 (reduce the impact of biological stressors). Further, the plan will be implemented to move toward desired conditions for all resources and activities, thus meeting the intent of the second suggestion as well. This management approach describes the forest supervisor's intention to include partners with interest and expertise to identify and document conflicts between species or their habitat and management activities so that adaptive management measures can be taken to correct issues. This content has been moved to the Adaptation, Restoration and Relationships management approach in the final Wildlife, Fish, and Plants section.

Regarding the third suggestion, special designations are not necessary to manage potentially detrimental activities. Further, what are potentially detrimental activities to one species, many be beneficial to another. There may be trade-offs involved that can only be understood and weighed at site and project-specific scales. The specific reference to post-fire mulching and seeding is speculative. There is no conclusive, science-based evidence that post-fire seeding is detrimental, neutral, or beneficial to any rare or endemic plant species over the long term. The preferred Burned Area Emergency Response action is natural recovery. Burned Area Emergency Response treatments are prescribed and implemented to mitigate unacceptable risks to human life, property, and critical natural and cultural resources. They will continue to be used when and where the need is identified, it aligns with policy direction and science-based evidence, and the cost-benefit analysis supports it.

Suggested Monitoring Requirements

Comment 29: Commenter recommends that the impacts of grazing and other ground-disturbing activities be monitored in botanical areas. **Associated Letter: 47**

Response: The plan's monitoring program includes a question (draft MQ70 and final MQ65: What is the status and trend of rare plants across the forest?) and provides an opportunity for multi-party monitoring by the nature of this question being "capacity dependent." The draft Rare and Endemic Species Conservation and Relationship management approach and final Adaptation, Restoration and Relationship management approach (see final Wildlife, Fish, and Plants section of the plan) describes the importance of developing a collaborative monitoring program specific to rare and endemic species. The forest supervisor recognizes that if this program is designed and implemented with enough scientific rigor that it can link a particular management activity to individual species trends, it would provide valuable information for future management. That is why the management approach emphasizes collaboration and agreements with institutions and individuals with specialized expertise. See also response to comment 6.

Caves and Abandoned Mine Lands

General

Comment 1: Commenters are concerned that plan direction does not cover new discoveries of very important cave resources that may be unknown at this time. There is an associated concern that plan direction is not

sufficient for proper cave management and a suggestion that a more extensive document or appendix is needed. **Associated Letter: 645**

Response: Forest plans provide a programmatic framework that guides site-specific actions. The draft and final forest plan contains desired conditions, standards, guidelines, and management approaches that cover cave resources and their associated values. This includes cave resources that are known now, and those that might be discovered in the future. More specific direction would be incorporated into Cave Management Plans for each cave as discussed in the "Cave Management Plans and Relationships" management approach.

Comment 2: Commenter is disappointed and concerned that cave resources are not well-defined, are not mentioned frequently enough in the draft plan and not enough attention is given to them as recreational, geologic, and hydrologic resources. There are also concerns that caves are discussed alongside abandoned mines, riparian management zones and federally listed bats, and that there is no mention of karst features and springs.

Commenters suggest the plan and EIS: better define and describe cave resources; mention the contribution of volunteers who have spent countless hours on cave restoration and protection; separate cave management from abandoned mine management; discuss karst features and springs; and recognize the prevalence and importance of other species of bats besides those that are federally listed. **Associated Letters: 684 and 699**

Response: Please see response to comment 1 in this section. Additional description and discussion about what cave resources and the ecosystem services they provide has been added to the background information in the final plan and the affected environment of the Wildlife, Fish, and Plants section of the final EIS (under Special Habitat Features subheading). This includes more discussion of karst features and springs associated with cave features. Relationships with volunteers and their contributions are discussed in greater detail in the final plan's "Cave Management Plans and Relationships" management approach. We manage both caves and abandoned mines primarily for health and safety, water quality, recreation access, cultural heritage values and wildlife habitat. Desired condition 2 includes all cave roosting bats.

Comment 3: Commenter requests that the planning team refer to Recommendations for Cave and Karst Management-CORONADO NF-7-30- 2019.pdf and bibliography attached to their comment letter stating: "These documents are currently under review at Coronado NF. I am the document editor. The Coronado NF caves contact is Manuel Silva." **Associated Letter: 699**

Response: The planning team reviewed this documentation and determined it would be useful when cave management plans are developed. Thank you for providing this resource.

Comment 4: Commenter suggests the following statement contained in volume 1 of the draft EIS is incorrect: "There are a few caves in the Gila NF including one that is managed through access control via a gated entrance and key sign-out procedures." Commenter suggests the planning team contact the Southwest Region of the National Speleological Society (NSS) to correct this statement. **Associated Letter: 699**

Response: This statement is factually correct but was removed from the description of special habitat features because it wasn't a critical component of the affected environment description for Wildlife, Fish and Plant species.

Comment 5: There is a concern that the plan direction provided for caves and abandoned mine lands is insufficient to ensure the persistence of bat species and a suggestion that the plan should incorporate the recommendations of bat experts. **Associated Letter: 699**

Response: The plan provides a strategic framework to guide site- and project-specific activities. At the site and project level, additional measures to provide for the persistence of bat species will be incorporated as needed. Bat experts with Bat Conservation International have been involved in the plan revision process since

the beginning. Commenter may choose to review the response to comments submitted in letters 678 and 686 by Bat Conservation International.

Comment 6: "The word "karst" is not in the document. If this document is science-based, this important term should be covered. Karst in the Gila NF is an abundant geological feature of the area." **Associated Letters: 684 and 699**

Response: Karst topography is associated with limestone and subsurface accumulations of gypsum. It is expressed as sinkholes and other features where water is dissolving the bedrock. There is a relatively small amount of limestone on the Gila National Forest and no known accumulations of gypsum. While the possibility that karst features could exist cannot be entirely ruled out, they are not likely to be common. Local geological expertise indicates there are no known karst features associated with Gila National Forest limestones (pers. com. Mary Dowse, Ph.D. Emeritus Professor of Geology Western New Mexico University, March 28, 2021). Karst features are mentioned in the background information of the revised plan's Caves and Abandoned Mine Lands section. Additional language has been added to clarify the status of karst features on the forest. See also response to comment 2.

Comment 7: Commenters are concerned that the number of caves is not known but there are 353 documented mines. Commenters would like to know how is it that so many mines are specifically documented but not caves and assert that there are several significant caves within the Gila National Forest. **Associated Letters: 684 and 699**

Response: Mines have legal claims associated with them that require written documentation for which caves do not. The term "significant" refers to a criteria-based determination resulting from the Federal Cave Resources Protection Act of 1988 and the subsequent regulations and policy direction that implement the Act. While caves may be significant in terms of formations or other features, there are none in the Gila National Forest that have gone through the official nomination and designation process to be called "significant." Those processes have been initiated but remain in the early stages at the time this response to comment was written.

Desired Condition 2

"Cave resources and abandoned mine lands provide habitat for species, particularly bats, that require specialized niches for raising young, roosting, and overwintering. Caves maintain humidity, temperature, and disturbance levels consistent with historic conditions. Caves known to be important for endemic, rare, federally listed, species of conservation concern, or cave-roosting bats are intact or provide habitat for these species. Disease is not spread by land management activities."

Comment 8: There is support for this desired condition and a recommendation that a management approach that discusses limiting public access to caves that provide habitat for bats in lowering the risk of introducing white nose syndrome should accompany the desired condition. **Associated Letter: 151**

Response: Additional discussion related to the potential need to limit public access to caves as a best practice to lower the risk of introducing white-nose syndrome is included in the White-nose Syndrome Response Plans and Relationships management approach.

Guideline 1

"Environments in caves should not be altered except where necessary to protect associated natural resources or to protect health and safety. Where closures are necessary to protect human health and safety, closures should preserve habitats for wildlife, including roosting bats, and avoid direct impacts to bats. If bats or other species are present, closure structures, such as wildlife-friendly gates that meet the most current

recommendations should be used, to allow species to continue using the cave. If gates are used, a lock or removable bar, or both, should be installed to allow future access for authorized personnel."

Guideline 2

"Identified bat roosts should be managed to provide for the enhancement and protection of bat populations. Protection measures may include seasonal closures, public education, and wildlife-friendly gates. When bats are present in a mine feature identified for closure, closure activities should not begin until bats have left for the season. Current regional guidelines for mine and cave closures should be followed."

Guideline 3

"The most current Forest Service guidance or most recent decontamination procedures should be used to avoid spread of white-nose syndrome (*Geomyces destructans* fungus) or other diseases."

Comment 9: There is a suggestion that guidelines 1, 2, and 3 be elevated to standards and reference the National White-nose Syndrome Decontamination Protocol Version 09.13.2018 because this disease threatens the persistence of affected bat populations. **Associated Letters: 151 and 678**

Response: Guideline 3, which requires the use of the most current decontamination procedures, has been elevated to a standard. Guidelines 1 and 2 remain as guidelines because we cannot foresee all the circumstances that may arise. Guidelines only allow for deviation when the original intent of the direction is met. Elevating guideline 3 to a standard provides the necessary constraint to protect bats, regardless of the specific circumstances.

Comment 10: Commenter states that in 2013, the white-nose syndrome-causing fungus was renamed from *Geomyces destructans* to *Pseudogymnoascus destructans*, or Pd for short. **Associated Letter: 678**

Response: Thank you for catching this error. All references to *Geomyces destructans* have been updated in the documents.

Guideline 4

"Management activities near a known cave or within 100 feet of an abandoned mine opening should not affect structural integrity of the cave or microclimate conditions by altering vegetation, hydrology, water chemistry, and sedimentation, except where necessary to protect associated natural resources or to protect health and safety."

Comment 11: There is a concern that the 100-foot buffer is not sufficient and that a 300-foot minimum buffer is more appropriate. **Associated Comment: 699**

Response: To clarify intent, this guideline has been modified to read: **"**Management activities that have the potential to affect microclimate, hydrology, water chemistry, sediment regime, or structural integrity of the cave or mine feature should incorporate a buffer zone to avoid impacting the cave or mine feature environment. The size of the buffer may be dependent on site and activity but should be at least 100 feet. Buffer zones less than 100 feet may only be used where necessary to protect associated natural resources, health, or safety." The most appropriate buffer size depends on the activity and site-specific conditions. The intent of the guideline is to preserve the structural integrity or microclimate conditions that provide for maintenance or achievement of desired conditions for these features. The buffer distance could be made larger or smaller based on the proposed activity and site-specific conditions, if the intent of the guideline is met.

Guideline 5

"Environments in abandoned mines should not be altered except where necessary to protect associated natural resources or to protect health and safety. Where closures are necessary to protect human health and safety,

closures should preserve habitats for wildlife, including roosting bats, and avoid direct impacts to bats. If bats or other species are present, closure structures, such as wildlife-friendly gates that meet the most current recommendations should be used, to allow species to continue using the cave. If gates are used, a lock or removable bar, or both, should be installed to allow future access for authorized personnel."

Comment 12: Commenters note the importance of properly constructed, bat-friendly gates placed across important cave and mine entrances, recommend the plan reference a publication by Sherwin and others (2009) titled "Managing Abandoned Mines for Bats," and provide a link to the publication on the web. Commenters state the guidelines found in this publication and those found on the White-Nose Syndrome Response Team's website should inform the design and placement of bat-friendly gates. **Associated Letter: 678**

Response: This guideline is identical to guideline 2 in this section of the draft plan, except it applies to abandoned mines and guideline 2 applies to caves. These two guidelines were combined in the final. These guidelines and the management approach titled "Cave Management Plans and Relationships" were intended to provide the direction necessary for bat-friendly mine closures. Reference to the suggested material has been added as a footnote to guideline 2 and additional detail has been included in the management approach.

Suggested Guidelines

Comment 13: There is a concern that there are no guidelines with respect to grazing near caves and locating salt/nutrient stations away from karst features and cave entrances. **Associated Letter: 699**

Response: Cave entrances and karst features have been added to Livestock Grazing guideline 2, which identifies areas where mineral supplements should not be placed.

Management Approaches

White-nose Syndrome Response Plans and Relationships

Comment 14: Commenters support this management approach and request that the North American Bat Monitoring Program is added to the list of collaborators. NABat, as it is known, is creating a continent-wide program to monitor bats at local to range-wide scales that will provide reliable data to promote effective conservation and long-term viability of bat populations across the continent. We also encourage the Forest to include in the management approaches a statement of intention to proactively monitor and test for the fungus *Pseudogymnoascus destructans* (Pd), which causes white-nose syndrome. A proactive approach to white-nose syndrome may not prevent the onslaught of the disease but it may help speed management responses when the disease does arrive on the forest. **Associated Letter: 678**

Response: NABat has been added to the list of collaborators in the White-nose Syndrome Response Plans and Relationships management approach. Additional discussion regarding collaborative monitoring and testing for *Pseudogymnoascus destructans* has also been added.

Comment 15: Commenters are concerned that the following statement is incorrect: "Currently, neither the cause nor the transmission of white-nose syndrome is well understood." Commenters assert the cause and transmission of white-nose syndrome has been thoroughly researched and methods looking at treatment are presently being explored by cave scientists around the country. **Associated Letters: 684 and 699**

Response: This statement has been reworded for clarity and accuracy. The cause of white-nose syndrome is known to be *Pseudogymnoascus destructans*. Modes of transmission remain an active topic for research as gaps in our knowledge still exist (Bernard et al. 2020).

Literature Cited in Response:

Bernard, R.F., J.D. Reichard, J.T.H. Colman, J.C. Blackwood, M.L. Verant, J.L. Segers, J.M. Lorch, J.P. White, M.S. Moore, A.L. Russell, R.A. Katz, D.L. Lindner, R.S. Toomey, G.G. Turner, W.F. Frick, M.J. Vonhof, C.K.R. Willis, and E.H.C. Grant. 2020. Identifying research needs to inform white-nose syndrome management decisions. Conservation Science and Practice 2020;2:e220. https://doi.org/10.1111/csp2.220.

Cave Management Plans and Relationships

Comment 16: There is support for this management approach but concern that forest staff have not asked the caving community for help with developing cave management plans and a suggestion to contact the Southwest Region of the National Speleological Society. **Associated Letters: 684 and 699**

Response: We have not yet developed of any cave management plans. At the time this response to comment was written, those processes had just been initiated, including a collaborative effort that includes the Society and other interested stakeholders.

Climate, Carbon, and Adaptation

General

Comment 1: Commenter states that the plan does not adequately address climate change as it relates the social, cultural, and economic sustainability and multiple uses, and recommends a separate section with plan content and direction in addition to the plan's Management Approach to Change and Uncertainty. **Associated Letter: 26**

Response: Climate change has ecological, social, cultural, and economic implications. Therefore, the Management Approach to Change and Uncertainty is plan-wide and contains material related to ecological and watershed resources as well as social, cultural, and economic sustainability and multiple uses. This management approach has been substantially reorganized in the final plan and includes updated and additional content related to the vulnerability of social, cultural, and economic sustainability and multiple uses, adaptation strategies for recreation, transportation and facilities infrastructure, wildland-urban interface, water uses and wood product industries, including direct links to responsive plan components, supporting plan content, and regional and national frameworks. Non-specific suggestions for plan components cannot be incorporated into direction.

Comment 2: There is a concern that the plan, especially the level of emphasis on monitoring, does not do enough to address restoration in the context of climate change. Suggested remedies include: (1) more research and collaboration incorporated into the monitoring plan; (2) a webpage on the forest's site with a strong statement about climate, ecosystems, restoration projects and collaboration; and (3) a volunteer and partnership coordinator. **Associated Letter: 30**

Response: The purpose of the plan monitoring program is to test assumptions, conditions, and management effectiveness over time relative to determine if a change in plan components or other plan content may be needed. The 2012 Planning Rule requires at least one monitoring question and associated indicator(s) to measurable changes on the plan area related to climate change and other stressors that may be affecting the forest (36 CFR 219.12). The draft monitoring plan exceeds this minimum requirement. Draft Minimum Required Monitoring Questions 9 through 11 all provide information about the impacts of climate change. Further, most questions and indicators will need to be evaluated in the context of climate change, because climate change may be influencing the outcomes of management and progress toward desired conditions for vegetation, disturbance regimes, soil and watershed condition, riparian and aquatic ecosystems, and species.

The plan's monitoring program is consistent with recommendation made by the Southwest Ecological Restoration Institute at Northern Arizona University, Forest Service State and Private Forestry, and Forest Service Research branches as part of a collaborative process to inform development of the Forest Service Southwestern Region's broadscale monitoring plan (Waltz et al. 2017). While the broadscale monitoring plan is still under development, the forest plan's monitoring program will eventually tier to it.

As described in the National Roadmap for Responding to Climate Change (USDA-FS 2011), national-level efforts by the agency to use monitoring networks at multiple scales is ongoing. As part of this effort, the newly updated Sustainability Action Plan (USDA-FS 2020), Climate Adaptation Plan (USDA-FS 2022), and Climate Action Tracker (formerly the Climate Change Scorecard) provide standardized monitoring and reporting progress to track national forest and grassland efforts related to climate change. The Climate Action Tracker represents a transition from climate readiness (Climate Change Scorecard) to climate action reporting. Forest Service regional offices are in the process of developing their own climate adaptation strategy documents that will implement or supplement the national roadmaps and plans.

Website content is beyond the scope of the forest plan. The agency has a national-level website on sustainability and climate change . While the plan's vision includes a year-round trail crew, staffing decisions are not made in the plan. Workforce planning is an ongoing effort within the agency. It is possible that a volunteer and partnership coordinator position could be created in the future. There does appear to be an upward trend in these types of positions across the agency. It is also possible that a volunteer coordinator might not be an agency employee, but a volunteer themselves.

Literature Cited in Response:

USDA-FS (United States Department of Agriculture – Forest Service). 2020. Sustainability Action Plan. Office of Sustainability and Climate. Washington, D.C. 14 pp.

USDA-FS (United States Department of Agriculture – Forest Service). 2022. USDA Forest Service Climate Adaptation Plan. Office of Sustainability and Climate. Washington, D.C. 83 pp.

Waltz, A., Z. Wurtzebach, B. Esch, T. Wasserman, and C. Schultz. 2017. Developing a Framework for the U.S. Forest Service Broader-Scale Monitoring Strategy: Processes and Outcomes. Technical Report. The Southwest Ecological Restoration Institute at Northern Arizona University. 87 pp.

Comment 3: There is a concern that the EIS references the assessment report with no acknowledgement of how climate science has changed drastically from 2017 to 2020. **Associated Letter: 110**

Response: It is true that additional studies have been published since the assessment report was finalized; however, the body of science that existed prior to 2017 is still valid, relevant, and supportive of the conclusions drawn in the environmental analysis document. The draft EIS incorporated approximately a dozen climate-related references that were published after the final assessment report. Additional climate-related studies published recently were reviewed and incorporated into the final EIS.

Comment 4: There is a general concern that the plan doesn't do enough to address climate change or identify its impacts. Many commenters make this statement but provide no specific, actionable suggestions. Others suggest the plan does not and should maintain important migration corridors and undisturbed lands to create a natural buffer, extensively study threatened species, protect the Gila River and its tributaries, and end or reduce motorized recreation, timber harvest and livestock grazing. **Associated Letters: 76, 161, 163, 239, 673, 708, 718, 718.3840, 718.3844, 718.3852, 718.3865, 720, 720.5, 720.26, 720.28, 720.34, 720.18, 720.48, 721.1 through 721.3, 725.1 through 725.7, 726.12531, 729.3**

Response: The final plan's Management Approach to Change and Uncertainty outlines the principal strategies forest leadership and staff are likely to take to address climate change and identifies plan components and other content that relates to those strategies. Additional discussion has been added to the final

management approach to better demonstrate the link to plan components and other content. This management approach has been substantially reorganized and includes additional content in the final plan. Forest plans are not the only means by which the agency is addressing climate change and its impacts, as described in response to comment 2 in this section of this appendix.

The Forest Service has a research branch that studies many things related to national forest and grassland management, including threatened species. Other researchers with universities, U.S. Fish and Wildlife Service, and other entities such as the New Mexico State Forestry Division's Rare Plant Program, also study threatened species. Gila National Forest staff or contractors conduct monitoring outlined in approved recovery plans.

Regarding the suggestion for migration corridors, please see response to comment 43 in this section. We assume by "undisturbed" lands the commenters are referring to recommending additional wilderness, where natural disturbances would dominate. Please see response to comment 20 in this section regarding that topic. Regarding protecting the Gila River and its tributaries, we assume the commenters are referring to Wild and Scenic eligibility in the context of the M.H. Dutch Salmon bill. We agree that there is a potential, climate-related, secondary benefit to stream ecosystems that qualify for status under the Wild and Scenic River Act in that free-flow of whatever water is in the stream must be protected. However, that is not the intent or purpose of the Wild and Scenic Rivers Act.

Ending or reducing motorized recreation would reduce greenhouse gas emissions but would effectively exclude recreation from all but the periphery of the forest, which is not consistent with the purposes for which the National Forest System was established and does not meet the needs for change. The travel management decision signed in 2014 banned cross-country travel across the forest and restricts motorized use to system roads and motorized trails. Similarly, ending timber harvest would not fulfill the purposes for which the agency was established, nor would it fill the purpose and need for change. Timber harvest, a type of mechanical thinning, can help maintain or create progress toward desired conditions for vegetation communities, disturbance regimes, and carbon. See also response to comment 19 later in this section of this appendix for more detail on carbon and thinning treatments. On livestock grazing, please refer to response to comment 20 in this section.

Comment 5: Commenter asserts that neither the draft plan nor EIS acknowledge the well-established science that recognizes natural climate solutions can accomplish 37 percent of the Paris Climate Accord goals. Commenter points to a peer-reviewed publication by Griscom and others and states: "All 21 of these land practices are readily doable and those relating to forests are at the top of the list. Recognition of the science and its accreditation of the primary importance of forests must be emphasized, front and center." **Associated Letter: 75**

Response: The 20 natural climate solutions considered by Griscom and others (2019) and how they are addressed in the plan and in practice are (bolded text indicates Griscom and other's naming of each solution):

1) **Avoided forest conversion** refers to areas with more than 25 percent tree cover in tropical and sub-tropical climates. Temperate forests are addressed by Griscom and others under practice 3, presumably because deforestation is not a common management practice in temperate zones as it is in the tropics and sub-tropics. However, this is still relevant to temperate regions and management of the Gila National Forest. The plan contains desired conditions for forests that are based on the historical range of variation consistent with 2012 Planning Rule requirements to manage for ecological integrity (36 CFR 219.8) and agency directives (FSH 1909.12 Chapter 20 section 23.11a). Deforestation of these areas would not be consistent with the plan. Reducing tree density where it is needed to move toward desired conditions for each forest type, would be consistent with the plan. It would also reduce the likelihood of large extents of stand-replacement fire and creation of a reforestation need (see below) or an ecological type conversion to a shrubland or grassland. The analysis of carbon and climate in the EIS discusses these dynamics.

2) **Reforestation** refers to converting non-forest (less than 25 percent tree cover) to forest (more than 25 percent tree cover) in areas where it is "ecologically appropriate." Griscom and others did not include afforestation of grasslands, savanna, etc., into forested conditions. Reforestation as it relates to national forest management in the Southwest, is an activity primarily undertaken in areas that have been deforested by stand-replacement wildfire. The Gila National Forest's reforestation program is discussed in a management approach under that name in the Timber, Forest, and Botanical Products section.

3) **Natural forest management** refers to lengthening the harvest rotation cycle of native forests under "non-intensive management for wood production" by 50 years. This applies to National Forest System lands. While there are lands identified as suitable for timber production as required by the 2012 Planning Rule (36 CFR 219.11), it is not the primary purpose for which those lands are managed. Timber harvest that does not maintain or contribute toward achievement of desired conditions for forests would not be compatible with the plan. Although a 30-year harvest rotation is a standard silvicultural assumption, and one that is made in the required estimate of timber harvesting levels (36 CFR 219.7 (3)(iv) and 219.11) (Youtz and Vandendrieche 2015), the plan is flexible and does not specify a harvest rotation interval because there may be reasons besides carbon management that an interval might need to be longer or shorter. The actual rotation interval will be based on risk, what is needed to maintain or move toward desired conditions, and what the market and industry can do to facilitate that. Extending a rotation by 50 years may have carbon benefits and support recruitment of more age classes. However, there is also risk associated with creating conditions that support stand-replacement fire where it is not part of the forest ecology.

4) **Improved plantations** are not relevant to national forests in the Southwest as plantation forestry is not and has not been practiced for many years. This style of forestry would not be consistent with the plan under any alternative (see above).

5) **Fire management**, in fire-prone, temperate forests, refers to reestablishing the natural role of fire on the landscape. The proposed action's vision, desired conditions and objectives for vegetation communities and all plan content for Wildland, Fire and Fuels support this practice.

6) **Avoided firewood harvest** refers to wood burned for cooking and heating purposes. Griscom and others describe this as being based on the number of people that rely on wood for these purposes. There remains debate regarding whether the use of biomass for energy generation is a climate mitigation strategy or not. It likely depends on what energy source would replace it. Additional discussion has been added to the EIS in the Climate and Carbon section. Many residents depend on wood harvested from the forest to heat their homes. The forest's firewood program will continue to meet this need, consistent with the agency's multiple-use sustained-yield mandate and mission to meet the needs of current and future generations. To end this program would not be consistent with that mandate or mission. To implement this natural climate solution, demand would have to decline, which is beyond the scope of the forest plan.

7) **Avoided grassland conversion** refers to avoiding the conversion of grasslands to cropland. It has limited applicability to national forest management and would only be a consideration of land adjustments. It has never occurred in the past and is highly unlikely in the future that a situation could arise where Gila National Forest leadership would consider a land exchange or disposal of grasslands for growing crops in the water-limited Southwest.

8) **Biochar** refers to amending cropland soils with biochar. The forest could certainly provide materials to supply a biochar industry.

9) **Cropland nutrient management** is not relevant to Gila National Forest management or the forest plan beyond biochar as previously discussed in 8).

10) **Conservation agriculture,** as described by Griscom and others, is not relevant to Gila National Forest management or the forest plan.

11) **Trees in croplands** are not relevant to Gila National Forest management or the forest plan.

12) **Grazing-optimal intensity** refers to decreasing stocking rates in areas that are over-grazed and increasing stocking rates in areas that are under-grazed. Stocking rates are an allotment level decision based on field conditions that change over time. These decisions are supported by the plan's desired conditions for livestock grazing. Under all alternatives, livestock grazing will be managed such that it is within the capacity of the land and supports movement toward desired conditions for other resources (DCs1-3).

13) **Grazing-legumes in pastures** is not relevant to national forest management as we are not in the business of sowing forage as is done on private land in some areas. Doing so would not be consistent with desired conditions for vegetation communities (All Upland Ecological Response Units Landscape-scale DC 3a).

14) **Grazing-improved feed** refers to avoided methane emissions because of "the use of more energy dense feed (cereal grains, improved pastures, cut and carry forages, single-celled feeds [a protein extract from pure or mixed cultures of algae, yeasts, fungi or bacteria]…" While this is less relevant to livestock grazing on public land than on private land, the plan provides the flexibility for permittees to provide supplemental feed to their animals if it is a certified-weed free product (Non-native Invasive Species S4 and G8) or is manufactured in such a way that it doesn't contain viable propagules.

15) **Grazing-animal management** refers to avoided methane emissions due to improved livestock breeds, in concert with the other identified grazing practices. Cattle bred for lower methane emissions also tend to be more profitable because of their feed conversion efficiency. However, the breed of cattle a producer chooses to run is an allotment-level decision that is not appropriate for a forest plan to dictate. As this breeding practice becomes more prevalent, opportunities for permittees to implement this natural climate solution may materialize.

16) **Improved rice cultivation** is not relevant to national forest management.

17) **Avoided coastal wetland** impacts is not relevant to Gila National Forest management or the forest plan.

18) **Avoided peatland** impacts is not relevant to Gila National Forest management or the forest plan.

19) **Coastal wetland restoration** is not relevant to Gila National Forest management or the forest plan.

20) **Peatland restoration** is not relevant to Gila National Forest management or the forest plan.

Literature Cited in Response:

Griscom, B.W., J. Adams, P.W. Ellis, R.A. Houghton, G. Lomax, D.A. Miteva, W.H. Schlesinger, D. Shoch, J.V. Siikamäki, P. Smith, P. Woodbury, C. Zganjar, A. Blackman, J. Campari, R.T. Conant, C. Delgado, P. Elias, T. Gopalakrishna, M. R. Hamsik, M. H. Herrero, J. Kiesecker, E. Landis, L. Laestadius, S.M. Leavitt, S. Minnemeyer, S. Polasky, P. Potapov, F.E. Putz, J. Sanderman, M. Silvius, E. Wollenberg, and J. Fargione. 2017. Natural climate solutions (Supplemental Information Appendix Table S2). Proceedings of the National Academy of Sciences of the United States of America. PNAS 114(44) 11645-11650. https://doi.org/10.1073/pnas.1710465114.

Youtz, J.A. and D. Vandendriesche. 2015. Overview of the Planning Requirements for Timber Suitability and associated NFMA timber calculations per the 2012 Planning Rule (36 CFR 219.11) and Directives

(FSH 1909.12, Chapter 60). Unpublished white paper. United States Department of Agriculture, Forest Service, Southwestern Region. 39 pp.

Comment 6: Commenter points to Edward O. Wilson's Half-Earth: Our Planet's Fight for Life, Liveright Publishing Corporation, New York | London, 2016 and states that "this book makes clear that human activity is the sole cause for myriad threats, making "us the most destructive species in the history of life" and because of the severity of damage and loss, one-half of this planet must be set aside for wildlife. Commenter notes there are others whose goal is 30%."

Commenter suggests that destruction of global habitat should be given emphasis in the plan and set forth the Forest Service's rewilding goals and makes the following assertions:

> "this destruction of global habitat and its consequences has given rise to an emerging discipline called "Planetary Health," a field of study that seeks to understand expanding human populations, the corresponding spread of pathogens and the link between human and ecosystem health. The world's in a "chronic emergency" of habit destruction as mining, road building, logging and rapid urbanization shrink wilderness - leading to disease transmission. A group of scholars at Stanford University are developing a center for human and planetary health - including postdoctoral fellowships for scientists to study the human ecology change - to better understand the centrality of these destructive factors.
>
> Humankind has changed the ecology of how we live with animals. Intimate living with wildlife - for example: deforestation moving bats closer to other animals and those animals closer to us - is the source of 75 percent of emerging virus. This spillover is the cause of the COVID-19 pandemic, which had an unlikely beneficiary, the planet with the drop in CO_2 emissions. To prevent further disease outbreaks, both global heating and the continued erosion of wild spaces for farming, mining and housing must end. We simply don't have the skills to make detailed suggestions, yet it is apparent that the plan fails to focus on and centralize the two most glaring and tragic aspects of civilization of which the Gila Forest is a recently recognized important part. As written, the plan misses the opportunity to lead, rather than pursue a "more of the same," business as usual approach. In times of crisis, there is no way out but for those in positions of leadership to be bold and aggressive."

Associated Letter: 75

Response: The plan provides a strategic framework that would provide abundant, diverse, high-quality, and connected habitats, keep forests as forests, and allow management the flexibility to implement the full Resistance-Resilience-Transition climate adaptation spectrum. This strategic framework includes science-based desired conditions for upland and riparian vegetation communities that include all the structural and functional ecosystem components that support critical ecosystem and watershed processes, ecological integrity, and biodiversity. Linkages between plan components and climate adaptation have now been more explicitly connected in the revised management approach Change and Uncertainty. Plan objectives for vegetation communities (see individual upland Ecological Response Units), and in the Soils, Watersheds, Riparian and Aquatic Ecosystems, Nonnative Invasive Species, and Wildlife, Fish, and Plants sections of the plan would drive management toward those desired conditions. Objectives for alternatives 2 and 5 are particularly bold and aggressive, with alternative 2 seeking to treat 2 million total acres over a 10-year period to move toward desired conditions and alternative 5 would aim to exceed that goal.

The forest plan is aligned with other agency goals, plans and programs that are intended provide leadership and apply knowledge in the pursuit of tackling climate change issues at national and global scales. Some of these larger agency efforts are described in response to comments 2 and 4 in this section. With respect to the rewilding concept and the Gila National Forest, we are aware of and acknowledge E.O. Wilson's perspectives. We are also aware of and acknowledge there are various interpretations of the rewilding concept and the 30x30 initiative that spurred the recently issued Executive Order on Tackling the Climate Crisis at Home and Abroad, and diverse opinions on what constitutes "conserved," "secured," or "protected" land.

Recent studies, including lands managed for multiple use-sustained yield in the protected area network, suggest the existing network will not be enough (Parks et al. 2023), the rewilding concept the commenter suggests might be most boldly and aggressively pursued by other jurisdictions.

Literature Cited in Response:

Parks, S.A., L.M. Holsinger, J.T. Abatzoglou, C.E. Littlefield, and K.A. Zeller. 2023. Protected areas not likely to serve as steppingstones for species undergoing climate-induced range shifts. *Global Change Biology* 29:2681-2696. https://DOI:10.1111/gcb.16629.

Comment 7: There is a suggestion that the adaptation measure of limiting management related stressors should be incorporated into the plan and discussed in the EIS. Commenter states that vulnerability to climate change requires consideration of reduction of damage to the ecosystem by limiting or reducing the level of ongoing human activities or expected increases in (1) stream clogging road construction; (2) commercial tree cutting; (3) vehicle traffic; (4) mining; (5) fires; (6) hunting of animals and foraging for plants; (7) recreational activities; and (8) utility corridors.

Commenters request that details be provided for how much motorized new road construction is anticipated for mining claims, corridors for utility and microwave transmission, increased grazing herd levels, for allowable tree cuts and how such impacts can be avoided or eliminated. They request discussion regarding what limits will be set in place for human activities so that the forest can return to its historical level of density for trees, vegetation, and species. Commenters also see a correlated problem stating: "there is no baseline given for what those historical levels were for differing environmental categories of tree density and species levels so that it is unknown what are the quantifiable levels to be set as reasonable targets for recovery." **Associated Letters: 567 and 663**

Response: The plan provides a strategic and adaptable framework to guide future projects. It does not propose or authorize any activity. The limitations or constraints on human activities are the sum of the standards and guidelines in the plan for each alternative. These are analyzed in the FEIS in terms of whether they contribute to maintenance, progress toward and achieve the desired conditions.

While it is possible that new road construction or utility corridors may be identified as necessary to implement a project or activity during the life of the revised plan, there are none at this time. If this were to occur, it would be subject to a project-level environmental analysis and would need to be consistent with the constraints outlined in the plan. It would also subject to any project-level constraints identified as necessary to mitigate undesirable impacts and contribute toward maintenance and achievement of plan-level desired conditions. These are most appropriately determined at the project level when site-specific circumstances such as topography, vegetation condition, soil type, properties, and condition, and other things are known. Permitted livestock grazing numbers and utilization levels have and will continue to be adjusted based on allotment-level conditions and circumstances. Any adjustments would have to be compatible with maintaining or achieving the plan's desired conditions and comply with plan standards and guidelines. Similarly, future commercial and non-commercial mechanical vegetation treatments are only consistent with the plan if they contribute toward maintenance or achievement of desired conditions and comply with plan standards and guidelines. Any of these actions are subject to the National Environmental Policy Act, would include a separate analysis and public engagement process, and may include additional constraints on activities beyond those in the forest plan.

The desired conditions for vegetation are based on what is known about the historical range of variation in tree density and species composition. The science basis supporting the historical range of variation was discussed and displayed in the assessment report. It is the same science which provides the basis for quantifying establishing desired conditions for tree density and community composition. It is further discussed and referenced in the plan (All Upland Ecological Response Units management approach Ranges of Values and Application of Science and, Application of Tree Density Ranges management approaches for each

vegetation community) and used in the analysis of vegetation in the EIS (see appendix E to the final EIS). The plan direction related to tree density and community composition and its relationship to climate and carbon are analyzed in the EIS in the Carbon and Climate section.

Comment 8: Some commenters observe that the forest is already losing significant numbers of trees because of climate change and scientists warn that these effects will only accelerate over time. Commenter is concerned that tree mortality is predicted to near 90 percent by the end of the century and recommends this threat should be an overall and underlying premise of the plan. Commenter states that restoration efforts are praiseworthy and challenging and observes that one way or another, fire will continue to be the most inexpensive and effective management tool.

Others assert that a combination of mechanical thinning and fire will forestall the worst of climate change but question how long lower tree densities can hold back the inevitable. This commenter concludes: "it is shameful that the Gila National Forest did not plan for climate change in the new Forest Plan as the ponderosa forests continue their retreat." **Associated Letters: 130, 361 and 632**

Response: The plan includes science-based desired conditions and objectives for vegetation communities that would address climate change, keep forests as forests for as long as possible and provide the flexibility to choose the most appropriate option from the Resistance-Resilience-Transition adaptation spectrum based on the site and circumstances. The plan's monitoring program would also track progress toward desired conditions for key vegetation community characteristics and ecological conditions, triggering and informing adaptive management actions over the life of the plan (such as MQs 3-5, 42-43, 49, 51, 55 and 56). We acknowledge that the linkages between draft plan components and climate change adaptation were not as clear as it needed to be. The final plan's management approach Change and Uncertainty has been updated to make those linkages more explicit.

The forest has lost trees due to fire and drought-stress, as well as insect infestations and disease. It is likely that at least some of this loss is attributable to climate change, and it is predicted that there will be wider-spread tree mortality because of climate change and climate-altered disturbance regimes. This has been discussed in the assessment report (Chapter 9: System Drivers and Stressors) and the EIS (Upland Vegetation, Fire Ecology and Fuels Cumulative Effects). The plan recognizes and emphasizes fire as one of the most inexpensive and effective management tools (plan sections Vision and Objective Development subheadings).

Comment 9: Commenters believe desired conditions relating to ecosystem resiliency, climate change, and carbon sequestration are especially important in the final management plan and are directly related to how vegetation is managed. Commenters recognize that forest management cannot control system stressors like drought and climate change but assert it can take actions to increase the forest's resiliency to those stressors and implement projects that ensure non-climate stressors like road densities, fragmented habitats, soil erosion, degraded riparian areas, do not significantly impact the ability of species and natural systems to respond to change. **Associated Letter: 672**

Response: We agree that these are important desired conditions. Desired conditions and objectives to move toward those desired conditions are what drive the plan. Future projects will be evaluated based on compliance with standards and guidelines and whether they will maintain or contribute toward achievement of desired conditions for resources, activities and uses. If they do not, they will not be compliant with the plan.

Comment 10: Commenter states the following statement in volume 1 on page 106 of the draft EIS is false: "Greenhouse gas emissions associated with grazing animals are primarily generated by cattle, which ultimately depends more on market forces and project level, allotment specific decisions rather than any plan-level alternative." The suggested remedy is to include a no grazing alternative, which would have the lowest greenhouse gas emissions and to remove this statement from the final EIS. **Associated Letter: 673**

Response: As discussed in volume 1 chapter 2 of the DEIS in the discussion of plan alternative development, a no grazing alternative was not considered because it does not meet the need for changes and would not be compliant with the Multiple-Use Sustained-Yield Act. The FEIS now includes a methane emissions analysis in the Climate and Carbon section to disclose emissions related to grazing animals and explore tradeoffs between alternatives.

Comment 11: Commenter states: "No question, we are experiencing a long-term drought cycle. I know that these cycles are part of the complex nature of the earth and climate change is of course recorded in the geologic record - not a recent, human-caused phenomenon (though there is a small impact). I don't judge past management decisions harshly because I know that whether we agreed or disagreed at the time, our society was trying to address the issues of the day in a reasonable, economically rationale way. I am an optimist in my view of human impacts, not a pessimist. Therefore, I believe human ingenuity is key to improving conditions…I am a proponent of continuing to be reasonable, balanced and economically astute for the sake of our counties surrounding and encompassing the" Gila National Forest." **Associated Letter: 675**

Response: We acknowledge the commenter's opinion. The 2012 Planning Rule requires us to provide for ecological integrity and sustainability, address climate change, and integrate plan direction for continued multiple use management and contributions to social, cultural, and economic sustainability.

Comment 12: Commenter quotes the first part of the draft Management Approach to Change and Uncertainty and suggests that management should focus on avoiding big fires and floods to slow down the rate of drying, or at least not to contribute to drying. Specifically, management should not manipulate vegetation or attempt to restore historic conditions. Rather, the commenter suggests: the goal should be to keep watersheds as moist as possible; prioritize funding for data collection to inform adaptive management; and adopt practices from similar systems world-wide or be a leader with innovative approaches rather than archaic ones like chaining and herbicide use. Commenter also questions the assumption that climate is not affected by Gila National Forest management. Commenter states that the Mogollon Mountains are probably big enough to influence local precipitation and temperature patterns so it's better to assume what management does on the land does influence precipitation. Commenter clarifies they agree management will not affect monsoon patterns but could try to keep the system healthy by fire management and grazing that is not detrimental to riparian zones or moisture regimes. **Associated Letter: 697**

Response: To avoid big fires and floods, the plan provides desired conditions and objectives to manipulate vegetation to restore the vegetation and fuel characteristics that support the kind of fire effects we can accept on the landscape. We acknowledge and discuss the conflicting science regarding managing for lower tree densities, the effects to site moisture and how that might influence vulnerability in the EIS (Upland Vegetation, Fire Ecology and Fuels Effects Common to All Alternatives; Soil and Watershed Resources Effects Common to All Alternatives). The plan also requires that all activities and uses provide preferential consideration to riparian areas, with that consideration being demonstrated by incorporating appropriate best management practices (Riparian and Aquatic Ecosystems S1). This is further supported by Livestock Grazing DC3 and S1, which also supports maintenance or movement toward desired conditions for soil quality, which includes soil functions related to how it captures, distributes, holds, and releases water (Soils DC 1).

Comment 13: Commenters are concerned that the expected ecological type conversions of several vegetation communities are not acknowledged in the draft plan, specifically, Spruce-Fir Forest, Mixed Conifer with Aspen and Montane/Subalpine Grasslands. Commenter points to the Climate Change Vulnerability Assessment ratings for Spruce-Fir Forest, it's importance to at-risk species and lack of recognition of these things in desired conditions or objectives. Commenter acknowledges that the management approaches for Spruce-Fir Forest and Mixed Conifer with Aspen discuss development of a vulnerability strategy, which is also listed in Appendix B: Proposed and Possible Management Practices of the draft plan and support this. Commenters note the requirements of the National Environmental Policy Act require the agency to take a hard look at the potential impacts of climate change and the planning regulations mandate the plan to provide

for the sustainability and species diversity of these vegetation types. Commenter asserts the environmental analysis should reflect numerous studies that predict a lack of snowmelt will make wet meadows, such as those associated with Montane/Subalpine Grasslands, increasingly rare. Commenter concludes with concern there are specialist species that only occur in Spruce-Fir Forest that are not on the Species of Conservation Concern list and suggests they should be because their habitat is predicted to vanish. **Associated Letter: 712**

Response: The probability of vegetation community type conversions is acknowledged in the draft plan as the commenter indicates. It is also discussed in the Management Approach to Change and Uncertainty, which has been reorganized and expanded in the final plan. Climate change impacts relative to high vulnerability ecosystems is discussed in the draft cumulative effects section for Upland Vegetation, Fire Ecology and Fuels. Additional discussion is included in the final, specifically related to grasslands. Herbaceous wetlands, which may be associated with Montane/Subalpine Grasslands, are covered in the cumulative effects section for Riparian and Aquatic Ecosystems. Species of conservation concern were identified in compliance with the procedures established in the agency's final directives implementing the 2012 Planning Rule (FSH 1909.12 Chapter 20 section 21.22).

Comment 14: Commenter observes that the draft plan and environmental analysis do address climate change but is concerned that the approach is piecemeal, and the discussion scattered. Commenter states this makes it difficult to understand how the Forest Service is planning to address climate change, how climate change is likely to impact the forest, and what gaps exist in the documents. There is a recommendation that the final plan and environmental analysis include a cohesive section on climate change that describes climate change impacts on the forest, explains how the Forest Service plans to address climate change (including climate mitigation, adaptation, and resilience), and cross-references all plan components that concern climate change. If the Forest Service is concerned about creating redundancy, there is a suggestion that this could involve either a table that lists the plan component code without the text or all the climate-related plan components in an appendix to the draft plan.

Furthermore, the commenter suggests the final environmental analysis should include a comprehensive section on climate change. This analysis should describe current and expected climate impacts in the Gila National Forest and explain how the various alternatives would address climate change. Climate impacts should be described in detail, including impacts on temperature, precipitation patterns, drought, wildfire, water resources, vegetation, species and habitat, insect infestations, disease, and invasive species. In addition to information about ecological impacts related to climate change, socioeconomic impacts, and impacts on human activity in the Gila National Forest should be described in detail. **Associated Letter: 713**

Response: The draft plan's Management Approach to Change and Uncertainty was intended to provide that cohesive section and link to plan components. We acknowledge that the draft fell short of the intention and have made several changes to the draft plan for clarity and to create better alignment with regional and national climate change adaptation strategies. Similarly, we acknowledge that climate change was not addressed consistently across ecological and socioeconomic topics in the draft EIS. This has been remedied in the final EIS with the alternatives being analyzed as adaptation strategies and climate change impacts being discussed in the cumulative effects sections. Please also see response to comments 2 and 4 in this section for more on what the agency is doing to address climate change.

Comment 15: Commenters state the principal goal of their comment letter is to help the Forest Service and the planning team build an ethical and legal case, based on the best available science, for responding appropriately to the rapidly accelerating and unprecedently threats facing the Gila National Forest from the dual, global-scaled crises of global heating and biodiversity loss, which have precipitated our planet's sixth mass extinction event. The plan should be an emergency response plan rather than business as usual. Commenters state that if there is one overarching theme to their comment letter, it is that only by coming together with a coordinated, global response will we meet the unprecedented magnitude of the challenges we face. One commenter included excerpts from the National Environmental Policy Act and the 2012 Planning

Rule, or provided scientific literature, or both, to support the suggestion that the revised plan be based on a vision for ecosystems to have ecological integrity and adaptive capacity and the development of desired conditions stating:

> "Despite the fact that the "Best Available Science" (BAS) supports the finding that the Earth is currently experiencing a global-scale ecological emergency, that humanity has recently become the dominant driver of bio-geo-chemical planetary change, and that the cumulative impact of human activity is rapidly accelerating the Earth into its sixth known mass extinction event, the Draft Plan does not contain a theme, a structure, content, or proposed alternatives that are consistent with the scope, scale, timing, or urgency of this unfolding global crisis."
>
> and,
>
> "Historic reference conditions no longer apply NEPA's mandate for 'stable-state ecological baselines' no longer apply to our current 'living reality' of uncertainty and instability…We, earth citizens, call for a re-drafting of the Gila forest draft plan to reflect 21st century global directives…We, earth citizens call for the current leaders and stewards of Earth's first designated wilderness to be heralded as leaders once again in the creation of the Earth's most complete and living forward thinking global plan of action for Earthlands Restoration and Resiliency."

Associated Letters: 193, 239, 244, 550, 601, 667, 698, and 712

Response: We agree that broad collaborative action will be required to meet the challenges ahead. Actions taken under the revised plan would contribute to that broad collective action through objectives to move toward desired conditions based on or informed by the natural range of variation, which represents the scientific and ecological understanding of the conditions that would sustain at-risk species (FSH 1909.12 chapter 20 section 23.11). Desired conditions are not tied to one version of an ecosystem map. Understanding and communicating gradual shifts in site potential and ecosystem features helps to identify the adaptation options best suited for meeting desired conditions that are not static to a particular area but remain applicable to the overall ecosystem, forest, and life of the forest plan (USDA FS 2023 Box 5).

The sections of the National Environmental Policy Act quoted by the commenter are met in draft and final plan direction, the range of alternatives, and the effects disclosures in the FEIS. The range of alternatives were based on areas of disagreement amongst stakeholders on how available resources ought to be used. The plan components and other content that enable climate adaptation and mitigation are included in every alternative, in compliance with the National Environmental Policy Act, 2012 Planning Rule and final agency directives for implementing the rule. The final management approach Change and Uncertainty has been substantially revised to (1) advance shared understanding of our vulnerabilities; (2) more explicitly link plan components and other plan content that address climate-related threats; (3) clarify how the forest plan fits in with and contributes to other regional and national plans, programs, and initiatives that address climate-related threats; and (4) provide transparency about the performance risks posed by climate change and the framework established for addressing these risks.

The Forest Service is working at multiple levels to implement climate adaption and mitigation actions. And, this work cannot be interpreted outside the full context of the National Environmental Policy Act, 2012 Planning Rule, and all the other laws and regulations governing National Forest System land management. The 2012 Planning Rule, consistent with the Multiple-Use Sustained-Yield Act, also requires that the plan provide for the integrated management of multiple uses and sustainable contributions to cultural, social, and economic systems (36 CFR 219.10). The preamble to the rule also specifically explains the intent was to recognize that ecological, social, and economic systems are interdependent, without prioritizing one over the other. (Federal Register Vol. 77, No. 68/Monday, April 9, 2012/Rules and Regulations page 212111). The desired conditions common to all alternatives provide this integration, as projects implementing the plan would have to be consistent with those desired conditions to be compliant with the plan. Plan objectives drive

management toward those desired outcomes. Standards and guidelines provide the sideboards along the path to those desired outcomes where constraints may be necessary to achieve them. Any necessary project-level constraints would be identified during project development. The plan's monitoring and evaluation program would also help trigger adjustments to changing conditions and new information. For more significant changes, the plan can be amended with the appropriate National Environmental Policy Act process.

We agree that the study by Park Williams and others (2020), which was published after the draft documents were released to the public, is highly relevant. It has been incorporated into the final EIS along with several other recently published scientific literature on climate change and adaptation.

Literature Cited in Response:

Park Williams, A., E.R. Cook, J.E. Smerdon, B.I. Cook, J.T. Abatzoglou, K. Bolles, S.H. Baek, A.M. Badger, B. Livneh. 2020. Large contribution from anthropogenic warming to an emerging North American megadrought. Science 368:6488 pp. 314-318. DOI:10.1126/science.aaz9600.

USDA FS (United States Department of Agriculture-Forest Service). 2023. Regional climate adaptation strategy: Integrating existing tools, science, and collaborative outcomes for climate adaptation, mitigation, and socioeconomic vulnerability. Version 9. USDA Forest Service technical guide. Southwestern Region, Albuquerque, NM. 158 pp.

Comment 16: Commenter states: "I would like to start by noting that I have read and fully support the comments that have been submitted by Mr. Mike Fugagli. Mr. Fugagli observes that the draft Forest Plan fails to address-- except in passing--the number one ecological issue of our time: climate change. In part, this failure is due to the constraints of law, such as the criteria to be used in recommending areas to be designated as wilderness. I believe there is considerable leeway for judgment in applying those criteria, however, which leads me to conclude that a failure of vision is also to blame for the plan's short-sightedness in the face of even conservative estimates of the effects of climate change on the Gila National Forest and our world…I believe the description of alternative 2 as one that balances the various stakeholder interests in forest management is inaccurate and represents an abdication of responsibility by an agency that has access to the best available science. An approach that is 'balanced' by historical standards is not adequate today, when ameliorating the effects of climate change is in fact the only approach that stands a chance of meeting any stakeholder's long-term interests. It is akin to hewing to the middle of the river, even as our canoe approaches a waterfall." **Associated Comment: 601**

Response: Commenter provides an opinion regarding alternative 2-proposed action. Commenter's letter number has been associated with the responses to comments submitted by Mr. Fugagli. Based on endorsement of Fugagli's comments and the wilderness concern, commenter is referred to response to comment 20 in this section of this appendix. We acknowledge the commenter's opinion about alternative 2.

Comment 17: Commenter states: "We as a country have seen the dynamic yet disastrous effects of climate change. This has most likely never been so evident as these past, recent wildfires of the Southwest. Wildfires driven by what seems to be an unending drought is the reason for our need of appropriate and science-based policies. The Forest Service must seriously review this plan and identify all those areas that deserve protection to maintain the forest's biodiversity. We as a Nation and you as a land-management agency must realize that we must change our perception on what works to maintain sustainability. The old practices and policies of old are not necessarily appropriate in this new 21st century. We need to break old habits. With the Gila Wilderness being the first such designation in the United States, it only seems fit that the science of the future be used to protect its resources today. The Gila National Forest needs to advance and implement a science-based policy as it addresses forest management, biodiversity, and climate change. It is becoming a cliché to say that we should use the best available science, but it is true. But it also can become empty words unless there is a real effort to make those words mean what they say." **Associated Letter: 69**

Response: We acknowledge the commenter's concern. The plan and the environmental analysis are supported by the best available science as referenced in the documents and documented in the project record. Please see response to comments in the Best Available Science section of this appendix. The plan also has the flexibility to adjust management based on monitoring, and as new information comes available or changed conditions occur. For more significant changes, the plan can be amended with appropriate National Environmental Policy Act process. On the wilderness topic, the commenter is referred to response to comment 20 in this section of this appendix.

Comment 18: Commenter states the carbon storage discussion in the EIS is interesting, but carbon doesn't appear to be a productive area for active management. Carbon moves in, carbon moves out. Forest protection, maintaining forest health, soils, watersheds, native vegetation, natural processes including fire, will result in a natural flow of carbon in and out of the forest. **Associated Letter: 193**

Response: Thank you for your interest in the Climate and Carbon section of the EIS. The discussion of the carbon cycle and carbon carrying capacity in the Climate and Carbon Affected Environment were not intended to give the impression that active management was not productive. To the contrary, active management that moves the vegetation and soil resources toward desired conditions can provide carbon and climate benefits. The degree to which each alternative is expected to affect greenhouse gas emissions and generate movement toward desired conditions for carbon storage is analyzed and discussed in the Climate and Carbon section of the EIS to provide the decision maker information about the relative differences between alternatives. Alternatives 1, 3, and 4 would store more carbon over the short term but are likely to promote more carbon emissions and reduced storage capacity over the long term. Alternatives 2 and 5 would address the long-term risk by accepting more carbon emissions in the short term, promoting long-term stabilization of storage capacity.

Comment 19: Commenters are concerned that the plan does not adequately provide for carbon storage as a mitigation measure for climate change and that the plan should maximize carbon storage. Commenters suggest that harvesting trees, especially large, tall, and old trees, has implications for carbon capture, storage and emissions, as well making the site hotter, drier, and less suitable for the species that should be there. Some suggest that management should be directed toward planting rather than cutting and maintaining the maximum number of trees a site can hold to store carbon and mitigate climate change. Others state that large trees sequester carbon at a higher rate and are typically more fire resistant than smaller trees suggesting that cutting large trees should be prohibited, and firewood collecting should go back to dead and down only. Alternatively, forest staff could mark the small trees they want cut to remove fuel load in live firewood cutting areas. Others point to published literature by McDowell and Allen (2015) that suggest large, tall, and old trees are most likely to die from drought stress and the Forest Service should not target them for cutting because of their vulnerability.

Another commenter states:

> "The GNF should also work with permittees to investigate means of enhancing grassland soils to increase carbon sequestration. Although the plan asserts that carbon sequestration is impossible, that statement apparently only contemplated above ground sequestration in trees and plant mass, whereas there is growing scientific understanding that massive sequestration can occur in soils via treatments such as biochar and compost tea."

Associated Letters: 63, 69, 233, 317, 611, 634, 697, 718.3829, and 726.12360

Response: The Gila National Forest staff and the revised plan recognize the vital role that national forests play in carbon capture, storage, and release. National forest and grasslands are managed for many different ecosystem services and uses based on the Multiple Use Sustained Yield Act, the National Forest Management Act, and the 2012 Planning Rule among other legal mandates. The revised plan emphasizes management for overall ecological function and integrity, which has carbon benefits. However, the science demonstrates that

maximizing carbon sequestration is neither ecologically appropriate or effective in mitigating and adapting to climate change in the arid Southwest (see draft and final EIS Carbon and Climate Affected Environment and Environmental Consequences). Please also see response to comment 10 under the Upland Vegetation, Fire Ecology and Fuels section of this appendix related to old and large trees.

Neither the plan nor the environmental analysis asserts that carbon benefits are impossible. The plan contains desired conditions for carbon storage (All Upland Ecological Response Units Landscape-scale DC6 and Soils DC1e). The discussion in the Carbon and Climate Affected Environment acknowledges the role of vegetation and soil in the carbon cycle. Both above ground vegetative carbon and soil organic carbon are analyzed and discussed as environmental consequences. Forest staff coordinate and work with grazing permittees on all activities that occur within their respective allotments. Grazing management and soil organic carbon are discussed under the Effects Common to All Alternatives heading in the Climate and Carbon section of the EIS.

Application of biochar and compost tea are ways to increase soil organic carbon in cropping systems and mining reclamation. There are very few studies related to the utility and effectiveness of wildland applications of biochar (Fehmi et al. 2020; McAvoy and Villalba 2019), and some indicate there may be unintended consequences of widespread application due to changes in the reflectance properties of soil (Verheijen et al. 2013). We cannot find any studies related to the utility, feasibility, or effectiveness of compost tea applications in wildland systems. However, should biochar or compost tea application prove to be beneficial and practicable, those applications would be allowed under revised plan direction.

Literature Cited in Response:

Fehmi, J.S., C. Rasmussen, and R.E. Gallery. 2020. Biochar and woodchip amendments alter restoration outcomes, microbial processes, and soil moisture in a simulated semi-arid ecosystem. Restoration Ecology 28:S4. Pp. S355-S364. Doi:10.111/rec.13100. Supporting information at: http://onlinelibrary.wiley.com/doi/10.111/rec.13100/suppinfo.

McAvoy, D. and J. Villalba. 2019. “Flame cap kilns for hazardous fuels reduction and biochar application in the western United States" in "Bio-Char II: Production, Characterization and Applications,” Franco Berruti, Western University, London, Ontario, Canada David Chiaramonti, RE-CORD, University of Firenze, Italy Ondrej Masek, University of Edinburgh, Edinburgh, United Kingdom Manuel Garcia-Perez, Washington State University, USA Eds, ECI Symposium Series, (2019). https://dc.engconfintl.org/biochar_ii/68.

Verheijen, F.G.A., S. Jeffery, M. van der Velde, V. Penížek, M. Beland, A.C. Bastos, and J.J. Keizer. 2013. Reductions in soil surface albedo as a function of biochar application rate: implications for global radiative forcing. Environmental Research Letters 8(2013) 0044008. 7 pp. doi:10.1088/1748-9326/8/4/044008.

Range of Alternatives

Comment 20a: This comment was received as a fully formed, cohesive citizen’s alternative to address climate change. Others in the community took that alternative and added their own specific concerns, suggestions, and rationale to specific aspects of the proposed alternative. While we wanted to take a holistic approach in our response, the complexity and nuance of the comments received necessitated breaking the larger, cohesive concern and ideas on how to address it into smaller pieces. This made it easier for us to make sure we provided a full and complete response that other interested parties, more removed from the Gila National Forest’s plan revision, would be better able to follow.

There is a concern that the range of alternatives commits a “Sin of Omission” because it does not include and analyze a reasonable alternative that is consistent with a climate emergency response plan. Commenters state the best available science indicates there is a global, regional, and Gila National Forest climate emergency,

pointing specifically to the climate change vulnerability assessments referenced in the draft documents. Commenters observe deficiencies in the draft documents and suggest alternative elements that would address their concerns. The first four deficiencies are:

1) The documents do not accurately characterize the current moment as an ecological "crisis" or "emergency" despite the admission that unprecedented ecological change is likely within this century.

2) The global biodiversity crisis or the related mass extinction event currently underway are not even mentioned or addressed despite their distinct role as a dominant drivers of global ecological collapse.

3) The documents do not discuss the critically important difference between mitigation (agency responsibility to reduce the total level of future stress) and adaptation (agency responsibility to reduce the total impact of future stress).

4) The documents do not inform the public or provide plan components consistent with the findings of the best available science that indicates a small window of opportunity, perfectly concurrent with the expected life of the revised plan, remains open to potentially forestall or mitigate the crossing of ecological thresholds, tipping points or discontinuities which would likely lead to catastrophic and irreversible ecological decline.

Commenters suggest that to address these deficiencies, the following must be incorporated into one or more alternatives analyzed in detail: Amend the draft plan's vision statement to fulfill the responsibilities of this generation as trustee of the environment for succeeding generations, and in response to unprecedented global and regional ecological change, as well as the imminent threat of catastrophic and irreversible ecological collapse and commit managers to work toward maximum ecological resilience and resistance of landscapes within the Gila National Forest.

1) Accurately characterize the current moment as an ecological "crisis" or "emergency."

2) Include substantive discussion of the global biodiversity crisis and the mass extinction event currently underway.

3) Include a substantive discussion about the critically important difference between mitigation (agency responsibility to reduce the total level of future stress) and adaptation (agency responsibility to reduce the total impact of future stress) and the role that each management approach could play as a response to this unprecedented ecological crisis.

4) Include a substantive discussion about the "window of opportunity," perfectly concurrent with the expected life of the new forest plan, that remains open to potentially forestall (mitigate) the crossing of ecological thresholds (tipping points, ecological discontinuities), which would likely lead to catastrophic and irreversible ecological decline.

Response: The plan's vision section is consistent with the agency's mission and responsibility to this and future generations. The purpose of including the optional vision statement is to empower future leadership and staff with an understanding of the local issues and values that informed the plan revision effort. The hope was that this understanding would help future leadership provide continuity in community relationships when the baton was passed. Revisions of the vision section were made between draft and final. The focus remains on community relationships, a healthy, functioning landscape, backcountry recreation experiences, and traditional uses. It contains both history and hope for the future. The plan does not compel any agency action or guarantee specific outcomes (FSH 1909.12 chapter 20 section 21).

The Gila National Forest's strategic plan is not the appropriate instrument for an emergency declaration, but it does address the urgency of the present moment with ambitious objectives to move toward desired conditions for vegetation communities, which includes the full climate adaptation spectrum (Resistance-Resilience-

Transition) as appropriate for the site. Managers would be striving to implement restoration and adaptation actions on 2 million acres over a 10-year period rather than the roughly 20,000 acres that have been treated in past decades.

We maintain that the plan's draft management approach Change and Uncertainty did not downplay climate change, but we recognize there was room for improvement. The final Change and Uncertainty management approach contains extensive revision and additional information based on further review by planning staff, new information and stakeholder comment. This includes a discussion about biodiversity conservation (see Adaptation, Natural Systems subheading especially numbered items 3, and 5 through 8), the "window of opportunity" (last paragraph under the Vulnerability subheading), edits to improve clarity about adaptation and mitigation and expanded content on climate change mitigation efforts (see Mitigation subheading, which now includes Carbon Management and Sustainable Operations subheadings).

Associated Letters: 45, 48, 50, 55, 57, 60, 62, 63, 70, 71, 75, 84, 87, 92, 106, 107, 118, 121, 122, 140, 143, 144, 150, 152, 167, 168, 181, 201, 239, 270, 361, 362, 482, 508, 514, 542, 550, , 563, 579, 582, 601, 602, 608, 609, 624, 632, 634, 656, 662, 666, 667, 673, 678, 680, 684, 685, 694, 698, 707, 712, 728.1 through 728.433, 728.240, 728.251, 728.260, 728.265, 728.290, 728.297, 728.302, 728.313, 728.330, 728.334, 728.337, 728.355, 728.364, 728.369, 728.356, 728.368, 728.370, 728.377, 728.378, 728.379, 728.384, 728.385, 728.386, 728.388, 728.406, 728.412, 728.422, 728.429, 729.8, 729.9, 730.69

Comment 20b: In addition to the deficiencies and suggested remedies discussed above in comment 20a, commenters state that the draft documents fail to properly interpret and apply the National Environmental Policy Act and the 2012 Planning Rule in the context of the climate emergency and fail to acknowledge all the mandates and directives discussed in an earlier comment submission (comment letter 550 and comment 15 in this subsection of this appendix). Commenter states these mandates and directives could rightly be interpreted as a legal mandate to provide a plan alternative that is consistent with an emergency response and provides a laser focus on maximizing resistance and resilience in an urgent attempt to work collaboratively toward the global effort to mitigate and adapt to the reality of climate change and our ongoing extinction crisis. Commenter also states the documents fail to discuss performance risks associated with the plan's desired conditions unless there is immediate, deep, global de-carbonization, protection of carbon sinks and biodiversity, and removal of carbon from the atmosphere.

Commenter suggests that to address these deficiencies, one or more alternatives analyzed in detail must include a substantive discussion about:

1) How the National Environmental Policy Act and the 2012 Planning Rule should be interpreted and applied in an emergency.

2) What mandates and directives for ecological integrity, persistence, restoration, recovery, and sustainability mean, in terms of agency responsibility, in a period of rapidly accelerating, and unprecedented ecological change. The conclusion of this substantive discussion must be that these mandates and directives constitute a legal requirement that the plan is an emergency response plan with a laser focus on building resistance and resilience.

3) The performance risks associated with the plan's desired conditions if a global policy of deep de-carbonization, protection of carbon sinks and biodiversity, and removal of carbon from the atmosphere. This discussion should conclude that the plan's desired conditions are only achievable if these mitigation actions are taken.

Associated Letters: 45, 48, 50, 55, 57, 60, 62, 63, 70, 71, 75, 84, 87, 92, 106, 107, 118, 121, 122, 140, 143, 144, 150, 152, 167, 168, 181, 201, 239, 270, 361, 362, 482, 508, 514, 542, 550, , 563, 579, 582, 601, 602, 608, 609, 624, 632, 634, 656, 662, 666, 667, 673, 678, 680, 684, 685, 694, 698, 707, 712, 728.1 through 728.433, 728.240, 728.251, 728.260, 728.265, 728.290, 728.297, 728.302, 728.313, 728.330, 728.334,

728.337, 728.355, 728.364, 728.369, 728.356, 728.368, 728.370, 728.377, 728.378, 728.379, 728.384, 728.385, 728.386, 728.388, 728.406, 728.412, 728.422, 728.429, 729.8, 729.9, 730.69

Response: Response to comment 15 in this section of this appendix responds e to this concern as it discusses how the plan and alternatives meet the requirements of the National Environmental Policy Act, 2012 Planning Rule and agency directives, as well as the Multiple-Use Sustained-Yield Act. The response to comment 15 is also relevant to the plan's performance risks associated with climate adaptation. If desired conditions for vegetation communities are tied to one version of an ecosystem mapping product, thereby, to a specific acre of land, then the evidence suggests the conclusion drawn by the commenter is likely to play out (see final plan management approach Change and Uncertainty, Vulnerability subheading, last paragraph).

Desired conditions in the plan are based on what is known about the natural or historic range of variation before European settlement and the disruption of disturbance processes. In our climate reality, desired conditions need to reflect the current and foreseeable potential of the ecosystem and be informed by the best available scientific information to support long-term ecosystem function (USDA FS 2023). The natural range of variation provides a likely and reasonable starting point in understanding the conditions that support ecological sustainability (FSH 1909.12 chapter 20 section 23.11a item 3). Therefore, desired conditions based on the natural range of variation define realistic management goals and a basis on which to evaluate the success of adaptation efforts (USDA FS 2023). The plan's final management approach Change and Uncertainty includes a discussion of the plan's performance risks under the subheading Adaptation.

Literature Cited in Response:

USDA FS (United States Department of Agriculture-Forest Service). 2023. Regional climate adaptation strategy: Integrating existing tools, science, and collaborative outcomes for climate adaptation, mitigation, and socioeconomic vulnerability. Version 9. USDA Forest Service technical guide. Southwestern Region, Albuquerque, NM. 158 pp.

Comment 20c: In addition to the deficiencies and suggested remedies discussed in comments 20a and 20b, commenters state the draft documents fail to provide a meaningful discussion about how traditional economic uses of the forest are balanced against the urgent need to maximize ecological resistance, resilience or integrity during this crisis and small window of opportunity.

Commenter suggests that to address these deficiencies, one or more alternatives analyzed in detail must include a substantive discussion about how the plan balances traditional economic uses against the urgent need to maximize ecological resistance, resilience, and integrity during this time of unprecedented change.

Response: We acknowledge the commenter's opinion that the plan must prioritize ecological resistance, resilience and integrity and over traditional economic uses to address climate change. The plan and alternatives do not embrace such a dichotomy. The plan provides for climate adaptation (Resistance-Resilience-Transition) in the contexts of integrated multiple-use sustained-yield management as required by the 2012 Planning Rule. The 2012 Planning Rule also requires plans provide for integrated resource management, which is defined as "Multiple use management that recognizes the interdependence of ecological resources and is based on the need for integrated consideration of ecological, social and economic factors" (36 CFR 219.19), without one being a priority over another" (Preamble to 36 CFR 219).

Further, current science suggests that approaching climate mitigation and adaptation efforts without adequate consideration of how natural and human systems are coupled could produce unintended, negative "spillover" effects (Liu et al. 2021). Liu and others provide an example of these effects where efforts to stop de-forestation in the Amazon lead to de-forestation in another important Brazilian ecosystem as people just found an alternative place for food production (2021). The plan's integrated desired conditions for traditional multiple uses, and the ecosystems and watersheds those uses take place in, would provide for ecological

integrity and climate adaptation and provide climate justice for local communities (in the sense of Anguelovski and Corbera 2022).

Literature Cited in Response:

Anguelovski, I. and E. Corbera. Integrating justice in Nature-Based Solutions to avoid nature-enabled dispossession. Ambio 2023, 52:45-43. https://doi.org/10.1007/s13280-022-01771-7.

Liu, J., T. Dietz, S.R. Carpenter, W.W. Taylor, M. Alberti, P. Deadman, C. Redman, A. Pell, C. Folke, Z. Ouyang, and J. Lubchenco. 2021. Coupled human and natural systems: The evolution and applications of an integrated framework. Ambio 2021, 50:1178-1783. https://doi.org/10.1007/s13280-020-01488-5.

Comment 20d: In addition to the deficiencies and suggested remedies discussed in comments 20a, b, and c, commenters state the draft plan lacks needed mitigation and adaptation measures. Commenters propose a climate change alternative consisting of four "natural climate solutions" that would be implemented as a cohesive whole and provide a detailed rationale as to why each of these elements is critical to addressing climate change. The first of the four alternative elements is maximizing wilderness. Commenters assert wilderness designation is a natural climate solution and restoration tool that can achieve landscape-scale resistance and resilience. The following is provided as rationale:

1) The best available science clearly identified massive rewilding, and the protection of the Earth's remaining wildlands as urgent priorities in the fight to forestall global ecological collapse. Scientist and policy makers are finalizing global goals to protect at least 30 percent of the world's lands and oceans by 2030, with the hope of 50 percent by 2050.

2) The restoration and protection of wildlands as wilderness is a proven way of storing and reducing emissions from the world's forests, grasslands, and wetlands.

Associated Letters: 45, 48, 50, 55, 57, 60, 62, 63, 70, 71, 75, 84, 87, 92, 106, 107, 118, 121, 122, 140, 143, 144, 150, 152, 167, 168, 181, 201, 239, 270, 361, 362, 482, 508, 514, 542, 550, , 563, 579, 582, 601, 602, 608, 609, 624, 632, 634, 656, 662, 666, 667, 673, 678, 680, 684, 685, 694, 698, 707, 712, 728.1 through 728.433, 728.240, 728.251, 728.260, 728.265, 728.290, 728.297, 728.302, 728.313, 728.330, 728.334, 728.337, 728.355, 728.364, 728.369, 728.356, 728.368, 728.370, 728.377, 728.378, 728.379, 728.384, 728.385, 728.386, 728.388, 728.406, 728.412, 728.422, 728.429, 729.8, 729.9, 730.69

Response: The range of alternatives for wilderness recommendations to Congress for designation range from zero to almost 750,000 additional acres. Wilderness recommendation or designation does not convey resistance or resilience. Resistance and resilience are products of intact forest structure, community functional traits, natural processes, and other ecosystem characteristics. These areas may also have wilderness characteristics that make them suitable for recommendation and designation.

While the primary purpose of wilderness is the use and enjoyment of the American people, there may be secondary benefits. There may also be unforeseen consequences or challenges associated with climate mitigation and adaptation associated with wilderness. Wilderness designation withdraws an area from mineral entry, subject to existing valid rights and restricts mechanized activities and modes of travel. Climate change will not stop at wilderness boundaries, and the subject of climate adaptation in wilderness is one of ongoing interest in research in sociopolitical, legal, ethical, and ecological context (for example Landres et al. 2019). Further, the best available science indicates that the global protected area network, which includes wilderness and lands managed under multiple use-sustained yield principles, is unlikely to serve biodiversity conservation, as it was hoped, in its current configuration and extent (Parks et al. 2023). Which suggests that any protected area initiative might be more effective targeting lands not already considered to have some level of protection, rather than arguing for more restrictive management of lands within the network already.

Similarly, wilderness recommendation and designation only serve a carbon storage and emission reduction purpose if the fuel characteristics of the area support natural fire regimes. The recommended wilderness alternative development criteria for alternatives 2, 3, and 4 considered the likelihood of large extents of stand-replacement fire (*if a fire were to occur*). Alternative 5 did not.

As discussed in the Climate and Carbon section of the EIS, the balance between carbon uptake and storage, and release to the atmosphere, is vital to maintaining a net carbon sink. As the carbon stored by vegetation approaches or exceeds the carrying capacity of the ecosystem, it becomes a wildfire liability (Hurteau et al. 2008; Hurteau et al. 2016; Hurteau 2017; Liang et al. 2017). Today's carbon sink becomes tomorrow's carbon source. Retaining the maximum amount of carbon that a site can biologically produce is not sustainable over the long term, and sometimes mechanical thinning treatments could be beneficial to promote carbon outcomes we can collectively accept.

Literature Cited in Response:

Hurteau, M.D., G.W. Koch, and B.A. Hungate. 2008. Carbon protection and fire risk reduction: Toward a full accounting of forest carbon offsets. *Frontiers in Ecology and the Environment*. 6(9):493–498.

Hurteau, M.D., S. Liang, K.L. Martin, M.P. North, G.W. Koch, and B.A. Hungate. 2016. Restoring forest structure and process stabilized forest carbon in wildfire-prone southwestern ponderosa pine forests. *Ecological Applications* 26(2) pp. 382–391.

Landres, P., B.A. Hahn, E. Biber, and D.T. Spencer. 2019. Protected area stewardship in the Anthropocene: integrating science, law, and ethics to evaluate proposals for ecological restoration in wilderness. *Restoration Ecology* 28(2), pp. 315-327.

Liang, S., M.D. Hurteau, and A.L. Westerling. 2017. *Potential decline in carbon carrying capacity under projected climate-wildfire interactions in the Sierra Nevada*. *Sci Rep* 7, 2420 (2017). https://doi.org/10.1038/s41598-017-02686-0.

Parks, S.A., L.M. Holsinger, J.T. Abatzoglou, C.E. Littlefield, and K.A. Zeller. 2023. Protected areas not likely to serve as steppingstones for species undergoing climate-induced range shifts. *Global Change Biology* 29:2681-2696. https://DOI:10.1111/gcb.16629.

Comment 20e: In addition to maximizing wilderness (see 20d above), commenters assert continuing to use fire as the primary restoration tool is a natural climate solution that should be part of a climate change alternative. Commenters recognize this is part of the draft plan and they express support. However, commenters state that the draft documents do not adequately analyze or come to the proper conclusions regarding the inherent conflict between surface fuels needed to carry low-intensity fire and available forage for livestock grazing. Commenters observe mixed messages in the draft plan regarding forage and fuels and suggest the Forest Service cannot have it both ways. Commenter states "In the exact same way that economic considerations have had to take a back seat to public health concerns during the COVID-19 pandemic, traditional economic uses of the forest must now take a back seat to ecological integrity during the life of the new Forest Plan. In fire-adapted landscapes, particularly grassland landscapes, that means the Forest Service must now prioritize fuel over forage."

Associated Letters: 45, 48, 50, 55, 57, 60, 62, 63, 70, 71, 75, 84, 87, 92, 106, 107, 118, 121, 122, 140, 143, 144, 150, 152, 167, 168, 181, 201, 239, 270, 361, 362, 482, 508, 514, 542, 550, , 563, 579, 582, 601, 602, 608, 609, 624, 632, 634, 656, 662, 666, 667, 673, 678, 680, 684, 685, 694, 698, 707, 712, 728.1 through 728.433, 728.240, 728.251, 728.260, 728.265, 728.290, 728.297, 728.302, 728.313, 728.330, 728.334, 728.337, 728.355, 728.364, 728.369, 728.356, 728.368, 728.370, 728.377, 728.378, 728.379, 728.384, 728.385, 728.386, 728.388, 728.406, 728.412, 728.422, 728.429, 729.8, 729.9, 730.69

Response: We acknowledge the commenters' opinions. Alternatives 1, 2, and 5 promote fire as the primary restoration tool. The draft plan highlights trade-offs that management will have to weigh during plan implementation related to forage and fuels and provides direction consistent with the 2012 Planning Rule's requirement for integrated resource management for multiple use (36 CFR 219.10) (Livestock Grazing DC2, G4-6, and management approaches). Again, the preamble to the final rule states: "Under this final rule, ecological, social, and economic systems are recognized as interdependent, without one being prioritized over the other" (Federal Register Vol. 77, No. 68/Monday, April 9, 2012/Rules and Regulations page 212111). Under all alternatives, livestock grazing would be managed to move toward the plan's integrated desired conditions, including those that would restore the natural role of fire on the landscape. Alternative 2 would also develop a small system of forage reserves that would be available to grazing permittees during drought, wildfire, prescribed fire, and other disturbance events, thereby enhancing the flexibility necessary to achieve integrated desired conditions.

Comment 20f: In addition to maximizing wilderness (comment 20d) and using fire as the primary restoration tool (comment 20e), commenters assert that minimizing grazing impacts as a natural climate solution must be part of a cohesive climate change alternative. Commenters suggest the draft plan fails to acknowledge and appropriately respond in any alternative the fact that there is no other discretionary, low-cost tool than minimizing grazing pressure to immediately increase landscape-scale resilience and resistance. Commenters suggest that given climate projections, the level of livestock grazing will probably need to be reduced over the lifetime of the plan. Others assert that adaptive management has failed, perhaps due to budget and staffing, and whatever grazing is allowed would need to be strictly monitored so that it does not exacerbate the impacts of climate change.

One commenter acknowledges there is some scientific debate about whether grazing can be done in a way that removes carbon dioxide from the atmosphere but asserts there is no debate that grazing done without great attention to soil compaction patterns, forage type and density, and regular herd movement leads to poor soil health, poor water retention, and net increases in atmospheric carbon dioxide. Cattle also contribute to soil erosion and stream channelization that exacerbate flash floods and carry away nutrients. Grazing reduces the ability of forest soils to retain moisture and will thereby hasten the loss of forests as the climate changes. Stripped soils will not hold enough moisture to support forest regeneration under the coming climate regime in many cases. Some commenters argue that since cattle are a primary source of species endangerment, soil compaction, erosion, and have lessened opportunities for hunting, fishing, birding, and recreation in general, and only 2 to 3 percent of beef comes from the grazing of cattle on public lands, they should not be considered essential. These commenters quote the Multiple-Use Sustained-Yield Act about the most judicious use of the land and some land being used for less than all the resources.

Commenters are concerned that under all the proposed alternatives total grazing pressure in the planning area is maintained or potentially increased with the stated goal of increasing overall forage production. The problem of the grazing issue is the Forest Service's multiple-use mandate stressing regional economic benefits against overall landscape health. Trying to balance publicly subsidized economic activity such as cattle grazing with fundamental ecosystem services like soil retention and water storage, during an unprecedented ecological crisis, is irresponsible. Commenters conclude that the plan alternatives and environmental analysis prioritize the economic sustainability of livestock producers over ecological integrity and sustainability. Failure to acknowledge and respond to the facts submitted by commenters violates the National Environmental Policy Act.

Furthermore, commenters assert that no alternative or its analysis acknowledges or appropriately responds to the best available science, which conclusively shows that livestock grazing is a net producer of greenhouse gasses and a significant contributor to global heating. Commenters suggest that to remedy these deficiencies, the revised plan must:

1) Analyze methane emissions from permitted livestock grazing.

2) Prioritize ecological integrity and ecosystem services over the traditional economic use of cattle grazing, protect the carbon sequestered in grasslands and minimize cattle-generated greenhouse gas emissions.

3) The plan should require management maximize the forest's carbon sequestration capabilities. As projected die offs of coniferous species occur due to increasing temperatures, grasslands will become the most important sequesters of carbon, and most scientific studies demonstrate cattle grazing reduces soil carbon storage. Some commenter's state that grasslands are also more resistant to ecological type conversions, but that continued grazing will accelerate desertification.

4) Back up the observation that overgrazing and fire suppression have created unhealthy forest conditions in which fire becomes catastrophic rather than helpful with strictly enforced rules about how many cattle can graze in sensitive areas, and for how long. Or permanently exclude livestock from riparian areas. Preventing damage to the Gila's riparian corridors and ensuring that grazing is not contributing to global warming must be the highest priorities.

5) Permanently retire all vacant allotments.

6) Correct the miserable failure to provide a varied range of reasonable alternatives regarding AUMS (animal unit months) by including a no-grazing alternative up to but not exceeding 50 percent of current numbers.

7) Consider the cumulative effects of having non-native species such as domestic livestock on a southwestern landscape (that is soil compaction, erosion and desiccation, lack of monitoring, displacement of native plants and animals, sediment load in streams, negative impacts to hunting, fishing recreation, pinyon and juniper invasion and lack of fine fuels to carry periodic small fires to prevent large ones).

Associated Letters: 45, 48, 50, 55, 57, 60, 62, 63, 70, 71, 75, 84, 87, 92, 106, 107, 118, 121, 122, 140, 143, 144, 150, 152, 167, 168, 181, 201, 239, 270, 361, 362, 482, 508, 514, 542, 550, , 563, 579, 582, 601, 602, 608, 609, 624, 632, 634, 656, 662, 666, 667, 673, 678, 680, 684, 685, 694, 698, 707, 712, 728.1 through 728.433, 728.240, 728.251, 728.260, 728.265, 728.290, 728.297, 728.302, 728.313, 728.330, 728.334, 728.337, 728.355, 728.364, 728.369, 728.356, 728.368, 728.370, 728.377, 728.378, 728.379, 728.384, 728.385, 728.386, 728.388, 728.406, 728.412, 728.422, 728.429, 729.8, 729.9, 730.69

Response: All action alternatives contain science-based desired conditions for vegetation communities, soils, watersheds and water resources, riparian and aquatic ecosystems, and wildlife, fish, and plant species. The action alternatives also contain desired conditions for the multiple uses the land supports. The negative impacts described by the commenters would not be consistent with the plan's desired conditions, nor would it be consistent with the laws, regulations and policies that guide livestock grazing permit administration on National Forest System lands. A description of the regulatory and policy framework guiding allotment management has been added to the livestock grazing sections in the plan (Background Information) and the EIS (Affected Environment). If those effects were to be observed on the ground, it is an implementation and enforcement issue, not a planning issue. Under all plan alternatives, livestock grazing would be directed toward maintaining and achieving desired conditions.

Monitoring is an important element of adaptive management. All action alternatives recognize this and include management approaches that describe multi-party monitoring and new tools available to inform adaptation management (final management approaches Collaboration, Adaptation and Monitoring and Drought, Forecasting Services and Adaptation). The plan's monitoring program includes monitoring questions and indicators that can be informed by allotment-level monitoring and monitoring questions. It also includes monitoring questions and indicators informed by satellite-derived information that can inform management at the plan and allotment-level. For example, MQ9 asks if temperature and precipitation patterns are supporting movement toward desired conditions for livestock grazing. The indicators are trends in

herbaceous production season start, peak, and end; trends in annual herbaceous productivity, all of which can be evaluated from satellite data using methodologies developed by (or areas with less than 25% tree cover). This data set goes back to the 1980s, can be updated annually, and has a 30-meter resolution. While not perfect, it would allow us to measure changes related to climate. While not sufficient to differentiate between multiple, interacting potential reasons for a trend, such information would be sufficient to signal a need for change. There are other monitoring questions that would also use satellite data and have dual use at the plan and allotment level, including MQ13, "How is the extent of bare soil changing over time?" and MQ30, "How is the availability of water for livestock changing over time?"

None of the alternatives propose to increase grazing pressure, but we understand how the information was displayed in the DEIS could lead someone to that conclusion. The alternatives contain objectives for vegetation management activities that would move vegetation communities and watersheds toward desired conditions. An increase in herbaceous production is a reasonably anticipated outcome of those activities. To facilitate an effects analysis for livestock grazing, AUMs were used as an indicator. Any actual increases in herbaceous production may or may not lead to additional AUMs being permitted or allowed. Those decisions would be made at an allotment level – subject to a separate Environmental Policy Act process including public involvement. In chapter 2 of the DEIS, potential changes in AUMs were displayed in the Summary of Alternatives table. AUMs are not a feature of any alternative; they are an analysis indicator. We have clarified this in the FEIS by removing AUMs and all other analysis indicators from the Summary of Alternatives and including them in the new Summary of Effects section at the end of chapter 3 in the FEIS. With regard to the suggested remedies:

1) A methane analysis has been added to the FEIS Climate and Carbon section.

2) The action alternatives desired conditions provide the foundation for integrated multiple use management, as required by the 2012 Planning Rule. Again, the preamble to the final rule states: "Under this final rule, ecological, social, and economic systems are recognized as interdependent, without one being prioritized over the other" (Federal Register Vol. 77, No. 68/Monday, April 9, 2012/Rules and Regulations page 212111).

3) It is true that grasslands are important for carbon sequestration and that areas that are now forested are vulnerable to conversion to grassland or shrubland. There is conflicting science on how livestock grazing impacts carbon storage, with some studies finding livestock grazing increases carbon storage, others that grazing reduces carbon storage, and some finding no effect (see Climate and Carbon Effects Common to All Alternatives in the DEIS and FEIS).

   It is also not a general truth that grasslands are less vulnerable than are tree-dominated ecosystems (see DEIS and FEIS Upland Vegetation, Fire Ecology and Fuels Affected Environment Table 6). It depends on where they are located within their climate envelope (Triepke 2017). In fact, there is some evidence that semi-desert grasslands are already converting to shrublands in more vulnerable areas (Caracciolo et al. 2016, Dick-Peddie 1993, Huenneke et al. 2002 as cited in Triepke 2017).

   It is also not a foregone conclusion that grazing will accelerate desertification. It depends on how it is managed. In fact, even the natural climate solutions being promoted by the Intergovernmental Panel on Climate Change do not suggest that grazing needs to be eliminated to achieve climate goals (see response to comment 5 in this section). There is conflicting science on how livestock grazing impacts carbon storage, with some studies finding livestock grazing increases carbon storage, others that grazing reduces carbon storage, and some finding no effect (see Climate and Carbon Effects Common to All Alternatives in the DEIS and FEIS). Further, some studies suggest semi-arid grasslands in the southwestern United States do not serve as a long-term carbon sink and are more often a net carbon source on an annual basis (Svejcar et al. 2008). The science on soil carbon dynamics in non-cropland settings is far from settled.

4) Overgrazing would not be compatible to plan direction under any alternative. Livestock grazing would be managed to maintain or move toward desired conditions for natural resources, the restoration of fire to its natural role on the landscape, and other resource uses. The suggestion to eliminate grazing from riparian areas is described as an alternative or alternative element considered, but not analyzed in detail. Please refer to that section of chapter 2 in the FEIS.

5) This suggestion was also considered but not analyzed in detail, as described in chapter 2 of the DEIS and FEIS.

6) As previously explained in this response to comment, AUMs do not vary by alternative. Each alternative may have effects on herbaceous vegetation and therefore forage production. AUMs were only used an indicator of effects. Allotment specific National Environmental Policy Act processes would continue to include a no-grazing alternative and a range of alternatives that would be responsive to the conditions on the ground and issues raised during those project-level opportunities to for public comment.

7) The cumulative effects analyses within the EIS are consistent with the programmatic nature of the plan alternatives.

Literature Cited in Response:

Svejcar, T.R., Angell, J.A. Bradford, W. Dugas, W. Emmerich, A.B. Frank, T. Gilmanov, M. Haferkamp, D.A. Johnon, H. Mayeux, P. Mielnick, J. Morgan, N.Z. Saliendra, G.E. Schuman, P.L. Sims and K. Snyder. 2008. Carbon Fluxes on North American Rangelands. *Rangeland Ecology and Management*. 61:465-474.

Triepke, F.J. 2017. *Assessing the Climate Change Vulnerability of the Southwestern U.S*. Dissertation. University of New Mexico, Albuquerque, NM. 147 pp.

Comment 20g: Finally, in addition to maximizing wilderness (comment 20d), using fire as the primary restoration tool (comment 20e), and minimizing grazing impacts (comment 20f), commenters assert that prioritizing the identification and protection of refugial areas must be part of a cohesive climate change alternative. Commenters recommend a plan objective is needed to identify and protect potential climatic refugia as one of the highest management priorities. Commenters state that if the predicted climatic changes continue, protecting areas that have unique microclimatic conditions related to soil, topography and site hydrology will be particularly important in the decades ahead for species to persist. Some commenters suggest that shaded slopes, like the north-facing slope of Tadpole Ridge, as well as deep river canyons, and spring areas are all examples of climatic refugia. This is especially true in areas with high resilience and high biotic potential like the mainstem, wilderness reach of the Gila River where the ecosystem's ability to provide critical refuge to a host of species and ecosystems is currently being undermined by an out-of-control population of unowned, non-permitted feral cattle. For three decades now, the wilderness reach of the Gila River has suffered impacts from this self- sustaining population of wild cattle, leaving what could be the plan area's most important refugial area subject to the damaging effects of repeated catastrophic scouring during high flow events. Commenters state that the objective to identify and protect potential refugia must include the immediate, and if necessary, under clear unilateral authority, development, and implementation of a once-and-for- all plan to remove all feral cattle from the mainstem, wilderness reach of the Gila River.

Commenters are disappointed that the draft documents once again perpetuated the myth that the NM State Livestock Board has management authority over feral cattle populations despite legal opinion upheld by subsequent case law that clearly denies management authority to any NM state agency, including the NM Livestock Board, because feral cattle do not meet the state's definition of "estray," are not considered to be "livestock," and no other applicable state law exists.

Some commenters are pleased to see refugia mapping included in Appendix B: Proposed and Possible Management Actions but would prefer it to be in a management approach, actionable plan direction, or completed as part of the plan. Some are specifically concerned about refugia for bat species stating: "On the Gila National Forest, climate refugia for bats is generally montane or upper montane forest habitats dominated by ponderosa pine or mixed conifer. By identifying climate refugia explicitly in the plan, we believe the Draft Revised Forest Plan would allow managers to manage habitats more flexibly under changing climatic conditions."

Associated Letters: 45, 48, 50, 55, 57, 60, 62, 63, 70, 71, 75, 84, 87, 92, 106, 107, 118, 121, 122, 140, 143, 144, 150, 152, 167, 168, 181, 201, 239, 270, 361, 362, 482, 508, 514, 542, 550, , 563, 579, 582, 601, 602, 608, 609, 624, 632, 634, 656, 662, 666, 667, 673, 678, 680, 684, 685, 694, 698, 707, 712, 728.1 through 728.433, 728.240, 728.251, 728.260, 728.265, 728.290, 728.297, 728.302, 728.313, 728.330, 728.334, 728.337, 728.355, 728.364, 728.369, 728.356, 728.368, 728.370, 728.377, 728.378, 728.379, 728.384, 728.385, 728.386, 728.388, 728.406, 728.412, 728.422, 728.429, 729.8, 729.9, 730.69

Response: We agree that mapping fine-scale climate refugia would provide important information, which is why we incorporated it as a proposed and possible management action in the management approach Change and Uncertainty. However, the related concept of fire refugia needs to be considered because climate-altered fire regimes are anticipated to be the primary way ecological type conversions are initiated. Kolden and others (2017) found that areas that historically functioned as fire refugia were more likely to burn in subsequent fires and at higher severity than non-refugial areas. These fine-scale climate refugia may be transitory in nature, and while they may provide for the persistence of some species, it may not be for the suite of species that currently occupy it. Finally, such a mapping effort will warrant collaboration with agency staff beyond those who work for the Gila National Forest and may benefit from the expertise of people who don't work for the Forest Service. For that reason, it is not appropriate for a plan objective.

Secondly, it is an over-generalization and over-simplification of the mapping process to broadly assert that all north-facing slopes, deep canyons, and spring areas are refugial areas wherever they exist. It's highly unlikely that is the case and resources are too scarce to misdirect management intended to produce an outcome in a specific location that isn't attainable. Regardless, the issue of feral cattle on the mainstem of the Gila River is a real one that we continue working to permanently resolve. The statement in the draft documents related to the management authority over these animals was consistent with what we knew and understood at the time. It has been removed in the final documents. Please refer to the response to comment 1 under the Feral Cattle heading in this appendix for additional discussion on this issue.

The Climate Change Vulnerability Assessment may not provide the detail that can be provided by the fine-scale methods commenters point to, but it does provide information on where refugial areas are most likely to be located. Areas mapped as low vulnerability are less likely to experience ecological type conversions, which suggests they may have refugial qualities. During plan implementation, potential refugia for bats and other species would be evaluated on a site-specific basis using the best available scientific information.

Literature Cited in Response:

Kolden, C.A., T.M. Bleeker, A.M.S. Smith, H.M. Poulos, and A.E. Camp. 2017. Fire Effects on Historical Wildfire Refugia in Contemporary Wildfires. Forests 2017, 8, 400;doi:10.3390/f8100400.

Comment 21: There is a concern that the plan doesn't prioritize climate resiliency or identify the impacts climate change will have on the viability of the forest's unique biodiversity, such as Mexican wolves, native trout species, Mexican spotted owls, and their habitats. Specifically, commenters are concerned about the climate change increasing the impacts of livestock grazing, timber harvesting and motorized recreation. Commenters point to the road system as an example stating:

> "…the Gila National Forest cannot afford to maintain its over-sized and deteriorating road system. The forest has a $2.72 million backlog and only maintains about 9% of all its roads. This translates into lost access, degraded streams and riparian areas, and habitat fragmentation, which the current draft plan fails to address. To ensure an ecologically and economically sustainable road system, the draft plan must include decommissioning of unneeded roads and provide strong direction to protect forest resources, riparian areas and wildlife and aquatic habitat from road construction and motorized use. The plan must also implement road and motorized trail density standards to restore aquatic habitat and improve wildlife habitat connectivity for a range of species, including Mexican wolves."

Commenters also suggest the plan must address the impacts of climate change on the availability of water and forage for livestock and native wildlife such as Mexican wolves. Commenters state that conflicts between grazing permittees and Mexican wolves will increase as resources decrease due to a hotter, dryer climate. Commenters suggest the plan must include standards and direction to reduce these conflicts such as: mandating monitoring of conflict and livestock loss; ensuring coexistence practices, such as carcass removal for all permittees; and closing all vacant grazing allotments to create space between the wild wolf population and commercial livestock operations. One commenter asserts that these rules must be viewed as the cost of doing business. Another suggests the draft EIS is fundamentally flawed and ripe for extensive legal challenges, at least in part due to failure to obtain proper public input. **Associated Letters: 53, 54, 720.1 through 720.55, 720.7-4, 720.41-4**

Response: The plan-wide Change and Uncertainty management approach discusses how management is likely to approach climate adaptation and mitigation during implementation of the final plan and provides links to relevant plan components and other content in the plan. This management approach has been reorganized and expanded to include additional details related to the road system under the subheading Transportation Infrastructure. All action alternatives include a desired condition and objective for decommissioning roads and management approach describing how unneeded roads would be prioritized for decommissioning, including criteria reflecting the importance of species and habitat concerns. The action alternatives include desired conditions for a climate-resilient transportation system (Roads DC6) that minimized impacts on natural and cultural resources (Roads DC4). The action alternatives also include standards and guidelines for the motorized transportation system that would support movement toward desired conditions for high-quality, connected habitat for all species (for example Roads S1, Gs1-3, 5 and 6; Riparian and Aquatic Ecosystems Ss1 and 2, and Gs1-4). Road density standards were considered but not analyzed in detail as described in chapter 2 of the EIS.

All water conflicts are likely to increase as climate change progresses, which is discussed in the FEIS Wildlife, Fish, and Plants Cumulative Effects section. Monitoring and documentation of conflict and livestock loss is accomplished by the Wolf Interagency Field Team in coordination with forest staff and permittees as described in the draft Livestock Grazing management approach Livestock and Wildlife Conflicts. This is a critical part of the recovery program, to which the law (Endangered Species Act) and the plan commits us (draft Wildlife, Fish, and Plants G3 and final S5).

For more information about coexistence practices, including carcass removal, please refer to response to comment 88 under the Livestock Grazing heading in this appendix. Regarding vacant allotments, see response to comment 74 under the Livestock Grazing heading in this appendix. Documentation of our public engagement efforts can be found in appendix C of the FEIS. The plan and FEIS contain many changes because of further review by planning staff, new information, and stakeholder comment. Those changes are documented in appendix B to the FEIS.

Comment 22: Commenter states the agency should include a climate alternative or significantly improve its climate analysis for the existing alternatives. Commenter is concerned that the draft plan relies on management approaches for climate related content because they are not enforceable. Commenter suggests that enforceable plan components and corresponding monitoring indicators are needed to effectively address

climate change and must be included in the final plan. Commenter notes the importance of intergenerational equity called for by the National Environmental Policy Act, and the final directives focus on a "forward looking, future-based viewpoint." Commenter goes on to cite the agency's Global Change Research Strategy regarding carbon sequestration and a commitment to best practices to increase sequestration while providing for ecosystem health. And finally, the commenter points to the Forest Service National Roadmap for Responding to Climate Change and the Climate Change Scorecard. **Associated Letter: 713**

Response: All the action alternatives are climate alternatives. The draft plan-wide management approach to Change and Uncertainty was not the only provision for climate change in the draft plan. However, we agree that there was room for improvement. This management approach has been reorganized and expanded to improve clarity and provide more explicit links to plan components and monitoring questions. See also response to comment 14 in this section for more on how the plan addresses climate change. Commenter is correct that the forest plan is nested within a larger framework of Forest Service efforts to address climate change, which is discussed in more detail in response to comments 2 and 4 in this section of this appendix.

We recognize there was room for improvement in the DEIS as it relates to climate change. The FEIS contains clarification on how climate change impacts and climate adaptation and mitigation measures in the plan were analyzed, improved consistency of analysis between sections, and additional information and analysis based on science that has emerged since the DEIS was released for public comment.

Effects Analysis

Comment 23: Commenters are concerned about climate change impacts being treated as a cumulative effect. Commenters point to page 45 of the DEIS and state it is not a cumulative effect, stating: "Climate change is increasing the probability of extreme events (IPCC 2014) and extreme events can cause rapid change in ecosystems. Further, changing climatic conditions can preclude the persistence of a given ecosystem in each geographic location (Hurteau et al. 2014b). There is ample evidence that ongoing warming and drying are limiting post-fire forest establishment throughout the western United States and that forests currently occupying the drier end of the range are at risk of conversion to non-forest following wildfire (Parks et al. 2019, Stevens- Rumann et al. 2018). In addition to this evidence, drought alone can cause significant dieback and drought-induced mortality is considerably higher when hotter droughts occur (Williams et al. 2013). FSH 1909.12 states that it is not appropriate to attempt to restore past conditions for areas where "the system is no longer capable of sustaining key ecosystem characteristics identified as common in the past based upon likely future environmental conditions." This clause is a clear indication that the FSH 1909.12 acknowledges that climate change is not a cumulative effect. **Associated Letters: 78 and 110**

Response: The purpose of the plan's EIS is to disclose and analyze the effects of plan direction. Consistent with guidance issued by the Council on Environmental Quality, the EIS describes the cumulative effects as "a multi-jurisdictional look at actions and their associated effects, but the focus is on reasonably foreseeable future actions likely to occur during implementation that could have effects on neighboring lands, as well as actions likely to occur under the plans of other jurisdictions that could affect the forest."

Climate change ***impacts*** on the ecological, socioeconomic, and cultural environment are treated as cumulative effects on the basis that they are effects associated with reasonably foreseeable multi-jurisdictional actions (Reid and Lisle 2008). It is multi-jurisdictional actions that will mitigate or exacerbate global climate change impacts. Climate change itself is not treated as a cumulative effect. Climate change is an atmospheric phenomenon that plan direction may have effects on. The effects of plan direction on climate are analyzed in the Climate and Carbon section of the EIS. Plan direction supports climate adaptation, and climate-informed reforestation (Timber, Forest, and Botanical Products G7). The reasonably foreseeable effects of these adaptation strategies are analyzed in terms of promoting the Resistance-Resilience-Transition adaptation spectrum (for example, Upland Vegetation, Fire Ecology and Fuels, Soils, Watersheds, et cetera).

We acknowledge that the historic range of variation may lose relevance in areas with moderate to high vulnerabilities to climate change. Desired conditions based on the historic range of variation are not tied to one version of an ecosystem map. Understanding and communicating gradual shifts in site potential and ecosystem features helps to identify the adaptation options best suited for meeting desired conditions which are not static to a particular area but remain applicable to the overall ecosystem, forest, and life of the forest plan (USDA FS 2023 Box 5).

Literature Cited in Response:

Reid, L. and T. Lisle. 2008. Cumulative Effects and Climate Change. (May 20, 2008). U.S. Department of Agriculture, Forest Service, Climate Change Resource Center. https://www.fs.usda.gov/ccrc/topics/cumulative-effects#:~:text=Potential%20effects%20of%20climate%20change,and%20modes%20of%20environmental%20disturbance.

USDA FS (United States Department of Agriculture-Forest Service). 2023. Regional climate adaptation strategy: Integrating existing tools, science, and collaborative outcomes for climate adaptation, mitigation, and socioeconomic vulnerability. Version 9. USDA Forest Service technical guide. Southwestern Region, Albuquerque, NM. 158 pp.

Comment 24: Commenter is concerned that highly vulnerable riparian areas are inadequately protected by the plan because climate change impacts are primarily considered cumulative effects in the environmental analysis. Commenter suggests that we must analyze climate change impacts and how to mitigate them to comply with the agency's multiple use mandate and National Environmental Policy Act stating: "The impacts of climate change on riparian areas need to be studied and managed in their own right, in addition to being considered in aggregate." **Associated Letter: 712**

Response: Please refer to response to comment 23 above regarding how the indirect effects of climate-related plan direction and the cumulative effects of climate change as an atmospheric phenomenon resulting from multi-jurisdictional actions are both analyzed. The indirect effects of plan direction on riparian areas and the support plan direction provides for the Resistance-Resilience-Transition climate adaptation spectrum is analyzed in the Watershed and Riparian and Aquatic Ecosystems sections of the EIS. These sections also contain a disclosure of the cumulative effects of climate change on riparian areas.

During implementation of any of the plan alternatives, management would be directed toward desired conditions for (see plan sections Watersheds, Riparian and Aquatic Ecosystems, Wildlife, Fish, and Plants for examples of applicable desired conditions). Plan and project-level monitoring would provide information to determine whether management was contributing to trends toward or away from desired conditions. Examples of plan monitoring questions that would provide this information include 1, 2, 6, 10. If conditions are stable or trending toward desired conditions, that would indicate management is effectively tracking climate change. If there is a trend away from desired conditions, then management is not effectively tracking climate and the adaptive management option most appropriate for the site and circumstances would need to be determined to comply with the plan.

Comment 25: There is a concern that the draft EIS did not discuss the roles of recalcitrant and labile soil carbon, or of even the existence of the microbiological communities in the soil. Commenter states that it appears the discussion of carbon is limited to 'organic carbon', which appears to be understood as carbon existing in plant materials which is only half of the system; soil is the other half. Commenter points to the rapidly developing science regarding the role of 'inorganic' carbon and its interactions with soil microbes. Commenter states that the ignorance of soil carbon and microbial communities leads to serious mistakes and lost opportunities for vegetation management, citing their business and other entities in the Gila National Forest area have been working on technologies and strategies for improved soil and carbon practices for more than a decade but with nearly zero interaction with Gila National Forest management despite their efforts to

engage. Commenter concludes that the ignorance of soil science and a lack of collaboration cause the environmental analysis to be seriously deficient in developing and analyzing superior proposed actions. Commenter includes attachments related to biomass energy and biochar. **Associated Letter: 203**

Response: Soil organic carbon is discussed and analyzed in the draft EIS (Climate and Carbon Affected Environment, Analysis Methodology, Effects Common to All Alternatives, Effects Common to Grasslands, Effects Common to Shrublands, Effects Common to Woodlands, Effects Common to Warm, Dry Forests, and Effects Common to Cold, Wet Forests sections). Soil organic carbon, soil microbial communities, soil biological function and productivity, and soil climate regulation function are also discussed and analyzed in the context of soil condition the draft EIS (Soil and Watershed Resources Soils and Soil Condition and Effects Common to All Alternatives). In keeping with plain language principles, the terms recalcitrant and labile are not used when referring to soil organic carbon as such technical language is not accessible to the average person. Science published since the release of the draft plan and EIS has been added to the discussion.

Soil inorganic carbon is also an important carbon reservoir and is an active area of research. The limited number of studies we are aware of have been conducted are in short-rotation tree plantations that are managed to supply wood products, or severely degraded agricultural and desert lands. Applying that science to the analysis of this forest plan was deemed inappropriate because plantation style management would not be consistent with the plan and the settings of the studies do not translate to the Gila National Forest.

The needs for change included developing desired conditions to recognize and improve the forest's role in contributing to local economies (Need for Change Statement 1) and to strengthen relationships (Need for Change Statement 2). See response to comment 2 under the Community Relationships heading in this appendix and appendix C to the FEIS for a description of the public engagement conducted for plan revision. Additional discussion related to biomass energy and biochar as wood industry innovations has been added to the plan's Vision, Management Approach to Climate Change, the Timber, Forest, and Botanical Products management approach Integrating Restoration and Social, Economic, and Cultural Diversity and Stability and the Reclamation management approach in the Locatable Minerals section. Discussion has also been added to the Climate and Carbon Cumulative Effects and the Timber, Forest, and Botanical Products Effects Common to All Alternatives.

Comment 26: Commenter points to page 104 of the draft EIS as says: "motorized fuel use generates greenhouse gasses. Methane also a greenhouse gas is released by grazing. Cattle having 2 stomachs produce substantially more methane than animals with 1 stomach, elk, deer, and horse." **Associated Letter: 233**

Response: The statement made in the comment is consistent with what is stated in the Affected Environment in the Carbon and Climate section of the DEIS and FEIS. Methane emissions from cattle have now been analyzed using quantitative methods and are discussed in the FEIS.

Comment 27: There is a concern that the draft EIS doesn't provide enough attention and analysis to the effect climate change is predicted to have on water resources and the course of regional development. Commenter suggests the planning team review and incorporate a 2007 published article by Seager and others, a 2008 technical reference from New Mexico State University, and a 2006 report from the Office of the State Engineer into the final analysis. **Associated Letters: 90 and 91**

Response: The purpose of the environmental analysis is to analyze the effects of plan direction and evaluate the differences between alternatives. Climate change impacts on water resources and regional development is a cumulative effect that is addressed in the last paragraph of the Soil and Watershed Resources Cumulative Effects section of the DEIS and FEIS, with the FEIS including a discussion about the 2018 New Mexico State Water Plan. The Seager and others article was referenced in the DEIS and FEIS. The technical reference was reviewed and incorporated into the project record as it relates to New Mexico state water planning which has progressed since 2008. The last recommended publication is from an older drought plan and has been taken off the web. Planning staff requested a copy from the Office of the State Engineer but received no response. It

is the commenter's responsibility to provide the material they would like to see considered, not just the bibliographical information.

Comment 28: There is a concern that the draft documents fail to adequately address ecological impacts of the forest road system on water resources, wildlife, and connectivity in the context of climate change. Commenter states that while there is some discussion of the cumulative effects climate change will have on the transportation system, there is no consideration of direct and indirect effects which violates the National Environmental Policy Act. Commenter quotes the cumulative effects discussion and states that these increased risks pose direct and indirect effects to soil erosion, stream sedimentation and fish passage that must be better analyzed in the final EIS.

Commenter notes that the draft analysis discusses how roads provide access for wildfire suppression activities but fails to acknowledge how roads provide a vector for human-ignitions, or in areas of high road densities, change wildfire behavior. Also, commenter notes that the draft did acknowledge that damage to the transportation system caused by fires and floods results in expenses that reduce the money available for standard road maintenance. Commenter asserts climate change effects will only exacerbate these risks which needs to be discussed in the final documents. Commenter provides examples, published literature, and states that overall, the documents fail to adequately discuss the impacts of climate change on the transportation system and how achieving a minimum road system can increase resilience to those impacts. Commenter also suggests that because there is not an infrastructure vulnerability assessment, the vegetation vulnerability assessment aggregated to the subwatershed level should be used. Commenter requests the documents answer the following questions:

> "How many miles of road are within areas of moderate to very high wildfire risk?
>
> How many of these roads are susceptible to increased erosion due to wildfire risk that may also cause increased sedimentation to streams with at-risk fish species?
>
> How many miles of ML 2 roads not currently maintained to their objective standard are in areas of increased risk due to climate change?"

Commenters note the draft plan components include some management direction that would limit the negative impacts of roads, but more is needed. The final plan should include comprehensive plan components that will minimize the impacts of the Gila National Forest's Road system on watersheds, wildlife, and ecological values across the forest. Commenter suggests the final plan incorporate direction from the agency's recently released transportation resilience guidebook as plan components because the guidebook specifically mentions forest plans as "an opportunity to analyze baseline conditions and climate change vulnerabilities and to develop climate resilient strategies for the future." **Associated Letter: 712**

Response: The plan provides a programmatic framework that guides site-specific actions but does not authorize, fund, or carry out any project or activity. Because the plan does not authorize or mandate any site-specific projects or activities there can be no direct effects. However, there may be implications, or indirect effects. A desired condition for a climate-resilient transportation network (Roads DC6), and a discussion about a transportation and facilities vulnerability assessment and adaptation options in the management approach Change and Uncertainty have been added to the final plan in response to this comment. This management approach describes how the plan addresses the transportation network's resistance, resilience, and realignment to future climate. Plan direction related to mitigating the impacts of the road system on watersheds, water resources, species and habitat are likewise referenced in the Natural Systems subsection of this same management approach. Corresponding analysis has been added to the Soil and Water Resources, Riparian and Aquatic Ecosystems, and Wildlife, Fish, and Plants sections of the FEIS.

The transportation resilience guidebook (Rasmussen et al. 2018) would inform both vulnerability analysis and adaptation options at the project-level. We agree that forest plan revision could be an ideal opportunity for

other national forests and grasslands about to embark on plan revision, depending on the resources available. The analysis of baseline conditions and vulnerabilities could be an appropriate part of the assessment phase of revision, with the revision phase providing the opportunity to develop resilience strategies. Unfortunately, the guidebook was released after our assessment phase was completed and neither the regional office or forest staff had or have the capacity for such an undertaking now.

The impacts of roads-related plan direction are analyzed in the Soil and Water Resources, Riparian and Aquatic Ecosystem, and Wildlife, Fish, and Plants sections of the EIS. Additional discussion related to the effects of the roads system on human-caused starts and wildfire behavior have been added to the Upland Vegetation, Fire Ecology and Fuels discussion after the statement about providing fire management access in response to this comment.

Comment 29: Commenters state there is insufficient analysis of the impacts of management decisions on the environment considering the compounding impacts of climate change. Commenter suggests the following questions and answers should be addressed.

1) "How will the plan exacerbate the already alarming impacts associated with the impacts of climate change on game species, threatened and endangered species, or special status species?

2) How will livestock grazing related fencing and infrastructure further fragment the landscape and how will this impact species already harmed by the rapid on-the-ground changes associated with climate change?

3) How does climate change affect what the Forest Service considers suitable range for livestock?"

Commenter states that climate impacts are compounded from heavy use by livestock and other grazing ungulates, which cause soil erosion, compaction, and dust generation; stream degradation; higher water temperatures and pollution; loss of habitat for fish, birds, and amphibians; and desertification. Livestock grazing and trampling degrades soil fertility, stability, and hydrology, and makes it vulnerable to wind erosion. This in turn adds sediments, nutrients, and pathogens to western streams. Commenter states the incomplete consideration of climate change in the draft documents is inconsistent both with the requirements of the National Environmental Policy Act and Forest Service policy. **Associated Comments: 713 and 718.3846**

Response: (1) The plan does not exacerbate climate related impacts to species common, uncommon, or with special status. The plan and its alternatives support the Resistance-Resilience-Transition adaptation spectrum to varying degrees as described in the final EIS. Climate change impacts, including the impacts of climate-altered disturbance regimes are analyzed as cumulative effects. See also response to comment 23. (2) The plan does not propose or authorize any project or activity. Any additional grazing infrastructure would be proposed and analyzed at the allotment level, including any impacts to species and species movements. (3) Suitability of lands for livestock grazing is better addressed at the allotment level because suitability determinations in forest plans are a coarse analysis indicating a general compatibility with desired conditions. Because plans prepared under the 2012 Planning Rule have explicit desired conditions, a determination for whether an activity is suitable in a particular location is best conducted at the project level.

The plan's monitoring program includes questions and indicators that will enable management to measure the effects of climate change the ability of management to move toward desired conditions as it relates to livestock grazing (for example, MQ9 "Are temperature and precipitation patterns supporting movement toward desired conditions for livestock grazing?" with indicators being "Trends in herbaceous production season start, peak, and end; trends in annual herbaceous productivity")

Livestock grazing DC3 specifically states "Livestock grazing, and use is compatible with the desired conditions for ecological sustainability, biodiversity, and other uses." The plan does not support "heavy" use and the impacts commenters describe would not be consistent with plan direction under any alternative.

Efforts have been made throughout the FEIS to clarify how climate change and climate change-related plan direction are analyzed, to improve analysis consistency between sections, to include scientific information, and respond to this and other comments.

Water

Comment 30: There is a request that given climate change, the plan prioritizes the protection of water resources. **Associated Letter: 707**

Response: The plan-wide management approach to Change and Uncertainty includes several points of emphasis on water resources and identifies the plan components that support that emphasis. For example, item 1 listed under the Adaptation, Natural Systems heading is "Sustain fundamental ecosystem and watershed functions" and identifies more than 50 plan components that directly address watershed and water resources.

Comment 31: Commenter states the agency appears to reject its responsibility to protect water and watersheds when it states, "However, unless climate change becomes central to the discussions and efforts around water and watershed issues, the resulting plans and projects may be inadequate to address the future." Commenter agrees that climate change absolutely must be central to the planning process, and fear that this statement suggests that forest staff and leadership are not up to the task of addressing future climate change impacts. The Gila NF must heed its own warning and ensure that its plan is up to the task of addressing climate change impacts, as it is required to do under the 2012 Planning Rule. **Associated Comment: 712**

Response: The statement the commenter refers to is taken out of context. It is found in the cumulative effects discussion of the DEIS's Soil and Watershed Resources section and reads:

> "Working together, across jurisdictional boundaries provides for the best possible outcomes. As drought and water scarcity have always been part of life in the Southwest there is already momentum in that direction. Federal agencies, state and local government, and private citizens across Arizona and New Mexico have been working together on water and watershed issues. However, unless climate change becomes central to the discussions and efforts around water and watershed issues, the resulting plans and projects may be inadequate to address the future. In the current social and political environment, it is just as likely that this will happen as it is that it will not."

This statement did not imply that Gila National Forest staff and leadership are not up to the task at hand. It is a statement that water and watershed issues cross jurisdictional boundaries and that everyone needs to be up to the task to be most effective. Nevertheless, this paragraph has been modified more accurately account for a changing sociopolitical environment and in response to other comments.

Management Approach to Change and Uncertainty

Comment 32: There is general support for the plan-wide Management Approach to Change and Uncertainty. One commenter specifically supports the landscape-level approach and the focus on watersheds. **Associated Letters: 180 and 672**

Response: Thank you for your comment. The final management approach has been reorganized, expanded, and maintains an emphasis on watershed processes and functions

Comment 33: There is support for the following language in the plan's Management Approach to Change and Uncertainty: "The previous discussion about landscape scale heterogeneity and plan content for vegetation and fire management can support resilient watersheds, although careful consideration of disturbance type, frequency, magnitude and intensity or severity will be required to maintain a balanced approach." **Associated Letters: 24, 100, 164, and 631**

Response: Thank you for your comment. This language no longer appears in the management approach, which has been reorganized and expanded to more fully address the input and feedback received by staff and stakeholders. An emphasis on watersheds and watershed processes remains part of the management approach, it's just that this language was no longer germane to the discussion.

Comment 34: There is support for acknowledgement that mechanical treatments may be necessary to maintain some refugial areas in the Management Approach to Change and Uncertainty. **Associated Letters: 24, 100, 164, and 631**

Response: Thank you for your comment. The substance of this discussion remains part of the final management approach's discussion of refugia.

Comment 35: Commenter states: "Pg.192 Connectivity designs based on current habitat patterns are likely to fall short for many species. By adding additional potential this would help with the connectivity." **Associated Letter: 233**

Response: We deduce that what the commenter means by "adding potential" is adding additional recommended wilderness. Please refer to response to comment 20d in this section of this appendix.

Comment 36: Commenter states: "The needs have to be identified. Ecosystem services 1) increase water conservation." **Associated Letter: 233**

Response: We think this comment is about the Ecosystem Services discussion in the Management Approach to Change and Uncertainty that identifies increasing water conservation as one of the ways we can help reduce climate-related vulnerabilities. Needs will be identified during plan implementation as those needs, and the opportunities to meet them, are likely to change over the life of the plan. The substance of this subsection is now found in the Water Uses subsection of the Change and Uncertainty management approach under the headings Adaptation, Human Systems.

Comment 37: Commenter points to discussion of infrastructure in the Management Approach to Change and Uncertainty and the bullet that states "Prioritize and treat road networks by storm-proofing or decommissioning to restore natural flow patterns, reduce erosion and increase system durability." Commenter emphasized the restoration of natural flow patterns and reduced erosion. **Associated Letter: 233**

Response: Decommissioning unneeded roads to restore natural flow patterns and reduce erosion is one of the adaptation measures we can take in anticipation of more extreme precipitation events. This section has been revised, identifies supporting plan content and has been relocated to a subsection titled Transportation Infrastructure under the headings Adaptation, Human Systems. The final plan's objective for decommissioning unneeded roads (Roads O1) is now accompanied by a desired condition for a climate-resilient transportation network (Roads D6).

Comment 38: Commenter points to pages 20 and 21 of the draft plan and states that thresholds need to be established for habitat patches for species and that adding recommended wilderness would help make these patches bigger and better protected. This would provide for species persistence which is a fundamental requirement of the 2012 Planning Rule. **Associated Letter: 233**

Response: Patch sizes are identified in the desired conditions for vegetation communities where the forest supervisor has determined there is sufficient science to base them on. On recommended wilderness, please refer to comment 20d in this section.

Comment 39: Commenter points to the Ecosystem Services section of the management approach on page 21 of the draft document and notes that the forest provides many other ecosystem services they would like to see mentioned. Specifically, commenter would like to see bats mentioned because they provide an estimated

$3.7 billion in reduced crop damage and pesticide use nationally. Commenter points to adaptive management being one of the plan's key concepts and suggests that including a wider suite of ecosystem services in the management approach will provide more leeway in addressing future issues related to ecosystem services. **Associated Letter: 678**

Response: Management approaches are not plan direction and do not provide or limit future leeway. This section of this management approach has been removed in favor of a separate management approach that consolidates all the Ecosystem Services management approaches that were included in many of the individual resource sections of the plan. The discussion is more about what we learned about how people who care about the Gila National Forest value ecosystem services, and how that can inform plan implementation, rather than a listing of ecosystem services.

Comment 40: Commenter quotes from the Infrastructure section of the Management Approach to Change and Uncertainty "Design in-channel structures to maintain hydrologic and biotic connectivity, unless the structure is intended to protect at-risk species from non-native species." Commenter wonders if we are suggesting diversions and requests examples of the structures being referenced. **Associated Letter: 697**

Response: We are not suggesting or proposing diversions in this discussion. Some examples include low water crossings for roads, weirs, erosion control structures, or fish barriers for Gila trout recovery. This sentence is no longer in the management approach as it was well covered in plan direction. The management approach now provides links to supporting plan direction, with transportation infrastructure being addressed under the headings Adaptation, Human Systems.

Comment 41: Commenters assert that by simply saying that by 2090 "the Gila NF's ecosystems (and species assemblages) are projected to be well outside the range of variability that is known to support them," and that "this could mean a profoundly different Gila NF than the one described in the desired conditions statements found throughout this draft plan regardless of any management action or inaction" is a complete abdication of the Forest Service's legal and policy mandates under the NEPA and the 2012 Planning Rule.

Commenters then point to this statement: "Gila NF managers do not view this uncertainty as an excuse to maintain the status quo or to do nothing; management decisions and actions taken within the life of this plan have the potential to influence the trajectory of the landscape and its component species, including humans." Commenters then state they are puzzled over "the above-referenced honest assessments of the expected impacts on the Gila NF in the near future" and "the illegal failure to incorporate this crucial information into the Draft Plan's Standards and Guidelines."

Commenters are also concerned because among the alternatives that were considered but eliminated from detailed study was one that "…suggested managing for resiliency, although without many details on how this was to be accomplished." Commenters assert that it is the responsibility of the Forest Service, not stakeholders, to develop the plan and that by failing to manage for resiliency, the plan fails to comply with the 2012 Planning Rule requirements for ecological integrity and ecosystem services. **Associated Letter: 712**

Response: The statements first referenced by the commenter do not represent a failure to accept management responsibility. They are anticipatory statements that there may be a need to revisit the plan's desired conditions in a plan amendment or subsequent revision before another 30 years goes by. The science around the future range of variability is evolving and others have introduced the concept of a bounded range of variation. However, that science is not yet mature. The natural or historic range of variability and resilience are not mutually exclusive ideas. Romme and others (2012) and Safford and others (2012) discuss how the historic range of variability remains useful because it helps identify the ecological conditions that are resilient.

All action alternatives include desired conditions for vegetation communities, based on what is known about the natural range of variation, and objectives to move toward those desired conditions because the natural range of variation represents the scientific and ecological understanding of the conditions that would sustain

at-risk species (FSH 1909.12 chapter 20 section 23.11). Desired conditions are not tied to one version of an ecosystem map. Understanding and communicating gradual shifts in site potential and ecosystem features helps to identify the adaptation options best suited for meeting desired conditions which are not static to a particular area but remain applicable to the overall ecosystem, forest, and life of the forest plan (USDA FS 2023 Box 5).

Plan direction is analyzed in the EIS based on how well it supports the climate change adaptation spectrum (Resistance-Resilience-Transition). All action alternatives support the full Resistance-Resilience-Transition adaptation spectrum and provide the flexibility to make vulnerability-informed decisions about adaptation options at the project-level. The management approach Change and Uncertainty has been revised to better inform a shared understanding of our vulnerabilities, provide more explicit links to desired conditions, objectives, standards and guidelines, demonstrate how the plan fits in with other frameworks for addressing climate change, and provide transparency about the plan's performance risks.

Forest Service leadership and staff do have the responsibility to develop the plan. Stakeholders have a responsibility to influence and contribute to the development of the plan. Gila National Forest leadership and staff have provided ample opportunities for stakeholders to get involved, as documented in appendix C in the EIS. Comments that are solution oriented and include specific examples are the most effective at influencing and contributing to the process and products of any National Environmental Policy Act procedure.

Literature Cited in Response:

Romme, W.H., J.A. Weins, and H.D. Safford. 2012. Setting the Stage: Theoretical and Conceptual Background of Historical Range of Variation. Chapter 1 in Wiens, J.A., G.D. Hayward, H.D. Safford, and C.M. Giffen (eds). 2012. Historical Environmental Variation in Conservation and Natural Resource Management. Wiley-Blackwell, Chichester, West Sussex, United Kingdom.

Safford, H.D., G.D. Hayward, N.E. Heller, and J.A. Weins. 2012. Historical Ecology, Climate Change and Resource Management: Can the Past Still Inform the Future? Chapter 4 in Wiens, J.A., G.D. Hayward, H.D. Safford, and C.M. Giffen (eds). 2012. Historical Environmental Variation in Conservation and Natural Resource Management. Wiley-Blackwell, Chichester, West Sussex, United Kingdom.

USDA FS (United States Department of Agriculture-Forest Service). 2023. Regional climate adaptation strategy: Integrating existing tools, science, and collaborative outcomes for climate adaptation, mitigation, and socioeconomic vulnerability. Version 9. USDA Forest Service technical guide. Southwestern Region, Albuquerque, NM. 158 pp.

Comment 42: Commenters disagree with the following statement: "The agency is also charged with managing for human time scales, not geologic time scales." Commenters acknowledge that the geologic time scale is an unrealistic one for forest planning, but the plan needs to look further ahead than a relatively short human lifetime. Commenters point to numerous studies predicting vegetation changes over the rest of the century and recommend they be taken seriously and not just cited. Commenters assert it is fundamental to the nature of climate change that management actions now will have repercussions for decades and that those reasonably foreseeable impacts must be disclosed and mitigated to comply with the National Environmental Policy Act. **Associated Comment: 712**

Response: We see your point and that was not the intent of the statement. The reason this statement was included was to respond to another viewpoint that had been expressed. That viewpoint was essentially that if the effects of management actions were based on a geologic time scale, then nothing we do would matter, so why we would be concerned about the extent of stand-replacement fire over the next few decades, or whether a spring was in proper functioning condition or not? This statement was intended to pull the dialogue back to "current and future generations" and the human timescale we manage for in perpetuity. This language has

been removed final plan. The vegetation analysis uses a 100-year timeframe to demonstrate trends in conditions and that analysis informs the others.

Comment 43: Commenters state that providing for connectivity is the best strategy to allow wildlife to adapt in the face of climate change and that the revised plan is not adequate. A commenter provides a discussion of science supporting this idea, including spatial data, and requests the following be incorporated into the final documents.

1) Identify, map and designate wildlife movement corridors because there is no way to enforce connectivity related plan components if it is not clear where they apply.

2) Formally define linear infrastructure as a stressor and develop mitigation measures to reduce adverse impacts to wildlife habitat connectivity of roads, railways, transmission lines, pipelines, and other linear features.

3) Increase and formalize collaboration with New Mexico Departments of Transportation, Game and Fish, the U.S. Fish and Wildlife Service, and the Federal Highway Administration where there is not already robust collaboration to take advantage of these agencies' data and expertise.

4) Develop and incorporate more actional plan components for connectivity conservation. Commenter provides examples from the Flathead and Custer-Gallatin national forests that are closer to what would address the concern. Carson National Forest has some specific elements that the commenter appreciates but is concerned that there are no actionable standards or guidelines included in their draft.

5) Assess the status of connectivity along Wild and Scenic rivers and ensure substantive plan components are established to protect these aquatic and riparian corridors.

6) Assess current conditions for native pollinators and establish standards and guidelines that promote connectivity for these species.

Other commenters discuss the shortcomings of the Management Approach to Climate Change, the rationale for eliminating an alternative that included designating wildlife corridors from detailed study, and connectivity related objectives. Commenter is concerned that there is only an objective that applies to upland habitats and there isn't a similar one for aquatic habitats which creates doubt about how the plan will achieve the two watershed-scale desired conditions for connectivity. Commenters are also concerned the draft plan downplays the very important role of designated areas in providing ecological connectivity and notes conflict within the EIS on this topic.

Commenters find the draft EIS misleading because it references that plan components related to wildlife connectivity in Appendix D and that doesn't appear to be the case. Commenters found a few mentions of "connected floodplains" and Appendix D doesn't address wildlife connectivity at all. Finally, commenters note Appendix D: Focal Species Rationale of the draft plan only mentions one component for wildlife connectivity – a desired condition of full stream connectivity for the common black-hawk.

To remedy these concerns, the commenters recommend the following:

1) In the climate change management approaches section of the plan, clearly articulate how the plan will provide for connectivity as required by the 2012 Planning Rule.

2) Convert plan guidelines into standards. [related to connectivity and climate change]

3) Add at least one plan objective to implement projects that maintain or enhance connectivity of aquatic habitats, similar to the objective for upland habitats.

4) Establish a management area for a wildlife corridor network.

5) Use the Gila plan revision process to set forth the Forest Service's vision for a long-term, landscape-scale wildlife connectivity strategy.

6) Clarify in the plan that designated areas, including Wilderness and Recommended Wilderness Areas, play a critically important role in providing ecological connectivity and wildlife corridors.

7) Specify which plan components maintain or enhance ecological connectivity in Appendix D of the DEIS.

Associated Letters: 201, 652 and 712

Response: Items 1, 10 and related unnumbered points – The action alternatives provide for connectivity with plan components that apply forestwide (for example Wildlife, Fish, and Plants DCs1, 2 and 5-7 and G5). Different species have different needs to facilitate their movement, migration corridors tend to shift over time. Almost all of the Gila National Forest provides high-quality connectivity under current management (Belote et al. 2016, which can be viewed on the Forest Service Climate Risk Viewer webpage. The discussion of alternative development in volume 1, chapter 2 of the FEIS has been revised to include and additional information on why this suggestion was eliminated from detailed study.

Items 1 and 7 – We recognize that the links to plan components and other plan content in the management approach to Change and Uncertainty were not clear at draft. This has been improved in the final plan.

Item 8 – There are pros and cons associated with standards and guidelines. Meeting the intent of a guideline is not optional, but there is flexibility in how that intent is met. Like all plan components, the intent of the guideline should be clear in its wording. This can be helpful when all site-specific circumstances are not reasonably foreseeable. Standards are rigid but may incorporate foreseeable exceptions. Because standards must be followed to the letter, compliance is easily determined. The forest supervisor will make decisions about which items are appropriate for guidelines and which would be better as standards based on public input and the analysis in the FEIS.

Item 9 – There is no requirement that all desired conditions have associated objectives, standards, or guidelines. However, there are three objectives in the plan which could enhance or restore aquatic and riparian habitat connectivity (Wildlife, Fish, and Plants O2 and O4, and Riparian and Aquatic Ecosystems O1). These objectives would be inclusive of projects that enhance connectivity as well as general habitat improvement. As the plan's desired conditions will drive future project development, connectivity considerations will be part of project design and analysis.

Items 2, 11, 13 and related unnumbered points – The plan contains infrastructure related standards and guidelines that address connectivity. The final management approach Change and Uncertainty has been reorganized and expanded, including the discussion related to connectivity and links to supporting plan components (please see item 6 under the subheadings Adaptation, Natural Systems). We do recognize room for improvement in the draft Appendix D, which has been revised for the final EIS (final appendix F).

Item 3 – The draft plan described the importance of collaboration with State and other Federal agencies in the Wildlife, Fish, and Plants management approach titled Relationships. The final plan reorganizes and expands upon that discussion in the management approaches Restoration, Adaptation and Relationships and Wildlife Corridor Action Plan. We will continue to work with the appropriate Federal and State agencies on all habitat-related issues during plan implementation.

Item 4 – Standards and guidelines cannot compel action, only place constraints on management activities. The plan contains standards and guidelines that address the connectivity issues relevant to the Gila National Forest (for example Wildlife Gs5, 6 and 14, Roads Gs1-3, 5 and 6, and Sustainable Recreation G14). Again, there is no requirement for every desired condition to have objectives, standards, or guidelines. Under the 2012 Planning Rule, each forest supervisor will make their own determination on what plan components are

needed based on the unique combination of circumstances, the most accurate, reliable, and relevant scientific information, and public input.

Item 5 – There are no river segments designated under the Wild and Scenic Rivers Act at the time the draft or final documents were prepared. The river segments found eligible for Wild and Scenic status as part of the eligibility study conducted during plan revision were found eligible, in part, based on their free-flowing nature. Their connectivity was assessed in that sense. All river segments will be managed to maintain or achieve desired conditions found in the Riparian and Aquatic Ecosystems section of the plan, including those related to connectivity. Eligible river segments will have additional plan direction found in the plan's management area direction and consistent with the provisions in the Wild and Scenic Rivers Act until such time that Congress decides to designate or release them from consideration.

Item 6 – Native pollinators habitat needs are addressed by the plan (final Wildlife, Fish, and Plants DC12) and clarified analysis has been added to the EIS Wildlife, Fish, and Plants section.

Item 12 – Please refer to response to comment 20d in this section. We appreciate the commenter pointing out where the document lacks clarity around roles designated areas do and do not play related to connectivity. Clarifying language has been added to all effects analyses sections related to wilderness and recommended wilderness where needed.

Literature Cited in Response:

Belote, R.T., M.S. Dietz, B.H. McRae, D.M. Theobalk, M.L. Mclure, G.H. Irwin, P.S. McKinely, J.A. Gage, and G.H. Aplet. 2016. Identifying Corridors among Large Protected Areas in the United States. PLoS ONE: 11(4):e0154223. doi:10.1371/journal.pone.0154223.

Suggested Plan Components

Comment 44: There is a suggestion to include a desired condition to track climate trends by 5-year periods to understand ecosystem trends. **Associated Letter: 26**

Response: The draft plan's monitoring program contained a minimum required monitoring question that would have provided climate trend analysis to evaluate alongside information about ecosystem trends. This question was removed from the minimum required monitoring based on stakeholder comment (letter 36), new technology and analysis methods and further review. It was replaced by a monitoring question and indicators that would help measure the effects of climate change on the ability of the forest to sustain contributions to livestock grazing. Still, this information would be relatively easy to compile and would be useful to consider when evaluating and interpreting the information generated by the monitoring program. Desired conditions describe specific social, economic, and ecological characteristics of the plan area, or portion of the plan areas, toward which management of the land and resources should be directed (FSH 1909.12 Chapter 20 Section 22.11). The suggestion is not appropriate as a desired condition. The monitoring program does contain questions and indicators that will help us understand ecosystem trends.

Comment 45: There is a suggestion to include an objective for long-term monitoring and research to find out how climate is driving change on the Gila National Forest to facilitate adaptive management. **Associated Letter: 26**

Response: The plan's monitoring program would provide information about the measurable effects of climate change and other stressors and information that will facilitate adaptive management. Objectives are concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions based on reasonably foreseeable budgets (FSH 1909.12 Section 22.12). Climate research performed by the Forest Service research branch, universities, and other professional research organizations will continue to provide valuable information for these purposes as well.

Comment 46: There is a suggestion to include an objective that incorporates climate-informed spatial predictions about vegetation changes into restoration projects and habitat connectivity management. **Associated Letter: 24**

Response: Climate change vulnerability analyses, like those discussed in the final management approach Change and Uncertainty are climate-informed spatial predictions that will be used to inform project development and prioritization. There are many others that will have utility as well. Objectives are concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions based on reasonably foreseeable budgets (FSH 1909.12 Chapter 20 Section 22.12). Objectives specifying the use of certain data products are not appropriate.

Community Relationships

Comment 1: There is a concern about the number of references to utilizing volunteers in the draft plan and that the Gila National Forest prefers using volunteers from extreme leftist organizations. Commenter suggests much of this work should be done by Forest Service employees rather than having volunteers associated with liberal environmental groups who have no regard or liking for grazing permittees out there interfacing negatively with the permittees who pay for the use of the land. **Associated Letter: 647**

Response: The plan discusses how management will work with volunteers and partners from a diversity of backgrounds and perspectives, whether they have an affiliation or not. This includes local and state governmental agencies, other Federal agencies, university extension services, and non-governmental organizations (see draft Livestock Grazing management approaches Rangeland Monitoring and Working with Other Entities and the final Collaboration, Adaptation and Monitoring management approach in that same section for examples). Soil and Water Conservation Districts, New Mexico State University Extension Research Service, Water Resource Research Institute, Range Improvement Task Force, New Mexico Department of Agriculture, New Mexico Department of Game and Fish, and permittees are all included.

Comment 2: There is a concern that community relationships around management of the Gila National Forest are not as collaborative or effective as they should be, though some commenters note there have been efforts. Some suggest that we should do more together for the betterment of the forest and the good of all who use it. Others point to their investment in collaborative planning and forest restoration projects over the last twenty years in Grant County but see the need for broader engagement of partners across the landscape. **Associated Letters: 2, 198, 201, and 346**

Response: This concern was identified in the needs for change document as statement 3. Community relationships, collaboration and partnerships are emphasized throughout the plan. The plan contains desired conditions, a guideline and management approach under the heading "Community Relationships" and over 30 management approaches throughout the rest of the plan that describe how forest staff and leadership intend to engage other community members and entities on various aspects of forest management. Forest staff and leadership also engaged in extensive outreach and collaborative efforts during the plan revision process to begin improving relationships and management. These efforts are documented in appendix C of the FEIS.

Comment 3: There is support for the following language in background section of the plan's direction for Community Relationships: "Relationships are a key factor that can influence the success of how the forest plan is implemented. With the challenges the forest faces today, strong working relationships with all stakeholders, partners, and volunteer groups are vital to increase capacity and help meet desired conditions to care for the land and serve the people." **Associated Letters: 24, 100, 164, and 631**

Response: Thank you.

Comment 4: Commenters recount an experience they had doing riparian monitoring on a livestock grazing allotment and an encounter with a grazing permittee. Commenters state that when collaboration is called for, all stakeholders need to commit to reasonable guidelines for listening, discussion and decision making. **Associated Letter: 152**

Response: The final plan-wide management approach Relationships discusses best practices for successful collaboration and partnerships. We also believe that mutually agreed upon ground rules for behavior during collaborative efforts is often helpful.

Comment 5: There is support for the guideline in the Community Relationships section of the plan which states: "Engagement with communities should occur at the early stages of project planning and design to include community perspectives, needs, concerns and knowledge." There is a suggestion to include clarification on how the community's needs are going to be met and what is considered essential. Additionally, there is a suggestion to include more information about what steps will be taken and the formal and informal strategies to actively engage with Federal and State agencies, local governments, and other organizations. Commenters note that given the value communication, collaboration and cooperation with others contributes to a healthy landscape, the strategic actions that need to be taken deserve more discussion and specificity, because it's not likely a one-size-fits-all for every agency or group. **Associated Letter: 42**

Response: The final plan-wide management approach Relationships discusses best practices for successful collaboration and partnerships. Please refer to response to comments 2 and 4 in this section about the importance of relationships and how the plan addresses them. We agree that different individuals and groups prefer or are better equipped to engage in different ways. Often, with organizations, these preferences and skills change as familiar faces move on and new people come on board. Familiar or new, we will continue to do our best to engage in ways that honor our collective diversity and fit the situation.

Comment 6: Commenter states appreciation for the plan's acknowledgement of the work that the Continental Divide Trail Coalition and its partners do to support the shared stewardship model of forestwide management. **Associated Letter: 180**

Response: Thank you**.** We look forward to strengthening relationships and the work we can accomplish together.

Guideline 1

"Engagement with communities should occur at the early stages of project planning and design to include community perspectives, needs, concerns, and knowledge."

Comment 7: There is a suggestion that this guideline should read something like: "Engagement with communities, publics and partners should occur at early stages of directional planning, project planning and design to include public, partners and community perspectives, needs, concerns and knowledge." Commenter suggests that for the Forest Service to gain public support, public involvement should be undertaken with more than just project planning. Commenter states: "Many times it seems that the Forest enters more directional type planning and has made internal commitments before it goes to project planning. As a result, project plans come across to implement decisions that have already been make without public input. This leads to distrust. Also, the way the guideline is presently written, it just says communities. This could be interpretative to mean only elected officials of towns and counties." **Associated Letters: 131, 474, and 475**

Response: No decisions are made in directional planning efforts like the Sustainable Recreation Plan or Facilities Master Plan, they identify and prioritize projects that are subject to their own, separate National Environmental Policy Act processes. For example, the Sustainable Recreation Strategy, which identifies developing a sustainable trails strategy as an action item. It didn't make decisions about what would happen with the forest's trail system and specific trails. However, we acknowledge that some directional planning

processes would benefit from public engagement or at the very least, better communication with the public about the process and its significance (please see also the final plan's management approach Collaborative Sustainable Recreation Plan in the Sustainable Recreation section). We see community as inclusive of everyone who cares about the forest. We did build some more specificity into the guideline based on this suggestion. This guideline has been reworded to read: "Engagement with community members, leaders, partners, and other stakeholders should being in the early stages of project planning and design to be inclusive of diverse perspectives, needs, concerns, and knowledge."

Commenting

Comment 1: There is a concern that the CARA website isn't user-friendly and other methods of comment submission might be necessary. Commenters state that they encountered issues submitting comments through CARA. Commenters tried repeatedly but the site was not accepting them. Some commenters received a message to submit to one or two email addresses instead. Some asked for verification that their comments had been received. **Associated Letters: 31, 601, 602, 605, 624, 634, 637, 639, 640, 642, 645, 652, 653, 662, 670, 678, 679, 683, 696, 712, and 713**

Response: While we encouraged comment submission through CARA, comments were accepted through the email, mail, fax, phone calls and, with COVID-19 best practices in place, drop-off at Forest Service offices during office hours. All stakeholders that contacted us about difficulties with the CARA website were directed to one or more of these alternative submission methods.

The CARA system had issues on the last day of the comment period, possibly due to the volume of submissions. We became aware of the situation when we were contacted a stakeholder. We reported the problem to the support desk and posted a message providing two email addresses as replacement submission methods. Due to this issue, the forest supervisor decided to accept comments that were submitted up to 24 hours following the official closing of the comment period. The timeline and steps taken to resolve this issue are documented in the project record.

Comment 2: Commenter appreciates the opportunity to comment, and the effort staff put into compiling data and presenting it in a readable form for the public to access, digest, and comment on. However, commenter states that it is an impossible task for a 90-day comment period, which is why comments are limited to a few topics and are general in nature. Another commenter asked for an extension of the comment period so they could have more time to review and make smarter comments. **Associated Letters: 93, and 720.5**

Response: We appreciate your interest and commitment to the management of your public lands. We acknowledge the level of effort expended to provide quality input and feedback. The minimum required 90-day comment period is established by the 2012 Planning Rule (36 CFR 219.16). Documents were made available on our website prior to the initiation of the official 90-day comment period with the publication of the notice of availability in the Federal Register. The forest plan contact list was notified of the documents being posted on the website, which provided a total of 115 days to review documents and formulate comments. Before this comment period, we released a preliminary draft plan for public review and comment. That comment period was March 13, 2018, through April 23, 2018, but comments received after April 23 were still accepted.

Comment 3: There are differing perspectives concerning what should have happened with the formal comment period considering the COVID19 pandemic. There is a concern that the COVID19 pandemic prevented people from engaging in and commenting on the draft plan and EIS and requests to pause, re-open, or otherwise extend the comment period for time periods ranging from 30 days to the end of the pandemic. One commenter provided a copy of a letter sent by senators from New Mexico to the Chief of the Forest Service requesting a pause on all planning Those requesting a pause, re-opening or extension point to pre-occupation with keeping their jobs, homes, and meals on the table; increased responsibility for their children's

education at home; worries about high-risk family members living in hot spots; difficulties with online reading; and access to computers and Internet services.

Members of organizations state that they were not able to conduct the kind of internal coordination and deliberations that they ordinarily do or would have done if their requests for extensions had been granted. Some point to the fact that printed hard copies were not made available at local libraries and community centers until the official release date. Those facilities were closed due to the pandemic in mid-March. This resulted in those with difficulties reading online or without access to a computer and internet service had less than the minimum 90 days required by the 2012 Planning Rule. A group of commenters point to U.S. Census data from 2018 that demonstrate New Mexico is among the least connected states to broadband in the nation and assert that by making hardcopies of the plan documents available to the public at convenient locations in southern New Mexico for less than three months, the Forest Service has violated the National Forest Management Act and the National Environmental Policy Act.

Commenters state that it is fundamentally unfair to ignore requests for extension when the agency warned the public that it might fail to meet statutory deadlines for responding to Freedom of Information Act requests and extended the terms of timber contracts because of the pandemic. Commenters also state that refusing to extend the comment period and failing to provide an email to which comments could be submitted severely limited the ability to comment. Specifically, members of the public with poor internet service who struggle with upload times and the reCAPTCHA timing out in the CARA system. Commenters state this may have put members of the public in harm's way as they may have ventured out into public spaces to access more reliable internet service. Commenters suggest that in order to comply with legal requirements for public participation and treat all of its stakeholders fairly, we should open another comment period on the documents that is at least three months long. A commenter provided letters submitted to the Secretary of the Interior, President Trump, the Gila National forest supervisor the Chief of the Forest Service asking for a pause or extension of public comment periods.

Other commenters support holding to the end date of the official comment period based on the notice of availability published in the Federal Register. **Associated Letters: 32, 64, 67, 70, 71, 76, 79, 81, 86, 120, 124, 125, 135, 141, 145, 171, 180, 232, 235, 236, 237, 238, 241, 243, 245, 252, 567, 663, 690, 712, 713, 720.1 through 720-55, 720.16, 721.2, and 721.3, 728.289, 728.301, 728.329, 728.358, 728.372, 728.417, 729.1 through 729.15, 730.10 through 730.124**

Response: Prior to the close of the comment period, the forest supervisor received letters requesting an extension on the comment period due to the COVID-19 pandemic, as well as support for not extending the comment period. The rationale and decision to not extend the comment period was distributed to the contact list in a letter dated April 7, 2020. The letter stated "Although the formal comment period began January 17, 2020, the material needed for a full review were made available to the public on December 23, 2019, which extended the opportunity to prepare for the comment period by 25 days. The result is that interested individuals and organizations will have had 115 days total to review the Forest Plan and EIS and over 90 days to provide comments. While I am sympathetic to the impact the COVID-19 pandemic is having on normal working and living conditions, the timeline for the comment period provided 80 days from the date the material was available until March 11, 2020, when the World Health Organization declared COVID-19 as a pandemic. As such, I feel we have provided ample time for stakeholders to read the draft documents and formulate comments."

In the letter, the forest supervisor pointed to the extensive public engagement conducted through-out the process that was used to build the draft plan (see Appendix E: Documentation of Public Engagement Process and Coordination with Other Planning Efforts). He stated his desire to respect those who had worked hard to meet the deadline and already prepared and submitted their comments. Methods of comment submission were available throughout the comment period including mail, email, CARA, phone, fax, or physical delivery to Forest Service offices, providing for COVID-19 best practices. Please also refer to response to comment 2 regarding difficulties with CARA.

We acknowledge that not everyone has access to a computer or reliable Internet service and that some have a hard time with the technology. We also acknowledge that printed copies were not distributed to centralized locations, such as public libraries and community centers, until the Federal Register notice of availability was published, and these locations were shut down by order of the New Mexico Governor on March 13, 2020, as part of a response to the COVID-19. This may have resulted in a comment period less than 90 days for those individuals who did not self-identify an accessibility-based need for a printed copy. Several need-based requests for printed copies were fulfilled before and after the March 13th closure order.

We understand that it is possible to see a lack of fairness considering the other agency actions commenters identified. The Forest Service Southwestern Region had a backlog of Freedom of Information Act requests prior to the pandemic. To say all the delays were due to the pandemic would be misleading. Freedom of Information Act requests often involve hard-copy records, which is the reason the pandemic would have been the cause of the delay. In these instances, requestors were asked if they would be willing to narrow the scope of their request to electronic documents to avoid further delay.

The Chief approved a Substantial Overriding Public Interest extension for most timber sale contracts and permits for up to two years because the timber market fell early in the pandemic. It was not a local decision and if a purchaser requested it locally, we were obliged to extend. No timber sale contracts or permits on the Gila National Forest were extended under this authority. Most of the contracts in place when the Chief approved the Substantial Overriding Public Interest extension were already eligible for Market-Related Contract Term Addition, which is triggered by quarterly market-value index data. There were Additions granted to contracts on the Gila National Forest, but those extensions had nothing to do with COVID-19. The decision to extend, pause, or postpone public comment periods was something national-level leadership determined was best decided at the local level based on the project, what public engagement had already occurred, and where in the process the project was at.

Comment 4: Commenters state email address listed in the Albuquerque Journal alongside an opinion editorial by Joe Trudeau of the Center for Biological Diversity on the Gila National Forest Plan revision and a separate herbicide-use proposal was not a valid working address. Commenter was concerned due to the approaching end of the comment period. Commenter states they tracked down the phone number for the point of contact on the Gila National Forest but reached a voice mailbox because the point of contact was working remotely due to the pandemic. **Associated Letters: 364 and 370**

Response: The most accurate source of information on any Forest Service proposal is the information provided by the Forest Service. Commenters should not rely on information provided by any other source. However, the email address published received hundreds of emails in response to the opinion editorial. A planning team member returned the phone call of the commenter who left a voicemail, who was able to submit their comments via email. The other commenter was able to submit their comments via email without contacting the planning team.

Comment 5: Commenter is concerned that the inclusion of the separate herbicide proposal in the draft EIS was intentionally released during the COVID-19 pandemic to avoid public comment. **Associated Letter: 539**

Response: This is simply not true. The documents made available, and the official comment period began months before the COVID-19 pandemic began. Please refer to response to comment 4 in this section for a timeline.

Comment 6: Commenter states they are generally pleased with how their previous comments were addressed in the draft forest plan. **Associated Letter: 180**

Response: Thank you for providing high-quality, substantive comments to help improve the plan.

Comment 7: Commenters state appreciation for the opportunity to provide comment on the plan and hope that their concerns will not be brushed aside or taken lightly. Commenters state that too often, it seems that the Federal system forgets the actual people that live in the area and the officials that have been elected to represent them. **Associated Letter: 631**

Response: Comments are considered based on their merits, not on who submitted them. It is our duty to serve all American citizens regardless of where in America they live or the positions they hold.

Conservation Watershed Network

Comment 1: Commenters suggest that the plan establish a Conservation Watershed Network where protection from climate change, overgrazing and other environmental stresses and restoration of pristine water quality and fish habitat will be the highest management priority. **Associated Letters: 87, 105, 107, 234, 362, 638, 666, and 694, 727.1 through 727.4389, 727.4385**

Response: The creation of a conservation watershed network was a suggestion received during scoping that was not analyzed in detail. The reasons why the proposal was not analyzed in detail described in chapter 2 of the EIS have been expanded upon for clarity. Resilience to climate change is important to every watershed. Overgrazing would not be consistent with the plan, or any of the plan alternatives, in any watershed. Similarly, in every watershed with the hydrologic and ecologic potential for flowing surface water and fish, high water quality and high-quality, connected habitats are important. Draft and final plan direction for watersheds and riparian and aquatic species are designed to maintain and restore these values across the entire forest, not just portions of it. Final plan direction for riparian and aquatic species has been revised based on specific comments received during the comment period and the 2019 Southwestern Region's Riparian and Aquatic Ecosystem Strategy.

Additionally, the Watershed Condition Framework provides a comprehensive approach for proactively implementing integrated restoration on priority watersheds. Watershed Restoration Action Plans are developed and implemented on priority watersheds to move toward desired conditions. Once the work is accomplished, management and stakeholders can prioritize work in other watersheds where conditions need improvement. The Framework is described in greater detail in the Watersheds Background Information section of the plan and the Soil and Watershed Resources Affected Environment section of the EIS.

Furthermore, the Climate Action Tracker, formerly referred to as the Climate Change Scorecard, includes watershed stewardship. This accountability and reporting tool tracks each national forest and grassland's progress toward implementing adaptation actions, including those that reconnect floodplains and restore riparian and aquatic habitat, which improves watershed resilience. Vulnerability assessments can help support the selection of priority watersheds in which to do that work. Between the forest plan, the regional Riparian and Aquatic Ecosystem Strategy, the Watershed Condition Framework, and the Climate Action Tracker, we think that creating a conservation watershed network would only add complexity, not value.

Coordination with Other Plans

Comment 1: There is a concern that the role of the Grant County Soil and Water Conservation District play in the management of natural resources in Grant County is the subject of misunderstanding and debate. Specific language was provided describing the nature and mission of the Conservation District. **Associated Letter: 24**

Response: The 2012 Planning Rule requires a review of planning and land use policies of federally recognized Indian Tribes (43 U.S.C. 1712(b)), Alaska Native Corporations, other Federal agencies and State and local governments where relevant to the plan area. This was included in the DEIS as Appendix E: Documentation of Public Engagement Process and Coordination with Other Public Planning Efforts under the

heading Coordination with Other Plans. There is a section in this appendix evaluating Soil and Water Conservation District plans with an introduction briefly describing the nature and mission of the districts. Language provided in the comment letter was used to improve the description of the nature and mission of the districts, and additional edits were made to accommodate preferences expressed by a Grant County Soil and Water Conservation District board member. The Coordination with Other Public Planning Efforts review is now its own appendix in the FEIS (appendix D), rather than being lumped with the Documentation of the Public Engagement Process.

Comment 2: There is support for the Sierra Soil and Water Conservation's goal to have no more than two miles between water sources but a concern that this might be asking too much, and every four miles might be more realistic. This goal is featured in EIS Appendix E: Documentation of Public Engagement Process and Coordination with Other Public Planning Efforts under the heading Coordination with Other Plans. **Associated Letter: 103**

Response: This appendix is documentation of our review of other plans. We have an opportunity to contribute toward this goal through Livestock Grazing objective 1 and Wildlife, Fish, and Plants objective 5, both of which could involve construction of water sources.

Cliffs and Rocky Features

Guideline 3

"Rock climbing and related recreation activities should not disrupt the life processes of cliff- or rocky feature-dependent species (for example, American peregrine falcon, Mexican spotted owl, rare or endemic plants, or landsnails), or diminish the function of specialized vegetation (for example, mosses, lichens)."

Comment 1: Commenter states this guideline provides no management direction as to how human disturbance will be mitigated in these sensitive habitats and suggests including language for temporary or seasonal closures where activity could disturb nesting at-risk birds. **Associated Letter: 712**

Response: This direction is included as a guideline because there are many ways in which the intent of not disrupting species life processes could be met. For example, educational signage could be posted to encourage people to avoid the area (Cliffs and Rocky Features G5). The appropriate management action will be determined at the project level when the species and site- and activity-specific circumstances are known.

Guideline 5

"Where rock climbing or other recreational activities have the potential to trample known populations of at-risk plant or animal species, or cultural sites, signs should be posted educating groups to stay in permitted areas to avoid impacts."

Comment 2: There is a suggestion that this guideline be amended to "potential to disturb known populations." **Associated Letter: 151**

Response: This suggestion has been incorporated into the guideline, which was merged with Guideline 3.

Suggested Guidelines

Comment 3: There is a recommendation for one or more guidelines that require seasonal use restrictions or closures in areas where recreational activities have the potential to disturb known peregrine falcon or other raptor nesting sites. Such guidelines should include specific dates for seasonal use restrictions or closures. **Associated Letter: 151**

Response: Closures are one of the possible tools that may be used to implement Cliffs and Rocky Features guideline 3.

Comment 4: There is a recommendation that the plan include guidelines for seasonal restrictions to avoid disruption of maternity, swarming, hibernation, or other critical life-cycle activities of bats when timber sales or road building are proposed near known roost sites. These buffer zones should reflect the species composition and sensitivity of roost sites. For example, at Townsend's big-eared bat sites, seasonally restrict timber harvest activities and road building within a 0.25-mile radius buffer around roost sites with bat use. In addition, these activities should be restricted seasonally to avoid disturbance to Townsend's maternity roosts (early May to late August) and hibernacula (mid-October to mid-March). These critical time periods of hibernation and maternity activity may vary by species regionally and should be determined by a qualified biologist (Pierson et al. 1999). **Associated Letter: 678**

Response: Seasonal restrictions, buffers or avoidance areas are best determined at the project level by the interdisciplinary team, including a qualified biologist, as there may be multiple species life history requirements and other site-specific factors that need to be considered during project design and implementation.

Suggested Management Approaches

Comment 5: There is a suggestion that the plan include consultation with agencies, owners, and the rock-climbing community to identify rock crevices where bats are currently or have historically roosted. **Associated Letter: 678**

Response: The Conservation, Education and Relationships management approach includes language consistent with this suggestion. A specific reference to bats has been added.

Comment 6: There is a suggestion that the plan include a management approach to develop rock crevice management guidelines that provide for recreational use when consistent with protecting bats and other cliff resource values. **Associated Letter: 678**

Response: Guidelines 3 and 5 provide direction consistent with this suggestion.

Comment 7: There is a suggestion that the plan include a management approach to fund survey efforts to identify roosts for different bat species in areas where climbing is popular to determine if conflicts may be occurring. **Associated Letter: 678**

Response: Looking for opportunities to partner and accomplish this work has been added to the Conservation, Education and Relationships management approach.

Comment 8: There is a suggestion that the plan include a management approach that regulates human uses for rock crevice roosts with sensitive bat resources by developing climbing management plans, cooperative agreements, and memoranda of understanding, if appropriate. **Associated Letter: 678**

Response: Guidelines 3 and 5 and the management approach Conservation, Education and Relationships provide plan content consistent with this suggestion, which now contains specific discussion of bats. See also response to comments 1, 3 and 4 in this section.

Cultural and Historic Resources

General

Comment 1: Commenter points to the DEIS Cultural and Historic Resources Effects Common to Alternatives 2, 3, 4 and 5, observes that the effects of recommended wilderness on cultural and historic resources are not addressed and states that the more recommended wilderness the lowers the risk to cultural resources because of fewer mechanical treatments across the land. **Associated Letter: 233**

Response: For the most part, we agree. Fewer undertakings in wilderness lowers the risk of our activities influencing cultural and historic resources. It does not, however, lower other risk factors such as recreation, livestock grazing, or naturally ignited wildfire. Additional narrative about the effects of recommended wilderness alternatives on cultural and historic resources has been added to the final analysis.

Comment 2: Commenters support maintenance of the cultural identity of traditional communities associated with the Gila National Forest. There is concern about the threat posed by increasing disturbance and a suggestion that all sites should be reevaluated to determine if they are eligible for inclusion in the National Register of Historic Places. Commenters note that protecting cultural sites connects people with the land and request that tribal leaders and groups have a voice in case-specific decisions and management of already protected cultural sites. **Associated Letter: 44**

Response: The Gila National Forest is involved in ongoing evaluation of archaeological sites, in compliance with the National Historic Preservation Act (P.L. 89-665; 54 U.S.C. 100101) and 36 CFR 800. The evaluation of sites is beyond the scope of the forest plan and an increased likelihood of disturbance is not a cause to re-evaluate a site that has already been evaluated. Tribal consultation is ongoing and, while it is a legal requirement, it is something we do whenever we propose a management action. Beyond that, we maintain communication with our Tribal partners through meaningful consultation outside project-specific discussions (see draft plan section titled Tribal Importance and Use).

Comment 3: Commenter points to a statement on page 173 about roads and cultural resources, makes a comment about law enforcement (addressed under Law Enforcement heading) and then asks if a cultural site map has been overlayed with travel management and areas identified for firewood collecting. **Associated Letter: 233**

Response: This comment is beyond the scope of the forest plan. Cultural sites were identified and considered as part of the process and analysis supporting the travel management decision signed in 2014 (USDA FS 2014a and 2014b). They will be identified and considered as part of future project-level travel management decisions too. They are also identified and considered as part of project-level decisions for designated firewood gathering areas. Furthermore, the Gila National Forest Firewood Guide that is distributed with every permit purchase includes this information: "It is also important to preserve the past. Historic structures and artifacts can be examined and photographed but leave what you find. Multiple laws and directions govern the management of cultural resources. These include but are not limited to: Antiquities Act of 1906; National Historic Preservation Act of 1966 (NHPA); National Environmental Policy Act of 1969 (NEPA); Archaeological Resources Protection Act of 1979 (ARPA); and Native American Graves Protection and Repatriation Act of 1990 (NAGPRA). Those who violate can face substantial fines and even a jail sentence if convicted. Do your part to pass our nation's heritage of outdoor recreation to future generations."

Guideline 5

"Unplanned user-created trails that lead to archaeological sites should be eliminated to protect sites from damage and looting."

Comment 4: Commenter points to page 128 of the draft plan in the Cultural Resources section, specifically indicating this guideline. Commenter questions why this does not apply to system trails like trail 906, which goes right through a site. **Associated Letter: 233**

Response: This guideline applied to unplanned, user-created trails not system trails. Where we design a trail, it may or may not go through a site. We consult with the State Historic Preservation Office and Tribes with connection to the area to either avoid or incorporate design criteria in the placement of the trail. This guideline was removed from the final plan for three reasons: (1) damage and looting of archeological sites is illegal, making it a compliance and enforcement issue, not a planning issue; (2) plan direction applies to agency actions, not the actions of forest visitors; and (3) plan direction cannot compel action, only place constraints on actions (FSH 1909.12 Chapter 20 section 22.14).

Cumulative Effects

Comment 1: Commenter states that the EIS must include a cumulative impacts analysis of vegetation management projects taking place on other federal lands adjacent to the Gila National Forest. Commenter recently became aware of widespread vegetation management projects on lands managed by the Bureau of Land Management that are near the Gila National Forest and doesn't see where that has been addressed in the draft documents. Commenter asserts that this is especially important considering the Forest Service plan for widespread use of herbicides. **Associated Letter: 713**

Response: The cumulative effects analysis in the Upland Vegetation, Fire Ecology and Fuels and Soil and Watershed Resources sections of the DEIS and FEIS address management projects taking place on other federal lands adjacent the Gila National Forest. There is no plan for the widespread use of herbicide, as explained in response to comment 1 under the Herbicide Use heading in this appendix.

Comment 2: There is a suggestion that the COVID-19 pandemic contributes to cumulative effects for recreation and population trends. **Associated Letter: 238**

Response: We agree and so does recent research. The FEIS considers the cumulative effects of the COVID-19 pandemic in the Carbon and Climate, Sustainable Recreation and Social and Economic Conditions cumulative effects sections.

Distinctive Roles and Contributions/The Vision

Comment 1: There is a concern that the changes made to the preliminary draft plan's Distinctive Roles and Contributions section to incorporate the Vision section of the draft plan is inconsistent with the planning rule's requirement to manage the forest for ecological sustainability. The concern is based on observation of a decreased emphasis on habitat and ecosystem services in favor of increased emphasis on roads, trails, and motorized recreation. Commenters cite agency handbook direction and the 2012 Planning Rule stating: As required plan content, the Distinctive Roles and Contributions section "can provide focus or context and aid in developing plan components" (FSH 1909.12 22.32). Together with the Need to Change the Plan (see FSH 1909.12 21.21), the Distinctive Roles and Contributions section guides the development of integrated plan components that reflect the Gila National Forest's distinctive attributes and distinctive benefits to the broader landscape in a manner that "provide[s] for social, economic, and ecological sustainability" (36 CFR 219.8), which includes both ecosystem integrity and ecosystem diversity (36 CFR 219.9(a))." **Associated Letter: 85**

Response: The 2012 Planning Rule also requires plans provide for integrated resource management, which is defined as "Multiple use management that recognizes the interdependence of ecological resources and is based on the need for integrated consideration of ecological, social and economic factors" (36 CFR 219.19). As the commenter correctly points out, the planning rule requires plans to provide for social, economic, and ecological sustainability with the Needs for Change and Distinctive Roles and Contributions providing focus

and context for plan development. The Vision is the forest supervisor's leadership intent. There is no violation of the planning rule in this section. However, some modification has been made in the final version based on public comment and for clarity.

Comment 2: There is a request that the Vision's discussion of traditional uses specifically mention the historical importance of the ecosystem services supplied by the Gila and San Francisco Rivers. **Associated Letters: 24, 100, 164, and 631**

Response: The importance of the ecosystem services supplied by the rivers that flow through the forest are discussed in the Watershed and Riparian and Aquatic Ecosystems section of the plan and mentioned in the final Vision under the Healthy Functioning Landscape subheading.

Comment 3: Commenter provides specific edits to the discussion of livestock grazing in the Traditional Uses section of the Vision. **Associated Letter: 713**

Response: We recognize that the commenter has a different vision for livestock grazing as a traditional use of the forest, but the suggested language is not aligned with the agency's mission or the forest supervisor's intent under any alternative analyzed in detail.

Comment 4: There is a concern about the following language in the vision regarding fire: "Although other restoration methods support the traditional uses of the national forest and are an important part of the vision for the future, fire has been and will remain the primary restoration tool." Specifically, the concern is that fire has only recently become the primary restoration tool on the Gila National Forest when the watershed and timber management programs were devastated by litigation. In the past, the primary use of fires was to treat slash generated by firewood and timber harvesting and thinning practices. A lot of prescribed burns have been tried over the last 30 years. There have been many failures, along with a few successes. Prescribed burning provides no ecological, watershed or carbon benefit. It is requested that a variety of management techniques for restoration of vegetation be kept on equal footing with the use of fire and not branded as too expensive or too hard to accomplish; thus, not considered or used. **Associated Letters: 24, 100, 164, and 631**

Response: Prior to 1996, more acres were treated on an average annual basis by mechanical treatments than with prescribed and natural fire. After 1996, the opposite is true (project record file name 20181113_VegObjDevelopment_Calculator). It is also true that this shift coincided with litigation.

The effects of prescribed (and natural) fire and mechanical vegetation treatments on ecological, watershed, and carbon resources are analyzed using the best available science in the FEIS in the Upland Vegetation, Fire Ecology and Fuels, Carbon and Climate, Soil and Watershed Resources, Riparian and Aquatic Ecosystems sections. Different management tools are associated with different economic costs. The 2012 Planning Rule requires that objectives be within the fiscal capacity of the forest to accomplish. A variety of management tools are included in the range of alternatives, with individual alternatives exploring a range of different emphasis levels on each within the constraints of projected funding (project record file name 20181113_VegObjDevelopment_Calculator). Alternative 2 uses mechanical treatments and wildland fire with an emphasis on fire. Alternatives 3 and 4 use mechanical treatments and limit prescribed fire. Alternative 5 also uses the same tools, but the emphasis is on wildland fire to the exclusion of mechanical treatments outside the urban interface unless a scientific analysis demonstrates mechanical treatments in a specific area would facilitate restoring fire to the landscape.

Comment 5: There is a concern about the following language in the Vision regarding mechanical treatments: "The Gila does not compete well for funding for more expensive mechanical treatments, because of its remoteness and the area's low population density. The funding necessary to mechanically treat large acreages tends to go to national forests close to urban areas and the designated municipal watersheds those large population centers depend on." Specifically, the concern is that if this is truly the case, it is because fire is

being used as the primary restoration tool. These mechanical treatments are accompanied by funding from the sale of timber, forage, and other forest products, so there is limited funding for them because the treatments themselves are limited and because Gila National Forest staff and leadership need to become better at working with cooperating agencies and all types of forest users' groups if it wants to become competitive for funding. This includes improving efforts for multi-agency/multi-landownership planning and implementation of land treatment projects, especially in the wildland-urban interface areas; taking advantage of the multiple land treatment funding sources that are available through cooperative planning and implementation efforts (like Community Wildfire Protection Plans, Multi-agency/Multi-landownership Watershed Plans); becoming more competitive in capturing targeted project dollars by building a record of successfully completing a variety of projects using a variety of treatment techniques in a variety of situations.

The practice of burning the same areas every few years while avoiding areas that have a much higher need for treatment needs to end. Promoting and depending on the use of fire as the primary land treatment technique on the Gila National Forest will only make it harder to get funding for mechanical treatment projects in the future. Mechanical treatment projects are often the most appropriate method to restore and/or enhance National Forest System lands. **Associated Letters: 24, 100, 164, and 631**

Response: The statement that raises the concern is accurate. It is true that there can be some special funding associated with these activities, but there is not enough money to overcome the agency's shortfalls and there is a process to compete for that special funding. Furthermore, timber value across the Southwestern Region is low for several reasons and the value of the wood doesn't pay for the necessary service work needed to accomplish overall restoration objectives. This was the topic of a technical meeting held December 13, 2017, in which an example of stewardship contracting economics was provided. The example was from the Four Forest Restoration Initiative (4FRI), which showed the actual service costs to cut, skid, and haul timber and necessary road relocation, temporary road construction and road maintenance at roughly $3.2 million with the timber to be removed valued at just over $700,000.

The needs for change specifically highlight the need for strong relationships and room for improvement. Needs for change statement 3 specifically identifies that management approaches encouraging inclusive collaboration amongst diverse partners and stakeholders. The plan contains desired conditions, a guideline and management approach under the heading "Community Relationships" and over 30 management approaches throughout the rest of the plan that describe how forest staff and leadership intend to engage other community members and entities on various aspects of forest management. These management approaches include "Fuel Reduction and Relationships" (Wildland-Urban Interface section), "Integrating Restoration and Social, Economic, and Cultural Diversity and Stability," "Firewood Program" (both in Timber, Forest, and Botanical Products section), "Fire, Fuels and Relationships" and "Annual Pre-Season Landscape Risk Assessment" (both in Wildland Fire and Fuels Management section).

Fire is an ecological process. Multiple entries are frequently needed to achieve and maintain desired conditions. It is never a "one and done." The management approach "Restoration of Natural Fire Regimes" in the Wildland Fire and Fuels Management section of the plan discusses how leadership and staff look for opportunities to balance maintenance with forward progress. The range of alternatives and environmental analysis also addressed this issue as described in Appendix B. State and Transition Modeling Process under the heading Inputs and Assumptions, subheadings Transition Pathways, Wildfire and Prescribed Fire). It should be noted that the spatial limitations of the models do not allow the demonstration that some areas might be mechanically thinned prior to being treated with fire. In practice, mechanical treatment will be done when deemed appropriate or necessary to reduce risk of reintroducing fire and the funding allows for it.

Comment 6: There is a concern about the following language in the plan's Vision: "From an ecological standpoint, fire is the primary restoration tool because the Gila landscape evolved with frequent fire. It is a natural ecological process that helped shape the national forest's plant and animal communities, watersheds, and hydrology before the fire suppression era began. But now, because the lack of fire on the landscape has

contributed to higher tree densities, restoration with fire is like surgery with a chainsaw, trade-offs abound, and it is all about water."

Some commenters state:

> "while the Gila landscape evolved with fire and were dominated by ecosystems that reflected periodic fires, this was before the introduction of domestic livestock, the harvest of thousands if not millions of cords of Firewood, timber harvest for mines and railroads, and the fire suppression era. This made the landscape not so natural and greatly changed their ability to ever return to the condition that once existed. It is going to take a substantial effort by man and not just the return to the desired previous "natural ecological process" and "frequent fire" to return these landscapes into what they were prior to the late 1800s. Man's routinely burning the current landscapes of the GNF will most likely send the "natural ecological process" in an entirely new and unknown direction, just as occurred in the late 1800s and early 1900s exploitation of the resources caused the GNF landscapes to be in the condition we are dealing with today. Nature is not always a friend of man. It may be noble to want to go back to the "natural" landscapes that are thought to have once occurred; and allow "nature" to manage the GNF the way it is believed to have occurred years ago, but the reality is the landscapes that make up GNF need to be managed as they occur today with man's past influences being the reality.
>
> It is true that many acres on the GNF are dominated by dense stands of trees and shrubs. It is also true many of these stands, due to their age, are becoming decadent and much more prone to burn especially during drier years. It is also true, as stated above, "restoration with fire is like surgery with a chainsaw…" With all of this said, using fire as the primary tool for treating the current fuel load and the degraded soil and watershed conditions on the GNF makes about as much sense as burning your house down so you won't have to worry about your house burning down.
>
> Do not depend on the use of fire as the primary tool for landscape restoration on the GNF. The recent large and very destructive fires on the GNF show that fire is not a controlled method for treating landscapes and fire often results in negatively and severely altering the landscapes that were to be treated."

Another commenter states that this whole section is troubling because it implies that the vision is to take conditions back to before it was managed for multiple uses and fire was prominent on the landscape. Commenter doesn't think this is realistic or desirable, at least not for every part of the forest and this section diminishes the other vegetation treatment methods discussed under the Traditional Uses section of the Vision.
Associated Letters: 24, 100, 164, 631, and 675

Response: We recognize there is risk associated with using fire and uncertainty about the future. The range of alternatives includes a suite of different vegetation treatment objectives that include varying emphasis on mechanical methods and wildland fire (see comparison of alternatives table at the end of chapter 2 in the EIS). We recognize that there are areas on the forest that will require mechanical thinning before re-introducing fire to minimize risk and maximize movement toward desired conditions. Additional language has been added to the restoration discussion in the Vision to provide this recognition. Objectives under alternatives 1-no action and 2-proposed action are designed such that the most appropriate decision of which tool or combination of tools can be made at the project level based on site conditions. There is less flexibility provided in the remaining alternatives as either mechanical or fire is restricted. The EIS explores the environmental consequences of those alternatives in the context of each resource or topic analyzed. The forest supervisor will decide on the relative emphasis the plan places on which tools, or combination of tools after considering the analyses in the FEIS and public input.

Comment 7: There is a concern that the "Undeveloped Recreation" section of the Vision includes "driving for pleasure" and "off-highway vehicle use" because they are inconsistent with undeveloped recreation and the rest of the narrative under this subsection heading. Commenter points to the assessment report page 540,

which states the three activities enjoyed by visitors to the Gila National Forest are hunting, horseback riding, and picnicking and assert these activities are what should define the recreational niche. Additionally, there is a suggestion that managing for primitive and semi-primitive non-motorized recreation opportunity settings would support these quiet recreational activities and help forest managers manage for ecological sustainability. There is a request that references to motorized activities should be struck from the "Undeveloped Recreation" subsection, or its equivalent, in the Distinctive Roles and Contributions section of the final plan. **Associated Letter: 85**

Response: These are two motorized recreation opportunities the Gila National Forest provides that some users value. They are mentioned in that context. Most of the narrative in this section of the Vision centers on non-motorized recreation opportunities, wilderness, and trails. Primitive and semi-primitive non-motorized recreation settings are desired conditions for 60 percent of the forest. However, the plan directs management toward ecological, social, cultural, and economic sustainability regardless of the recreation opportunity setting.

Comment 8: While commenter notes that a well-maintained, minimum road system and trails are necessary for the public's use and enjoyment and certain aspects of forest management, they assert the "Access" subheading of the Vision does not fit with the intended meaning of Distinctive Roles and Contributions because it is neither a distinctive attribute of nor benefit provided by the plan area. There is a suggestion that this content does not belong where it is in the draft plan, rather it belongs as an aspect of the affected environment. As such, impacts to access across alternatives should be analyzed in the EIS and weighed in the forest supervisor's selection of a final revised forest plan. **Associated Letter: 85**

Response: We agree that this section wasn't a good fit where it was. It has been removed from the plan. Impacts to access are analyzed in the FEIS.

Comment 9: There is a concern that the "Restoration" section of the Vision was taken from the preliminary draft plan's Distinctive Roles and Contributions and lessens the important contributions the Gila National Forest makes to fish and wildlife habitat, populations of fish, wildlife and plants, and diverse upland vegetation communities. Commenter prefers the version in the preliminary draft plan and would like it restored. Commenter suggests active restoration has its place, but passive restoration may be the best approach in certain circumstances. Commenter also suggests that given the plan's emphasis on fire and that the Vision states that "restoration with fire is likely surgery with a chainsaw," it is especially important management appropriately consider its use considering the numerous rare and endemic species present on the forest. **Associated Comment: 85**

Response: We reorganized the Vision and Distinctive Roles and Contributions sections and have expanded on the distinctive ecological roles and contributions in the narrative to include more of the preliminary draft plan language. We do not understand what the commenter means by "passive" restoration in this context. It is true that some areas can be restored by letting fire play its natural role on the landscape and others need additional management action prior to reintroducing fire. The fire management decision making process is risk-based. At the individual fire level, management weighs the trade-offs of strategies and tactics and makes the best decision possible with the information they have. This process is described in more detail in the background information of the draft and final plan's Wildland Fire and Fuels section. See also response to comment 6 about fire in the Vision and Distinctive Roles and Contributions sections.

Comment 10: There is a concern about the removal of language from the preliminary draft plan's Distinctive Roles and Contributions related to water and streams. Commenter suggests that given the contribution of the Gila National Forest to ground and surface water, this language should be reincorporated into the final plan's Distinctive Roles and Contributions section. **Associated Comment: 85**

Response: This language has been reincorporated.

Comment 11: There is a concern that the Vision included in the draft revised forest plan values resource extraction over the inherent value of the natural environment. Commenter points to the first bolded, italicized statement in the Vision section of the draft plan and expresses concern this language values the provisioning services the national forest can provide over other ecosystem services to the point of exploitation. **Associated Letter: 159**

Response: We recognize the commenter's opinion. The draft Vision is consistent with the agency's mission and the 2012 Planning Rule requirements for integrated multiple use and ecological sustainability and exploitation was not part of it. While not in response to this comment, the statement that generated this concern has been revised. At draft it read: "Connect individuals and communities to a healthy, functioning landscape by recognizing and providing the opportunities for traditional uses and recreational experiences that stakeholder's desire, and that the Gila National Forest is uniquely positioned to provide." The final version reads: "We envision our community of stakeholders connected to each other and to a healthy, functioning landscape where high-quality backcountry recreational experiences abound, and traditional uses continue to have both ecological and socioeconomic benefit."

Comment 12: Aside from concerns about the Restoration section, commenter supports the Vision because it does a great job of supporting people and nature in a sustainable way. **Associated Letter: 675**

Response: Thank you. Much of the content remains like the draft, but the Vision section has been reorganized and fine-tuned in the final plan.

Comment 13: There is support for the Vision's inclusion of supporting a year-round trail crew. One commenter suggests this part of the vision should be expanded to include making trail condition maps available so that visitors can make informed decisions about where they would like to travel. Commenter states this will buy time while forest staff and partners work to catch up on the backlog of maintenance and help disperse use. Commenters state that all trails that are on the map should be able to be maintained.

A commenter also suggests section of the Vision be expanded to describe changing the old Forest Service culture to that of true collaboration and partnership through mandates and performance plans for forest staff. Commenter states holding staff accountable is important because non-forest staff may know more about the forest than they do. Commenters are concerned that the National Forest System Trails Stewardship Act of 2016, the Forest Service 10-year Trail Challenge, and National Strategy for a Sustainable Trail System, which all advocate for removing barriers for working with volunteer groups and partners, have not been incorporated into the Vision. Commenter states that they should be reflected in the Vision and anywhere in the plan the Sustainable Recreation Strategy is mentioned. Commenter states that the current system of ranger pre-approval for every project discourages partners and has caused multiple trails projects to be cancelled.

Commenters state volunteerism is a very important part of the vision and would like to see this specific language added:

> "The Forest has volunteer partners that are assisting with the planning and maintenance of all trail systems.
>
> The Forest Service not only supports trail maintenance but is organized to recruit, coordinate, and train trail volunteers helping with the trail programs.
>
> Working with volunteers, the Forest Service is able to provide recent information on trail conditions to visitors.
>
> The Forest working with volunteers is able to provide recent information on trail conditions so that visitors can choose trails that have been recently maintained, or more primitive trails that have not been recently maintained.

> Many of the old barriers to volunteer satisfaction such as excessive over-site have been eliminated and volunteers feel they have the freedom to appropriately provide an important role in trail management.
>
> Working with partners, the Forest Service has identified a primary system of wilderness and non-wilderness trails that the agency will work hard to keep open and maintained. All other presently identified system trail will be available for maintenance by volunteer groups with the understanding that if they are not maintained by volunteer groups, they may not be receiving maintenance."

Some commenters assert that importance of volunteerism is not reflected in the plan components and suggest identical language be incorporated as desired conditions or objectives. **Associated Letters: 39, 51, 52, 56, 131, 474, 475 and 712**

Response: Relationships are a central theme of the plan. Best practices for successful, sustainable partnerships and collaboratives are discussed in the final plan-wide management approach Relationships. Relationships with our volunteers and partners around sustainable recreation and trails are specifically valued within the Vision; final Community and Tribal Relationships DCs 1 and 4, G1, and the management approach Engagement and Collaboration; final Sustainable Recreation DC5 and the management approach Collaborative Sustainable Recreation Strategy and Relationships. Many of the changes in these plan components and management approaches were based on suggestions made in the letters associated with this comment (see also Sustainable Recreation section in this appendix). The National Forest System Trails Stewardship Act of 2016, the Forest Service 10-year Trail Challenge, and National Strategy for a Sustainable Trail System are not implemented by the forest plan, but the plan can support their implementation. Agency employee performance, decision-making authority, and volunteer satisfaction are all outside the scope of the forest plan.

Comment 14: Commenter appreciates the Vision's focus on traditional uses, recreation experiences, relationships, and volunteerism. Commenter states that the Vision is well crafted and helps make it clear what makes the Gila National Forest so special. Commenter especially wants to acknowledge the elevated importance of traditional and current cultural connections to the landscape and the importance of including tribal communities. **Associated Letter: 180**

Response: Thank you. We made what we believe to be improvements in the final Vision section, and the importance of traditional and current cultural connections to the landscapes remains.

Comment 15: There is appreciation for the draft plan's emphasis on traditional uses. One commenter states that traditional uses and culture should not outweigh the needs of the public at large and that traditional uses are not the same as "custom and culture" terminology that other community members often use. **Associated Comments: 273, 479, and 675**

Response: We acknowledge the commenters' opinions.

Comment 16: Some commenters would like to see additional activities listed as traditional uses including firewood gathering, Christmas tree cutting, outdoor recreation, canoe trips, fishing, camping, hunting, wilderness recreation and seclusion, off-road vehicle use, and mining. **Associated Letters: 273, 479, 627, and 675**

Response: Firewood and hunting are included as traditional uses. Outdoor recreation, including canoe trips, fishing, camping, wilderness recreation and seclusion are traditional uses that are given an entire section (draft Undeveloped Recreation, final Backcountry Recreation) in the Vision. While all possible recreation activities are not specifically listed, they are included conceptually. Off-highway vehicle use would also be included as a recreational activity, but off-*road* vehicle use is illegal. The Vision was not meant to be a thorough accounting of everything and everyone's values, it was intended to provide continuity of focus and context to future forest leadership.

Comment 17: Commenter notes fuel and timber harvest are the only traditional uses that the Vision portrays as management tools. Commenter agrees that they are management tools but asserts all the traditional uses are management tools. **Associated Comments: 675**

Response: We acknowledge the commenter's opinion.

Editorial Changes

Comment 1: There is a suggestion that re-structuring draft plan chapters 1 and 2 would be beneficial. As structured in the draft, commenter was wondering about hierarchy of ideas and context and whether some content was necessary or could be provided elsewhere such as in an appendix. Commenter states the new structure will make the plan stronger and easier to grasp. Specific suggestions were submitted in a table of contents format. **Associated Letters: 214 and 230**

Response: We agree that some restructuring of the draft would improve clarity and readability. Planning staff considered your suggestions alongside other final plans before settling on a final structure.

Comment 2: Standards and guidelines should be individually numbered for reference purposes, rather than grouped. **Associated Letter: 713**

Response: There are several different ways plan components could be identified and we acknowledge your preference.

Comment 3: Commenter points to abbreviations used to refer to plan components in multiple volumes and identifies room for confusion. For example, DC is defined in volume 1 of the EIS but not in volume 3. Commenter then points to guidelines being abbreviated as (GL1, GL2 et cetera) and wonders if the numbering indicates which alternative the plan component is part of or something else. **Associated Letter: 699**

Response: All abbreviations referring to plan components, and descriptions of the system of abbreviation, in all the documents have been reviewed for consistency and clarity. We also made a concerted effort to avoid using abbreviations as much as we reasonably could in all the final documents.

Comment 4: Appendix E references the strategic plans of other agencies as being "complimentary" to the draft plan. This appears to be a typographical error that would lead readers to incorrectly conclude that the agencies listed are in favor of the proposed revised plan. There is a suggestion to replace the word "complimentary" with the word "complementary." **Associated Letter: 38**

Response: Thank you for catching the typographical error. This has been corrected in the FEIS. Draft appendix E is now final appendix D.

Comment 5: There is a concern that some of the narrative in the documents is repetitive and cumbersome. There is a suggestion that modeling results could be summarized and more technical details put into separate sections and that the volume containing the appendices should be numbered consecutively with the other volumes, not start over. **Associated Letter: 39**

Response: We acknowledge that there may be more technical details included in the main body of the DEIS than is traditional in Forest Service documents. The planning team's intent was to get out of the "black box" our stakeholders have complained about in the past and increase transparency. Efforts have been made within the FEIS to reduce repetition, improve clarity, and make it easier to follow. Page numbering has been addressed so that volume 1 contains chapters 1 through 3 and pages are numbered through page 478. The appendices are in volumes 2 and 3 with pages numbered with a prefix showing the appendix where the text appears (for example, A-97 is page 97 in appendix A).

Comment 6: There is a suggestion that the plan should include language up front about the Organic Act, Multiple Use Act, and other laws that dictate the purposes for which the Gila National Forest is managed. **Associated Comment: 39**

Response: The final plan includes an appendix that lists relevant laws, regulations, and policies.

Comment 7: Commenter suggests there is a need to have a comprehensive index linking the parts of the final assessment report to the EIS. **Associated Letter: 110-1**

Response: Information from the assessment report is used to help describe the affected environment.

Comment 8: Commenters note the page numbers in the Table of Contents of the draft plan are incorrect. **Associated Letters: 131, 151, 474, and 475**

Response: This error in the draft was identified by stakeholders soon after its release. A Table of Contents errata sheet was posted to the website on January 9, 2020.

Comment 9: Commenters note that the last sentence of the fourth paragraph in the draft plan's Management Approach to Restoration is incomplete. **Associated Letter: 151**

Response: Thank you for catching this error. It has been fixed in the final plan.

Comment 10: Commenter observes that the Wildlife, Fish, and Plants section of the draft plan was split out into subsections for Aquatic Species and Habitats, Terrestrial Species and Habitats, and At-Risk Species in the Cibola and Santa Fe National Forest draft plans. There is a preference for the way the other New Mexico forests structured their plans because it provides for more specific, in-depth development of plan components and management approaches. Commenter requests that the final plan be structured in this way. **Associated Letter: 151**

Response: There are many ways that forest plans can be structured, and we acknowledge the commenter's preference.

Comment 11: Commenter points out that the citation "MEA 2005" in the sixth paragraph second sentence on page 102 of the draft plan's Wildlife, Fish, and Plants section is not included in the section's references. **Associated Letter: 151**

Response: Thank you for catching this. It has been corrected in the final plan.

Comment 12: Commenter points out error in the draft EIS and asks for clarification. Page 15 states "There are 10 vacant allotments out of 138 active grazing allotments," then on page 319 it says, "As of 2018, the Gila NF contained 129 allotments…" **Associated Letter: 215**

Response: Thank you for catching this error. There are 138 allotments. Three have been closed by NEPA decision, 10 were active but vacant at the time the draft documents were published, and the rest were active and not vacant. This has been corrected in the FEIS.

Comment 13: Commenter states there is a typo in the Sustainable Recreation environmental consequences common to all alternatives section under the Facilities and Level of Development subheading first sentence third paragraph. The current trail system will be assessed as part of the sustainable recreation strategy, will the objective of establishing a more manageable trail system that better meets needs of trail users. A possible typo in phrase above—on second "will" perhaps need other word such as "with?" **Associated Letter: 3**

Response: Thank you for catching this typo. It has been corrected in the final document.

Facilities

General

Comment 1: There is a suggestion that the plan describes the key features of the Facilities Master Plan and identifies priorities. **Associated Letter: 39**

Response: A footnote has been added to the mention of the Facilities Master Plan in the Facilities management approach.

Suggested Guidelines

Comment 2: The Department recommends incorporating guidelines for reducing avian collisions consistent with U.S. Fish and Wildlife Service's Reducing Bird Collisions with Buildings and Building Glass Best Practices and the American Bird Conservancy's Bird-Friendly Building Design. **Associated Letter: 151**

Response: While bird collisions with our facilities windows has not been an issue, we understand that is a potential problem. We have added a guideline that addresses collision prevention to the final plan (Facilities G6).

Feral Cattle

Comment 1: The documents use "feral cattle" and "wild cows" interchangeably to refer to unclaimed, unauthorized, and unmanaged livestock. There is a request for uniformity of language to refer to such animals. Given that they vary in age and sex, the term "feral cattle" should be used rather than "wild cows." **Associated Letter: 38**

Response: All references to "wild cows" have been changed to "feral cattle" in the final documents for accuracy and consistency.

Comment 2: In the cumulative effects discussion related to feral cattle and given that most permittees take range and herd management seriously and keep up with infrastructure maintenance and their cattle as a matter of both short- and long-term economic stability, there is a request to add the word "some" to the following sentence. "In the Gila NF, these populations were initially established not because fire destroyed fences, but because some former permittees did not keep up with maintenance or their cattle." **Associated Letter: 38**

Response: This EIS should not have included this discussion and it has been removed in its entirety from the FEIS. The purpose of the plan's environmental analysis is to evaluate the effects of plan direction and the differences between plan alternatives. Activities and uses that are not consistent with plan, or any of its alternatives do not serve this purpose. Unauthorized, unmanaged grazing is not compliant with plan direction under any alternative and is an implementation issue, not a planning issue.

Comment 3: There is a concern about feral cattle on the forest. Commenters ask if Gila National Forest staff or leadership can cooperate with the state to get rid of them. Others state that it is imperative that the feral cattle on the Gila River need to be captured or killed and removed from the wilderness. Some suggest a hunt for wild grass-fed beef could be a solution. Commenters state their outrage that this problem has gone on so long and share observations about the increasing population of these animals. Commenters state the draft documents do not adequate address this issue, suggesting the plan should establish a plan for their removal and restoration. One commenter provides scientific literature published in the journal Biological Conservation as proof of the detrimental effects of unmanaged cattle grazing in riparian areas.

A couple of commenters are concerned that the long-standing belief that unbranded, feral cattle are owned by the State and under the authority of the New Mexico Livestock Board is not true. One commenter submitted

documents for the planning team, forest supervisor, and the agency's legal counsel to review, suggesting it was clear that no state agency has management authority over these animals. Commenter would like these documents entered into the plan revision's project record. Commenters are concerned that the draft documents perpetuate this long-standing, inaccurate belief and it may have altered or prevented the public from submitting comments that are reflective of the agency's clear authority to act. Commenter asks if there is a process in place to amend the document or notify stakeholders when there is a clear legal error in the draft document.

Commenters are concerned that leaving the feral cattle in the wilderness goes against the effort to achieve and maintain desired conditions for watershed, soils, riparian and aquatic, water quality and contributes to the decline of at-risk species. Commenters assert it also goes against the planning rule and agency directives to prioritize riparian areas. Commenters are concerned that leaving feral cattle anywhere on the forest will lead to an ever-growing and intractable ecological and legal problem like what happened in Arizona with feral and estray horses and add to the negative opinion about ranchers as stewards of the land. Commenters suggest the plan must include an objective to remove these animals within the next two years and add additional analysis in the EIS about feral cattle in the wilderness. **Associated Letters: 39, 50, 61, 130, 131, 142, 147, 152, 159, 161, 184, 210, 233, 361, 508, 542, 603, 612, 629, 632, 684, 685, 689, 694, 724.8, 725.5, 728.1 through 728.433, 728.369, 729.1, 729.9, 730.27, 730.57, 730.60**

Response: Unauthorized, unmanaged grazing is not compliant with plan direction under any alternative and is an implementation and enforcement issue, not a planning issue. Efforts to address this issue are ongoing.

General

Comment 1: Commenters state, "We think it is great that you guys are focusing on the Gila National Forest, but shouldn't the land that is surrounding the forest be accounted for and be taken care of? **Associated Letter: 51**

Response: Lands outside the forest boundary are not National Forest System lands and plans for those lands are the responsibility of private landowners or other land management agencies. The Forest Service has no jurisdiction on those lands. However, the 2012 Planning Rule does emphasize an "all lands approach." This means that the assessment, revision, and implementation and monitoring phases of the planning process must include consideration of surrounding lands and their management.

The assessment phase of revision explored current conditions on the national forest in the context of the broader landscape to help build an understanding of how the Gila National Forest contributes to the overall health and sustainability of that landscape and those that inhabit it. The management plans of others were consulted as the revised plan was built with consideration of how the Gila National Forest could contribute to joint objectives or reduce conflict. This is documented in appendix D of the FEIS. Collaboration, partnership and otherwise working with those individuals and entities that manage surrounding lands is a central theme of the revised plan and will be a determining factor in the outcomes of implementing the revised plan.

Comment 2: Commenter asks where the agency authority comes from. **Associated Letter: 598**

Response: Article IV, Section 3 of the Constitution provides: The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States; and nothing in this Constitution shall be so construed as to Prejudice any Claims of the United States, or a particular State. Congress has exercised this power in relation to national forests by, among other things, providing for the establishment and management of the forest reserves and the Forest Service. The Organic Act of 1897 and the Transfer Act of 1905 authorize the Secretary of Agriculture to establish rules and regulations for the use and protection of national forests.

Comment 3: Commenter reminds the planning team to be aware of the important ecological mission of the Forest Service and urges prioritization of wildlife and habitat. **Associated Letter: 718.3831**

Response: The agency's mission is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations. The 2012 Planning Rule requires the plan to provide for ecological integrity, sustainability, and integrated multiple-use management.

Comment 4: Commenter states that environmentalists believe in preservation, which is that living things and geology can remain in a constant, static condition. Commenter explains that this is not possible because all creation begins, grows, ages, and dies and even rocks change through wind and water action. Commenter states preservation is not the answer, but conservation is. Commenter states Forest Service policy used to be and should now be based on conservation but with the influx of environmentalists among employees the agency has shifted to preservation. Commenter states the agency has pushed Wilderness and Wild and Scenic River acts to back this false ideology, thereby keeping traditional users off the land and authorizing more restrictions on multiple uses. **Associated Letter: 647**

Response: We acknowledge the commenter's opinions about land ethics, designations, and Forest Service employees. The plan and environmental analysis are based on the well-established, scientific understanding that ecosystems change across the landscape and over time. Please refer to the response to comment 2 regarding the Forest Service's conservation mission. The wilderness inventory, evaluation, analysis and recommendation process, and the Wild and Scenic Rivers eligibility study were completed in compliance with the 2012 Planning Rule and agency directives implementing the rule. The Hatch Act of 1939 and the Anti-Lobbying Act of 1919 prohibit Federal Civil Service employees from seeking to influence a politician or elected official on any issue, including laws and acts.

Comment 5: There is a recommendation that within all Desired Conditions, Standards and Objectives the terms "should not" be amended to read "can be" or "may be." The amended language would give Forest Service personnel the opportunity to allow actions in certain cases while maintaining a positive verbiage throughout the plan versus language expressing Forest Service personnel the opportunity to not allow actions. **Associated Letter: 247**

Response: This suggestion would not be consistent with the requirements for plan component language. Standards are a mandatory constraint that are stated in a precise manner and prohibitive wording such as "must" or "must not" (FSH 1909.12 Chapter 20 Section 22.13). Guidelines are also constraints but allow for departure from its terms if the intent of the guideline is met. As such, they use the words "should" and "should not" (FSH 1909.12 Chapter 20 Section 22.14).

Comment 6: There are differing opinions regarding the overall balance between guidelines and standards the plan should contain for livestock grazing, other multiple uses and management activities. Some commenters express a general preference for guidelines over standards to preserve flexibility. Some specifically prefer no standards or guidelines related to livestock grazing, stating the decision-maker and the permittee ought to work together to make allotment-specific decisions. One commenter asserts the decision document will need to spell out the rationale and intent of the guidelines that are included in the final plan so there are safeguards to make sure that intent isn't misinterpreted. Others express a preference for standards over guidelines, especially for livestock grazing, because of detrimental ecological effects and the potential for those effects to be worse because of climate change. **Associated Letters: 10, 38, 543, and 687**

Response: There are pros and cons associated with standards and guidelines. Meeting the intent of a guideline is not optional, but there is flexibility in how that intent is met. Like all plan components, the intent of the guideline should be clear in its wording. This can be helpful when all site-specific circumstances are not reasonably foreseeable. Standards are rigid but may incorporate foreseeable exceptions. Because standards must be followed to the letter, compliance is easily determined. The forest supervisor will make decisions

about which items are appropriate for guidelines and which would be better as standards based on public input and the analysis in the FEIS. Regardless of the decisions made, Gila National Forest staff and leadership agree that the decision-maker and the permittee ought to work together to make allotment specific decisions. This has been and will continue to be a vital part of managing livestock grazing as a use of the forest.

Comment 7: Commenters state they cannot take the time to specifically identify all the standards and guidelines that are unclear, but points to one in the Designated Wilderness section of the plan as an example. Commenter says they understand that the public might not be aware of those directions so including them provides emphasis, but they do not understand why some things are repeated and others are not. Commenter suggests whenever there is a repetition, the law or manual direction should be referenced. Commenters are concerned about their observations that the agency is bringing on more and more people that do not have a lot of experience or are familiar the complex handbook and manual system. Commenter observes the many plan standards are very generalized statements of what is in manual direction and suggests the manual needs to be referenced to make the standards understandable. Commenter asserts this would reduce misunderstandings and the opportunity for people in the agency to make decisions based on general statement in the plan that are against more specific manual direction. **Associated Letters: 131, 474, and 475**

Response: The decision about whether to repeat law, regulation, or policy was made based on two considerations. The first was to build shared understanding with stakeholders where comments suggested stakeholders were not familiar with the law, regulation, or policy direction. The second was to build shared understanding across disciplines within the forest staff. Most employees are familiar with handbook and manual direction for the resources, uses or activities that fall under their primary responsibility. However, not all employees are equally familiar with policy direction for those that are not their primary responsibility. We did find draft plan components that repeated policy direction in ways that were confusing, including in the Designated Wilderness section. These were clarified if public comment indicated a need to keep them, or removed if there was no identified need for the repetition.

Comment 8: Commenter states: "I appreciate the desired condition information and find it useful but without some type of information on the priority associated with accomplishing competing desired conditions (from a financial standpoint) it seems kind of like "pie in the sky." Commenter says they understand that Congress controls the agency's funding and funding priorities but suggests that maybe someday elected officials will look at the forest's priorities and try to bring them forward. Commenter concludes that without some indication of priority, it is impossible to determine what the forest might look like after implementing the plan, which makes it difficult to comment. **Associated Comments: 474**

Response: The forest plan, and its desired conditions, are viewed as a whole and are combined to meet requirements for ecological integrity, diversity of plan and animal communities, ecologically sustainable multiple use management. The desired conditions associated with the resources, uses and activities covered by the plan are of equal importance, without one being a priority over the other. As described under the Plan Implementation in chapter 1 of the draft plan (Interrelationships between Plan Components in the final plan), the plan is implemented by site-specific planning, proposals, and decisions. Those specific proposals will be evaluated, and prioritized by how well they support progress toward, achievement, and maintenance of all desired conditions and objectives. Partnerships, volunteers, and funding opportunities will also play into the prioritization of projects.

Comment 9: While some commenters acknowledge the planning team tried to make the documents accessible to the reader, there is a concern that the documents are still not accessible to the average reader and do not provide clear and concise direction for management. Another commenter thanks the team for preparing a clearly written plan that includes a thorough explanation of some complex ecological concepts. Commenter also thanks the planning team for a plan based on current climate, fire, and forest research and for explicitly stating the limitations of the state-and-transition models. **Associated Letters: 24, 634, and 640**

Response: Thank you for acknowledging our efforts. The plan and EIS have been updated in an additional effort to make them easier to read and understand. New definitions have been added to glossaries and some text has been rewritten to clarify information. A summary of the changes made to the documents between draft and final can be found in appendix B of the FEIS.

Comment 10: Commenter states appreciation for the planning team's attempt to include as much science as possible in the documents. However, the commenter is concerned that the sociopolitical climate under which it was developed as led to an "unstated but clearly principal goal" of maintaining the status quo. Commenter states that this is a defensive, backward-looking approach that will not be helpful in the coming years. **Associated Letter: 634**

Response: We acknowledge the commenter's opinion.

Comment 11: There is a concern that the language in the planning documents insinuates that desired conditions could only be achieved if wilderness style management was applied to the whole forest. **Associated Letter: 24**

Response: Multiple uses and activities that depend on mechanized means are expected to continue and are supported by plan content beginning with the Vision narrative, which describes a future where firewood collection and timber harvest are promoted. The Vision also discusses the importance of roaded access to support traditional uses. The draft and final plan contain vegetation management objectives for specific ecological response units that include the use of mechanized equipment and chapter 4 is dedicated to describing those lands suited for timber production and estimated mechanized vegetation management practices. There are also desired conditions, standards, and guidelines associated with mechanized activities throughout the plan including but not limited to standards in the All Upland Ecological Response Units section, and desired conditions, standards, and guideline in the Roads and Timber, Forest, and Botanical Products sections. This is supported by analyses in the EIS in the Upland Vegetation, Fire Ecology and Fuels, Soils and Watershed Resources, Riparian and Aquatic Ecosystems, Wildlife and Botanical Species, Socioeconomic Contributions and other sections that correspond to resources, uses, and activities that could be impacted by plan direction for mechanized activities. Furthermore, recommended wilderness under alternatives 2, 3, and 4 included criteria that excluded areas from recommendation that would otherwise be suitable for timber production or have a foreseeable need for mechanical thinning where such thinning would be otherwise feasible.

Comment 12: The use of standards and desired conditions is good, as it allows flexibility in management to reach those goals under uncertain future economic and climatic conditions. The emphasis on restoring ecosystems and protecting communities and water supplies from wildfires is consistent with the purpose of national forests. **Associated Letter: 39**

Response: Thank you. The forest supervisor will make decisions about which items are appropriate for guidelines and which would be better as standards based on public input and the analysis in the FEIS.

Comment 13: There is a suggestion that the plan include direction related to personnel and funding priorities so that there is a shared understanding of available funding, how that funding is allocated, efforts to streamline and create efficiencies, and future staffing and workloads. **Associated Letter: 39**

Response: While we would like for there to be a shared understanding of budgets, staffing and workloads, this is beyond the scope of the plan. Congress determines how much funding is made available and what it can be used for. That changes from year to year. Coordinated efforts to streamline and create budget efficiencies are ongoing at all levels of the agency.

Comment 14: There is a concern that the administration's budget recommendations are short-changing natural resource agencies. **Associated Letter: 728.322**

Response: This concern is outside the scope of the forest plan.

Comment 15: There is a concern that budget and staffing will be limiting factors in plan implementation and a suggestion that the plan should include a description of how the plan will be implemented, how many resources it will take and if budget and staffing levels decrease, what work will be dropped from forest programs. There is also a suggestion that the plan should include provisions for implementation during future public health emergencies given the recent COVID-19 pandemic. **Associated Letter: 51**

Response: The 2012 Planning Rule requires that plans be within the technical and fiscal capacity of the forest. In compliance with this requirement, plan objectives were developed based on the fiscal capacity the forest has had to do work in the recent past (for example see draft plan Ecosystems and Watersheds Background and Description Upland Ecological Response Unit Objective Development). Plan objectives were based only on what staff have been able to accomplish with congressionally allocated monies, often including the words "at least" or "minimum" indicating more could or should be done if there are resources to do so. They did not include partnerships or grant monies because those can fluctuate based on things outside Forest Service authority or ability to influence. However, plan content specific to relationships, partnerships and collaboration are intended to help increase the resources available for forest management under current and future budget scenarios. Project-level planning is the mechanism for plan implementation. This is described in chapter 1 of the final plan under the heading Implementation of a Forest Plan (draft heading Plan Implementation). Future project work must demonstrate compliance with plan direction.

Every year forest leadership prioritizes the program of work, knowing that opportunities and challenges may arise during the year, and we will have to adapt and adjust our priority work. Prioritization is dynamic and responsive to changes in funding and staff time, and the ecological, socioeconomic, and political landscape. Incorporating the suggestion to describe the priority work and what will get dropped if resources continue to decline could create an unrealistic expectation of program delivery.

Comment 16: There is support for hiring more personnel. **Associated Letter: 728.392**

Response: We appreciate your support. Hiring is beyond the scope of the forest plan.

Comment 17: Commenter is concerned that many of the suggestions in the plan requiring money to implement will simply not be possible given the money Congress allocates for forest management. **Associated Letter: 690**

Response: The 2012 Planning Rule requires that plans be within reasonably foreseeable budgets and the plan's objectives were built to fulfill that requirement. For an example, see draft plan Ecosystems and Watersheds Background and Description Upland Ecological Response Unit Objective Development discussion. We may not be able to achieve desired conditions within the life of the plan, but we can fulfill our objectives and make progress toward desired conditions.

Comment 18: There is question about what Gila National Forest staff can do to get more funding for forest management. **Associated Letter: 51**

Response: The plan includes management approaches related to relationships, partnering, and collaboration that can contribute to acquiring more funding through special initiatives and associated grants, such as the Collaborative Forest Landscape Restoration Program or the Joint Chiefs Landscape Restoration Partnership. Project proposals that include multiple jurisdictions are more competitive for special funding.

Comment 19: Commenters request the plan implementation section in the introductory chapter of the draft plan contain an actual due date that the responsible official must propose a project or activity that would not be consistent with the revised plan. They also request it include a due date for implementation of each component to keep things going and moving through the agency. **Associated Letter: 51**

Response: We cannot project a specific date at this time. There remains another round of public engagement and administrative review before the plan is approved and implementation can begin. Plan components will not be implemented individually; the plan will be implemented holistically. Objectives are the only plan component with a completion timeframe. A smooth and gradual transition to the new forest plan is anticipated, rather than one that forces an immediate reexamination or modification of all contracts, projects, permits, and other activities that are already in progress. Once the final plan is approved, all new project proposals and decisions, contracts, permits, renewals, and other activities will be required to conform to the approved plan.

Comment 20: Commenter cites the ecological need for change on page 9 of the draft plan and asks how the revised plan is going to address these issues. **Associated Letter: 69**

Response: The plan addresses the ecological need for change with science-based desired conditions for ecosystems, watersheds, management activities and uses. These desired conditions are supported by standards, guidelines, and objectives.

Comment 21: There are differences of opinion about what and who is most important to keep in mind in the plan revision process. One commenter states: "the most important thing to take into consideration in this process is that the plan has to be comprehensive enough to provide guidance far into the future, flexible enough to allow for consequences we haven't even thought of yet and specific enough to keep a forest supervisor's personal and/or political preferences from having undue influence on the future of a public asset that doesn't just belong to the residents in and around the forest but to every single person who resides in the U.S."

Other commenters state that the real outcome of plan revision will be in the effects implementation has on locals and asserts that this should be done with full cooperation, consultation, and coordination with locals, not far away groups with national interests and no local permanent involvement. Commenter's primary concern is with private property rights of local, resident land holders. **Associated Letters: 93, 186, 684, 718.3738, 718.3769, 720.4, 721.1 through 721.3, 726.12509**

Response: Community relationships and involvement are a critical factor in the success or failure of plan development and implementation. This is acknowledged and supported throughout the plan, including relationships with grazing permittees, other local individuals, businesses and governments, State and Federal government entities, local and national level non-governmental organizations and all American citizens (see also response to comment 2 under the Community Relationships heading in this appendix). The Forest Service has no jurisdiction on private lands and must provide for legally recognized property rights that may occur on National Forest System lands.

Comment 22: Commenter states they do not want their public land being used for private profit. **Associated Letter: 718.3769**

Response: We acknowledge the commenter's preference. The Forest Service operates under the mandates of the Multiple-Use Sustained-Yield Act. The Act specifically directs the agency to provide for uses that contribute to the socioeconomic well-being of the American people without impairing the productivity of the land.

Comment 23: Some commenters thank the team for the under-appreciated hard work and research put into the draft forest plan and public engagement efforts. Some express appreciation for the difficult task this process entails stating: "The interests of a multitude of stakeholders, all with very different ideas about the Gila's possible futures, is no easy job, and I very much respect the planning team for taking on that heavy burden." Another states: "The authors of these documents, the Forest Plan and the 3 EIS volumes deserve praise and gratitude. We taxpayers have been given a gift and we need to recognize it… Truly in a very trying time it is rewarding to see that Government can provide the applicable facts that must be considered for decisions that will impact all citizens." **Associated Letters: 103-1, 186, 189, 193, 201, 217, 550, 561, 589, 612, 614, 656, 664, 690, 694, 696, 699, 706, and 712**

Response: Thank you for acknowledging our efforts.

Comment 24: The Grant Soil and Water Conservation District would like the full text of their comment letters incorporated into final documents for full public disclosure. **Associated Letter: 100**

Response: All letters submitted during the formal comment period by governmental agencies and elected officials are in the FEIS Appendix M.

Comment 25: There is a request that documents that were cited in the Gila Coalition comment letter submitted by the Center for Biological Diversity to be used by the planning team in response to comments and document revision and entered into the project record on behalf of all letter signatories. **Associated Letters: 174, 175, 176, 177, 178, 179, 192, and 712**

Response: These documents have been reviewed by the planning team and entered into the project record.

Comment 26: Commenter states: "You can make a positive difference!" **Associated Letter: 198**

Response: Thank you for your interest in the Gila National Forest plan revision effort.

Comment 27: There is a concern that the plan does not establish geographical areas and a suggestion that the riparian Ecological Response Unit Desert Willow should be a geographic area. **Associated Letter: 233**

Response: Geographic areas are based on *place*. Management (and designated) areas are based on *purpose*. The plan does not identify any geographic areas as no place-based needs for different management direction were identified. The plan contains management (and designated) areas because purpose-based needs for different management direction exist. Establishing Desert Willow as a geographic area is problematic because it is in relatively small patches scattered over the southern portion of the forest and not in one contiguous area. Ecological response unit mapping is also subject to revision based on new technologies and field validation. Plan direction for Desert Willow is found in the Riparian and Aquatic Ecosystems section of the plan.

Comment 28: Commenter points to the definition of resilience in the draft EIS glossary on page 628 and suggests it should be expanded to include watersheds, not just ecosystems. **Associated Letter: 233**

Response: This glossary entry was created based on the definition contained in FSH 1909.12 Zero Code Section 05. However, we agree that resilience can also be expressed at the watershed unit, not just at the ecosystem unit. This suggested change has been incorporated into the glossary in the FEIS.

Comment 29: There is a concern that it is not clear to what degree the draft forest plan may already amend existing plans aside from the group and stock size limit. **Associated Letter: 102**

Response: Key differences between current management (alternative 1-no action), the draft revised plan and its alternatives are summarized in chapter 2 of the draft and final EIS.

Comment 30: Commenter is concerned that the DEIS does not mention Covid-19 and provides a message released by NatureServe on April 9, 2020, on the pandemic. Commenter suggests that a second draft EIS that includes the possibility of future pandemics which may impact either humans or wildlife or both, and how it may relate to climate change, should be developed, and released for public comment. Another commenter suggests the plan should include provisions to protect plants, wildlife, and fish species in the face of future pandemics like COVID-19. **Associated Letters: 114, 152-53 and 684-57**

Response: The draft analysis document was developed and released months before the pandemic. The COVID-19 pandemic, and the possibility of future pandemics are discussed as part of the cumulative effects analyses in the relevant sections of the FEIS. We can't foresee what the threats or risks might be with an unknown future pandemic. That is why the plan needs to provide enough flexibility that we can adapt our management when unforeseen circumstances arise. What we have noticed during this pandemic is an increase in recreational use and associated impacts. The plan does include desired conditions (final Sustainable Recreation section), forestwide length of stay limits (final Sustainable Recreation S1), and guidance for developing and managing recreation sites (final Sustainable Recreation section) to avoid long-term resource damage.

Comment 31: Commenter notes the strategic nature of the forest plan and the programmatic nature of the environmental analysis and looks forward to reviewing future project-level documents tiering from the plan documents, including commitments to mitigate adverse impacts. **Associated Letter: 251**

Response: We also look forward to engaging with our partners and stakeholders to implement the final revised plan.

Comment 32: Commenter communicated inability to open geospatial datasets made available to the public along with the documents. **Associated Letter: 250**

Response: Commenter was provided with data in file format that met their needs as requested during the comment period (PR file name 20200412-CorrPub-ReqGIS-assist-WerkmeisterM.pdf).

Comment 33: Commenter states that the forest is a national treasure and notes that "it has done pretty good, under present & even most past management practices. If it hadn't, most people who care about it, would in fact no longer care much about it." Commenter is concerned about proposed changes to the plan because they exclude many people just to make a few happy. Commenter states "This could possibly be one of the biggest violations of Forest Service's mission statement & it's creators' intent. Please stop taking away our Forest, inch by inch." **Associated Letter: 211**

Response: We recognize the commenter's perspective but without specific reference to a plan component or process we are unable to provide a detailed response. None of the plan alternatives exclude anyone or take away any amount of the forest. Temporary closure orders for emergencies such as wildfires or to protect health and safety are the only way management can limit access. Modes of access are restricted in some places by the terrain, laws passed by Congress, or both. These laws include the Travel Management Rule or the Wilderness Act. The plan is consistent with the forest's travel management decision and alternatives 2, 3 and 4 recommend areas to Congress for wilderness designation only where modes of access are already limited by terrain.

Comment 34: Commenter states that if the plan or its alternatives would influence aviation and the National Airspace system, the planning team would need to coordinate with the Federal Aviation Administration's Obstruction Evaluation/Airport Airspace Analysis office. Commenter states the planning team needs to make the determination if formal notice to the Federal Aviation Administration is needed due to potential to affect airspace. Commenter provides the contacts and information sources the team would need to make this determination and respond appropriately. **Associated Letter: 212**

Response: Thank you for the information. We determined that formal notice is not needed. Forest plans provide a programmatic framework that guides site-specific actions, but do not mandate, authorize, fund, or carry out any project or activity. We will coordinate with the Federal Aviation Administration during project-level decision making processes if necessary, during plan implementation.

Comment 35: Non-governmental organizations supporting trails and motorized access express support of additional streamlining of the draft plan because they observe it is merely a consolidation of numerous site-specific plans and projects. Commenters state that this makes for a plan that is very long and detailed, which creates barriers to public comment. Commenters state they have also observed issues with complexity, flexibility, coordination of planning efforts and analysis because of land management plans that do this. Commenters assert the Gila National Forest is a perfect example of why forest plans should not be overly detailed and remain flexible because there are areas where tree mortality is easily at or above 90 percent. **Associated Letter: 386**

Response: As explained in the introductory chapter of the draft plan under the heading An Integrated Approach, the forest plan is not an assemblage of smaller plans. Also explained in the environmental analysis Affected Environment and Environmental Consequences Introduction: "Forest plans provide a programmatic framework that guides site-specific actions, but do not mandate, authorize, fund, or carry out any project or activity." We agree that the more streamlined and flexible the plan is, the easier it will be to understand and implement. We also must meet all the requirements in the 2012 Planning Rule and final directives.

Comment 36: Non-governmental organizations supporting trails and motorized access state their awareness of management restrictions to basic access are a challenge to addressing forest health and drought. Commenters suggest that the plan include "a brief but balanced management goal and objective" that would allow management to address challenges from population growth and other unforeseen challenges. Commenters state: "Too often recreational access to public lands is lost when maintenance cannot be performed in a cost-effective manner. Adding additional management standards that will at a minimum need an additional round of NEPA planning to address future management challenges simply makes no sense." **Associated Letter: 386**

Response: We agree that restrictions on modes of access can be a management challenge when restoration treatments or other large-scale management response is needed. However, the plan must be consistent with law, regulation, and policy and there are laws, regulations and policies in place that limit some modes of access in some places. Because the plan is programmatic in nature and does not mandate, authorize, fund, or carry out any project or activity, additional, site- and activity-specific National Environmental Policy Act procedures will be required regardless of what is or isn't in the plan.

Comment 37: Commenter requests that the planning team revise the 1986 plan based on the current, best available science and management practices and suggests we should update the Carson National Forest's plan too. **Associated Letter: 480**

Response: That is exactly what we are doing. The Carson National Forest had their own team updating their plan and it was finalized in 2022.

Comment 38: Commenter is concerned that forest staff and leadership are disregarding stakeholder suggestions too readily as too complex, unrealistic, or not economically feasible, especially if it would increase costs to permittees. Commenter reminds us that our first job is to protect the forest that has been entrusted into our care. **Associated Letter: 508**

Response: We consider all comments and suggestions that are submitted to us. The rationale for alternatives and suggestions considered but not analyzed in detail are included in chapter 1 of the FEIS. Our job is to

fulfill the agency's mission to sustain the health, diversity and productivity of the Nation's forests and grasslands to meet the needs of present and future generations.

Comment 39: Commenter is concerned about the border wall and adverse environmental impacts. **Associated Comments: 604**

Response: The border wall is beyond the scope of the forest plan, but it may have a cumulative effect on habitat connectivity. The FEIS includes this analysis in the Wildlife, Fish, and Plants Cumulative Effects section.

Comment 40: Commenter has several concerns and opinions about the Grant Soil and Water Conservation Society's comments on the draft documents. **Associated Letter: 632**

Response: We recognize there are conflicting views on topics. We consider all comments received based on their substance and supporting rationale.

Comment 41: Commenter would like to see an effort to hold all Gila National Forest users accountable for trash and left-over manmade objects that no longer serve their intended purpose. Commenter provides specific examples and states: "more money." **Associated Letter: 690**

Response: The plan includes guidelines for the removal of materials that are no longer needed or serving their intended purposes in the Livestock Grazing (G7) and Wildlife, Fish, and Plants (G11) sections of the plan. Those guidelines compel forest staff to remove such materials as they are discovered during field work and require clauses be incorporated into relevant contracts, permits, and agreements for the removal of such material. Littering and dumping are prohibited by State law, and as such, is a legal compliance issue, not a forest planning issue.

Comment 42: Commenter is concerned about dumping of holding tanks from RVs within the forest and asks where the dump stations are. **Associated Comments: 690-16**

Response: There are dump stations at a few of the forest's developed recreation sites, like Quemado Lake. We anticipate opening dump stations in established developed recreation sites as opportunities arise. There are also privately owned businesses in and around the forest that provide dump services.

Comment 43: The Forest Service provides no clear direction on the makeup and ground rules for proposed "interdisciplinary teams" referenced in several plan components. Would these teams be comprised of Forest Service personnel or others? The plan should be clear that the Forest Service is ultimately responsible for monitoring and implementing management plan directives. Any interdisciplinary/collaborative group recommendations must be consistent with the Forest Service's statutory, regulatory, and plan obligations. **Associated Letter: 712**

Response: Typically, interdisciplinary teams are composed of agency employees representing the appropriate disciplines and skills for the scope of the action, issues, or effects. The responsible official determines the make-up of the team. Others that can contribute relevant expertise may aid or support the team as determined necessary by the responsible official, consistent with the Federal Advisory Committee Act of 1972.

Comment 44: The Plan should provide for ecological authenticity of sustainable ecosystems and watersheds, refugia for diverse plant and animal communities, and social and economic sustainability. The emphasis should be on collaboration and public engagement, including those who supply information on the best available science. These engagements provide the social, economic, and ecological benefits for now and into the future, that are mentioned in Federal Regulation CFR 36. **Associated Letters: 152 and 684**

Response: We agree that sustainability and public engagement provides focus for the plan and is required by the 2012 Planning Rule (36 CFR 219). The revised plan meets the sustainability requirement of the planning rule and agency directives. Our public engagement efforts are detailed in appendix E of the FEIS.

Herbicide Use

General

Comment 1: There are differing perspectives on the plan's inclusion of content related to herbicide use. Some have expressed support for the plan's Management Approach to Restoration, which describes herbicide as a tool in the restoration toolbox to treat both noxious weed species and native re-sprouting alligator juniper and evergreen oak. Some that support herbicide use state that it's about time active management steps like this were taken, especially in wilderness areas.

Others support plan content related to herbicide use on noxious weed species, but do not support its use on any native species. Of those commenters that do not support its use on native species, climate change and the predictions of widespread tree mortality is cited as a reason. One commenter states they have observed oaks struggling and dying over the last five years and they should not be targeted with herbicide.

Some who do not oppose herbicide use outright would like to see additional safeguards incorporated into plan direction, especially for vulnerable pollinators and plants. Specific suggestions include evaluating herbicide use on a site- and species-specific basis; a plan standard restricting the use of the most potent and toxic herbicides to the treatment of Class A and B noxious weeds and never in riparian areas; a requirement to let the grass grow and reseed itself before grazing is allowed to resume; and no herbicide use in wilderness areas. Also, commenters would like to be notified when managers intend to use these types of herbicides.

Still others would prefer herbicide was prohibited entirely by the plan, expressing concern related to human health and environmental impacts. Suggestions have been made that all plan content related to herbicide use be removed from the plan or that desired conditions be adjusted to include re-growth and infill of juniper.

Many of the commenters opposing herbicide use mention an opinion editorial authored by a representative of a non-governmental organization and published in the *Albuquerque Journal*. Many of these comments expressed general opposition to the use of herbicides, but others include more specific concerns or suggested remedies that were not brought forward by commenters before this newspaper article was published.

These include: the project-level proposal included in the plan's EIS and lack of public engagement; timing of the herbicide use proposal in light of the pandemic; indiscriminate use of herbicides instead of integrated pest management; unspecified extent of herbicide use; large volume and large swaths of herbicide use; aerial applications; herbicide use in wilderness; the focus should be on noxious weed prevention and targeted early detection, rapid response actions; links between glyphosate and COVID-19; robotic weed control is an emerging solution in agriculture that could be transferred to forestry applications; controlling noxious weeds is a waste of time and resources that could be better spent elsewhere; herbicide use should be authorized on a site-specific basis just like forest staff keep saying livestock grazing decisions are allotment-specific because they have the same impact; eliminating grazing would be more effective at addressing noxious weeds before they get established.

A few commenters question the conclusions reached regarding herbicide use in the draft EIS. One commenter finds no foundation for the argument that the use of herbicides on native trees would improve carbon storage. Commenter recommends this language be removed. Others want to know what science supports the conclusion that herbicide use "will realize an increase in cost-efficiency and pace of progress toward desired conditions for restoration and fuels reduction." Commenter states that fuel mitigation is a long-term expensive proposition and there isn't a cheap alternative tool. One commenter questions whether herbicide use dramatically alters fire behavior and severity by increasing fine fuels and suggests this needs to be

investigated. **Associated Letters: 11, 24, 27, 28, 29, 30, 39, 41, 93, 100, 122, 123, 128, 130, 133, 134, 137, 139, 140, 142, 152, 159, 162, 164, 165, 167, 182, 184, 189, 190, 193, 207, 233, 253, 254, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 271, 272, 274, 275, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 361, 363, 365, 366, 367, 368, 369, 371, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 476, 477, 478, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 533, 542, 535, 536, 537, 538, 539, 540, 541, 542, 546, 547, 549, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 562, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 583, 584, 585, 586, 587, 588, 590, 591, 592, 593, 594, 595, 597, 599, 600, 602, 603, 606, 607, 608, 610, 613, 614, 615, 618, 620, 621, 622, 625, 626, 627, 630, 631, 633, 634, 635, 636, 641, 643, 644, 647, 648, 649, 650, 651, 654, 655, 657, 658, 659, 660, 661, 663, 664, 665, 668, 669, 670, 673, 674, 676, 677, 681, 682, 684, 685, 687, 688, 689, 691, 692, 693, 694, 696, 697, 698, 701, 702, 703, 704, 705, 708, 712, 713, 714, 715, 716, 717, 718.1 through 718.3873, 718.8, 718.13, 718.14, 718.3864, 718.3848, 718.3855, 719.1 through 719.11, 719.3, 719.5, 719.6, 719.7, 719.9, 719.10, 720.1 through 720.55, 724.10, 725.1 through 725.7, 726.0 through 726.12547, 726.12370, 726.12416, 727.4240, 727.4298, 727.4361, 728.1 through 728.433, 728.243, 728.244, 728.254, 728.273, 728.274, 728.279, 728.285, 728.293, 728.300, 728.326, 728.327, 728.341, 728.366, 728.371, 728.375, 728.383, 728.391, 728.424, 728.433, 729.1 through 729.15, 729.7, 729.13, 729.14, 729.15, 730.49, 730.50, 730.51, 730.57, 730.59, 730.62, 730.63, 730.66, 730.67, 730.70, 730.72, 730.76, 733, 734, 735**

Response: We recognize diverse opinions regarding vegetation management and the use of herbicide as a tool. The plan does not propose or authorize the use of herbicide on native or non-native species nor is its use incentivized in any way. Herbicides and other pesticides are heavily regulated and most of their use and management is already decided by law and regulation. The plan establishes additional sideboards when herbicide is deemed to be the appropriate tool, either alone or in combination with physical, cultural, or biological methods. The draft EIS did contain a separate proposal and analysis for herbicide use under the provision in final agency directives for the 2012 Planning Rule (FSH 1909.12 Chapter 20 Section 21.7) that authorizes the forest supervisor to include project- or activity-specific proposals, analyses, and decisions concurrent with plan decisions. Please also refer to the last two paragraphs in the introduction to this appendix related to the status of that separate proposal.

Herbicide use is discussed in the draft plan's Management Approach to Restoration (final plan's Vegetation Management Tools management approach), Non-native Invasive Species management approach Early Detection Rapid Response (EDRR), Timber, Forest, and Botanical Products management approach Integrating Restoration and Social, Economic, and Cultural Diversity and Stability, and is the subject of more than a dozen standards and guidelines in multiple sections including All Upland Ecological Response Units, Non-native Invasive Species, and Wildlife, Fish, and Plants. It is also featured in the monitoring plan as question 15.

Management approaches are not plan direction, are not commitments of program delivery (FSH 1909.12 Chapter 20 section 22.4), but are proposed and possible approaches. The draft Management Approach to Restoration and final Vegetation Management Tools management approach, are intended to describe a management philosophy and provide transparency around what tools or methods managers are likely to consider and under what circumstances. The management philosophy is "all tools are in the toolbox", but not all are equally likely to be successful in maintaining or promoting movement toward desired conditions.

Management is likely to select the best tool or tools for the site and circumstance. Similarly, proposed and possible actions, by nature of being proposed and possible, are not commitments that managers will perform or permit. They are possible actions that would have to comply with applicable laws, regulations, agency policy and plan standards and guidelines to promote maintenance or progress toward desired conditions (FSH 1909.12 Chapter 20, section 22.34).

Desired conditions for vegetation communities include structure, composition, process, function, and connectivity (All Upland Ecological Response Units all Landscape Scale DCs). Where alligator juniper and evergreen oak species are part of the vegetation community, they are part of the desired condition. However, when and where their abundance alters the structure of the vegetation community, fuel conditions are altered which changes how fire behaves. This does not support the restoration of natural fire regimes, which is also part of the desired conditions for vegetation communities (All Upland Ecological Response Units LS-DC1 and each individual Ecological Response Unit LS-DC number varies). Based on the desired conditions in the plan, management would not seek to eliminate these species, only reduce their abundance so that progress toward all desired conditions can be achieved.

Desired conditions for vegetation acknowledge that the edges of different vegetation communities, or ecotones, fluctuate naturally over time (All Upland Ecological Response Units LS-DC4). However, adjusting the science-based desired conditions to include encroachment and infill would not be consistent with requirements that our plan components are informed by the natural range of variation (FSH 1909.12 Chapter 20 Section 23.11a).

Plan standards and guidelines provide the starting point for mitigation measures and constraints that would be part of site- and species-specific herbicide applications. The need for additional constraints would be evaluated when the site, target species, and vulnerable non-target species are identified, and through public engagement and consultation with tribes, the State Historic Preservation Officer, and the U.S. Fish and Wildlife Service. The plan prohibits aerial application of herbicide (Non-native Invasive Species S12). If a future project planning effort identified a need for aerial application, a plan amendment with a new public engagement process and comment period would be required. Herbicide applications in wilderness would only be allowable if a minimum requirements analysis, in addition to the required public engagement and environmental analysis, demonstrated it was necessary to maintain or improve wilderness character, or characteristics, over the long term.

Regarding non-native invasive and noxious weed management, the plan requires the use of Integrated Pest Management, which includes the appropriate use of physical, cultural, biological, and chemical methods (Non-native Invasive Species S1). The plan includes content that emphasizes prevention and early detection and rapid response (Non-native Invasive Species S1, S3, S4, S5, S22, G2, G3, G6 and the Early Detection Rapid Response management approach).

However, the suggestion that eliminating livestock grazing is the best method of preventing noxious weed introduction does not consider that wind, flowing water, roads, and people are at least as likely to introduce these species. There is a lack of evidence that livestock grazing is responsible for more introductions than recreation or vegetation management activities. Eliminating livestock grazing would also be inconsistent with the agency's multiple use-sustained yield mandate (see response to Livestock comment 1 and volume 1, chapter 1 Alternatives and Alternative Elements Considered but Eliminated from Detailed Study). The plan also requires permits include specifications for supplemental feed to limit the potential for weed introduction (Non-native Invasive Species G8).

We acknowledge that the analysis of the herbicide use proposal and its effects on vegetation and carbon were not as clear in their relationships as they could have been. While the project-level analysis is removed from the plan's final EIS, herbicide use on native plants could still be allowable under all the alternatives except Alternative 5 which has been modified in response to comment to prohibit such use.

Comment 2: There is a question as to whether a botanist will be a part of any team applying herbicide to make sure that native plants are not misidentified as noxious weeds. **Associated Letters: 39 and 137**

Response: A management approach in the Non-native Invasive Weeds section of the plan called "Plant Identification" includes consultation with professional botanists. This management approach demonstrates awareness of how critical correct identification is to effective noxious weed management. The team of individuals conducting the application would be assembled for each application and could certainly include a botanist or other competent plant science specialist, either Forest Service employee, volunteer, or partner.

Comment 3: Commenter cites text in the Management Approach to Restoration describing lessons learned from past experiences requests that the planning team do more review of the success of past herbicide use. Commenter states: "If I am not mistaken, there are portions of North Star Mesa where herbicides were used. In 1987 when I was working on the Mimbres District there were a number of places…where herbicides were used to try to eliminate sprouting of juniper. I am pretty sure North Star Mesa was one of them. There may be better techniques and ingredients now but…[the planning team]…should review the results of these activities before suggesting a renewed program." **Associated Letter: 474**

Response: To the best of our knowledge, there was an effort initiated by the district in the 1990s to partner with the Rocky Mountain Research Station to investigate the effectiveness of herbicide treatments on alligator juniper. North Star Mesa was one of the potential study sites. Due to the level of public opposition, that proposal was dropped. We were unable to locate documentation of this or of earlier efforts.

Comment 4: There is a suggestion that appendix K in volume 3 of the DEIS be renamed "Herbicide" Risk Assessments. **Associated Letter: 80**

Response: Draft appendix K has been removed from the FEIS supporting the final plan based on the intent of the forest supervisor to separate the project-level herbicide proposal and its alternatives from the plan and its analysis after releasing the draft documents (DEIS Volume 1, Chapter 1 Introduction).

Comment 5: Commenter points to the discussion of chemical use in the Management Approach to Restoration, questions if forest staff will be the applicators, suggests that no contractors are used and then questions the effects on pollinators. **Associated Letter: 233**

Response: By law, applicators must be fully trained and licensed through the state or be supervised by someone who is. Applicators could be forest staff members, contractors, or other stakeholders on a volunteer agreement, if those legal requirements are met. The effects on pollinators would be discussed in detail in a separate project-level environmental analysis supporting a future herbicide-use proposal and its alternatives, since the separate proposal in the plan's draft EIS was dropped.

Comment 6: There is a concern that rare and endemic plant species will only be considered when herbicide applications occur in the proposed botanical areas. Commenter points to page 286 of the draft EIS and states: "Impacts of herbicide use should be evaluated and minimized for all at-risk plant species, regardless of where they occur, not just in botanical management areas." Other commenters suggest that mitigation plans for these species should be developed when the use of herbicides is planned. **Associated Letters: 47, 640, and 653**

Response: The discussion that begins with the last paragraph on page 285 of the draft EIS and continues on page 286 specifically references a draft plan component for Rare and Endemic Vegetation Management Areas that states: "The use of non-selective herbicides or herbicides that may have effects on rare and endemic plant species will not occur in recommended rare and endemic plant management areas unless it is to control or eradicate noxious weed species, and other integrated pest management efforts have failed or are not likely to be successful." We agree that effects to these species should be minimized wherever they occur, not just in

proposed botanical areas. A modified version of this standard that applies forestwide has been included in the Wildlife, Fish, and Plants section of the final plan.

Comment 7: Commenter states: "Careless cleaning of equipment can contaminate soil, ground and surface water, and desirable vegetation. Commenter suggests proper transport, storage, disposal, and spill procedures should be described in the forest plan. **Associated Comments: 567 and 663**

Response: Non-native Invasive Species G8 states: "All treatment projects that involve using herbicides will develop and implement pesticide use plans that include transportation and handling specifications." We included this repetition of regulatory requirements because of the importance of proper transport, storage, disposal, and spill procedures. These pesticide use plans are required elements of pesticide use plans which are necessary to meet Clean Water Act section 402 permitting requirements.

Comment 8: Commenter states that any subsequent version of both the forest plan and the herbicide proposal EISs, whether they are released together or separately, must analyze the relationship between livestock production and invasive plant occurrence and persistence, and provide plan components that reduce or eliminate the functional pathways between livestock and invasive plants. Commenter also recommends the following plan components to be added to any future version of the plan and included as terms in Annual Operating Instructions: (1) All vehicles and equipment used during livestock management activities shall be pressure-washed to ensure they are weed-free before entering Forest Service lands or moving between allotments/pastures; (2) A livestock permittee or permitted outfitter who is found to be responsible for spreading invasive plants or their propagules shall have their permit revoked; (3) Livestock shall be removed from pastures if invasive plant populations are detected; (4) A management approach stating that livestock permittees will work with the appropriate agencies and conservation districts to remove noxious weeds on their base properties in order to reduce the spread of invasive plants from private to public lands. **Associated Letter: 712**

Response: Additional discussion has been added related to livestock grazing and invasive plants in the effects common to all vegetation types and all alternatives subsection of the Upland Vegetation, Fire Ecology and Fuels, Soil and Watershed Resources, and Riparian and Aquatic Ecosystems analyses. The suggestions provided by the commenter are not implementable or enforceable as plan components annual operating instructions. (1) This would require a permittee to carry a pressure washer and the water to operate it in their vehicle, which is not practicable or equitable. If permittees are required to do pressure wash before entering the forest or moving from one area to another, then every recreationist should be required to do the same as there is equal risk of introducing invasive plant propagules. Requiring a pressure wash before entering Forest Service lands is also not enforceable. Neither would this strategy be effective; washing would occur on forest lands when moving between allotments or pastures, which would deposit any propagule that may have been on the vehicle at the wash site. (2) Given the possible modes of introduction and spread (wind, water, wild or domestic animals, permittees, recreationists, et cetera), there is no reasonable way to meet a burden of proof sufficient to establish responsibility unless it were tied to supplemental feed. The plan addresses this with Non-native Invasive Species Gs4 and 6, which are like standard requirements already included in the permit, allotment management plan, and annual operating instructions. Violations are dealt with through the permit administration process and are not appropriately addressed in the plan. (3) It is not always beneficial or necessary to remove livestock from an infested area. Livestock management can be adjusted as appropriate for many invasive species life history traits (Davison et al. 2007). (4) The Non-native Invasive Species management approach Integrated Pest Management and Relationships discusses opportunities to work collaboratively on noxious weed issues across jurisdictions. Directing other entities to work together on specific tasks is outside agency authority.

Literature Cited in Response:

Davison, J.C., Smith, E. ,and L.M. Wilson. 2007. Livestock Grazing Guidelines for Controlling Noxious Weeds in the Western United States. A Western Region Sustainable Agriculture, Research and Education Project EB-06-05. 85 pp.

Comment 9: Commenter asserts that the draft documents fail to specify how agency guidelines for integrated pest management of invasive plants are followed. Commenter points to a statement in the draft EIS as evidence that the agency has failed their legal mandate to follow integrated pest management protocols. The statement in the draft document is quoted as "herbicides are in many cases, the only effective treatment for noxious weed species…"

Commenters go on to state that chemicals should only be used as a last resort and assert that the absence of clear direction and specific plan components lays the groundwork for reflexive or reactive pesticide use as the first line of attack. Commenters review the elements of integrated pest management and their purpose stating: "Successful management requires the preparation and implementation of strategic, long-term plans with defined threshold values for pest control actions that rely on prevention, education, and restoration that enhance the overall health of an ecosystem. Early detection and rapid response (EDRR) are essential to identifying, monitoring, and removing new alien species from an environment. In integrated pest management, chemical control may only be the last line of defense after preventative and avoidance practices have been implemented, and in IPM, even when pesticides are used, the least toxic options are deployed."

Commenter recommends the final plan include meaningful plan components and use-criteria for herbicides to fulfill its legal mandate to use integrated pest management principles, reduce the likelihood of default reliance on herbicides, and ensure the use of herbicides for noxious weed management is minimized. **Associated Letter: 712**

Response: Non-native Invasive Species S3 and G1 require the use of integrated pest management and supports its application at the project level. Non-native Invasive Species S9, G2 and final Wildlife, Fish, and Plants S3 provide additional support. The plan includes prevention practices for management activities, including the issuance of special use permits (Non-native Invasive Species Ss2-4, Gs1, 8 and 11, and Wildland Fire and Fuel Management S4). Non-native Invasive Species G1 specifically requires herbicide use to be the last resort, "when physical or cultural methods are unlikely to be successful". The plan also emphasizes identification, monitoring and early detection and rapid response and promotes education with plan components (final Non-native Invasive Species DCs2 and 3, O1, O2, and G3) and other plan content (Non-native Invasive Species section Early Detection and Rapid Response, Integrated Pest Management and Relationships, Survey and Documentation Strategy, Plant Identification and Information, Education and Research management approaches; and monitoring questions 62 and 63)**.** See also response to comment 1 in this section of this appendix.

Action thresholds are based on economics, which depend on the invading species characteristics, the values threatened and in the case of public land management, the funding Congress allocates to noxious weed management. These thresholds may be useful, but they are more appropriately addressed as part of program delivery and budget processes at a regional or national level when the specifics are known.

All Upland Ecological Response Units Standard 5 and Non-native Invasive Species Standard 13

"Herbicide must not be sprayed within 100 feet of known rock art sites, caves, or rock shelters due to the possibility of perishable materials."

Comment 10: Commenter states that they find it relevant that the proposal gives respect to historical and cultural resources by giving them the widest 100 feet distance barrier. Commenter suggests this seems a

relevant distance for all applications. Commenter notes that we have learned during the COVID quarantine that even in a closed building like a retail store with aisles and tall shelving that air flow dynamics can spread the virus up to 80 feet or more. Commenter then points to plan guidelines that will allow applications up to 20 and 30 feet away from water and other plants not intended targets. Commenter is concerned about the 9.9 miles per hour winds that the plan finds acceptable to apply herbicides in, there are seasonal rains that are torrential and will carry the chemicals up to miles, not just 100 feet. Commenter states that chemicals are not inert once dry after 4 hours and can travel in particle form or can be washed away and combine with other chemicals that have been applied in other locations. Commenter states the plan provides no consideration for the distribution of different chemicals within the same watershed combining because of rain runoff and there is the potential for carcinogenic combinations because not all combinations have been tested and analyzed. **Associated Letter: 614**

Response: These guidelines establishes minimum distances, the buffer may be adjusted as appropriate for the site, species, and application scenario and must be compliant with label instructions, which are legally binding requirements. Where backpack or boom spray methods are deemed appropriate, droplet size can be adjusted to limit drift. The maximum acceptable wind speed during application is specified on the label instructions, which is typically 10 miles per hour but may be lower based on a variety of factors. Sometimes, like with saltcedar, we must treat up to the water's edge using appropriate herbicide formulations and application methods. Establishing a 100-foot buffer would mean that saltcedar and other noxious plants that threaten riparian and aquatic ecosystems could not be treated. The time it takes for herbicides to become rainfast varies and is specified on the label instructions.

Herbicides can and do move in the environment over time, depending on the herbicide, site characteristics, and weather events. This would be appropriate to consider at a project level when the specific herbicide(s) and site characteristics are known. It is true that combinations can have effects that are more pronounced or different than individual chemicals. As an agency, we are only authorized to use or propose to use those combinations that have gone through the risk assessment process. Using untested combinations would not be legal and are not proposed or authorized by plan direction. Clarifying language about the use of larger buffers has been added to Non-native Invasive Species S13.

All Upland Ecological Response Units Standard 5 and Non-native Invasive Species Standard 15

"Loading or mixing of herbicides will occur at a minimum of 300 feet from live water and private residences."

Comment 11: Commenter suggests that to help quell public anxiety about the use of herbicides, extend the minimum to 600 or more feet from live water, private residences, and public wells. **Associated Letter: 694**

Response: The guideline provides a minimum buffer distance. At project level, this could be expanded depending on the situation and the concerns of the adjacent jurisdictions and private property owners.

All Upland Ecological Response Units Standard 5 and Non-native Invasive Species Standard 20

"Herbicides will only be used in restoration treatments where they are deemed necessary to move toward desired conditions for vegetation communities or the urban interface. When herbicide treatment is chosen, the rationale for use will be documented and included in plan-level compliance monitoring and reporting. All standards for the use of herbicide provided under the Non-native Invasive Species heading will be followed."

"Prior to the implementation of herbicide treatments, forest staff will ensure timely public notification. Treatment areas will be signed to inform the public and agency personnel of herbicide application dates and herbicides used. If requested, individuals will be notified in advance of application dates."

Comment 12: Commenter states appreciation for being provided notice but would prefer that notice be defined by a specific number of days or hours. Commenter requests that areas that are treated will be shown on specifically posted maps for residents and non-residents alike who may be planning day or long-term camping outings can avoid sprayed areas. Commenter asks if there will there be flags or signs in the field to avoid these areas for as long as the herbicides are known to persist. Both healthy people and those with breathing, autoimmune, or multiple chemical sensitivity generally assume that a national forest is natural and not laced with toxic chemicals they may wade in, swim in or filter and drink. Commenter states most camping water filters will not remove hazardous herbicides so campers should know water features that are downhill or downstream from herbicide applications. **Associated Letter: 614**

Response: Notice would be a pre-treatment press release distributed through multiple mediums the week before implementation, like prescribed fire treatments. We added that language to the final standard. If people let District staff know during project design that they want to know when the application takes place, staff would contact them individually by whatever method they prefer. Signing on the ground could occur any time before the press release through the day of application depending on what was most efficient or practical for the situation. On the ground signing would require posting of information, not just flagging because no one would know what the flagging meant unless they were also paying attention to press releases or were engaged in the National Environmental Policy Act process. How long the area would remain posted would depend on the project location, size, type of herbicide used, method of application and stakeholder concerns.

Suggested Plan Components

Comment 13: There is a concern about proper plant identification when herbicides are used to control non-native invasive species and a suggestion that the plan include a requirement for a trained botanist to be part of the application team or at least be consulted prior to treatment. There is a specific concern about proper identification of thistles because there are many native thistles that are important for pollinators. **Associated Letters: 39 and 137**

Response: There is a management approach in the Non-native Invasive Weeds section of the plan called "Plant Identification" that includes consultation with professional botanists. This management approach demonstrates awareness of how critical correct identification is to effective noxious weed management. The team of individuals conducting the application would be assembled for each application and could certainly include a botanist or other competent plant science specialist, either Forest Service employee, volunteer, or partner.

Comment 14: There is a suggestion that the plan should forbid the use of herbicide in cultural areas used for medicinal purposes, plants, and sacred sites because of the potential damage to dyes. **Associated Letter: 233**

Response: We always consult with the Tribal governments on all aspects of projects and consider their concerns during decision-making processes.

Implementation

Comment 1: Commenter states: "All in all there is much in this plan that is good. It could have stronger goals for sustainability and protections of natural and environmental values, but I also believe that how you choose to execute this plan could improve the results." **Associated Letter: 188**

Response: Desired conditions are what drive the plan. During plan implementation, projects and activities will be analyzed and monitored to determine whether they contribute to maintaining or moving toward desired conditions. If the analysis shows movement away from desired conditions because of the project or activity, it would not be compliant with the plan.

Integrated Approach

Comment 1: There is support for the explanation of the plan's integrated approach. **Associated Letters: 24, 100, 164, and 631**

Response: Thank you for your comment. This section has been retained in the final plan under the heading Interrelationships between Plan Components.

Inventoried Roadless Areas

Comment 1: There is a request for Gila National Forest staff and leadership to reconsider the use of the original (and now deleted) 2001 planning rule to designate 733,836 acres of the forest as "Inventoried Roadless Areas" that would have special management prohibitions on road construction, reconstruction, and timber harvest. Commenters state: "While the implementation of the 2001 Roadless Area Rule has been litigated with multiple opposing legal opinions and injunctions being rendered, the 1980 New Mexico Wilderness Act makes it clear that all but the areas designated as wilderness or Wilderness Study Areas by the Act were to be dropped from any further management that would protect them for future designation and wilderness areas." Commenters also request that the planning team provide references to any legislation passed by Congress since 1980 that expressly authorized the Secretary to conduct any further statewide roadless area reviews and evaluations of National Forest System lands in the State of New Mexico for the purpose of determining their suitability for inclusion in the National Wilderness Preservation System. Commenters state that the 2012 Planning Rule is not management direction authorized by Congress and cannot be the instrument that allows for the inventory, analysis, and recommendation of roadless areas on the Gila National Forest for wilderness designation.

Commenters assert that the revised plan misinterprets laws with agency overreach and prescribes management that makes integrated ecosystems management and public multiple use almost impossible over most of the forest. Commenters assert that the Code of Federal Regulations (36 CFR, Part 294 Subpart B) does not contain the provisions of the 2001 Roadless Rule as described in the draft plan and that the Federal rule specifies a process for State-specific rulemaking for the inventoried roadless area management where the Secretary determines the regulatory direction with the respective Governor's petition. Commenters assert that the 2001 Roadless Rule does not override the 1980 New Mexico Wilderness Act because it is a legal instrument that authorizes the occupancy and use of National Forest System lands prior to the issuance of the Roadless Rule. **Associated Letters: 24, 100, 164, and 631**

Response: The New Mexico Wilderness Act of 1980 Section 104(c) states that unless expressly authorized by Congress, the Secretary of Agriculture shall not conduct any further statewide roadless area review and evaluation of National Forest System lands in the State of New Mexico for the purpose of determining their suitability for inclusion in the National Wilderness Preservation System. The revised forest plan is consistent with this section of The New Mexico Wilderness Act because it is a general land management plan and not a statewide, single purpose study.

Land management plans guide sustainable, integrated resource management of the resources within the plan area in the context of the broader landscape, giving due consideration to the relative values of the various resources in particular areas (36 CFR 219.1(b)). The forest supervisor is required by 36 CFR 219.7(c)(2)(v) to identify and evaluate lands that may be suitable for inclusion in the National Wilderness Preservation System and determine whether to recommend any such lands to Congress for wilderness designation. Issues related to potential conflicts with the NM Wilderness Act and 36 CFR 219 are outside the scope of the plan decision.

Comment 2: There is a question about what purpose inventoried roadless areas serve and a concern that more areas will be needed in the future for the types of activities that require roads, timber or firewood harvest, or mechanical vegetation treatments. **Associated Letter: 39**

Response: The purpose of these areas is described in the FEIS Inventoried Roadless Areas Affected Environment section. This section also discusses the authority, review process, and allowable exceptions for vegetation management activities.

Comment 3: Commenter states that "the plan should be commended for further study and consideration" of additional roadless area because "there is a greater need of protection in our changing environment." **Associated Comment: 8**

Response: We did not study or consider any additional inventoried roadless areas as part of the plan revision process. That would be a violation of 36 CFR 223, which requires that any changes or additions to inventoried roadless areas must be undertaken as a separate, state-wide process.

Comment 4: Commenter requests that inventoried roadless areas be managed as wilderness, whether they are recommended as part of the final plan or not, until they are released by congressional action. **Associated Letter: 188**

Response: Inventoried roadless areas are managed by the mandates of the 2001 Roadless Rule and 36 CFR Part 294 for protecting roadless characteristics. Wilderness is managed for protecting wilderness character under the mandates of the Wilderness Act. These are important distinctions, as only areas designated by Congress as wilderness are managed as wilderness under the mandates of the Wilderness Act, and by policy direction. However, if an inventoried roadless area is included in recommendations to Congress for wilderness designation, it is appropriate that these areas be managed for the protection of both roadless and wilderness characteristics.

Comment 5: Commenter is concerned that the draft plan's management approach Corrections to Minor Cartographic Errors limits public involvement in changing boundaries of inventoried roadless areas by stating "any changes to inventoried roadless area boundaries not directed through congressional legislation must be part of a statewide process involving state and local governments." Commenter states this approach appears to be contrary to the plain language of the 2001 Roadless Rule, which makes no reference to any "statewide process involving state and local governments." Commenter states that their interpretation of the Roadless Rule is that boundary changes would need to be part of a national process involving all interested persons, not through a "statewide process" involving only "state and local governments." Commenter recommends that this language be revised to be consistent with their interpretation of the Rule. **Associated Letter: 712**

Response: The Rule states: "The purpose of these administrative procedures is to set forth a process for *State-specific rulemaking* [*emphasis added*] to address the management of inventoried roadless areas in areas where the Secretary determines that regulatory direction is appropriate based on a petition from the affected Governor" (36 CFR 294.10). And the "Secretary or the Secretary's designee shall respond to the petition within 180 days of receipt of a completed petition. The response shall accept or decline the petition to initiate a *State-specific rulemaking."* (36 CFR 294.13 (a)(2)). Language has been updated the management approach to clarify that changes to inventoried roadless areas are outside of the authority of the forest supervisor and not within the scope of the plan revision process.

Law Enforcement

Comment 1: There is a concern that there is insufficient law enforcement to address illegal activities such as cutting firewood without a permit and driving off the designated open road system. The suggested remedy is more law enforcement officers and patrols. **Associated Letters: 9, 34, and 233**

Response: Illegal woodcutting and illegal motorized use are ongoing issues. Resources to increase law enforcement capacity is beyond the scope of the forest plan.

Comment 2: There is a concern that increased visitation has the potential to create more resource damage if the rules aren't enforced and with more visitors, more enforcement resources will be needed. There is an accompanying suggestion to create additional rules or increase the number of law enforcement officers. **Associated Letter: 51**

Response: The plan can only provide constraints on our management activities, including special use permit authorization. The plan provides an adaptive framework to address increased visitation as needed through default length of stay limits for the closure orders that implement those limits (final Sustainable Recreation S1) and group size limits for permit authorizations (final Designated Wilderness S1 and Recommended Wilderness S4). The number of law enforcement officers is beyond the scope of the forest plan.

Comment 3: Commenter points to a statement on page 173 in the Roads section of the draft plan which contains management approaches and states: "Travel management resolves issues and cultural resources. Not true if Law Enforcement does not hold people accountable." Commenter then asks if a cultural site map has been overlayed with travel management and areas identified for firewood collecting. **Associated Letter: 233**

Response: Forest Service law enforcement personnel play a critical role in ensuring compliance with laws and regulations, protecting public safety, and protecting national forest resources. Education and cooperative relationships with community members improve enforcement efforts by promoting voluntary compliance. Page 173 of the draft plan in the "Road System Management" management approach that says: "Encourage stakeholders to provide specific feedback on the road system to assist with travel management implementation and look for opportunities to resolve issues in an adaptive management approach." This statement describes how the forest supervisor intends to leverage stakeholder knowledge and concerns about the road system and the implementation of travel management to support achievement and maintenance of the desired conditions outlined in the revised plan.

Cultural sites were identified and considered as part of the process and analysis supporting the travel management decision signed in 2014. They will be identified and considered as part of future project-level travel management decisions too. They are also identified and considered as part of project-level decisions for designated firewood gathering areas. Furthermore, the Gila National Forest Firewood Guide that is distributed with every permit purchase includes this information: "It is also important to preserve the past. Historic structures and artifacts can be examined and photographed but leave what you find. Multiple laws and directions govern the management of cultural resources. These include but are not limited to: Antiquities Act of 1906; National Historic Preservation Act of 1966 (NHPA); National Environmental Policy Act of 1969 (NEPA); Archaeological Resources Protection Act of 1979 (ARPA); and Native American Graves Protection and Repatriation Act of 1990 (NAGPRA). Those who violate can face substantial fines and even a jail sentence if convicted. Do your part to pass our nation's heritage of outdoor recreation to future generations."

Land Ownership and Access

General

Comment 1: There is a suggestion to reword the following sentence from the landownership, use and access effects analysis: "People want to use their public lands and are becoming sensitive to restrictions on that ability." The suggestion is to remove the word "their" to clarify the true nature of public landownership. The United States government holds public lands in trust for its citizens and manages these lands under the principle of multiple use. **Associated Letter: 38**

Response: This change has been made in the final EIS.

Comment 2: There is a request to include in the forest plan an updated ownership map and description with the Fort Bayard National Historic Landmark and its boundary as depicted in the National Register nomination. **Associated Letter: 229**

Response: If we did this for Fort Bayard, we would have to do it for all sites nominated for, or listed in, the National Register and would add more length than value. This information would inform any project-level work that might involve the area around Fort Bayard.

Comment 3: Commenter representing the BLM Las Cruces District Office and Socorro Field Offices is concerned with Forest actions that may affect adjacent BLM-managed lands in Sierra and Grant Counties. Commenter requests notification and consultation on actions that may impact access to those adjacent lands, specifically road closures that may limit or eliminate access to BLM-managed lands. Commenter states the Offices understand that travel management is not part of this revision and would be handled in a separate decision. Commenter states the Offices will continue to partner with the Gila National Forest on various actions such as fire suppression, fuels treatment, the Continental Divide National Scenic Trail, and wildlife habitat management. The BLM welcomes and appreciates any opportunity to participate in project-level planning and implementation for this effort. **Associated Letter: 700**

Response: The Forest Service publishes a Schedule of Proposed Actions (SOPA) every January, April, July, and October. This provides notification of what activities and projects are being proposed, the anticipated timeline to complete National Environmental Policy Act processes, and status updates. Stakeholders can find this posted on the forest's website, request a notification when the updated schedules are posted, and request to be included on the mailing list for specific projects. The project-specific mailing list will receive notification of opportunities to engage and collaborate. Thank you for your interest in project-level planning during plan implementation. We look forward to working with the Bureau of Land Management to accomplish shared objectives.

Land Adjustments and Exchanges

Comment 4: There are differing perspectives on what direction the plan should contain regarding land adjustments. Some feel that the agency has enough land under their management and support the guideline for no net loss of private property contained in alternatives 3 and 4. Others support the guideline in alternatives 3 and 4 because they are concerned about tax revenues, loss of other economic contributions and cultural values, and the use of eminent domain. Some simply prefer this guideline over no plan direction being provided.

Other commenters support the management approach to land adjustments in alternative 2, which describes the focus of the forest's land's program as the enhancement of public access and use, and support of resource management objectives. Some commenters appreciate the criteria provided in the management approach for identifying and prioritizing lands that would best meet the public interest. A few commenters suggest the plan elevate the management approach to a guideline that allows for land adjustments to be made for the purpose of enhancing public access, use and important fish and wildlife habitat. One commenter expressed specific concern about access to the East Fork of the Gila River for fishing and a private property owner who is blocking access. A couple of non-governmental organizations suggest that with the renewed focus on improving relationships and building new ones, land acquisitions that serve these purposes could be achieved using private donor investment and collaborative fundraising. Others suggest science should be used to determine which parcels are most desirable and would provide the greatest benefit to species and habitats.

A few commenters assert that the Lands section of the draft plan fails to prioritize the public interest and provide recommendations on how to address this failing. These recommendations include (1) prioritizing land acquisition for resource and habitat protection as opposed to management efficiency; (2) including criteria for land exchanges in addition to those provided for acquisition; (3) maintaining a land ownership adjustment

plan that identifies priority non-Federal lands for possible acquisition and Forest land suitable for disposal and incorporate this plan into the forest plan as a standard; and (4) including a plan standard requiring National Environmental Policy Act analyses for land exchanges that include quantitative assessments of the costs of surveying and maintaining boundary lines and corners for proposed actions and their alternatives.

Some commenters suggest that any inholding that a willing owner wants to sell should be acquired because these inholdings generally reduce public access and use, increase management complexity and fragment habitat. Some of these commenters express understanding of other's concerns about tax revenue and the reality of the agency's budget limitations. **Associated Letters: 51, 93, 119, 672, 712, 724.1 through 724.11, 724.4, and OWS-1 through OWS-144**

Response: We acknowledge the diverse preferences related to land adjustments and exchanges. This topic generated much interest, and we took time to survey stakeholders as we prepared the preliminary draft plan. There is no proposal in or associated with the forest plan to use eminent domain. Land purchases or exchanges will only occur with willing sellers. The plan's Land Adjustments management approach describes the criteria for establishing both priorities of the lands program, including purchase and exchange. Ecological and habitat value and protection are among the criteria for purchases. While the criteria for land acquisition are not specifically ranked in this management approach, they are presented in an order where the emphasis is on public access and important wildlife habitat ahead of management efficiency. With limited resources and funding for acquisitions, parcels that meet multiple criteria are more competitive for funding opportunities.

The properties available for sale by willing sellers are constantly changing, so creating a list of properties, or a land ownership adjustment plan, would become obsolete quickly. It may also be viewed unfavorably by property owners to have their private property listed in such a plan and complicate negotiations should they occur. Having a land ownership adjustment plan as a standard would be impossible to adhere to since land adjustments depend on willing sellers or acceptors. Environmental analyses for land exchanges are required under the National Environmental Policy Act. Under the Act, the level of analysis is determined by the nature of the exchange and the level of effort required to fully assess the potential impacts.

Comment 5: A commenter suggests that the plan should prioritize acquisition of vintage mine lands within the forest's administrative boundary. **Associated Letter: 165**

Response: The plan's Land Adjustments management approach includes inholdings as one of the criteria that would make acquisition desirable. Often private property inholdings within the Gila National Forest's administrative boundary are patented mine claims that could be considered "vintage" mine lands. Some of these claims may no longer be of interest by the current owners or others and they may be willing to sell the property to the Forest Service. The Forest Service may be interested in these parcels if they exhibit the characteristics described as desirable in the Land Adjustments management approach, which includes significant historical or cultural resources. However, we would have to determine that any acquisition of former mine lands does not pose existing or potential future environmental contamination liabilities.

Objectives 1 and 2

"Annually post an average of 2 to 5 miles of unposted property boundary."

"Annually, maintain an average of 2 to 5 miles of previously posted property boundary."

Comment 6: One commenter interprets these objectives as only applying to jurisdictional boundaries and suggests there should be an objective for posting special management area boundaries within the forest like wilderness and research natural areas. Commenter is concerned that if the plan does not include an objective to do this it will continue to not happen. Commenter suggests that if these boundaries are posted there would be fewer motorized intrusions.

Another commenter suggests these objectives should not provide a range of average length. Commenter states this is confusing and lacks the clarity needed to evaluate if the objective has been met or not. Commenter recommends the final objectives specify a range or a minimum value for length of boundary because they would be easier to assess on an annual basis. **Associated Letters: 474 and 712**

Response: Commenter's interpretation that these objectives only apply to jurisdictional boundaries is correct. The plan contains a guideline for posting wilderness boundaries (Designated Wilderness G14). Policy direction requires special designated area boundary lines be located, monumented, marked, and posted prior to implementing management activities (FSM 5603) and identifies the priorities for accomplishment (FSH 5609.11 Chapter 60 section 61.3).

We agree that the draft objectives are confusing. We have updated the final objectives to specify a minimum length of boundary to be posted and maintained based on input from the Forest Service Southwestern Region's surveying staff. Surveying staff have been centralized at the regional level and are no longer forest-level resources. If there is capacity to do more than minimum, we will do more.

Guideline 6

"Inholding patented properties owned individually should have only one access point to the inholding as entitled under the Alaska National Interest Lands Conservation Act."

Comment 7: Commenter requests this guideline be re-written as a standard because there are no circumstances under which Gila National Forest management should provide more than one access point to inholdings. **Associated Letter: 712**

Response: One access point is generally sufficient, but sometimes there is a need for flexibility. Some situations where more than one access point has been necessary include a topographic feature within the private parcel that prevents crossing from one side to the other, or another private landowner nearby blocks access. The law provides line-officer discretion to determine whether one or more access points is reasonable under the specific circumstances. Upon further consideration, this guideline has been removed from the final plan as it is already decided by the law and its inclusion did not appear to promote the shared understanding it was intended to cultivate.

Lands Special Uses

Comment 1: The New Mexico Department of Game and Fish holds several permits including Snow Lake, Quemado Lake, and Lake Roberts. These lakes are popular recreational fishing areas in southwestern New Mexico where angling opportunities are limited. There is a suggestion that the plan should include assurances that activities approved in these special use permits, including dam maintenance and monitoring, can continue long term. **Associated Letter: 151**

Response: The plan cannot include assurances for any special use permit holders. There is a permitting process established by national policy direction that must be followed for each permit, regardless of who the permit holder is or the services that they provide under their permit.

Comment 2: Commenter recommends that draft plan guidelines for co-location of buildings and structures, and the consolidation of special uses be elevated to standards because it would provide greater assurance that this will happen, and the plan would have to be amended to allow deviation. Commenter states this is important because it conserves natural resources and increases management efficiency. **Associated Letter: 712**

Response: While the intent of the guideline is to keep the special uses physical footprint as small as possible, there may be reasons why co-location is not practicable. For example, there may not be enough room or there

maybe interference between electronic frequencies. So far, this situation has not happened on the Gila National Forest but retaining flexibility into the future is important.

Livestock Grazing

General

Comment 1: There is both support and opposition to the Gila National Forest's livestock grazing permit program. Those supportive of the program assert it is a legally protected use of the forest and value its contribution to local custom, culture, and socioeconomic well-being. Commenters state it is important because: livestock grazing contributes to the local economy and provides a livelihood for many families; it contributes to fire-control by keeping vegetation manageable; and the improvements the rancher provides are beneficial to wildlife as well as cattle. Commenters assert wise use of this forest resource honors the custom and heritage of generations of hard-working ranchers.

Others would support the program if there were not any overgrazing, if "cattle were well-behaved and stayed on their allotment," or the rules were changed to be more friendly to natural resources than to producers. Those that stated conditional support cited reasons like those commenters that stated outright opposition (see next paragraph). Some that conditionally supported the continuation of the forest's livestock grazing program suggest that reducing numbers or utilization, specifying how many cattle can be in sensitive areas and for how long, or eliminating grazing from wilderness or riparian areas would address their concerns. Others note that overgrazing problems in the wilderness have largely been addressed over the years, but state that there are problems in watersheds outside of wilderness. One commenter suggested the plan should ban grazing for a mandatory fire-year recovery period and then re-evaluate the ban. Another stated that livestock grazing can be sustainable, even in a warming climate, but only if animals are more closely watched and moved.

Those opposed assert that the program supports the interests of a small minority, rather than the American public at large. These commenters assert the American taxpayers would benefit economically and ecologically from the retirement of all grazing permits. Many commenters cite negative impacts on recreation experiences, riparian areas, plant and animal species, soils, water quantity and quality, ecological integrity, fire regimes, primary productivity and greenhouse gas emissions and suggest the analysis in the DEIS did not adequately analyze these effects. Some commenters provided links or references to peer-reviewed published literature or Forest Service technical reports about the effects of cattle grazing, monitoring reports prepared by non-governmental organizations, or economic studies demonstrating recreation generates greater economic contributions than does livestock grazing. One commenter suggests livestock grazing should not be considered a traditional or historic use, submitting an opinion editorial written by a board member of the Western Watersheds Project about the Point Reyes National Seashore as support for this perspective.

One commenter states that producers have proven they can't responsibly manage their livestock and keep up with fences, there is a downward trend in demand for livestock use, and the best available science clearly shows grazing is not compatible with plan direction for rangelands. This commenter suggests that the economic impact could be softened by using the range program dollars to pay permittees not to "run cows" or to remove range infrastructure. Others think that permit fees should be raised each year at a rate about twice the Consumers Price Index, CPI, or "something like that."

Some state that grazing is not sustainable at in the Southwest and is more appropriate in wetter climates. Others suggest the agency should convince Congress that grazing is no longer a sustainable use because of unprecedented drought and climate change.

Some commenters request that the final documents discuss the issues that are pertinent to the current debate and controversy over grazing on the Gila National Forest. They also request clear answers to the following question with references to the best available scientific publications:

1) "Do water infrastructure projects actually result in better quality riparian areas?"
2) "Are wildlife species better off with artificial waters or is it better if cows are kept out of creeks and springs?"
3) "What is the effect of groundwater pumping for artificial waters on creeks and springs?"
4) "How does the Forest Service ensure that large expenditures for water and range developments using funding from outside the Forest Service achieve stated goals and are properly supervised?"
5) "The DEIS should discuss the status of Allotment Management Plans. How many allotments have Management Plans and what is the schedule for renewal of these Plans?"
6) "Has there been grazing-related litigation against the Forest Service and if so, what have been the results? The public needs to know this."
7) "The DEIS should have some sort of cost – benefit analysis on grazing on the Gila. This should include the cost of Federal funding to maintain the grazing program plus outside funding for range infrastructure. How much does the Gila spend on its grazing program? "

Commenters note that the Forest Service is expected to address these types of questions at the plan level. The preamble to the 2012 Forest Planning Rule states: "The appropriate level of grazing on a unit or other direction regarding range use in the plan area is best determined in individual plans and at the site-specific level, so that direction is appropriate to the conditions in the plan area."

A few commenters state that they are appalled to learn the draft plan would expand cattle grazing and that they suspect regional managers are being paid off by corporate interests. One commenter asserts the end of cattle ranching, and its beef market is inevitable unless foreign trade becomes profitable and asks "So do we sacrifice our landscapes, plants and listed animals for foreign markets? to line the pockets of a few greedy profiteering corporations? With such an obviously losing-ground-and-becoming-more-desperate industry and such a gamble, why on earth would any federal regulatory agency risk our (meaning us--citizens and taxpayers) decimation of our most valuable lands and natural resources? Anyone who would do that, for the sake of profits in a steadily declining market would be considered mad or incompetent, or both. We urge the adults in the room—those with some integrity—to step up to do what's right."

Commenters also state that they see no analysis of the effects of cattle grazing on endangered species and suggest the EIS should review the status of those species and describe how management actions will foster their recovery. One commenter states the analysis is biased and even constitutes advocacy for the livestock grazing industry. **Associated Letters: 4, 7, 12, 54, 61, 63, 69, 117, 119, 127, 130, 134, 142, 239, 152, 154, 155, 158, 162, 181, 185, 188, 190, 193, 206, 233, 273, 361, 372, 479, 508, 542, 543, 548, 561, 611, 629, 673, 698, 709, 713, 718.8, 718.14, 718.23, 718.3688, 718.3717, 718.3824, 718.3834, 718.3836, 718.3837, , 718.3826, 718.3864, 718.3856, 718.3870, 718.3873, 720.2, 720.4, 720.37, 720.47, 720.49, 724.6, 726.12361, 726.12387, 726.12424, 726.12449, 726.12450, 726.12469, 726.12497, 728.244, 728.410, 728.413, 728.425, 729.4, 730.13**

Response: Under all alternatives analyzed in detail, there are multiple mechanisms to evaluate, review and adapt livestock grazing management to effectively conserve resources and respond to changing conditions. Furthermore, stocking decisions regarding the number of livestock and amount of grazing authorized for each allotment are considered as part of project-level analysis and beyond the scope of the forest plan and environmental analysis. Project-level analysis would cover changes to authorized grazing through term grazing permits (subject to forestwide standards and guidelines); allotment management plans; and annual operating instructions. An explanation of the legal and policy framework livestock grazing is managed under has been added to the Livestock Grazing Background Information in the plan, and the Livestock Grazing Affected Environment in the FEIS.

None of the alternatives propose to increase grazing pressure, but we understand how the information was displayed in the DEIS could lead someone to that conclusion. The alternatives contain objectives for vegetation management activities that would move vegetation communities and watersheds toward desired conditions. An increase in herbaceous production is a reasonably anticipated outcome of those activities. To facilitate an effects analysis for livestock grazing, AUMs were used as an indicator. Any actual increases in herbaceous production may or may not lead to an increase in authorized grazing. Stocking decisions are made at an allotment level – subject to a separate Environmental Policy Act process including public involvement. In chapter 2 of the DEIS, potential changes in AUMs were displayed in the Summary of Alternatives table. An increase in authorized grazing is not proposed under any alternative; they are an analysis indicator for comparing differences in expected forage production under each alternative. We have clarified this in the FEIS by removing AUMs and all other analysis indicators from the Summary of Alternatives and including them in the new Summary of Effects section at the end of chapter 3 in the FEIS. Nevertheless, the estimated change in animal unit months is far from dramatic, ranging from a decline of 8 percent (alternative 1-no action) to a maximum increase of 4 percent (alternative 5).

In addition, the alternatives include a range of options on how to deal with vacant allotments that could increase or decrease grazing numbers. Based on all the above, a no grazing alternative was not considered necessary or legally compliant, as described in volume 1, chapter 2 of the FEIS (Alternatives and Alternative Elements Considered but Eliminated from Detailed Study). Eliminating grazing from riparian areas was also an alternative element considered but eliminated from detailed study and an explanation can be found in that same section of the FEIS. Commenters may also refer to comment 1 in the Riparian and Aquatic Ecosystems section of this appendix for more information. Outright elimination of grazing in wilderness would not be compliant with the Wilderness Act, which protects livestock grazing where it was established prior to wilderness designation.

To eliminate livestock grazing outright forestwide as part of plan revision is inconsistent with existing law and Forest Service policy and does not adequately address the purpose and need for change identified in need for change statement 1 “Develop a desired condition to recognize and improve the Forest's role in contributing to local economies through recreation, tourism, timber and forest products, livestock grazing, and other multiple-use related activities and products while balancing these uses with available resource capacity.”

The Forest Service operates under the Multiple-Use Sustained-Yield Act of 1960. This law authorizes the Secretary of Agriculture to develop and administer the renewable resources of timber, range, water, recreation, and wildlife on the national forests for multiple use and sustained yield of the products and services. The act defines multiple use as “the management of all the various renewable resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people...” and sustained yield as “the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the national forests without the impairment of the productivity of the land.”

The National Forest Management Act of 1976, which is the legislation that places the requirement for every national forest and grassland to have a strategic land management plan, directs the Forest Service to “provide for multiple use and sustained yield of the products and services obtained therefrom in accordance with the Multiple-Use Sustained-Yield Act of 1960, and in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness.” The 2012 Planning Rule also requires plans provide for integrated resource management, which is defined as “Multiple use management that recognizes the interdependence of ecological resources and is based on the need for integrated consideration of ecological, social and economic factors” (36 CFR 219.19), without one being a priority over another” (Preamble to 36 CFR 219).

We recognize that livestock production may be easier in environments where water is not limiting and acknowledge the perspective that climate change may make livestock production unsustainable in some locations. The DEIS and FEIS discuss the potential effects of climate change on this use in the Livestock

Grazing Affected Environment and Cumulative Effects sections. However, the current science-based natural climate solutions advocated for by national and global organizations do not call for an end to livestock grazing or even a reduction in numbers, rather improved management practices related to breeds, feeds, and distribution on the landscape (see response to comment 5 numbered items 11 through 14 in the Climate, Carbon and Adaptation section of this appendix).

The effects of livestock grazing on upland vegetation communities, riparian and aquatic ecosystems, soils, watersheds, water quality and species are discussed in their respective sections of the FEIS. However, the effects analysis is limited to only those effects that are likely if plan direction is followed. Overgrazing and unauthorized or unmanaged grazing is not analyzed because it would not be compliant with the plan, and it is illegal. The purpose of the environmental analysis is to evaluate the effects of plan direction and the differences between plan alternatives, not to evaluate the effects of everything that could happen if plan direction is not followed.

Regarding the specific questions some commenters requested written answers with supporting science for,

1) It depends. Swanson and others (2015) conclude that water developments in upland areas can reduce the time cattle congregate in riparian areas. Off-stream waters within riparian pastures may reduce impacts to streambanks, but placement is critical to avoid water quality impacts (Swanson and others 2015). This is a project-level consideration because proper placement depends on site characteristics.

2) It depends. In a review of the scientific literature on this topic, Rosenstock and others (1999) found that "…water developments have likely benefitted many game and non-game species but not all water development projects have yielded the expected increases in animal distribution and abundance." Rosenstock and others admit that the beneficial and detrimental effects of water developments are not fully understood, in part because of the limitations of study design. Where constructed waters are discussed in the FEIS, edits have been made to clarify that some but not all those features benefit both wildlife and livestock (Wildlife, Fish, and Plants Affected Environment).

3) It depends. Groundwater pumping for constructed waters can lower the water table and reduce groundwater contributions to streams and springs. Whether the draw down is ecologically significant or not depends on the hydrology of the site, the depth of the well and how much water is removed. Groundwater allocation and use is outside Forest Service jurisdiction. The plan contains a standard and a guideline that addresses what is within Forest Service authority. The standard reads: "Special use permits for new groundwater or surface water uses will not be issued if it is determined those uses would have an adverse impact on riparian or aquatic resources within the forest." The guideline reads: "New or reconstructed spring developments should include provisions for the dependent ecosystems."

4) It depends. Information about project effectiveness and subsequent management is usually provided by Forest Service staff, permittees, or other stakeholders. If a development is not being "properly supervised," this is corrected through policies established in Forest Service Handbook 2209.13 Chapter 90. This is not a science-based question and does not require supporting scientific literature.

5) This question is beyond the scope of the forest plan, is not a science-based question, and does not require supporting scientific literature. All allotments that have a signed National Environmental Policy Act decision are required to have an Allotment Management Plan. These plans contain the direction from the decision with additional detail as the decision-maker deems necessary. These plans are part of the permit. The permit is the instrument that authorizes the permittee to graze and implements the decision (FSH 2209.13 chapter 94). There is no schedule for renewal or revision of Allotment Management Plans. They are renewed or revised based on the need to reflect changed conditions and new information resulting from the most current allotment-level National Environmental Policy analysis and decision (FSH 2209.13 chapter 94). There are six allotments

without a signed decision (see also response to comment 26 in this section of this appendix). These are the Redstone and Fort Bayard allotments on the Silver City District, and the Harden Cienega, Deep Creek, Copper Creek, and Apache Creek allotments on the Glenwood Ranger District. The Fort Bayard allotment is for administrative use for the Gila National Forest's pack and saddle stock. The Redstone allotment is vacant, with one pasture authorized for use by the permit holder on an adjacent allotment.

6) Litigation is not a planning issue.

7) There is a socioeconomic analysis in the Social and Economic Conditions section of volume 2 of the FEIS. The methodology, including indicators and assumptions, is discussed at the beginning of the Environmental Consequences subsection. This analysis is consistent with requirements identified in agency directives (FSH 1909.12 Chapter 20 section 23.22 and FSH 1909.17).

8) Recovery plans are incorporated into the plan by reference as Wildlife, Fish, and Plants guideline 3. Any additional measures identified during consultation with the U.S. Fish and Wildlife Service will also contribute to the recovery of listed species. The Wildlife, Fish, and Plants section of the FEIS provides the appropriate level of analysis for the programmatic nature of the plan.

Literature Cited in Response:

Rosenstock, S.S., W.B. Ballard, and J.C. Devos, Jr. 1999. Viewpoint: Benefits and impacts of wildlife water developments. Journal of Range Management. 52:302–311.

Swanson, S., S. Wyman, and C. Evans. 2015. Practical Grazing Management to Maintain or Restore Riparian Functions and Values on Rangelands. Journal of Rangeland Applications, 2, pp. 1–28.

Comment 2: Commenters assert that the range of alternatives is inadequate because there isn't an alternative that addresses the multiple references to current grazing practices being responsible for conditions that are below the current or proposed desired conditions. Commenter notes that the number of authorized livestock is substantially lower than permitted and concludes the Forest Service has overestimated the need for or capacity for livestock grazing. However, commenter suggests that the environmental analysis must contain a chart or table that discloses the current number of authorized animal unit months and the number of authorized animal unit months proposed under each alternative. The commenter also suggests that there should be at least one alternative that would significantly reduce the number of authorized animal unit months forestwide. Specifically, the commenter recommends that the range of alternatives analyzed in detail must include a no grazing alternative, an alternative that prohibits grazing in riparian areas, and an alternative that authorizes the permanent retirement of grazing allotments.

Commenter asserts that the rationale used to dismiss a no grazing alternative is flawed because the agency frequently analyzes alternatives that do not comply with the law. Commenter uses the Travel Management Planning process as an example, where the no-action alternative left the current road system in place and did not prohibit cross country travel. Commenter argues that the Multiple-Use Sustained-Yield Act does not require that Federal agencies allow for every use of federally managed lands, or that every acre be managed for all uses, and does not define range as only for livestock. Commenter states that it is clear that: "the Forest Service may consider a no-grazing alternative and has simply chosen not to do so despite reasonable requests for such an alternative, citing at least in part the need for economic benefit to livestock permittees."

Commenter goes on to suggest that: "The Forest Plan must allow permits to be waived back to the agency for permanent resource protection. The option of permanent voluntary retirement of permits and associated grazing privileges represents an equitable solution to wildlife conflicts with agricultural operations on public lands. It provides security to livestock producers facing declining economic returns, increasing price instability, a shrinking available workforce, and other challenges, and allows the Forest Service to redesignate lands to other uses, including wildlife habitat, recreation, and hunting. The permit waiver system represents

the increasing public interest in maintaining natural systems and restoring native species and allows land managers to facilitate the win-win resolution of grazing conflicts which impact not only native species, but also water quality and the recreational experience of users. Allotments already vacated for resource protection, either through Forest Service actions or through the voluntary relinquishment of grazing preference, must be closed. All alternatives include grazing in fragile areas such as the Hell Hole and Lower San Francisco Wilderness Study Area (WSA), and designated wilderness areas where livestock grazing is described as difficult, expensive, and sometimes not even occurring due to lack of demand." **Associated Letter: 713**

Response: We acknowledge the commenter's opinions and preferences. Please refer to response to comment 1 in this section of the appendix regarding the no-grazing and no-grazing in riparian area alternatives. These rationales have been revised in the FEIS based on further review and stakeholder comment. Alternative 5 includes an adaptation of the suggestion for waiving permits (Livestock Grazing G6). It was adapted to be compliant with agency policy direction, which limits the amount of time a permit can be in non-use for resource protection. Entering nonuse for resource protection may indicate a need for change (FSM 2209.13 section 17.2) and trigger a new National Environmental Policy Act decision-making process to evaluate conditions and determine appropriate future uses. Under all circumstances, it is the allotment-specific National Environmental Policy Act process which determines future uses, not the forest plan. Allotment closure is a viable alternative and decision at that level. A reduction in livestock numbers is better addressed at the allotment-level as well. A plan alternative arbitrarily reducing numbers forestwide would not be equitable, as conditions vary across the forest and from allotment to allotment.

The DEIS and FEIS include a graph displaying permitted and authorized use in the Livestock Grazing Affected Environment section. Authorized use is often less than permitted use for a variety of reasons, one of which is adaptive management responses to drought conditions, another is permittee convenience. Authorized use is not an indicator of need and is not necessarily an indicator of capacity. Nowhere in the documents does it say that a lack of demand is responsible for areas within wilderness, or wilderness study areas, that are unallotted or in non-use. The Livestock Grazing Cumulative Effects section states: "An apparent social trend, and perhaps a cultural shift being observed that may influence livestock grazing on lands under any jurisdiction is the decline in the use of horses and mules for access and travel. More and more producers are opting for all-terrain, off-highway, or utility vehicles for access and travel. While there are certainly exceptions to this trend, if it continues, remote allotments that contain substantial area in designated wilderness or inventoried roadless areas could become less attractive."

Comment 3: Commenter is concerned that the EIS seems to focus on the impacts to livestock grazing as a use of the forest, rather than on the impacts of livestock grazing on natural resources. Commenter asserts this is a backwards approach and a failure to comply with the National Environmental Policy Act. **Associated Letter: 713**

Response: The Livestock Grazing section of the environmental analysis does focus on the effects to livestock grazing as a use of the forest. Livestock use is part of the affected social, economic, and cultural environment. The effects of livestock grazing on natural resources and other uses, as managed under revised plan direction, are covered under headings corresponding to those resources and uses.

Comment 4: The commenter observes that with the amount of prescribed fire planned under Alternative 2, the forage for cattle is projected to decrease and income from grazing will drop (DEIS p. 329). Doesn't the forest have enough "unallocated" areas to shift cattle around and lessen this impact? **Associated Letter: 39**

Response: The effects analysis associated with alternative 2 on page 329 of the DEIS does not conclude that prescribed fire will decrease forage and income from grazing. The conclusion drawn is that range conditions will improve but that there are potential trade-offs associated with the risk of fire-damaged infrastructure. We assume vacant allotments are what is meant by "unallocated areas" because that is what is discussed on page

329. There are provisions in alternative 2 to utilize vacant allotments to lessen impacts to producers and forest resources under a variety of circumstances, including those related to prescribed fire activities.

Comment 5: Commenter is concerned that the proposed action (Alternative 2) is driven by restoration activities to increase forage. Commenter asserts there is no sound justification for this premise stating: "The aim to increase forage and thus carrying capacity to support an increase in AUMS separates the possibility of improved forage availability from the economic realities of cattle ranching in semi-arid Southwestern New Mexico. This completely negates the rationale for the emphasis of this topic as a driver of the Plan." Commenter identifies reliance on a qualitative assessment in the EIS as a fatal flaw stating the plan includes: "No currently accepted measure of whether or not there is more forage is referred to, nor a monitoring plan to determine what and how much is or is not growing." Commenter suggests this lack of plan direction is inconsistent with the 2016 supplement to Forest Service Handbook 2209.13- Grazing Permit Administrative Handbook, Chapter 90-Rangeland Management Decision Making.

Commenter also suggests if the aim is to improve rangelands, rangeland monitoring and evaluation methods should have been employed stating: "Without a commitment of both personnel and tools that utilize BASI to provide a sound measure of whether or not there's more grass, the premise of the Plan's emphasis on restoration of rangelands for the purpose of grazing cattle is unsupported. That emphasis is a poor choice for serving Desired Conditions for all ecosystems in ERUs that contain grazed lands, as we do not yet have the data to make sound assumptions as to which plant communities will best thrive in the face of climatic shifts." Commenter quotes sentences from the EIS that support their perspective that climatic conditions are most likely to drive whether livestock grazing can be increased or reduced.

Commenter states that it is disheartening that a part-time business with such widespread, negative impact across Forest ecosystems is driving the premise of the Plan, with "way of life" as its basis. Commenter asserts that the need for many ranchers to work part-time jobs to support their ranch is the very definition of unsustainable in agricultural business terms and illustrates that market factors are clearly not favorable and climate change will only increase the challenges. Commenter points to a statement in the environmental analysis that says the livestock industry contributes $11.4 million in labor income on an average annual basis, says that number is meaningless in the context of the forest plan because it is unclear how much of that is generated from grazing on the forest versus larger ranches that place little reliance on grazing allotments for their operations. Commenter asks how much of it is from livestock operations that are unprofitable, and thus unsustainable and what the economic impact might be if forest management altered the leases where conditions were impaired. Commenter suggests it could be inconsequential to the livestock industry and a greater economic benefit to the local economy if those unprofitable operations sold and got better paying jobs.

Commenter points to the discussion of drought and climate change in the livestock grazing analysis and states: "It is notable that the authors do not state which grassland vegetation to which they refer, because there is nothing about warm-season grass physiology (even less so for cool season grasses) that support a supposition that reduced water availability could enhance their growth and vigor, although undesirable (for range) shrub species such as acacia can thrive and become predominant in such conditions." Commenter is concerned the analysis ignores the fact that market factors and climate are the main drivers that will determine if livestock grazing continues to a significant extent and how much of a socioeconomic contribution it will make. Commenter states it is unknown what plants will thrive best and the only way to know is through monitoring and evaluation. Commenter quotes an undisclosed plant scientist regarding the needs of warm-season grasses and asserts it is unwise to assume that reducing tree and shrub density will lead to a higher density and volume of grasses. **Associated Letter: 548**

Response: Alternative 2-Proposed Action is not based on the premise of doing vegetation treatments for the purposes of increasing forage. It is based on doing vegetation treatments for the purposes of moving toward desired conditions for all resources, uses and activities, sustainability and improving the forest's capacity for adaptation. It is consistent with the 2012 Planning Rule requirements for ecological integrity, integrated

multiple use and sustainability. The projected change in animal unit months was used as an analysis indicator to evaluate the effects of the alternatives on forage production. There are no proposals to raise or lower cattle numbers or allowable use. Those decision-making processes would have to be specific to each allotment and the conditions on the ground. See also response to comment 2 in this section of this appendix for more detail on how we've clarified the use of AUMs as an analysis indicator, not a feature of any alternative in the FEIS.

We agree that monitoring and evaluation is a critical component of grazing management and that it will only increase in importance as climate change progresses. While allotment-specific monitoring is outside the scope of the plan, it is anticipated that plan level monitoring and allotment level monitoring will complement one another.

There are questions in the plan's monitoring program that will be evaluated by compiling allotment-level monitoring data. For example, question one will involve tracking trends in the rangeland vegetation indicator of the Watershed Condition Classification which is evaluated for each watershed based on allotment level information. Monitoring question 2, related to condition trends in riparian areas, will also be evaluated based on aggregated allotment-level monitoring. The plan's monitoring question 30, about the availability of water for livestock could be evaluated based on allotment-level reporting, or remotely sensed data could be used. Other plan monitoring questions that can be evaluated similarly include 43-46, 50 and 63.

The plan's monitoring program also contains questions and indicators that can inform livestock management at both a forest and allotment scale (draft plan Chapter 5 MQs 13, 29, 30, 32, 44, 45, 53, 56, 57, and 68). For example, minimum required monitoring question 13 tracks trends in bare soil over time. When the remote sensing methods mature, this will provide a spatial dataset that can be used to analyze trends across the forest, and on specific allotments. We recognize that without the information that will be available in the forthcoming monitoring implementation guide it is not evident that this is the case because monitoring methods are not discussed.

Regarding the $11.4 million in annual labor income, the draft environmental analysis states: "Today, livestock grazing activities *on the Gila NF* [*emphasis added*] support 612 jobs and contribute $11.4 million in labor income on an average annual basis (see Social and Economic Conditions)." That full amount is the estimated amount generated by livestock grazing activities within the Gila National Forest's administrative boundaries. We refer the commenter to the Social and Economic Conditions section of the FEIS for a discussion of how this figure was generated. We do not know the private financial matters of individual livestock operations, nor is it appropriate for us to know. We only know that some number of permittees work outside the ranch to supplement their income.

We acknowledge there is uncertainty about the future and the range of impacts that climate change might produce on livestock grazing as a use of the forest during the life of the forest plan, as discussed in the Livestock Grazing Affected Environment and Cumulative Effects sections of the draft and final EIS. We also acknowledge that effects of market forces and climatic conditions have more influence on the fate of the livestock industry than the vegetation treatments used to estimate the effects of plan direction. Additional analysis has been added to the Livestock Grazing Cumulative Effects section in the FEIS.

Comment 6: Commenter is concerned that alternatives 3 and 4 put crucial decisions that impact public lands into the hands of private individuals who lease grazing allotments from the Forest. Commenter states: "These individuals have a vested interest in outcomes that may serve their interests above those of other individuals, groups, and the forest ecosystem, all of whose rights would thus be violated. This is a deeply disturbing breach of public trust." **Associated Letter: 548**

Response: Alternatives 3 and 4 do not delegate decision-making authority to permit holders. None of the alternatives do. As described in the comparison of alternatives table at the end of chapter 2 in the first volume of the EIS, these alternatives move some standards to guidelines, remove a guideline and adjust a management approach.

Comment 7: There is a suggestion that diversifying the domestic livestock allowed to graze on the forest could also be sustainable, including herds of pigs and goats. **Associated Letter: 193**

Response: Feral pigs are a national problem that have caused billions of dollars in damage. The Animal and Plant Health Inspection Service and the states are actively investing resources into removing these animals. Fencing design and materials sufficient to manage pigs cannot accommodate wildlife passage as well as fences for managing cattle. There are disease transmission concerns associated with domestic goats and sheep and bighorn sheep. The plan prohibits grazing permit conversion to sheep and goats as part of addressing this concern.

Comment 8: Commenter submitted a list of laws, regulations, policies, and court cases regarding livestock grazing on public lands. **Associated Comment: 208**

Response: Thank you for your interest in forest plan revision.

Comment 9: There is a recommendation that all projects or decisions made under the revised plan be in full consultation with the permittee of the allotment(s) that will be impacted. **Associated Letters: 227 and 247**

Response: We discuss all proposed actions with the permittees that are likely to be impacted and provide opportunities for them to be involved in the decision-making process whether it is required by the forest plan or not. The draft plan does support these relationships and conversations with the section on Community Relationships, and them in the Livestock Grazing section's management approaches, standard 4 and guidelines 2, 4, 5, and 8.

Comment 10: There is a concern that the management approaches for livestock grazing are insufficient and suggestions that more about monitoring, management of livestock use, and management to move livestock out of sensitive riparian areas are needed. Also, more needs to be included about reducing the exposure of calves to predators and other conflicts. Language needs to be expanded because livestock cannot be managed to avoid disturbance to other resources it cannot be said to be sustainable. **Associated Letter: 27**

Response: Management approaches are optional plan content, are not plan direction and do not compel or prohibit actions. They describe principal strategies and priorities the forest supervisor intends to employ to implement the plan. They may discuss potential processes such as analysis, assessment, inventory, project planning or monitoring (FSH 1909.12 Chapter 20 Section 22.4). In addition to the management approaches in the Livestock Grazing section of the plan, which have all been revised based on comments, new information and further review, there is the Inventory, Monitoring and Relationships management approach in the Riparian and Aquatic Ecosystem section that prioritizes riparian monitoring and strategic leveraging of partners and volunteers to assist. These management approaches are intended to work in concert with one another and support the collection of monitoring data necessary for adaptive management to move toward desired conditions for livestock grazing, and riparian and aquatic ecosystems. See also response to comment regarding riparian monitoring objectives below. For brevity, the livestock grazing management approach "Livestock and Wildlife Conflicts" references science specific to reducing depredation rather than reiterating the conclusions drawn by the authors. That science includes management actions that can reduce the exposure of calves to predators.

Comment 11: The commenter is concerned the environmental analysis does not provide any economic analysis of the conflict between Mexican gray wolves and livestock grazing or even identify how many wolves have been killed as a direct result of livestock industry activities on federal public lands. **Associated Letter: 713**

Response: Such an analysis is beyond the scope of the Gila National Forest plan. The purpose of the plan's environmental analysis is to evaluate the effects of plan direction and the differences between alternatives. We

contribute to the recovery effort, but we do not manage it. The U.S. Fish and Wildlife Service manages the recovery effort. Information about the recovery program, including population information can be found on the U.S. Fish and Wildlife Service's website.

Comment 12: Commenter states the agency understands livestock fences disrupt migration corridors and species movement, which is particularly troubling considering the impacts of climate change as wildlife need to be able to move freely about the landscape to find suitable habitat. Commenter asserts the draft plan does not adequately address the needs of wildlife to move across the landscape and draft EIS does not analyze the impacts of allotment and pasture fencing on wildlife movement. Commenter suggests the planning team revisit these sections and that the remedy to their concern is a grazing suitability analysis. **Associated Letter: 713**

Response: All of the action alternatives include direction requiring wildlife friendly fence construction (Wildlife, Fish, and Plants draft G4 and final G5) Guidelines are not optional, and under these alternatives, the intent of providing for wildlife passage would still need to be met. Additional analysis related to this plan direction has been added to the FEIS in the Wildlife, Fish, and Plants section. Timber suitability analysis is the only suitability analysis required by the 2012 Planning Rule.

Other suitability studies, including a grazing suitability study, were considered, but not undertaken at the discretion of the forest supervisor because suitability determinations in forest plans are a coarse analysis indicating a general compatibility with desired conditions. Because plans prepared under the 2012 Planning Rule have explicit desired conditions, a determination for whether an activity is suitable in a particular location is best conducted at the project level.

Regardless, a suitability study would not resolve the commenter's concern about fences as a determination of unsuited does not trigger interior fence removal.

Comment 13: Commenter observes that the analysis does provide some information about the capability of the land to support livestock grazing but questions the methods and assumptions used to estimate changes in animal unit months. Commenter states: "Apparently, because the Forest Service has made an assumption that canopy cover will change as a result of vegetation management (largely chaining and herbicide use), moving the forest away from a shrub dominated landscape (more suitable for wildlife) to a grassland dominated landscape which is more suitable for livestock. Nowhere (at least, not that was available online) does the Forest Service provide a description of the current carrying capacity of the forest for livestock use. However, in the DEIS, the Forest Service acknowledges that livestock grazing is a cause of tree density increases in at least four areas: Largo Mesa, Agua Fria, Pinos Altos, and Eagle Peak. The Forest Service also acknowledges that the impacts of livestock grazing can persist for decades (and perhaps centuries), as it has in the Rabbit Trap livestock exclosure area, which has not been legally grazed since the 1940s, but still shows evidence of livestock abuse, including gully erosion." **Associated Comments: 713**

Response: The state-and-transition modeling that supported the analysis of vegetation communities and timber suitability demonstrated changes in tree canopy cover because of the plan objectives associated with each of the alternatives. These objectives include various combinations of mechanical treatments and wildland fire. There are no plan objectives that include the use of herbicide under any alternative (commenter is referred to response to comment 1 under the Herbicide Use heading of this appendix). Neither is chaining specifically called for in any of the objectives under any alternative. It would be allowable, but it is not promoted or proposed. Plan objectives do not specify the type of mechanical treatment as this is best determined at the project level. Plan objectives are intended to move toward science-based desired conditions for vegetation communities, not for the purposes of converting grasslands to shrublands or increasing forage for livestock. Wildlife species need grasslands, shrublands, woodlands, forests, riparian areas, and aquatic environments to differing degrees depending on their life history requirements.

Increases in forage for livestock or wildlife may or may not be a secondary benefit of plan objectives, as explained in the Analysis Methodology section of the Livestock Grazing analysis (draft EIS) as quoted below: "A zero value was used to establish the other end of the range of possible changes in AUMs. This was done to account for the variables that influence carrying capacity and condition of the range that are outside the influence of plan direction under any alternative. These variables include allotment-specific adaptive management strategies, patterns of precipitation and temperature, soil productivity potential, and wildlife populations and patterns of use." Note that projected changes AUMs were used as an analysis indicator. Those changes are not a feature of any alternatives.

It is correct that the Livestock Grazing analysis assumed that there would be some increase in herbaceous canopy cover because of decreases in woody canopy cover. It also acknowledges that this may or may not correspond to actual changes in herbaceous plant community production as temperature and precipitation patterns are the primary driver. The carrying capacity of the range fluctuates on a seasonal and annual basis due to fluctuations in temperature and precipitation. Management adapts to these fluctuations, evidenced in part by Figure 39 in the first volume of the draft EIS which displays current trends in permitted and authorized use. Authorized use has been below permitted use for a variety of reasons, including reduced carrying capacity due to drought.

Comment 14: Commenter discusses the purpose, process and methods of rangeland monitoring and identifies the agency's reliance on the outdated Parker 3-step method. Commenter states that Gila National Forest staff have not actually done the necessary monitoring and that the methods used to analyze herbaceous vegetation were qualitative and only based modeled changes in woody vegetation. Commenter asserts that if Gila National Forest staff had done the necessary monitoring using the Parker 3-step method it should have resulted in a map of utilization, which was not included in the draft EIS. Commenter states the Parker 3-step method is heavily dependent on photo comparisons, yet no photos of allotments are included in the analysis either. Commenter also notes that the locations of the permanently marked transects that are necessary for the Parker 3-Step method are not identified and there is nothing publicly available on the website that shows a summary of field data, the scoring process, and no photos. Based on these things, the commenter says it is unclear which parts of the method, if any, were implemented.

Commenter states the environmental analysis also lacks an explanation of how the current, and seemingly unused ecological monitoring concepts were reconciled with the 1950s era Parker 3-step, which is based on Clementsian concepts of succession and evaluates conditions relative to what is best for livestock, not wildlife. Commenter concludes with a concern about the scientific basis for authorizing livestock use on the Gila National Forest and suggests agency staff have failed to apply the best available science or disclose important, relevant information. **Associated Letter: 713**

Response: The 2012 Planning Rule requires the use of readily available information. The range monitoring data generated by decades of using the Parker 3-Step was not in readily available format to be used for the assessment, which is where that data's utility would have been. The environmental analysis is future oriented. The planning team did not have the capacity or resources to compile and digitize the many boxes of monitoring records. Attempts were made to contract outside resources to do this work, but that effort proved impracticable. Instead, the assessment analyst for range reviewed National Environmental Policy Act analyses and conversed with District and Supervisor's Office staff to reach the conclusions documented in the assessment (Chapter 11: Multiple Uses and Their Economic Contributions page 510 and Chapter 19: Social, Economic, and Cultural Sustainability Integrated Risk page 723). The assessment concluded that range was generally in "fair" condition across the forest with stable to upward trends; however, the ability of the forest to provide forage for livestock was at risk of being unstainable due to higher densities of woody species, drought, climate change and market factors.

While the relative merit of various monitoring protocols is beyond the scope of the forest plan, it is true that successional theory and our understanding of ecology have advanced considerably since the Parker 3-Step

method was developed and implemented. The data are still useful for evaluating trends. Rangeland scientists recommend the Parker 3-Step method continue to be used in addition to newer methods until those data are sufficient to inform trend analysis (Ruyle and Dyess 2016). The transition is ongoing, as are data storage improvements.

Literature Cited in Response:

Ruyle, G. and J. Dyess. 2016. Rangeland Monitoring and the Parker 3-Step Method: Overview, Perspectives and Current Applications. University of Arizona College of Agriculture and Life Sciences Cooperative Extension. 14 pp.

Comment 15: Commenter states planning staff and decision-makers are violating the National Environmental Policy act by making grazing management decisions on allotments forestwide without environmental analysis or public participation. Commenter states these decisions are related to deferring all site-specific analysis to "some to-be-completed-but-aspirational revision of the Forest's outdated AMPs." Commenter states that to remedy these deficiencies, suitability and capability analyses must be completed and a second draft EIS released for public comment that does the following:

1) Complete allotment-specific environmental reviews and analyses through the plan revision process. It is a clear violation of law to defer these analyses and continue to permit grazing.

2) Revise the fatally flawed analysis assumptions. It is not clear how animal unit months were calculated. If it was calculated based on a 1,000-pound animal, this is an error and doesn't reflect the current understanding of livestock weights. Second, the analysis is silent on the important issue of trespass and unauthorized use.

3) Address the cumulative impact of unauthorized livestock grazing.

4) Correct the deficiencies in the monitoring plan. Monitoring is critical to adaptive management. The poverty mentality around the capacity to conduct monitoring is not acceptable. The only required monitoring of grazing related impacts is limited to analysis of the economic contributions it provides. Optional monitoring includes how drought impacts livestock grazing, and how water availability and rangeland productivity are changing over time, but there is no plan to monitor if permitees are complying with the terms of their permits, Allotment Management Plans or Annual Operating Instructions. The Forest Service should also plan to monitor the impacts of livestock grazing on Mexican gray wolves. If this is not remedied, adaptive management is a failed concept and cannot be the basis of the revised plan.

5) The assumption that range infrastructure is beneficial to wildlife must be revisited, especially considering the admission that most of this infrastructure is non-functional.

6) Include a plan standard requiring permittees to remove infrastructure when they abandon their allotment or transfer the permit to someone else. At the very least, the plan must require permittees provide an inventory of all infrastructure and its status to the permittee to whom any permit is transferred.

7) Analyze the impacts to wildlife from abandoned fences, defunct waters, corrals, and non- functioning cattle guards

Associated Letter: 713

Response: Forest plans provide a programmatic framework that guides site-specific actions, but do not mandate, authorize, fund, or carry out any project or activity. Nothing is being deferred. Projects, including allotment-level National Environmental Policy Act processes, are how the plan is implemented. Each project, or in this case each allotment, requires its own proposal and National Environmental Policy Act process. The

decision coming out of that process is incorporated into each Allotment Management Plan. A description of the legal and policy framework under which livestock grazing is managed has been added to the final background information of the Livestock Grazing section of the plan, and the Livestock Grazing Affected Environment of the FEIS. There is no requirement for a grazing suitability analysis. The 2012 Planning Rule only requires a timber suitability analysis. A grazing suitability study was considered, but not undertaken at the discretion of the forest supervisor because suitability determinations in forest plans are a coarse analysis indicating a general compatibility with desired conditions. Because plans prepared under the 2012 Planning Rule have explicit desired conditions, a determination for whether an activity is suitable in a particular location is best conducted at the project level.

1) Allotment level planning happens at the project level, not at the forest plan level.

2) The animal unit months displayed in Figure 39 of the draft EIS (retained in the FEIS) is a display of current information and is based on the Society for Range Management's most current standard (2016). The analysis in the EIS is based on a percent change estimated from the reduction of woody species cover demonstrated by the state-and-transition modeling supporting the vegetation community analysis (Livestock Grazing Analysis Methodology).

3) The purpose of the plan is to analyze the effects of plan direction. It is necessary to assume all activities and uses will be compliant with plan direction. Unauthorized use is not compliant with the plan. It is an implementation and enforcement issue, not a planning issue.

4) We acknowledge the commenter's opinion about the plan's monitoring program and refer them to responses to comments 5 and 10 in this section of this appendix. Monitoring for the Mexican gray wolf is done as part of U.S. Fish and Wildlife Service recovery plan implementation. There is no requirement for additional monitoring in the forest plan.

5) There is no assumption in the analysis that all range infrastructure is beneficial to wildlife. There is a discussion of the effects of plan direction related to range infrastructure. In the Livestock Grazing Effects Common to All Alternatives, the effects discussion concludes that plan direction incorporating provisions for wildlife in range infrastructure also benefits livestock grazing as a use of the forest. In the Wildlife and Botanical Species analysis, similar conclusions are drawn. With respect to range infrastructure in general, neither of the draft documents identify a "majority" of range infrastructure as "nonfunctional." The draft EIS's Livestock Grazing Affected Environment states: "Fire-damaged infrastructure has become a major challenge for some, but not all permittees." The draft plan's background information for the Livestock Grazing section states: "Some range infrastructure is in poor condition or is non-functional due to age, lack of maintenance, poor design features or locations, damage associated with recent fires, or a combination of these factors. Permittees and forest staff have invested substantial efforts to address fire-damaged infrastructure with limited financial resources, but much work remains to be done."

6) Requiring the permittee to remove infrastructure that could be necessary for the future management of the allotment doesn't support the plan's desired conditions. An inventory of range infrastructure and its functional status is something that is routinely kept as part of allotment management and helps inform the schedule for infrastructure maintenance in annual operating instructions.

7) The purpose of the analysis is to analyze the effects of plan direction and the differences between alternatives. Functional fences, waters, corrals, and cattle guards are necessary to achieve desired conditions under any alternative and will continue being addressed during plan implementation at the allotment-level. Livestock Grazing guideline G7 addresses range infrastructure that is no longer serving the purpose for which it was intended. The Wildlife and Botanical Species coarse filter analysis covers these effects as common to all action alternatives.

Literature Cited in Response:

Society for Range Management Rangeland Assessment and Monitoring Committee. 2016. Does Size Matter? Animal Units and Animal Unit Months. *Rangelands* 39(1):17-19.

Comment 16: Commenter asserts that because the ecological costs of livestock have been clearly documented, advocates of public-lands livestock grazing must be able to demonstrate that low-impact management and ecosystem sustainability are possible, based on careful use of the best available science. Commenters state that advocates must be able to demonstrate how ecological costs can be minimized. Commenter identifies and discusses peer-reviewed published literature relevant to the effects of livestock grazing on natural resources and suggests that the documents must disclose and analyze how the presence, number, and grazing intensity of livestock will impact the native and non- native plant communities in addition to the following.

1) Predator-livestock conflicts and the effects of plan content related to those conflicts, specifically involving the Mexican gray wolf.
2) Productivity and key forage species should be monitoring to complement management objectives.
3) Analyze and disclose plant diversity in the project area and what specific plan provisions related to livestock grazing will have on that diversity
4) Analyze and disclose forage overlap between native species and cattle and if or how specific plan provisions related to livestock grazing will change that forage overlap.
5) Analyze and disclose anticipated ungulate distributions, including seasonal variations and if or how specific Forest Plan provisions related to livestock grazing will change that
6) Analyze and disclose how stocking rates will impact ungulate distribution in light of the changes facilitated by specific Forest Plan provisions related to grazing
7) Analyze and disclose seasonal variations in forage productivity in the project area and if or how specific Forest Plan provisions related to grazing will change that
8) Analyze and disclose forage preferences of cattle and wildlife and if or how specific Forest Plan provisions related to grazing will change that
9) Analyze and disclose impacts of cattle grazing on cover for wildlife during breeding and fawning season and if or how specific Forest Plan provisions related to grazing will change that
10) Analyze and disclose cascading effects of cattle grazing on wolf prey species and the impacts on wolves and if or how specific Forest Plan provisions related to grazing will impact the Mexican gray wolf.

Associated Letter: 713

Response: The ecological effects of livestock grazing depend on how it is managed. Overgrazing is not compatible with plan direction under any alternative. Livestock grazing will be managed to move toward the plan's desired conditions. The plan does not authorize livestock grazing or any other activity. Grazing, permitted numbers, and grazing intensity are authorized at the allotment level. Therefore, the effects of these management factors are analyzed at the project level, not at the plan level. All allotment-level decisions would have to maintain or move toward the plan's desired conditions and be within the constraints of the plan's standards and guidelines to be consistent and compliant with plan direction. A paragraph describing the legal and policy framework livestock grazing is managed under has been added to the plan and FEIS in their respective Livestock Grazing sections.

1) The plan incorporates the most current, approved recovery plan for federally listed species including the Mexican gray wolf. The Livestock Grazing management approach Livestock and Wildlife discusses predator-livestock conflicts and explains the conservation measures in place that address those conflicts. The Wildlife and Botanical Species analysis discloses the effects of the plan and its alternatives on the Mexican gray wolf under the Federally Listed Species heading in the EIS.

2) See response to comments 5 and 10 in this section of this appendix related to allotment-level and plan-level monitoring.

3) All Upland Ecological Response Units DC3a and Riparian and Aquatic Ecosystems 4th and 5th level Watersheds DC5 provide direction on plant species diversity. Livestock grazing will be managed to maintain or move toward those desired conditions.

4, 5, 6) Livestock distribution, utilization rates, stocking rates, season and duration of use and their effects on wildlife species and habitat are related to allotment-specific proposals, analysis, and decision-making. The suggested remedies are not applicable at the plan-level.

7 and 8) Seasonal variations in productivity are driven by seasonal variations in temperature and precipitation. Forage preferences are driven by biology. Plan direction will not change temperature and precipitation patterns or biology, it provides the adaptive management framework to respond to changing environmental conditions to maintain or move toward desired conditions. The plan's monitoring question 9 and its associated indicators will provide information about fluctuations or trends in productivity relevant to livestock grazing.

9 and 10) The plan's desired conditions for upland vegetation, riparian and aquatic ecosystems and wildlife, fish and plants provide for the conditions that support the diversity of plant and animal species found in the plan area, including cover for breeding and fawning. The effects are discussed in the Wildlife, Fish, and Plants section of the FEIS, including conclusions drawn about the impacts of related plan direction on the Mexican gray wolf.

Comment 17: The commenter points to a discussion of water developments for livestock grazing in the draft EIS and suggests additional drinkers and trick tanks may be needed if periods of drought increase in the future. **Associated Letter: 39**

Response: We agree that additional drinkers and trick tanks could be needed if periods of drought increase in the future. More specific discussion on this topic has been added to the final EIS in the livestock grazing cumulative effects section.

Comment 18: A lot of new fencing has been built near the Ben Lily lookout, several locations in the Burros, and by Mule Creek. Can you explain why? Has there been a recent change in how grazing is managed? **Associated Letter: 39**

Response: These questions are project-specific and beyond the scope of the forest plan. Fence construction or reconstruction is a routine part of livestock grazing management that facilitates adaptive management actions. For more information we recommend contacting the Silver City Ranger District.

Comment 19: Commenter states that range improvements are generally made to improve livestock handling, water development and management of both public and private property. Water improvements are beneficial to both wildlife and livestock. Property boundaries that are fenced should be done in consultation with the grazing permittee. **Associated Letter: 93**

Response: Commenter shares our understanding of the purpose and benefits of range infrastructure. Allotment fences needs to be configured for the site conditions, the operational needs of the permittee and

consistent with private property rights. We agree that private property owners need to be involved when locating fences, whether those owners are the grazing permittee or not.

Comment 20: Commenter recommends that all decisions be made in consultation with the permittee rather than placing requirements on management through plan direction. Commenter prefers this approach because it would avoid unnecessary litigation. Commenter states that if the plan places mandatory requirements on management, then it should fall both on the permittee and the agency to fulfill that requirement, not just one of them. **Associated Letter: 93**

Response: Please refer to response to comment 9 in this section of this appendix about consultation with the permittee. The forest supervisor will make decisions about which items are appropriate for plan standards and guidelines based on public input and the analysis in the final EIS. Regardless of the decisions made, Gila National Forest staff and leadership agree that the decision-maker and the permittee ought to work together to make allotment specific decisions and implement them. This has been and will continue to be a vital part of managing livestock grazing as a use of the forest. Responsibility for specific actions will be determined on a case-by-case basis when the requirement, allotment-specific circumstances, available funding, and other resources can be fully considered. When responsibility is appropriately determined to belong to the permittee, forest staff will typically help with any funding, materials and time or labor as available to do so.

Comment 21: There is a suggestion that because of climate change, the length of time, or season of use, may have to be shortened. **Associated Letter: 561**

Response: These suggestions are all possible adaptive management actions that may be appropriate to a variety of circumstances, at the allotment level, including those circumstances created by climate change.

Comment 22: Commenter points to page 143 in the draft plan which contains the objectives, standards and the beginning of the guidelines for Livestock Grazing. Commenter asks how many permit holders there are, what the standards are, if the permit holders are local or out of state, and if not local, who checks for compliance and does maintenance. **Associated Letter: 233**

Response: These questions are outside the scope of the forest plan. There are 109 permit holders. Most permit holders live locally, others do not. Typically, those who do not live locally employ a ranch manager who does live locally. All permit holders are held to requirements in their permit, which must be consistent law, regulation, policy direction and forest plan direction. The permit holders are responsible for following their annual operating instructions, consistent with their permit and are responsible for maintenance. However, the Forest Service does assist with maintenance as range betterment funds, special project funding, and staff time allow. As the permitting agency, the Forest Service is responsible for making sure permit holders compliant and taking administrative actions when non-compliance is identified.

Comment 23: Commenter points to page 145 of the draft plan which is in the Livestock Grazing section and contains management approaches. Commenter states: "Grazing permittees, maintain, reconstruct, construct, improvement, pay for costs," and then asks how often these allotments are visited by Forest Service staff. **Associated Letter: 233**

Response: How often Forest Service staff visit a given allotment for the purposes of range management depends on a variety of factors and is not the same on every allotment, every season, every year. It depends on management activities and issues on a particular allotment at any given time.

Comment 24: Commenter points to page 147 of the draft plan which is in the Livestock Grazing section and contains the management approach "Unauthorized and Excess Livestock" and a glossary. Commenter states: "Riparian management zones for cattle and vehicles." **Associated Letter: 233**

Response: Please refer to response to comments under the Feral Cattle heading of this appendix for more on unauthorized and excess livestock and the Riparian and Aquatic Ecosystems section of this appendix for more on riparian management topics.

Comment 25: Commenter suggests range condition might improve with having more wilderness. **Associated Letter: 233**

Response: Wilderness designation does not improve range condition. Wilderness designation restricts modes of access and the toolset for managing vegetation by prohibiting mechanized equipment. Restoring the natural role of fire to the landscape provides the only opportunities to improve forage production and reduce tree density. Range and ecological condition respond to how livestock are managed, as discussed in the FEIS.

Comment 26: Commenter asks how many allotments do not have current National Environmental Policy Act cleared permits, how many allotments are waived back to the Forest Service without an applicant in alternative 5, and how long National Environmental Policy Act processes would take on these allotments? **Associated Letter: 233**

Response: These questions are beyond the scope of the forest plan. There are currently two allotments that do not have National Environmental Policy Act decisions. These are Deep Creek and Copper Creek. Others with signed decisions will require adequacy reviews at some point in time to determine if a change in conditions warrants a new analysis and decision. Forest leadership continues to incorporate and prioritize these projects into the annual program of work.

Allotments waived back to the Forest Service are not related to the draft plan or any of its alternatives. If or when allotments are waived back to the Forest Service is a decision made by the permittee to whom the permit is issued. National Environmental Policy Act processes vary in the time between initiation and final decision due to a variety of factors, not all of which are foreseeable.

Comment 27: Commenter points to page 331 in the Livestock Grazing cumulative effects section of the draft EIS and asks how many ranchers have more than one allotment. Commenter goes on to note the statement that there is a decline in the use of horses and an increase in the use of utility task vehicles (UTVs) for allotment management and suggests permittees should drive down a road as close as possible and then ride the horse to check on fences and tanks instead of using UTVs, which are noisy and polluting. **Associated Letter: 233**

Response: There were eight producers that have a permit for more than one allotment at the time this response to comment was written. Allowable modes of access for allotment management include horses, UTVs and other motorized vehicles consistent with travel management and specific authorizations contained within the grazing permit. We acknowledge the commenter's preference regarding modes of access.

Comment 28: Commenter notes trend discussed in the Livestock Grazing cumulative effects section of the draft EIS about social trends away from backcountry skills and horseback riding having the potential to make wilderness grazing allotments less attractive to permittees. Commenter suggests that a trend for cattle off wilderness would reduce livestock conflict and supports removing livestock grazing from designated and recommended wilderness. **Associated Letter: 233**

Response: This is a projection of reasonably foreseeable effects of social trends. There is no actual current trend away from grazing in wilderness nor is there any proposal to remove livestock grazing from designated or recommended wilderness. Livestock grazing is an allowable use that is afforded certain protections under the Wilderness Act. Removing grazing from an area for the sole reason of it being wilderness or recommended wilderness is not compliant with the act.

Comment 29: Commenter points to the discussion in the Soil and Watershed Resources Affected Environment and the percentage of springs developed for livestock watering. There is a concern about the risk to springs from management activity and a suggestion that these springs need to be brought back to their natural state and the cattle moved away. **Associated Letter: 233**

Response: The plan's desired conditions for riparian and aquatic ecosystems apply to springs and resource uses will be managed to maintain or move toward those desired conditions. Water use is subject to New Mexico state law. There are water rights associated with many of these springs and removing the development could interfere with the exercise of those rights. If conditions warrant changing the development to pipe water away from the source, that is something that can be done to reduce risk. There may be other ways to integrate desired conditions for springs and livestock grazing where issues arise but would be best addressed at the project level when site conditions and other specific circumstances are known, and all the options can be evaluated.

Comment 30: Commenter notes several things described in the Livestock Grazing Affected Environment section of the draft EIS and asks if the Forest Service offers classes to permittees for better practices. **Associated Letter: 233**

Response: No, the Forest Service does not offer classes. Range specialists working for the Forest Service often discuss practices and adaptive management options with permittees and assist to the extent there are resources to do so. Permittees also have access to the expertise provided by the Natural Resources Conservation Service, Soil and Water Conservation Districts, the New Mexico State University's Extension Services and the Range Improvement Task Force if they choose to seek it.

Comment 31: Commenter states they have noticed that the documents do not provide a list of open, vacant, and closed allotments and no rationale for failing to do so. A list of allotments and their status could allow the public to view current grazing operations relative to ecological conditions. Commenter states that they understand this information may be dynamic and would need to be updated throughout the process, but it is critical to understanding how livestock grazing impacts many forest resources. **Associated Letter: 713**

Response: Allotment status does not describe the grazing operation or ecological conditions, all of which are subject to change over time and space. Allotment status, grazing operations and allotment-level ecological conditions are relevant at the project-level. Livestock grazing would be managed to move toward the plan's desired conditions. If the commenter would find this information useful, it can be requested from the Gila National Forest outside of plan revision.

Comment 32: Commenter asks how many allotments are affected by the areas recommended to Congress for wilderness designation in alternative 5. Commenter notes occasional motorized access for range infrastructure is possible, acknowledges the increased cost of fencing without the use of mechanized equipment and states that wilderness should have rights over cattle and that the forest is senior. **Associated Letter: 233**

Response: There are 103 allotments affected by areas recommended to Congress for wilderness designation in alternative 5. Two of these are closed by National Environmental Policy Act decisions and five were vacant at the time this response was written. Livestock grazing and wilderness are both established as multiple uses in the Multiple-Use Sustained-Yield Act. Livestock grazing is an allowable use that is afforded certain protections under the Wilderness Act. Removing grazing from an area for the sole reason of it being wilderness or recommended wilderness is not compliant with the act.

Comment 33: Commenter points to page 456 in the Land Ownership, Use and Access Affected Environment section of the draft EIS that states 2.6 million acres of the Gila NF's total 3.3 million acres are managed for grazing. Commenter suggests that this seems high. **Associated Letter: 233**

Response: This statement is an accurate representation of the affected environment.

Comment 34: Commenter states that the documents should stop minimizing the effects of livestock grazing by using pseudonyms such as ungulate grazing, over exploitation, excessive use, trampling, traditional use, herbivory, other, and unauthorized use. Commenter suggests that terminology should be used when referring to something specific as in "herbivory by elk" or "unauthorized use of livestock." **Associated Letter: 612**

Response: We acknowledge the commenter's language preferences and efforts to improve clarity, consistency and the use of plain language have been made in the final documents. The analysis in the FEIS discusses the effects of plan direction. Livestock grazing would be managed to move toward the plan's desired conditions. Over exploitation, excessive use and unauthorized use would not be consistent with the plan; thus, they may be threats to wildlife, fish, and plant species, but they are implementation and enforcement issues, not planning issues.

Comment 35: Commenter suggests adding a plan component requiring that livestock grazing within riparian areas is managed to sustain proper stream morphology, floodplain function and riparian vegetation desired conditions. **Associated Letter: 672**

Response: Livestock grazing will be managed to maintain or move toward desired conditions for riparian and aquatic ecosystems, other ecological resources and uses. The action alternatives have detailed desired conditions for riparian and aquatic ecosystems that included stream morphology, floodplain function and riparian vegetation community characteristics.

Comment 36: Commenter suggests that range infrastructure should not be termed "improvements" and that "developments" is more appropriate because fences harm wildlife and constructed waters do not improve habitat. Commenter states: "The balance that exists in the uplands between wildlife, cattle, and forage is relative to the availability of water. When you create a water source in the uplands, more vegetation is removed surrounding it creating a sacrifice zone where the soil is compacted, more erosion takes place and soil becomes drier as it is more exposed to the sun and wind. The drier soil will stress the vegetation and create a dieback. You should be looking to IMPROVE the desired conditions, not degrade them." **Associated Letters: 673 and 713**

Response: We acknowledge the commenter's preferences on word usage. Cattle will congregate near water, whether it is a developed water in the upland or a stream in a riparian zone. Yes, there are localized impacts, but water developments in the uplands can be a tool to improve cattle distribution, which can benefit soil, water, and vegetation conditions over a much larger area. Livestock grazing will be managed to move toward the plan's desired conditions.

Comment 37: Commenter points to this statement in the draft environmental analysis: "Maintaining range infrastructure is an expense borne primarily by the permittee—and it is expensive." Commenter states they do not believe permittees spend any money on range infrastructure because if they did, they could claim a property right on it. Commenter suggests this statement be removed and that this should be considered in the final environmental analysis. **Associated Letter: 673**

Response: Permittees do spend money on range infrastructure. This responsibility is part of holding a grazing permit. Range infrastructure is conveyed with the permit and do not have private property rights associated with them.

Comment 38: Commenter points to this statement in the draft environmental analysis: "All alternatives contain requirements for livestock water developments to include wildlife access and escape considerations, either as a standard or a guideline." Commenter is concerned that wildlife access is meaningless if waters are turned off and that when livestock are not present, permittees often turn off water systems that rely on wells.

Commenter suggests there needs to be verification and consequences to permittee if waters are not available when pastures are rested from cattle. **Associated Letter: 673**

Response: The commenter's concern is an implementation and cooperation issue, not a planning issue.

Comment 39: We need to redefine "managed grazing" as actually moving the animals through only when conditions are sustainable, then moving them off. **Associated Letter: 707**

Response: Sustainable grazing management is responsive to changing conditions through adjustments stocking levels, pasture rotations and season, duration, frequency, and intensity of use. It may also be responsive through maintenance and constructure of water developments and other range infrastructure. The allotment-level National Environmental Policy Act analysis and decision-making process addresses these and other elements of grazing. This is then incorporated into the permit, Allotment Management Plan, and Annual Operating Instructions. Allotment-level decisions would be compliant with the plan and grazing would be managed to move toward the plan's desired conditions.

Comment 40: Commenters are concerned that the draft documents fail to analyze the additive effects of grazing coupled with drought, climate change, elk herbivory, recreation, roads, habitat fragmentation, uncharacteristic wildfire, and other stressors, which exacerbates riparian and upland degradation. Commenter states that Forest Service and New Mexico Department of Game and Fish biologists and ecologists have established that livestock grazing compounds the effects of other stressors on riparian areas and hydrologic function. Commenter provides references to applicable scientific literature, quoting directly from a Forest Service climate assessment for the middle Rio Grande:

"For many species, reducing non-climate-related threats during restoration is important. For example, herbicides pose high risks to amphibians (USACE 2001). Grazing may exacerbate disturbance related to restoration treatments. Warming conditions and increased variability to river flow will reduce the capacity of the riparian habitats and individual species to recover from disturbances. Decisions on land use and conversion should consider the overall effect of human activities plus potential consequences of climate change for habitat loss."

Commenter also quotes a Forest Service technical reference: "[i]n most cases, it is difficult to deal with isolated threats as most occur in combination with other threats. Land managers need to be aware of the multiple threats and their interactions to successfully manage riparian ecosystems in the western United States." Commenter asserts the draft documents violate the National Environmental Policy Act requirements for the disclosure of such synergistic impacts, which should be addressed in the cumulative effects analysis. The suggested remedy is to use the science provided by the commenter and redo the analysis for habitats and at-risk species. Another commenter suggested the Livestock Grazing Affected Environment section, which discusses the long history of grazing on the forest, needs to be expanded to acknowledge the long-lasting negative impacts of livestock grazing that continue to exacerbate altered fire regimes, invasive species establishment and expansion, loss of biodiversity and degraded watershed conditions. This commenter also suggests the draft analysis did not disclose indigenous land claims or address environmental justice. **Associated Letters: 712 and 713**

Response: Programmatic-level cumulative effects take a multi-jurisdictional look at future management actions likely to occur during plan implementation that could have effects on neighboring lands, and actions likely to occur on neighboring lands under those plans that could affect the forest. The FEIS cumulative effects analyses in the Soil and Watershed Resources, Riparian and Aquatic Ecosystems, and Wildlife, Fish and Plant Species sections related to topics raised by the commenters. However, the discussion the commenters would like to see in the analysis is not appropriate for programmatic cumulative effects, it could be appropriate at a project level. The purpose of the plan's EIS is to analyze the effects of plan direction. The draft and final EIS do this, evaluating the effects of plan direction on management's ability to mitigate and adapt to climate change and move toward desired conditions. Reducing or mitigating the impacts of biological

stressors is part of the plan management approach for Change and Uncertainty (Natural Systems item 5), which would be implemented by project-level work. The assessment report and the affected environment sections of the FEIS, discuss legacy issues related to overgrazing and fire suppression.

We did analyze indigenous land claims through our formal government-to-government consultation process. The information shared during those discussions is not subject to public disclosure (25 U.S.C. 3056 Section 8106 and Executive Order 13175), in the environmental impact statement or elsewhere. If there were a specific reason to make a disclosure, we would be required to consult with the Secretary of the Interior, who would be the authorizing official. The authorization would be made or declined based on the regulation and further consultation with the Tribe (36 CFR 800).

The draft EIS addressed environmental justice in the Social and Economic Conditions section. The FEIS moves that discussion and expands upon it in a separate section titled Environmental Justice and Equity.

Comment 41: There is a concern that the draft plan is based on an inaccurate assessment of grazing's economic and cultural benefits. Commenter acknowledges that grazing may part of cultural identity to some people but states: "the 2012 Forest Planning Rule does not permit the cultural identity of a tiny minority of Forest users to override the considerable impacts of livestock damage and prevent progress toward a truly sustainable future. The Gila NF is mandated to protect the land and water, not cultural identity. 'Economic sustainability' is a disingenuous label for public lands grazing that is highly subsidized and is not sustainable in any true sense of the word. These realities should be acknowledged…." Commenter asserts the draft documents contain contradictory language and that if livestock grazing were truly sustainable, livestock producers would not need to supplement their income by working other jobs. Commenter suggests livestock operations are not viable without generous federal subsidies. Commenter points to conclusions in the draft EIS regarding the use of vacant allotments as forage reserves and states it is not appropriate for the agency to let consideration of short-term economic problems outweigh the potential for long-term benefits to land and water.

Commenters recommend that to comply with the National Environmental Policy Act, the plan, and environmental analysis should disclose the extent to which public lands grazing is economically subsidized by the Federal Government, the true cost of the livestock grazing program and reveal that it constitutes a net loss. Another commenter suggests the documents must acknowledge the historically low cost to permittees and provide a comparison of this low rate to rates charged on State Trust Lands or private lands for context. **Associated Letters: 712 and 713**

Response: The range of alternatives for the management of vacant allotments includes all the options allowed by policy direction, the effects of which are analyzed in the FEIS. The Forest Service is mandated to provide for multiple use-sustained yield and the 2012 Planning Rule requires the plan to provide for the integrated management of natural resources and multiple uses in a sustainable manner. Under all alternatives, livestock grazing will be managed to move toward integrated desired conditions. Livestock grazing as a use of the forest may contribute socioeconomic benefits, but there are factors that contribute to sustainability that are outside the scope of forest planning, like market and other economic forces. The economic analysis contained in the Social and Economic Conditions section of the DEIS and FEIS meets Forest Service policy requirements. We acknowledge the commenter's opinion regarding sustainability. The forest supervisor will consider public input and the final analysis before determining what the plan will contain regarding the management of these allotments.

Comment 42: Commenter notes discussion about the condition of range infrastructure on page 142 of the draft plan which contains the background and description for Livestock Grazing and the desired conditions. The commenter asks if we know where all the stock tanks are located, what condition the infrastructure is in and if old pipelines are being removed. **Associated Letter: 233**

Response: We do know where range infrastructure, including stock tanks are located. These locations are not always accurately represented in our geospatial database, and we have been working to get that database up to date and precise. Condition is something that is monitored and tracked as part of range permit administration. Currently, old pipelines that no longer serve a purpose are typically left in place. The plan contains a guideline (Livestock Grazing G7) that specifies requirements to be built into contracts, permits and agreements that provide for safety and aesthetics. Such provisions would include removal of non-functional or excess pipeline unless the intent of providing for safety and aesthetics could be met through other means. Please also refer to responses to comments on Livestock Grazing guideline 7.

Comment 43: Commenter states: "Stock tanks poorly located or designed, in need of maintenance. Who maintains them? Seems like a raise in grazing fees would help with maintenance and when will these tanks be moved or removed?" **Associated Letter: 233**

Response: The grazing permittee is responsible for maintenance but coordination with the Forest Service is often necessary given the need for heavy equipment to remove accumulated sediment and restore the original holding capacity or reconstruct the berm or spillway. Because of the ground disturbance, archeologists are often needed to ensure cultural resources that may be in the path of the equipment are properly identified and treated appropriately. In these cases, permittees may not be able to do the maintenance until an archeologist is available. Grazing fees are set at the national level and are outside the scope of the forest plan. The need to relocate or remove a stock tank is an allotment-level decision.

Comment 44: Commenters suggest the plan's Livestock Grazing section should provide a brief narrative describing how livestock grazing is authorized and permitted on National Forest System lands. Furthermore, it should include a description of management's abilities and mechanisms for modifying stocking numbers, timing, and duration of grazing to ensure improvement, restoration, and sustainability of rangelands and suitability for grazing if changes in range condition occur within the term of the grazing permit authorization. **Associated Letter: 151**

Response: We think this information would be useful for building shared understanding and have incorporated this suggestion in the final plan's background information section for Livestock Grazing and the Livestock Grazing Affected Environment section in the FEIS.

Desired Condition 1

"Sustainable livestock grazing contributes to the long-term social, economic and cultural diversity and stability of local communities, and helps to preserve the rural landscape, cultural heritage, and long-standing tradition."

Comment 45: There is a concern that livestock grazing may not be sustainable under predicted future climate and associated economic uncertainties, and a related concern about how monitoring might identify a trigger point for a determination that livestock grazing is no longer a sustainable use of the forest. Some commenters suggest this desired condition should read: "If prevailing market and climatic factors support livestock production, …" pointing to the following statement in the draft environmental analysis "Forage and water availability are still limiting factors, particularly during times of drought, and may become more limiting in the future as climate change progresses. This could potentially result in more land area being required to support the same number of animals, regardless of how the land is managed. This would reduce the quantity and quality of sustainable social, cultural, and economic benefits provided by livestock grazing" Others prefer to remove language that suggests livestock grazing could be sustainable and the reference to cultural heritage as a contribution. **Associated Letters: 27, 548, and 713**

Response: Desired conditions are aspirational statements about what social, cultural, economic, and ecological outcomes management will be directed toward. If there is a trend away from desired conditions, that would serve as a trigger for adaptive management action, a change in plan direction, or both. We

acknowledge that sustainable use under increasing aridity is a moving target. Establishing ecological thresholds can be complex and time consuming. Researchers with the Jornada Experimental Range and U.S. Army Corps of Engineers have explored the threshold concept in relationship to grazing and adaptive management (Brown et al. 1999). However, the science to support a threshold for southwestern rangelands is still evolving and it remains unknown whether ecological thresholds themselves may be a moving target under increasing aridity. When the science matures, thresholds can be incorporated into the monitoring plan with an administrative change. Until then, if monitoring demonstrates a trend away from desired conditions, that will trigger management to re-evaluate and develop adaptation strategies.

Literature Cited in Response:

Brown, J.R., J. Herrick, and D. Price. 1999. Managing low-output agroecosystems sustainably: the importance of ecological thresholds. Canadian Journal of Forest Research. 29(7): 1112-1119. https://doi.org/10.1139/x99-052.

Desired Condition 2

"Livestock use provides for conditions that support movement toward natural fire regimes."

Comment 46: Some commenters support this desired condition. Others are concerned that the following desired condition for Livestock Grazing is not measurable and has no associated objectives, guidelines, or monitoring questions: "Livestock grazing provides for conditions that support movement toward natural fire regimes." The accompanying suggestion is to either delete it or turn it into a research project. Others would like to see this desired condition reworded such that livestock use is only permitted where it provides for conditions that support movement toward natural fire regimes. **Associated Letters: 27, 548, and 713**

Response: This desired condition could be measured. For example, it could be measured by how many permittees or times a permittee works with staff to provide for fuel conditions that support meeting prescribed fire objectives. Alternately, if prescribed or naturally ignited fires are meeting objectives then it could be concluded that this desired condition is met on the affected allotments. FSH 1909.12 Chapter 20 Section 22 states "A plan is not an assemblage of program plans that have unique plan components for every resource, While the set of plan components must fulfill all the requirements of 36 CFR 219.8 through 219.11, there need not be a one-to-one correlation of one plan component to each requirement..." All resources and activities covered in the plan must have desired conditions, but there is no requirement that each desired condition be accompanied by an objective, standards, and guidelines. The plan does contain objectives for vegetation communities that will promote movement toward desired conditions for natural fire regimes. The forest supervisor has the discretion to set the scope, scale, and priorities for plan monitoring within the financial and technical capabilities of the Gila National Forest but must include one monitoring question for the eight items set out in the planning rule (36 CFR 219.12, FSH 1909.12 Chapter 30 Section 32.1). More questions may be included but are not required.

Desired Condition 3

"Livestock grazing and use is compatible with the desired conditions for ecosystems, soils, watersheds, native plant and animal species, and other activities and resources."

Comment 47: There are concerns about this desired condition. A few commenters support it as written. Some commenters are incredulous that this is a desired condition at all because it is inconsistent with the known impacts of grazing. There are a couple suggestions on rewording. One suggestion is that the first part of the desired condition ought to be reworded so that livestock grazing only occurs where it is compatible with other desired conditions. Another suggestion is that it should be rephrased that it will only occur where it can be demonstrated it is not degrading resource values. **Associated Letters: 27, 130, 233, 361, 542, 548, 685, and 713**

Response: The effects of livestock grazing depend on how it is managed. During plan implementation, areas if or where livestock grazing management is not contributing toward the maintenance or achievement of desired conditions for other activities and resources would be identified at the allotment level. Appropriate adjustments to range infrastructure or the frequency, intensity or duration of use can be made when the site-specific issues are known and can be addressed appropriately. The suggested change in wording would not change how the desired condition was implemented.

Desired conditions describe specific social, economic, and/or ecological characteristics of the plan area, or portion of the plan areas, toward which management of the land and resources should be directed. They are forward looking aspirations that must be attainable through integrated resource management for multiple uses even if the time for success exceeds the plan period. Plan components must not directly conflict with another plan component or prevent its accomplishment (FSH 1909.12 Chapter 20 Section 22).

Desired Condition 4

"Range infrastructure facilitates livestock management and the production of forage, allows wildlife safe and reliable access to water, provides for habitat connectivity and wildlife movement, and does not negatively affect the safety of forest users or Forest Service personnel."

Comment 48: There is support for this desired condition. **Associated Letters: 548 and 713**

Response: This desired condition has been retained in the final plan.

Desired Condition 5

"Required environmental analyses are conducted in a thorough and timely manner to reduce regulatory uncertainty and encourage investment by permit holders[a]."

Comment 49: There is appreciation that efficient environmental analyses are being prioritized by this desired condition. **Associated Letters: 227, 247, and 713**

Response: This desired condition is retained in the final plan as DC6.

Comment 50: There is a suggestion that this desired condition be reworded to state: "Semi-annual field checks of all active grazing allotments are completed to determine condition of each ERU [Ecological Response Unit] within them and required environmental analyses are conducted in a thorough and timely manner to reduce regulatory uncertainty and encourage investment by permit holders[b]." **Associated Letter: 548**

Response: The frequency of field inspections or monitoring visits can vary from allotment to allotment based on site-specific circumstances and the producer's operation. These types of requirements are best determined at the allotment level.

Suggested Desired Conditions

Comment 51: Commenters state that most of their concerns about livestock grazing have to do with impacts to riparian and aquatic ecosystems, especially trout species. Commenters state that a lack of monitoring data elevates their concern and makes proactive management difficult. Because of this, the commenters request

[a] NEPA decision-making process is outlined in the most current Forest Service Handbook (FSH) 2209.13 Chapter 90: Rangeland Management Decisionmaking. As of the date of this document, https://www.fs.usda.gov/rangeland-management/documents/directives/FSH2209-13-CH90-Proposed-508.pdf

[b] NEPA decision-making process is outlined in the most current Forest Service Handbook (FSH) 2209.13 Chapter 90: Rangeland Management Decisionmaking. As of the date of this document, https://www.fs.usda.gov/rangeland-management/documents/directives/FSH2209-13-CH90-Proposed-508.pdf

more plan components like DC5, which require the use of "temporally and spatially appropriate data". They also request this data collection and interpretation be guided by best available science and the most current Grazing Permit Administration Handbook and Regional Supplements. Commenters want to see a commitment to monitoring in the plan to benefit livestock producers, rangeland health and native species with a desired condition that states: "Routine rangeland monitoring creates temporarily and spatially appropriate data and livestock grazing decisions incorporate best available science." **Associated Letter: 672**

Response: We have added a desired condition (final DC5) based on the commenter's suggestion. It complements the final management approach Collaboration, Adaptation and Monitoring. Best available science is one of the considerations in every decision-making process.

Comment 52: A commenter suggests that the following be included as a desired condition for livestock grazing: "Livestock Grazing is not permitted in riparian areas." **Associated Letter: 713**

Response: Desired conditions cannot compel or prohibit management actions (FSH 1909.12 Chapter 20 Section 21.11). Please refer to response to comment 1 in the Riparian and Aquatic Ecosystems section of this appendix for more on excluding livestock grazing in riparian areas.

Comment 53: A commenter suggests that the following be included as a desired condition for livestock grazing: "Native plant communities support diverse age classes of shrubs, and vigorous, diverse, self-sustaining understories of grasses and forbs relative to site potential, while providing forage for wildlife, and where appropriate, livestock." **Associated Letter: 713**

Response: This suggestion would have no additional value as it is redundant with the more detailed desired conditions for vegetation communities and habitats (All Upland Ecological Response Units, individual Ecological Response Units, Riparian and Aquatic Ecosystems, Wildlife, Fish, and Plants DCs) and Livestock Grazing DC3. Livestock grazing will be managed to move toward the plan's desired conditions, regardless of what section of the plan they are in.

Comment 54: A commenter suggests that the following be included as a desired condition for livestock grazing: "Wetland and riparian areas consist of native obligate wetland species and a diversity of riparian plant communities consistent with site potential and relative to wetland riparian and forest and shrub riparian desired conditions." **Associated Letter: 713**

Response: This suggestion would have no additional value as it is redundant with the more detailed desired conditions for riparian and aquatic ecosystems and habitats (Riparian and Aquatic Ecosystems, Wildlife, Fish, and Plants DCs) and Livestock Grazing DC3. Livestock grazing will be managed to move toward the plan's desired conditions, regardless of what section of the plan they are in.

Objective 1

"Implement at least one action per year to improve poor or very poor range condition (or equivalent condition class), other than mechanical treatments targeting woody invaders (woody invaders are addressed through the objectives for Upland Ecological Response Units)."

Comment 55: Commenter is concerned the objectives for Livestock Grazing are insufficient to provide meaningful ecosystem improvement consistent with the desired conditions for other resources and activities (Livestock Grazing DC3). Commenter suggests this objective should specifically include considering allotment or permit retirement. **Associated Letters: 548 and 713**

Response: Management actions with the ability improve range condition vary depending on allotment-specific factors and conditions. This objective is intended to compliment the objectives for ecological components such as vegetation communities, soils, and watersheds to achieve the all the plan's desired

conditions. Allotment closure through a site-specific Environmental Policy Act process is an allowable option per policy direction, a plan component is not necessary to enable that.

Objective 2

"In cooperation with every permit holder, evaluate consistency with annual operating instructions and document pasture rotation, utilization compliance, and improvement maintenance annually."

Comment 56: One commenter states: "Field-level evaluation will be completed prior to meeting with the permit holder" and then to the footnote for the objective which states: "If these evaluation meetings are held annually with every permit holder, this objective is met." Commenter states this is too open to interpretation and that these meetings must be tied to a field-level assessment of the conditions. Commenter states that the way the footnote is written, such evaluation could consist of an in-office only meeting that involves only the review of paperwork. Another commenter would like the public to specifically be included in the language of this objective. **Associated Comments: 548 and 713**

Response: Field-level monitoring and evaluation throughout year prior to annual meetings is standard operating procedure for program delivery and permit administration. Permittees are always invited and encouraged to participate in the field. The draft management approach Rangeland Monitoring and final management approach Collaboration, Adaptation and Monitoring, discusses these types of field evaluations, which can and have been expanded beyond forest staff and the permittee, to include other entities such as New Mexico University's Range Improvement Task Force, Soil and Water Conservation Districts, and members of the public. The public has an opportunity to participate during the National Environmental Policy Act process for each allotment. The decision coming out of this process directly informs the permit and Allotment Management Plan, which are implemented by the annual operating instructions.

Suggested Objectives

Comment 57: Commenter recommends adding objectives to establish additional and alternate water sources for livestock to reduce activity within riparian management zones for maintaining stream morphology and vegetative conditions conducive to aquatic and riparian species management and adhering to New Mexico water quality standards. **Associated Letter: 151**

Response: We recognize that additional and alternate water sources in the uplands are an important management tool to improve livestock distribution and reduce pressure on riparian areas. The agency must adhere to state water law as well as water quality regulations. Water rights considerations may be limiting factors in meeting such an objective. The need for additional waters is addressed during allotment management planning or watershed restoration planning.

Comment 58: Commenter suggests that the plan include an objective that specifies the number of range inspections that will be done each year because nothing substitutes for on the ground knowledge, especially in livestock grazing. **Associated Letters: 52 and 474**

Response: We agree that allotment-specific, field collected data is important. The number of inspections that will be needed differs between allotments and thus depends on natural resource conditions, the operation, and patterns of temperature and precipitation. The suggestion is not appropriate for a plan objective.

Comment 59: There is a suggestion that guideline 7 should be accompanied by an objective regarding the minimum amount of unnecessary fencing and other materials that should be removed each year. Without this, commenter fears that this guideline would 7 will be worthless. Another commenter suggests and objective that states: "Annually remove at least 6-10 existing range improvement structures for livestock grazing that are no longer necessary or in poor or non-functional condition." **Associated Letters: 474 and 713**

Response: The guideline will primarily be implemented through terms and conditions incorporated into contracts, permits, and agreements and by agency personnel and volunteers when it can be reasonably accommodated during other project and incident work.

Comment 60: Commenter suggests the following be included as an objective for livestock grazing: "Annually consider at least 1 vacant or understocked allotment for permanent grazing retirement." **Associated Comments: 713**

Response: This suggestion is not appropriate for a plan objective under any of the alternatives analyzed in detail. Those National Environmental Policy Act processes, including proposals, alternatives, and decisions, are best addressed at the allotment level**.**

Comment 61: Commenter points to page 326 of the draft EIS and a statement that there are no plan objectives for riparian exclosures. Commenter then asks if allotments have been checked by a biologist for riparian and aquatic ecosystem health and states: "Wildlife escape, hiker faucet, horse drink. Keep cows from peeing and pooping in wetlands." **Associated Letter: 233**

Response: There is no "one size fits all" approach to managing livestock grazing in riparian areas (Lucas et al., 2004). When it is determined that livestock need to be removed from a riparian management zone or any upland area, all the options are already on the table. Whether herding, exclosure, rest or other approach is best will be determined based on the specific site and circumstances.

Literature Cited in Response:

Lucas, R.W., T.T. Baker, M.K. Wood, C.D. Allison, and D.M. Vanleeuwen. 2004. Riparian vegetation response to different intensities and seasons of grazing. Journal of Range Management, 57(5):466-474.

Standard 1

"Livestock management will be compatible with carrying capacity and address ecological resources (such as forage, invasive plants, at-risk species, soils, riparian health, and water quality) that are departed from desired conditions, as determined by temporally and spatially appropriate data."

Comment 62: Some commenters support this standard. Others express a concern that it is repetitive of agency manual and handbook direction, the contents of grazing permits, allotment management plans and other regulations and policies. This standard could also lead a reader to believe that livestock management on the Gila National Forest has been and is still unregulated and without the proper oversight of professional rangeland managers. If the standard is retained, it is requested that the language could lead a reader to believe that departure from desired conditions is a common occurrence should be stricken and the standard modified to read "Livestock management will be compatible with carrying capacity as determined by temporally and spatially appropriate data." There are many well managed allotments that are made up of heathy and productive ecosystems on the Gila National Forest and the future management of allotments where ecological resources are departed from desired conditions have been or will be addressed through site specific analysis. Another commenter suggested the wording be adjusted such that livestock use would only be allowed when it is compatible with carrying capacity and it is possible to address ecological resources. One commenter asked for clarification on what was meant by "temporally and spatially relevant." **Associated Letters: 24, 100, 164, 548, 631, 672, and 713**

Response: This standard is essentially a high-level summary of agency directives. It was included to address stakeholder concerns and input received on the preliminary draft plan. We acknowledge differing perspectives on whether this standard is necessary, or if it should be modified to read differently. The terminology "temporally and spatially appropriate data" was included in the standard based on the expertise provided by staff working for our cooperating agency, the New Mexico Department of Agriculture. Temporally and

spatially appropriate data refers to data that provides allotment specific information about current conditions or trends that are responsive to management. This standard was removed from the final plan because it was a high-level summary of agency directives and a description of how the plan works; and as such, was unnecessary.

Standard 2

"Recommended project-specific best management practices (BMPs) will be followed to maintain or enhance soil, water, riparian, and aquatic resources."

Comment 63: Some commenters support this standard as written. Others recommend that this standard be amended to read: "Recommended project-specific best management practices (BMPs) will be followed to maintain or enhance plant, soil, water, riparian, and aquatic resources. Where any of these resources are either fair or good, but also either stable or trending downward, or in impaired condition, cattle will be removed until the area reaches a condition of good and trending upward." Commenter states that this would provide for movement toward draft Livestock Grazing Desired Condition 3. **Associated Comments: 548 and 713**

Response: Draft Livestock Grazing S2 (final S1) does not stand alone. Projects, including their best management practices, must maintain or move toward desired conditions for vegetation communities; wildlife, fish, and plant species; soils; water; and riparian and aquatic resources to be compliant with the plan and achieve the desired conditions for livestock grazing as a use of the forest. Resting an area from grazing may be an option, or part of an allotment-specific strategy, but it is not the only option or the sole recourse to move toward desired conditions.

Standard 3

"New or reconstructed range improvements will be designed to prevent wildlife entrapment (for example, escape ramps in water troughs and cattle guards) and allow for wildlife passage except where specifically intended to exclude wildlife (for example, elk exclosure fence) and/or to protect human health and safety (see also Wildlife, Fish, and Plants)."

Comment 64: There are differing perspectives on whether this draft standard should remain a standard, be moved to a guideline or removed entirely from the plan and addressed on a case-by-case basis. Some commenters are concerned that the way this standard is worded will cause confusion and debate around what is considered reconstruction and what is considered repair. Others prefer it be a guideline rather than a standard, suggesting the way it is worded could be interpreted in such a way as to exclude livestock access to water on specific streams. Some suggest specific wording requiring consultation with the permittee be incorporated. Others would like to see this plan component removed completely because requiring all fences to allow wildlife passage will be problematic for livestock management and reduce management flexibility to adapt to changing conditions. These commenters prefer each situation be considered on a case-by-case basis because situations are so varied. Some would like the emphasis to be on development of grazing infrastructure for economic benefit, stating that there may be some isolated impacts, but that it wouldn't threaten the viability of any species. Others state fences don't affect wildlife or wildlife movement or assert that whatever benefits cattle benefits wildlife. These commenters state that plan components like this are proof that the plan is catering to radical environmental groups.

Others support this standard. Of those, one commenter suggests reconstruction should mean any maintenance or repair that involves 20 percent of the structure. Some commenters point to publications that identify specific design features. Others suggest specific design features that they would like to see as plan standards. One commenter suggests that this standard should include a statement that any new or reconstructed fencing should be consistent with the New Mexico State Department of Game and Fish's wildlife-friendly fencing guidelines to ensure wildlife passage.

Some commenters suggest a need to prioritize wildlife, habitat condition and connectivity, restoration of natural fire regimes, soil condition, water, climate change adaptation and mitigation, and archeological resources over livestock grazing. One commenter suggests that livestock grazing needs should be secondary to wildlife needs in all cases because there are other options for livestock but not wildlife. **Associated Letters: 38, 93, 130, 151, 361, 542, 548, 561, 598, 678, 685, 713, and OWS-1-144.**

Response: What constitutes a reconstruction versus a repair or maintenance activity is determined by local range staff in conference with the District Ranger. A footnote clarifying this has been added to the final standard. The intent of this standard is to prevent wildlife entrapment and provide wildlife-friendly passage, while providing for the purpose of the range infrastructure, which is to facilitate livestock management. These two intents are not mutually exclusive. Both can and would be accommodated at the project-level.

Wildlife entrapment, injury, and mortality in water troughs, cattleguards and fences are well documented. The Landowner's Guide to Wildlife Friendly Fences: How to Build Fence with Wildlife in Mind (Paige 2012) says this about wildlife friendly fences: "Not all fences create problems for wild animals. By tailoring fence design and placement, you can reduce wildlife injuries and decrease damage to your fence. Many of these methods are low cost or can save money in the long run by reducing the need for future fence repair. This guide will help you construct and modify fences and crossings that are friendlier to wildlife while still meeting fencing needs." While this publication was intended for private landowners, the concepts and technical specifications are relevant on any jurisdiction. The New Mexico State Department of Game and Fish also has recommendations for fence construction in big game habitat (NMDGF 2003). All these technical specifications recognize that fencing must be able to function for livestock management in addition to providing for wildlife passage. A footnote referencing publications with helpful technical specifications has been included to provide a place to start evaluating options when specific projects include new construction or reconstruction of range infrastructure.

Literature Cited in Response:

NMDGF (New Mexico Department of Game and Fish). 2003. Recommendations for Constructing Wire Fences for Livestock in Big Game Habitat. Santa Fe, NM. 5 pp.

Paige, C. 2012. A Landowner's Guide to Wildlife Friendly Fences. Second Edition. Private Land Technical Assistance Program, Montana Fish, Wildlife and Parks, Helena, MT. 56 pp.

Standard 4

"New livestock handling facilities designed to hold or concentrate livestock (for example, corrals, traps, water developments) will be located outside of riparian management zones, known archeological sites, and known occupied sites of at-risk species."

Comment 65: There are differing perspectives on whether this draft standard should remain a standard, be moved to a guideline or removed entirely from the plan and addressed at the allotment level. Those that prefer this remain a standard would generally like to see livestock grazing be completely removed from the entire forest or just riparian areas, and avoidance of all archeological sites. Commenters elaborate on the detrimental effects of livestock grazing on natural and cultural resources as support for their perspective. Others suggest avoidance should only include known sites or significant archeological sites and that mitigation measures should be allowable if sites are not significant. Burial sites and dwellings are identified specifically by a commenter as deserving of such consideration. Some commenters would like this standard to be expanded to include existing infrastructure and suggest grazing fees be raised. One commenter notes this standard is beneficial to producers because floods would be less likely to damage or destroy infrastructure. Some support this guideline applying to all at-risk species, not just plants, to mitigate negative effects to wildlife movement. Some commenters suggest a need to prioritize wildlife, habitat condition and connectivity, restoration of

natural fire regimes, soil condition, water, climate change adaptation and mitigation, and archeological resources over livestock grazing.

Those that prefer it be moved to a guideline would like it to state that consultation with the permittee will be included and that new infrastructure be allowed if there are no other options available. One commenter suggested the guideline specify that is applied only to riparian areas associated with year-round water because this would allow flexibility for dry riparian zones. This commenter suggested that there may be valid reasons that warrant placement of such facilities in a riparian area.

Those that would have this direction removed entirely from the plan because restrictions based on archeological sites would tie management's hands because "you can't swing a cat on the Gila National Forest without hitting" a site. Some point out some archeological sites are range infrastructure and that it might be less impact if they continue to be used rather than disturbing new ground. Others state permittees treat archeological sites with utmost respect. Some suggest livestock may be beneficial to riparian areas and point to a report issued by New Mexico State University's Range Improvement Task Force. Others suggest the grazing permittee can best inform the decision and are concerned that this standard would mean that a great amount of water infrastructure would need to be removed. They point out that not all permittees are able to move facilities and still have them support their operation. Several commenters recommend the plan place no requirements on grazing infrastructure or management because every allotment and operation have different needs that change over time. These commenters assert the District Ranger and the permittee are best qualified to make the decision because they are the most familiar with the allotment. One commenter observes that no work is being done to repair fire-related damage and so questions why the plan would include anything about new infrastructure. Others state this standard would simply cost too much money.

Among those commenters that would like this removed from the plan entirely, there is a concern that this could infringe on private property rights, especially water rights. Some suggest infrastructure should intentionally be placed in riparian areas because there is water, which is generally scarce. Others ask who decides which species are at-risk and suggest this will change over time. Some would rather see the plan focus on providing the flexibility necessary to sustain the economy because any negative impacts would be small scale and not threaten the viability of any species. Commenters go on to state that livestock grazing can't hurt archeological sites and can benefit wildlife species. One commenter suggests people may place pottery pieces or wolf dung someplace so that this standard would apply. **Associated Letters: 93, 130, 227, 247, 361, 542, 548, 561, 598, 672, 685, 713, and OWS-1 through 144**

Response: This standard was intended to promote movement toward desired conditions for riparian and aquatic ecosystems, cultural heritage resources, at-risk species and livestock grazing as a use of the forest. It only applies to new construction. Existing infrastructure in riparian management zones is addressed by Livestock Grazing G3. Standards and guidelines cannot compel action (FSH 1909.12 chapter 20 section 21). This standard would apply when, during allotment management and permit administration, new construction is identified as needed. Any new construction would also require a completed National Environmental Policy Act analysis and decision-making process, which would allow a range of alternatives to be explored. Similarly, G3 would apply when monitoring and other fieldwork supporting allotment management and permit administration identifies a potential issue, or when fieldwork supporting allotment-level National Environmental Policy Act processes identify a potential issue. These plan components don't compel action or create a new workload.

We acknowledge that there are some issues with draft standard's provision for at-risk species. If this standard was applied to all at-risk species, it would very likely not be practicable. At-risk mammals, birds, and insects can move or avoid corrals and other facilities intended to hold livestock. Water developments are also not a major concern for these types of species and may benefit from them if they are designed to avoid entrapment (Livestock Grazing S3). At-risk invertebrates typically utilize habitats and habitat features that would make the site highly unlikely to be selected for such facilities (such as talus slopes). The issue this guideline was intended to address relates more to at-risk plants, because they can't move. Language has been updated to

specify at-risk plant species rather than all at-risk species. The need for a buffer zone between the facility and the plant population will be evaluated at the project level because the necessary distance is likely to vary by species, type of infrastructure and other allotment-specific management factors.

We acknowledge there are some issues with the way the draft standard is worded with respect to archeological sites. Archeological sites are numerous and can range from scattered fragments of worked stone or broken pieces of pottery to dwelling and burial sites. Sites also range in importance and susceptibility to damage. Without specifying what kind of sites are to be avoided, this standard is very likely not practicable. This language has been refined to require avoidance of "significant" sites.

The ability to exercise valid existing water rights would not be infringed upon, they would inform the development of feasible options to meet this standard. Compliance with the law and maintenance or progress toward desired conditions are not mutually exclusive. Both would be required.

Standard 5

"Permit conversions to domestic sheep or goats will not be allowed, to minimize the risk of disease transfer to bighorn sheep."

Comment 66: Some commenters support this standard. One suggests this standard should stipulate that grazing of domestic sheep or goats should not be authorized in areas occupied by bighorn sheep, or in areas where the risk of contact between domestic sheep or goats and bighorn sheep is moderate or high. Another commenter requests that this standard be expanded to prohibit the creation of new term or temporary permits that would authorize sheep or goats. However, one commenter does not think this standard adequately acknowledges that bighorn sheep do not show absolute fidelity to their home range or that domestic sheep and goats can wander great distances if separated from their band or herd and suggest the following be added as plan standards, specifically for bighorn sheep.

1) Cattle shall not be grazed in sensitive and critical habitats, including those used as lambing range."
2) Cattle shall not be grazed in areas with limited water sources, to prevent the displacement of wildlife and the transmission of livestock pathogens to bighorn sheep.
3) Fences shall be constructed and repaired using only wildlife-friendly materials, methods, and designs, and fences shall be immediately removed from pastures and allotments where they are in disrepair or are no longer needed. [in occupied and potential habitat for bighorn sheep]
4) Allotments made vacant for the protection of wildlife or riparian systems, soil or water resources, cultural and historic artifacts or other public values will be permanently closed to livestock grazing. [to ensure the persistence of bighorn sheep]

Others suggest there is no science basis for including goats because they do not carry the same strain of the bacteria that can cause induce fatal disease in bighorn sheep populations. **Associated Letters: 98, 133, 151, 548, and 713**

Response: This standard prohibits permit conversions from cattle to sheep or goats. Since there are no existing permits for grazing sheep and goats, there will be no contact between domestic sheep and goats and bighorn sheep because of permitted livestock grazing. The only other possibilities of contact would come from recreational use of domestic sheep or goats or if they were used for vegetation management. Commenters questioning the science basis for including goats in this standard are reminded that this direction only applies to grazing permits, not special use permits for recreational purposes and are referred to response to comment 4 in the Recreation Special Uses section of this appendix and comment 184 in the Wildlife, Fish, and Plants section of this appendix.

1) Cattle grazing will be managed to move toward desired conditions for wildlife, fish and plants and their habitats, including lambing range for bighorn sheep.

2) While there is a study potentially linking cattle and lethal disease transmission to bighorn sheep (Wolfe et al. 2010), it is the only one we are aware of. In that study, bighorn sheep were coming down out of the high country during bad winters onto private property and eating hay with the cattle. This herd had very limited winter range to begin with, and the extreme winter weather conditions were an added stress that overcame the sheep's typical response of interspecies avoidance. The study concluded that the duration and intensity of the interaction may also have contributed to the lethal transmission. This situation is highly unlikely on the Gila National Forest. The two bighorn sheep herds in the Gila National Forest are located along the San Francisco and Gila rivers and probably rely on those streams for most of their water needs (and potentially Turkey Creek). All these streams are either excluded from permitted livestock grazing or closed to livestock grazing. This diminishes the possibility that bighorn sheep and permitted livestock congregate at the waters used by the sheep.
3) Wildlife friendly fencing is addressed by Wildlife, Fish, and Plants G5 and Livestock Grazing S2, which apply forestwide.
4) There are many reasons an allotment may become vacant that do not involve resource protection. See response to comment 74 later in this section of this appendix for more information on how the plan and its alternatives address vacant allotments.

Literature Cited in Response:

Wolfe, L.L., B. Diamond, T.R. Spraker, M.A. Sirochman, D.P. Walsh, C.M. Machin, D.J. Bade and M.W. Miller. 2010. A bighorn sheep die-off in southern Colorado involving a *Pasteurellaceae* strain that may have originated from syntopic cattle. *Journal of Wildlife Diseases* (2010) 45(4):1262-1268. https://doi.org/10.7589/0090-3558-46.4.1262.

Standard 6

"The Congressional Grazing Guidelines for Wilderness shall be applied to all decision-making regarding management of commercial grazing in wilderness areas."

Comment 67: There is support for this standard. **Associated Letters: 548 and 713**

Response: The standard has been retained in the final plan.

Guideline 1

"Existing livestock handling and watering facilities located in RMZs should be modified, relocated, or removed where an interdisciplinary team determines they are incompatible with movement toward desired conditions for other resources. Any modification, relocation or removal of infrastructure may not impede the use of permitted water rights recognized by the State of New Mexico."

Comment 68: There are differing perspectives on whether this guideline should be retained as worded, retained with modification, or removed from the final plan. A few commenters make the following assertions: (1) the role of the interdisciplinary team will lead to much controversy and mistrust; (2) most of these facilities have been in place many years and have not adversely impacted other resources; (3) this new guideline will allow an interdisciplinary team to interfere with current livestock management activities on most allotments; (4) regardless of where these facilities are located, they play a key role in management of an allotment and their location is often key to making management successful; and (5) the guideline also does not address who will bear the cost of modifying relocation or removing these facilities. Commenters state the cost should not be to the permittee or to the Gila National Forest's rangeland management program because it is most likely to be a very minor but politically correct desired condition that benefits another function. It is requested that this biased, unnecessary, and potentially highly controversial guideline be removed from the plan. If found to be necessary address the construction and maintenance of livestock handling and watering

facilities on a case-by-case basis when developing or updating the allotment specific livestock grazing management plan.

Furthermore, there is a concern that this will lead to drastic changes in management requirements, substantially increase in the producer's operation costs resulting in economic hardship and a loss of sweat equity. There is a related concern that the DEIS does not adequately analyze the adverse impacts of this guideline to livestock grazing as a use of the forest, range or watershed condition, the functionality of the Bear Creek watershed, riparian conditions, water availability, the condition of trails or socioeconomic contributions. There is a suggestion that the DEIS should disclose downward trends in all these resource conditions because of this guideline.

One commenter expresses “strong concerns” with the decision space being given solely to an interdisciplinary team and suggests the remedy is to require inclusion of the permittee. This commenter would prefer the guideline read: “Existing livestock handling and watering facilities located in RMZs may be modified, relocated, or removed where and interdisciplinary team and the permittee determines they are incompatible with movement toward desired conditions for other resources. Any modification, relocation or removal of infrastructure shall not impede the use of permitted water rights recognized by the State of New Mexico.” Commenter concludes that the location of handling facilities should be evaluated on a case-by-case basis as complete exclusion from riparian areas could potentially eliminate the only viable option in some cases.

Another commenter suggests the guideline should grandfather-in any existing handling and watering facilities and include language for consultation, cooperation and coordination with the permittee and local Soil and Water Conservation Districts. If these suggestions are not workable, then there is a subsequent suggestion that the costs of any modifications, relocations, or removals of existing watering facilities should be absorbed by the agency since those changes would be made at the behest of the Forest Service.

Some commenters would prefer this guideline was made a standard and reworded to read: “Existing livestock handling and watering facilities located in RMZs will be removed. They will be relocated and may require modification to prevent incompatibility with movement toward desired conditions of other resources and species. Any modification, relocation or removal of infrastructure may not impede the use of permitted water rights recognized by the State of New Mexico.” **Associated Letters: 24, 38, 164, 227, 247, 543, 548, 631 and 713**

Response: We recognize that handling and watering facilities are critical to successful management of allotments. The intent of the guideline is not to create controversy, mistrust, or an obstacle to livestock management activities, rather when and where issues are identified, it directs project-level work to find site, circumstance, and allotment specific ways to create movement toward desired conditions for livestock management, riparian and aquatic ecosystems, and community relationships (DCs 1-3) within the legal constraints of New Mexico water law.

Although not specifically stated, it is standard operating procedure for the permittee to be involved in decisions affecting their allotment. Interdisciplinary teams do not make decisions, they provide expertise and serve as advisors to the responsible official, which in these cases would be the District Ranger. The District Ranger consults with the permittee and the interdisciplinary team as part of the decision-making process. Interdisciplinary teams routinely invite permittees to join them in the field when doing riparian condition assessments. This is always helpful because the permittee can help the team develop all the feasible options to address the issue and identify the pros and cons associated with each option, ensuring the District Ranger has adequate information to make the best decision for the circumstance.

Assigning responsibility for associated costs is not appropriate at the plan-level and would be addressed at the project level when site, circumstance and allotment specific information is known, and funding opportunities can be identified. In the past when this has happened, the materials are typically provided by the agency and agency range staff do or help with the work. The range of alternatives does include an option that removes

this guideline (alternatives 3 and 4). No downward trends in livestock grazing, range or watershed condition, the functionality of the Bear Creek watershed, riparian conditions, water availability, the condition of trails or socioeconomic contributions are expected because of this guideline.

A blanket grandfathering in of existing handling and watering facilities would essentially remove this guideline. As mentioned previously in this response, the range of alternatives does include an option that removes this guideline.

Elevating this guideline to a standard would not provide the flexibility necessary to support the 2012 Planning Rule's requirement for integrated multiple-use management. The intent of the guideline is to address ecological conditions that are trending away from desired conditions. There may be other ways to accomplish that if relocating or replacing the infrastructure is not a viable option, or not the best option. Options can only be identified when site and circumstance specifics are known. If ecological conditions are not an issue, this would also result in unnecessary expenditure of resources that could better used where there are issues. Ultimately, the forest supervisor will decide whether to keep this guideline with or without modification, elevate it to a standard, or remove it from the plan entirely. This decision will be based on public input and the analysis in the FEIS.

Guideline 2

"Mineral (for example, salt) or vitamin supplements should not occur on or adjacent to known occupied sites of at-risk plant species, known archaeological sites, or poorly drained or saturated, unsatisfactory soils, or those with severe erosion hazard or high mass wasting hazard ratings."

Comment 69: There are differing perspectives on whether this guideline should be retained as worded, retained with modification, elevated to a standard, or removed from the final plan. Some commenters suggest language that requires consultation with the permittee. Others are concerned that avoiding all known archaeological sites will not be manageable as there are sites almost everywhere.

Those that support this guideline or would like to see it elevated to a standard express concern about at-risk plants, cultural resources and impacts related to grazing and the supplements themselves. Some express conditional support of this direction as a guideline but recommend the language be better defined for clarity and to help avoid lawsuits. Others prefer the flexibility of the guideline because sensitive natural resources should be protected but there may be some cases where siting of mineral supplements is dictated by terrain or other factors. Others conditionally support this as a guideline but would like more information on the extent of at-risk plant species. One commenter recommends including avoidance of "heavy" soils because they can easily be compacted which reduces soil quality.

Those that would like to see this guideline elevated to a standard state that it is hard to imagine this being a difficult thing to do and want it incorporated into grazing permits as well. These commenters prefer that the language be expanded to include all types of supplements, and some would prefer supplements be minimized and kept away from anything living. One commenter recommends that permittees should not be allowed to identify sites for mineral placement and forest staff with botanical, soil and archaeological expertise should provide support to the permittee to make sure placement is appropriate. This commenter then questions whether there is capacity amongst forest staff to do this. Another suggests the public should be included too. One commenter suggests hunters should be told not to use salt or mineral blocks to lure in elk or deer. Several commenters express a preference to eliminate cattle grazing from the forest as a simpler and better solution.

Those that would like to see this plan component removed are concerned about increasing restrictions. These commenters suggest permittees know best how to manage their allotment and they wouldn't be stupid enough to put supplements on soggy ground. One commenter suggests the Endangered Species Act should be revised to that it is more favorable to permittees. Another commenter is concerned that restrictions like this aim to remove ranching families one at a time and take away the essential use of their property. Some are concerned

that the term "at-risk" is subjective, the New Mexico rare plant list is not fully vetted and recently the State has arbitrarily located areas called "potential habitat" that cross private land without consulting the landowner. Some are concerned that the term "unsatisfactory" is too broad and that there could be variable interpretations of what constitutes an erosion risk. Others do not see a problem because they are already considering natural and cultural resources when they place their supplements and supplements are good for wildlife and soils. One commenter notes an irony or dilemma with this direction because if a supplement was placed on "satisfactory" soils, they would quickly become "unsatisfactory." Another commenter states that cattle need these supplements and to deny them what they need would be animal abuse. **Associated Letters: 93, 361, 361, 548, 685, 713, and OWS-1 through 144**

Response: We recognize that cattle require mineral supplements and that those supplements are an important tool that can help distribute use across a wider area as cattle will graze as they travel between water and supplement sources. We also recognize trade-offs because there is often concentrated use right around water and supplements. The intent of this guideline is to minimize the potential detrimental effects of mineral supplements and concentrated use, not prohibit the use of those supplements. The suggestion to eliminate cattle grazing was an alternative considered but not analyzed in detail for reasons explained in the EIS chapter 2. Similar concerns and suggestions about archeological sites were expressed in comments specific to Livestock Grazing standard 4. Commenters are referred to the response to that comment for more specifics but clarifying language has been added to this guideline to specify which types of archaeological sites should be avoided.

The 2012 Planning Rule requires that the plan provide for the persistence of species (36 CFR 219.9) while providing for multiple uses (36 CFR 219.10). At-risk plant populations are more vulnerable to trampling in areas of concentrated use than they are in areas of dispersed use. At-risk species include federally recognized threatened, endangered, proposed or candidate species and species of conservation concern (36 CFR 219.9). Species of conservation concern are identified by the regional forester through a rigorous process outlined in Forest Service Handbook 1909.12 chapter 10 section 12.5 and 1909.13 chapter 20, section 21.22.

Unsatisfactory soils are identified as such through a field-based soil condition assessment using a standardized regional protocol. Similarly, erosion and mass wasting hazards are interpretations of field-collected soil survey data based on specific criteria developed by the Natural Resources Conservation Service's National Cooperative Soil Survey. We do see the commenter's perspective on siting mineral supplements on unsatisfactory versus satisfactory soils and it's a matter of scale. Soil condition is not evaluated at such a fine scale as a supplement site. Soil condition assessments and ratings are typically tiered to soil type within an allotment or pasture, depending on the variability in conditions across the allotment. Whereas a supplement site might impact 1/8th of an acre, depending on topography and other management factors. Avoiding heavy clay soils that are easily compacted is not practicable on every allotment. Some allotments are composed entirely of heavy clay soils, which would mean no supplements. Again, it's a matter of scale, but the big picture would be maintaining or moving toward desired conditions.

Identifying avoidance areas is something that would be done as part of developing allotment management plans and annual operating instructions, with forest staff providing the location information as appropriate to the resource (botanical, archeological, or soil resource). Ultimately, the forest supervisor will decide whether to keep this guideline with or without modification, elevate it to a standard, or remove it from the plan entirely. This decision will be based on public input and the analysis in the FEIS.

Comment 70: Commenter states that the Lower Box is not in compliance with this and that there is a salt lick on system trail 906 that goes through cultural heritage site and is also not in compliance with this. **Associated Letter: 233**

Response: The placement of supplements for livestock must be compliant with the 1986 forest plan direction, the National Environmental Policy Act decision, grazing permit and annual operating instructions. The transition to compliance with final revised plan direction will begin after revision process is complete.

Guideline 3

"Mineral (for example, salt) or vitamin supplements should not be allowed within 0.25 mile of water sources. Exceptions may occur if prior written approval is obtained from the appropriate line officer and one or more of the following sets of circumstances are present: (1) the water source is not in a riparian management zone and special circumstances dictate a short-term need; (2) the water source not in a riparian management zone and the intent of placing the supplement near water is to draw use away from riparian areas; or (3) the water source is not in a riparian management zone and the particular supplement requires that it be close to water to encourage better distribution (for example, high-protein liquid feed)."

Comment 71: Some commenters prefer this guideline be made a standard and the mineral or vitamin supplement language should be amended to include any type of supplement. Some prefer the distance be adjusted to 500 feet while others prefer half a mile. One commenter prefers the third exception be removed. **Associated Letters: 548, 561, and 713**

Response: The quarter-mile distance is a rule of thumb based on field observations that areas within this distance experience higher use levels. The intent is to better distribute use across a broader area which benefits livestock producers and natural resources. Cattle that make best use of the range put more weight on and therefore bring more money at market. Well distributed use better sustains the forage resource, the productivity of the land and water quality. The third exception was incorporated because of conversations with New Mexico Department of Agriculture, which is one of our cooperating agencies. Some producers see an advantage to providing high-protein liquid feed to their cattle so that those nutritional needs are met, and the cattle are simply foraging for roughage. This type of feed requires proximity to water, and if that water is a constructed stock tank in the uplands, any adverse impacts to water quality or other riparian and aquatic conditions would be highly unlikely. Ultimately, the forest supervisor will decide whether to keep this guideline with or without modification, elevate it to a standard, or remove it from the plan entirely. This decision will be based on public input and the analysis in the FEIS.

Guideline 4

"Restocking and management of grazing allotments following wildfire or other major disturbance should be evaluated by an interdisciplinary team and the allotment permit holder to evaluate readiness. Livestock use of recovering riparian vegetation should be managed to maintain or improve canopy cover of native riparian and wetland species, including regeneration of woody riparian species."

Comment 72: There are differing perspectives on whether this guideline should be retained as worded, retained with modification, elevated to a standard, or removed from the final plan. Some commenters prefer this guideline be made into two separate guidelines. Others suggest it be made two separate standards. One standard would read: "Re-stocking and management of grazing allotments following wildfire or other major disturbance will be evaluated by an interdisciplinary team to evaluate readiness and adjust the grazing management plan." This would provide for movement toward draft Livestock Grazing DC5 as amended by other comments made by the same commenter. The second standard would read: "Livestock use of recovering riparian vegetation will be managed to maintain or improve canopy cover of native riparian and wetland species, including regeneration of woody riparian species, and it will be ensured that streambanks are not impaired."

Several commenters suggested language changes that would include the public and out-right prohibit livestock use in recovering riparian areas. These commenters state that public involvement is important because the permittee and the agency do not own the land. Others that support this direction as a standard suggest that it would prevent the close relationships between the permittee and the District Ranger from biasing the decision. One commenter prefers grazing be eliminated from the forest completely but states this is a good alternative to slowly protect damaged lands. Another commenter suggests providing for recovery time is in the best interest of the rancher.

Those that prefer it remain a guideline note that there isn't always time to get things checked out or there may not be the staff capacity to get it done. One commenter suggests that sometimes more cattle might be appropriate to reduce fine fuels. Others suggest permittees are already doing this based on drought conditions and no permit holder is going to want to use land that hasn't had proper time to recover because it doesn't make economic sense. Another suggested establishing a grazing advisory board to work with the interdisciplinary team. A few commenters support the concept but are concerned that the permittee has too much influence in the decision-making process. There was also a suggestion to remove last part about riparian vegetation because the rest of the guideline provides adequate direction and riparian use should be determined on a case-by-case basis. Another suggestion would temporarily allow riparian use only if the area was deemed resilient enough and the permittee was in a dire situation.

Those that would like this direction removed entirely from the plan are concerned about increasing restrictions that complicate management and lead to lawsuits. Some are concerned about infringement on valid existing rights. Commenters state that every situation is different. Some suggest these conversations should just be part of standard operating procedures and if it isn't, then perhaps it is more of an agency employee performance issue than a plan issue. Others suggest the permit holder can ask for expert input if they want but it should be up to the permittee. One commenter could support this guideline if the part about riparian recovery was removed. This commenter is concerned about how riparian areas are defined and what that might mean for cattle being able to access water sources on their allotment and private land. **Associated Letters: 548, 549, 672, 672, 685, 713, and OWS-1 through 144**

Response: The intent of this guideline is to use the diverse expertise of the interdisciplinary team and the permittee's intimate knowledge of the allotment and their operation to evaluate the need for adaptive management actions that are responsive to the complexity of the specific challenges and promote movement towards desired conditions. With increasing frequency, intensity, and duration of drought, fewer but more intense precipitation events, more fire on the landscape and management for at-risk species, we need strong relationships, shared understanding and collaborative problem solving now and going forward. Public involvement in the allotment National Environmental Policy Act procedures, and in multi-party monitoring is required, practicable and desirable. It is not practicable to include a public process in every situation on every allotment every time adaptive management action is be needed.

There are pros and cons associated with standards and guidelines. Meeting the intent of a guideline is not optional, but there is flexibility in how that intent is met. The forest supervisor will make decisions about which items are appropriate for guidelines and which would be better as standards based on public input and the analysis in the final EIS. The suggestion to split this into two plan components led to the recognition that the second part was redundant with how the plan works. Livestock grazing will be managed to move toward desired conditions for riparian and aquatic ecosystems, other ecological resources and uses in all circumstances. This portion was removed from the plan component for this reason.

Guideline 5

"Stocking and management of grazing allotments should be evaluated by an interdisciplinary team and the permittee before applying prescribed fire to balance the availability of forage and fine fuels, and after prescribed fire to evaluate and determine readiness."

Comment 73: Some commenters prefer this guideline be made a standard with appropriate language changes from "should" to "will" to provide for movement toward draft Livestock Grazing Desired Condition 5. Others suggest the public should be included and specified in the language of the guideline. **Associated Letters: 548 and 713**

Response: There are pros and cons associated with standards and guidelines. Meeting the intent of a guideline is not optional, but there is flexibility in how that intent is met. Like all plan components, the intent of the guideline should be clear in its wording. Guidelines can be helpful when all site-specific circumstances are

not reasonably foreseeable. Standards are rigid but may incorporate foreseeable exceptions. Because standards must be followed to the letter, compliance must be easily determined. The forest supervisor will make decisions about which items are appropriate for guidelines and which would be better as standards based on public input and the analysis in the final EIS. Regarding public involvement, see response to comment 72.

Guideline 6 and Management Approach (Vacant Allotments)

"Vacant allotments should be considered for temporary use by holders of a current permit during times or events when their allotment(s) require growing season recovery time because of wildfire or other disturbance, or to minimize livestock and wildlife conflicts."

Comment 74: There are differing opinions on what plan direction should be provided for the management of vacant allotments. Some commenters state that every allotment is different, and each should be dealt with on a case-by-case basis and no plan direction should be provided. Some commenters prefer these allotments be permitted and stocked to the maximum extent possible because grazing is beneficial for the economy and the ecosystem. These commenters suggest that adjacent permit holders be given the first opportunity to use these areas. Some suggest that this approach would help reduce wildfire risk, noting that millions of acres have been lost in the last 20 years because of a lack of logging and grazing. Others state that pasture rotations within an allotment is enough security and that moving animals to new locations will only stress and kill them. Some are concerned that the infrastructure won't be maintained if they aren't permitted and stocked, which will reduce the viability of grazing the area in the future. One commenter asks why the agency is trying to take away the livelihood of rural families by considering plan direction that would not permit and stock every allotment to the maximum extent possible. This commenter goes on to state that the agency doesn't own the allotments, the ranching families do.

Some commenters prefer those vacant allotments be permanently closed to livestock grazing to reduce greenhouse gas emissions, promote wildlife habitat connectivity, and create space between the wild wolf population and commercial livestock operations. One commenter states: "The permanent voluntary retirement of livestock grazing permits is a valuable tool for addressing wildlife conflicts and resource damage on public lands. Permit retirement provides an equitable solution to livestock producers facing rising costs, labor shortages, increasingly uncertain climatic conditions, growing recreational use of public lands, and changing public attitudes regarding wildlife and public lands. Permit retirements allow land managers to designate landscape areas based on modern priorities rather than on historical uses. They relieve the taxpayer burden of supporting the commercial interests of a few, and instead expands access and availability of forest resources to the broader public, including areas with known cultural significance, high recreational value, critical ecosystem services, sensitive native species, or other qualities of interest. The retirement of grazing permits without further preference must be allowed and encouraged…" A few of those that would like to see these allotments permanently retired see it as a path to eventually phasing out grazing entirely.

A group of commenters suggest the forest supervisor should choose alternative 5, which would maintain vacant allotments as vacant and unstocked until a new environmental analysis determined the appropriate future use. These commenters state that vacant allotments are almost by definition in some state of recovery from overgrazing and often contain lands that are steep, rugged, remote, and otherwise marginal for livestock grazing, and are inappropriate for cattle. Commenters assert it is ill-advised to use these areas as forage reserves, because it only increases the grazing pressure elsewhere and perpetuates overgrazing. Commenter recommends that if conditions on any allotment fail to meet or move towards desired conditions, or if permitted grazing impedes movement toward desired conditions, or if current climatic conditions do not support livestock grazing, then stocking must be reduced or the pasture/allotment rested, rather than shifting impacts to areas absent of grazing pressure. These commenters also express opposition to alternatives 3 and 4 which would support stocking vacant allotments to the maximum extent possible. Another commenter also prefers alternative 5 and questions the economic viability of grazing as a use of the forest. Some commenters would support alternative 5 if the environmental analysis and decision-making process was quicker.

Some commenters support this guideline and the concept of forage reserves because grazing is important to the local economy and "if something happens it's nice to have backup." Some commenters view this to let the land rest and recover from grazing. Others support it because it is a fair balance between meeting the needs of the rancher and wildlife. However, there is a concern about the maintenance of infrastructure on these allotments. If it isn't maintained, then the benefits of creating forage reserves may not be realized. A few commenters note that grazing stimulates grass growth and suggest that these allotments should be used regularly but not at the level regular allotments are used. Others conditionally support some allotments being used as forage reserves only if riparian and aquatic ecosystems were adequately protected. There is a request for more details on whether there will be a vacant allotment management plan that will provide clarification on the decision-making process on when to use and who can use forage reserves proposed in alternative 2.

Alternately, there is suggestion that these allotments be given a ranking according to their value to wildlife and riparian areas. Those allotments could receive priority for retirement or closure if they ever become vacant. Others suggest vacant allotments within riparian zones should remain unstocked regardless of site-specific conditions and issues and that wilderness areas should never be grazed.

Others that support the guideline but recommend some additional language is needed to make sure all necessary improvements are inspected and in good condition. Commenter states: "Additionally, since elk move around a lot there needs to be an assessment that negative effects to elk will not occur the year this is planned. The last concern that needs to be addressed with additional language is that National Environmental Policy Act analysis should be conducted just like what is done on active allotments to determine appropriate restrictions and make sure there are not significant negative impacts."

Several commenters recommend an environmental analysis be conducted regardless of which option is included in the final plan. One commenter suggests that forest staff start the process for all vacant allotments now so that it will be done when the plan decision is made. One commenter recommends this topic should be the subject of its own environmental analysis as the effects are unclear. Another commenter suggested planning staff review Bureau of Land Management policy because they don't allow any supplements on the range and plan direction should be aligned with other federal agency policies on grazing.

Another group of commenters prefer managers not worry about "require growing season recovery time" which often is not necessary and focus on the need for providing forage for the permittee whose operation is dependent upon the use of their allotment(s). Commenters make the following assertions: 1) often time following a wildfire or other disturbance such as a prescribed burn, planned and appropriately timed grazing immediately following the disturbance is very beneficial for treating the re-sprouting shrub species so they do not dominate the site in the future; 2) planned and appropriately timed grazing immediately following a fire can be a tool to suppress the invasion of the site by non-native grass species such as Lehman's lovegrass and other undesirable species of grass, forbs and shrubs. Commenter's suggest managers consider is using "vacant" allotments to resolve long-term problems instead. These problems could include situations where very low forage production lands make up most of an allotment. Also, commenters suggest allotments that are uneconomical to grazing in today's economy could be retired from grazing without putting current permittees out of business; combining or reconfiguring existing allotments or moving term permit obligations to a "vacant" allotment to grazing the most productive rangelands instead of relying on unsuitable or very poor condition rangelands could resolve many current and future resource problems.

One commenter observes a fatal flaw in the concept of forage reserves stating: "Permittees have paid for their base property with the privilege of using their allotments for the grazing of their cattle. Their permit does not allow them use of any other lands and would be improper to allow the use of lands not agreed to in their permit." **Associated Letters: 24, 27, 38, 69, 93, 130, 142, 164, 361, 474, 542, 543, 548, 561, 631, 634, 672, 673, 685, 712, 713, 718.1 through 718.3873, 718.14, 718.3855, 718.3871,720.5, 724.1 through 724.11, 725.1 through 725.7, and OWS-1 through 144**

Response: The assessment report concluded that the ability of the forest to provide adequate forage to contribute to opportunities for livestock grazing is at risk of being unsustainable due to drought, conifer encroachment into grasslands and infill of woodland and forest openings (chapter 19). This guideline, the desired conditions and restoration objectives for vegetation communities and the objective to improve range condition (Livestock Grazing O1) are designed to work together to address that risk and keep cattle on the landscape, consistent with the agencies multiple-use sustained-yield mandate and the plan's desired conditions for livestock grazing as a use of the forest.

The range of alternatives includes permitting and stocking vacant allotments to the maximum extent possible (alternatives 3 and 4), using some of them to create forage reserves (alternative 2), and keeping them unstocked until a new National Environmental Policy Act process determines the most appropriate future use (alternative 5). Automatic closure or permanent retirement of all vacant allotments is not consistent with our multiple-use sustained-yield mandate or policy direction and was not considered a viable suggestion to be incorporated into an alternative. Regardless of whether it was stated in the description of the alternatives, a National Environmental Policy Act process for each individual allotment that was a good candidate for a forage reserve would be required to implement any of the plan alternatives.

Current permittees in good standing can legally be authorized to use vacant allotments or portions thereof on a temporary basis without a public process if the existing National Environmental Policy Act decision on the vacant allotment remains valid. The District Ranger has the authority to determine if the decision remains valid. The law and related court decisions have been clear. Federal public land is owned by the American people. Livestock grazing is a privilege subject to the terms and condition of the permit administered by the agency designated that authority and responsibility by Congress.

On the science, there are peer-reviewed published studies that suggest that rest from grazing after fire is not always ecologically necessary (Allred et al. 2011, Powell et al. 2018, Vermeire et al. 2018), particularly in systems that evolved with large native herbivores that are now absent or substantially reduced in number. Others have found that post-fire grazing reduces perennial grass plant frequency (Drewa and Havstad 2001). Others have found that it depends on interactions between precipitation patterns, fire and grazing (Valone and Kelt 1999 as cited in Drewa and Havstad 2001, Giljohann et. al. 2017). The guideline does not imply that growing season rest is required after every disturbance event. It would be determined whether rest is needed when the specific allotment and circumstances are evaluated (project level) to move toward the desired conditions for livestock grazing and vegetation communities. We acknowledge that fire-grazing interactions can drive species diversity and dominance; however, we are unable to find any science that supports the use of cattle to control shrub densities after fire. Rather, the available science clearly suggests that cattle prefer grasses (Frost and Launchbaugh 2003 among others), especially the protein-enhanced regrowth that occurs following fire (Allred et al. 2011 among others). Browsing becomes more important for cattle during the winter months when protein-levels in grasses are low, or if the abundance of grasses does not provide enough volume of feed. We are also unable to find any science that supports the idea that grazing following fire events suppresses invasion of invasive species, rather both disturbances can increase the susceptibility of an area to invasion (Keeley et al. 2003 among others). Additional science and discussion about fire-grazing interactions has been added to the Upland Vegetation, Fire Ecology and Fuels Effects Common to All Vegetation Types and Alternatives section of the FEIS.

The guideline does not preclude combining or reconfiguring of vacant allotments and there may be instances where such an action would be the most appropriate thing to do. Additional language has been added to the Restoration and Relationships Management Approach, titled Adaptation and Forage Reserves in the Livestock section of the final plan for clarification on that point. Discussion of what characteristics would make a vacant allotment a good selection for establishment of forage reserves, and the decision-making process for determining when and who could use those reserves has also been added. Ultimately, the forest supervisor will decide whether to keep this guideline with or without modification, elevate it to a standard, or remove it from the plan entirely. This decision will be based on public input and the analysis in the FEIS.

Literature Cited in Response:

Allred, B.W., S.D. Fuhlendorf, D.M. Engle, and R.D. Elmore. 2011. Ungulate preference for burned patches reveals strength of fire-grazing interaction. Ecology and Evolution 2011; 1(2):132-144.

Drewa, P., and K. Havstad. 2001. Effects of fire, grazing and the presence of shrubs on Chihuahuan desert grasslands. Journal of Arid Environments Vol 48:429-443.

Frost, R.A. and K.L. Launchbaugh. 2003. Prescription Grazing for Rangeland Weed Management. A new look at an old tool. Rangelands. Vol. 25(6):43-47.

Giljohann, K.M., M.A. McCarthy, D.A. Keith, L.T. Kelly, M.G. Tozer, and T. Regan. 2017. Interactions between rainfall, fire and herbivory drive resprouter vital rates in a semi-arid ecosystem. Journal of Ecology. Vol 105:1562-1570.

Keeley, J.E., D. Lubin, and C.J. Fotheringham. 2003. Fire and Grazing Impacts on Plant Diversity and Alien Plant Invasions in the Southern Sierra Nevada. Ecological Applications, 13(5) pp. 1355-1374.

Powell, J., B. Martin, V.J. Drietz, and B.W. Allred. 2018. Grazing preferences and vegetation feedbacks of the fire-grazing interaction in the northern Great Plains. Rangeland Ecology and Management Vol 71 (1):45-52.

Vermeire, L.T., D.J. Strong, and R.C. Waterman. 2018. Grazing history effects on rangeland biomass, cover and diversity responses to fire and grazing utilization. Rangeland Ecology and Management Vol 71(6): 770-775.

Guideline 7

"As part of all management activities range infrastructure and associated materials (including barbed and smooth wire, storage tanks, pipeline, etc.) that are no longer functioning or in excess of what was needed for maintenance, reconstruction or construction, should be removed to provide for the safety of forest visitors, wildlife, recreational and permitted livestock, and aesthetics. Such requirements should be incorporated into contracts, permits, and agreements. Forest personnel should resolve any such safety hazards identified during project or incident activities."

Comment 75: There are differing perspectives on this guideline. Some commenters would like to see this guideline be moved to a standard. Commenters that support this guideline because there are many miles of fence on the ground that are not needed and need to be removed. Others support it because the replacing water lines and leaving all the old line is equivalent to littering. These commenters would like to see a portion of the Range Betterment funds or range program dollars be allocated to this annually or it will continue to be postponed.

Those that prefer this guideline is removed suggest "range infrastructure" is too broad of a class to make this direction viable. Commenter's state: "Pipeline is almost always buried to avoid freezing during colder months; given its location underground, it's hard to imagine a scenario in which pipeline would present a safety or aesthetic issue. Furthermore, this guideline treats as equal human/animal safety and aesthetics, even though the latter is far more subjective. Lastly, is it possible that certain range infrastructure—say a set of wooden corrals—aged 50 years or older might qualify as an archaeological resource worth protecting? Others are concerned that removal of infrastructure will eliminate future uses and would prefer the plan focus on providing stricter oversight of infrastructure maintenance on allotments that have permits in non-use.
Associated Letters: 38, 52, 227, 247, 373, 474, 548, and 713

Response: This guideline was created in response to stakeholder input in an earlier comment period. We disagree that range infrastructure is too broad a class to make this direction viable. The primary materials presenting a safety hazard are barbed wire, like pasture division fences that have been abandoned due to

reconfiguration of pastures in an allotment. Pipeline would be less likely to pose a safety hazard but it could. Pipeline is not always buried, nor always at depths that would prevent freezing during colder months, protect it from fire or exposure and deterioration over time. Pipelines buried in sandy washes are routinely exposed. Busted up old pipeline providing no current or future function could feasibly create an aesthetic issue. Buried pipeline, whether it is or could provide function, would not create an aesthetic issue.

There is no intent of placing equal value on safety and aesthetics. Both are mentioned because both are values and potential issues. That does not make them of equal value in theory or in practice. It is true that certain range infrastructure are archaeological resources, and those resources would be managed according to applicable law, regulation, and policy. A footnote has been added to the guideline to clarify that point.

Budget and budget direction are not within the scope of the forest plan. This comes down to the forest level from Congress and is subject to change. The intent of the guideline was not to initiate a concentrated effort, but to incorporate removal of these materials into future fieldwork for projects, fire incidents contracts and permits for efficiency's sake. Ultimately, the forest supervisor will decide whether to keep this guideline with or without modification, elevate it to a standard, or remove it from the plan entirely. This decision will be based on public input and the analysis in the FEIS.

Guideline 8

"All monitoring data collected by non-Forest Service personnel that adhere to protocol identified in the plan-level monitoring implementation guide should be accepted for consideration and made available to permit holders for allotment management."

Comment 76: There is a concern that the use of non-Forest Service personnel to collect livestock grazing and rangeland health-related monitoring data sets a very dangerous precedent concerning the "best available science" especially if grazing related monitoring data is collected by someone that is not a journeyman level professional rangeland manager. Commenters suggest such data should be closely scrutinized and should involve the permit holders. They assert that accepting monitoring data from anyone just because its collection adhered to the protocols does not mean it is accurate and dependable. Commenters are concerned about the ease with which one's personal bias can corrupt almost any type of monitoring data especially when someone is not properly trained or inexperienced. It is requested that only data collected by journeyman level professional rangeland manager or someone who is trained and closely supervised by such a manager be accepted. Furthermore, it is requested that the statement be revised due to lack of performance standards, being unreviewable with apparent standard-less discretion. The revised statement should say that any person or non-government organization that desires to engage in studies, data gathering and/or monitoring on our national forests should be required to go through the same procedures that any non-Forest Service scientist, individual researcher or outside organization is required to go through and subject to "MBO" standards.

There is also concern this guideline as written could be misconstrued as an actionable item where non-Forest Service monitoring data would be used as the basis of a forest directive that would force a change in a permittee's management approach. There is a suggestion for this to be clarified to rule out the possibility that it would be misinterpreted in this way.

Other commenters support this guideline as written. One commenter would like to see it elevated to a standard and include making the data available to the public. **Letters: 24, 38, 100, 164, 227, 247, 548, 631, and 713**

Response: This guideline supports multi-party monitoring and responds to stakeholder input regarding the need for more information to support adaptive livestock grazing management. Data doesn't dictate anything; it informs the decision-making process and adaptive management. This is reinforced in the language of the guideline which says it "should be accepted for consideration." If consideration finds the data suspect, that would require validation before it might be useful. The guideline requires adherence to protocol in the plan monitoring program's implementation guide and effective multi-party monitoring involving volunteers

without specific expertise generally involves training. Data held by the Forest Service can be made available to anyone, including members of the public. More discussion about rangeland monitoring and collaboration has been added to the Livestock Grazing management approaches in the plan, specifically the final Collaboration, Adaptation and Monitoring management approach.

Section 219.12(c)(3)(i and ii) of the 2012 Planning Rule specifically directs the forest supervisor to take into account existing National Forest System and non-National Forest System inventory, monitoring and research programs, and to take into account opportunities to design and carry out multi-party monitoring. FSH 1909.12 Chapter 40 Section 42.14a requires that plan monitoring include opportunities to design and carry out multi-party monitoring with other Forest Service units; federal, state, or local government agencies; scientists; partners; members of the public; and federally recognized Indian Tribes. Data relevant to rangeland management has and will continue to be collected by a variety of vegetation professionals, including but not limited to rangeland managers, vegetation ecologists, soil scientists, botanists, and wildlife biologists. We acknowledge that bias can be an issue for professionals (for example Andersen et al. 2019, Jones et al. 2019) and non-professionals alike, but those concerns are beyond the scope of the plan.

Literature Cited in Response:

Andersen, F., R.L. Anjum and E. Rocca. 2019. Philosophical bias is the one bias that science cannot avoid. eLife 2019;8;e44929. DOI: 10.7554/eLife.44929. available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6415937/.

Jones, G.M., R.J. Gutierrez, H.A. Kramer, D.J. Tempel, W.J. Berigan, S.A. Whitmore, and M.Z. Peery. 2019. Megafire effects on spotted owls: elucidation of a growing threat and a response to Hanson et al. (2018). Nature Conservation 37:31-51 (2019). doi 10.3897/natureconservation.37.32741.

Suggested Guidelines

Comment 77: Commenter suggests the rigor of standards is needed to direct the development of allotment management plans and the day-to-day activities of the permittee. Without this, the commenter is concerned there is the danger that the time and work involved in developing and executing grazing plans that have the necessary detail to protect forest ecosystems will simply be foregone. Commenter discusses their professional background and observations gathered over years spent walking within the Gila National Forest. Commenter states that they have seen little evidence of management that would support movement toward desired conditions for natural resources or the persistence of any type of living organism other than cattle. Commenter notes that although guidelines are flexible, they should relate to standards and be well aligned with desired conditions. Commenter asserts this is an important point of clarity to offer direction to staff and permittees, so they do not have to guess as to which components need to be included in the allotment management plan and what the livestock manager's responsibilities are regarding resources of publicly owned, grazed lands. Commenter is concerned that the draft plan does not have guidelines for field-level activities that relate to the standards or desired conditions. Commenter suggests that topics related to meeting desired conditions for especially sensitive or impaired areas should not be left to the subjectivity of guidelines.

Commenter states that guidelines must employ strategies that will accomplish the intent of standards, but the decision maker and permittee can choose the method by which standards will be met to align with desired conditions. Commenter recommends that guidelines should recommend practices for allotment management plans to support movement toward, achievement and maintenance of desired conditions for riparian and upland vegetation communities. Commenter states these practices should correlate with the condition of the natural resources in question based on monitoring results obtained through best available scientific information and may involve complete removal of cattle from that part of the allotment. Commenter recommends the following guidelines be included in the final plan:

1) Livestock grazing management should include controlled timing and use that correlates with the growth of the forage, so that grasses and forbs can re-grow.
2) Grasses and forbs or any other vegetation should not be grazed during dry and/or dormant periods when plant re-growth could be impeded, regardless of available water and supplements provided for livestock.
3) Where it is determined that livestock are to be removed from RMZs, either exclosures or herding may be employed as options, as well as complete removal from the allotment.
4) Where it is determined that livestock are to be removed from any upland area to allow for forage and any other resource recovery, herding or other behavioral management that draws cattle away from that area may be employed as well as complete removal from the allotment.

Associated Comment: 548

Response: Commenter's interpretation of the differences and relationships between desired conditions, standards and guidelines is not entirely consistent with agency directives. Desired conditions are what management is working toward, descriptions of what the ecological and socioeconomic environment would look like if we did everything right. Standards and guidelines are both constraints on projects and activities that the forest supervisor determines are necessary to maintain, move toward or achieve desired conditions based on public input and the environmental analysis. Standards do not implement the desired conditions, and guidelines are not the means to implement standards.

There are pros and cons associated with standards and guidelines. Meeting the intent of a guideline is not optional, but there is flexibility in how that intent is met. Like all plan components, the intent of the guideline should be clear in its wording. Guidelines can be helpful when all site-specific circumstances are not reasonably foreseeable. Standards are rigid but may incorporate foreseeable exceptions. Because standards must be followed to the letter, compliance must be easily determined.

On the commenter's specific suggestions, the frequency, duration, and season of use are all important elements of grazing management that are part of all allotment-specific National Environmental Policy Act proposals and decisions, allotment management plans and annual operating instructions. Although there are other factors that combine with season of use that determine the effects of grazing on grasses, dormant season grazing has been found to provide the same ecological benefit as long-term rest (Davies et al. 2014). In general, grasses have a harder time recovering when they are grazed during flower development and bloom (Hendrickson and Olson 2006). Woody riparian vegetation is most vulnerable when herbaceous vegetation is dormant (George et al. 2011). However, a study conducted in the Black Range mountains of Sierra County, New Mexico found that at light to moderate grazing intensity, season of use did not appear to affect cottonwood communities (Lucas et al. 2004). Lucas and others concluded that there is no "one size fits all" approach to managing livestock grazing in riparian areas (2004). Whether or not growing season or dormant season rest is an effective best practice to move toward desired conditions is most appropriately determined at the allotment level where site-specific factors can be considered. When it is determined that livestock need to be removed from a riparian management zone or any upland area, all the options are already on the table. Whether herding, exclosure, rest or other approach was best would be determined based on the site characteristics and circumstances specific to the individual allotment.

Literature Cited in Response:

Davies, K.W., M. Vavra, B. Schultz, and N. Rimbey. 2014. Implications of Longer Term Rest in the Sagebrush Steppe. Journal of Rangeland Applications Vol 1, 2014 p. 14–34.

George, M.R., R.D. Jackson, C.S. Boyd, and K.W. Tate. 2011. A scientific assessment of the effectiveness of riparian management practices. In: Briske, D.D. (Ed). Conservation Benefits of Rangeland Practices. United States Department of Agriculture Natural Resources Conservation Service. p. 213–252.

Hendrickson, J. and B. Olsen. 2006. Chapter 4: Understanding Plant Response to Grazing. IN Launchbaugh, K., J. Walker and R. Daines (Eds). Targeted Grazing: A Natural Approach to Vegetation Management and Landscape Enhancement. American Sheep Industry Association. p 32–39.

Lucas, R.W., T.T. Baker, M.K. Wood, C.D. Allison, and D.M. Vanleeuwen. 2004. Riparian vegetation response to different intensities and seasons of grazing. Journal of Range Management, 57(5):466-474.

Comment 78: Commenter states that decades of scientific research comparing grazed and ungrazed areas has demonstrated that livestock grazing in the arid west negatively effects water quality and quantity, stream channel morphology, hydrologic function, soil stability, streambank vegetation, and aquatic and riparian species. Commenter states that research has consistently demonstrated the benefits to riparian vegetation and stream habitat that occur when livestock are excluded from riparian areas and suggests that in conjunction with other projects, constructing exclosures will provide cost efficiencies and foster more holistic management approaches. Commenter request the following guideline be included in the final plan: "Where feasible, riparian area exclosures intended to move toward forestwide desired conditions for Riparian and Aquatic Ecosystems should be considered when developing a proposed action for a NEPA project."

Commenter also recommends a guideline from the Santa Fe National Forest's draft plan would provide further clarity that livestock grazing should be managed is such a way as to not degrade streams, floodplain connectivity, or riparian vegetation, or harm at-risk and aquatic species: "Livestock grazing within riparian management zones (RMZs) should be managed to sustain proper stream channel morphology, floodplain function, and riparian vegetation desired conditions." **Associated Letters: 672 and 724.1 through 724.11**

Response: Final Riparian and Aquatic Ecosystems S1 states: Decision's authorizing uses and activities in riparian management zones must provide preferential consideration to riparian and aquatic resources. Project-specific best management practices will be developed, identified in the proposed action, and followed as the principal mechanism for demonstrating preferential consideration and controlling nonpoint source pollutants to protect beneficial uses and riparian and aquatic ecosystem values." Site-and circumstance-specific adaptive management actions will be used to ensure this does not preclude the exercise of private property rights recognized by federal or state law. The Santa Fe's guideline was included at their forest supervisor's discretion, but it is not strictly necessary because it reiterates how the plan works; that is livestock grazing will be managed to maintain or move toward desired conditions for riparian and aquatic ecosystems. Those desired conditions include proper stream channel morphology, floodplain function, and riparian and wetland vegetation communities as detailed in the Riparian and Aquatic Ecosystems desired conditions. Riparian exclosures may be one way to move toward desired conditions, but they are not always the only or best option. Exclosures can and will continue to be part of project-level proposals or alternatives when they are within the scope of leadership's intent for the project and where they are identified as feasible. Plan direction is not needed to make that option available.

Drought Plan Management Approach

Comment 79: Commenter would like to see the public included in this management approach, including a statement at the end that says: "When precipitation would permit ephemeral grazing the forest will notify the public prior to turn out for this use." **Associated Letter: 713**

Response: This management approach has been updated based on the availability of new management tools, which are available to agency staff, permittees, and the public. It is now titled Drought, Forecasting Services and Adaptation. Public involvement is discussed in the Collaboration, Adaptation and Monitoring management approach.

Livestock and Wildlife Conflicts Management Approach

Comment 80: Commenter is concerned that the language in this management approach does not convey that management for species recognized under the Endangered Species Act, species of conservation concern, and rare and endemic species is a priority over livestock grazing. Commenter recommends specific language changes to remedy their concern which emphasizes protection of Mexican gray wolves and asserts that "the forest will take all available action to address actions by permittees that violate the endangered species act by harming or killing Mexican gray wolves." **Associated Letter: 713**

Response: Please refer to response to comment 1 under the Multiple Use heading in this appendix as it relates to priorities. Management approaches are not plan direction and are not commitments to take action. We have and will continue to take appropriate action based on the specific circumstances.

Range Infrastructure and Partnerships Management Approach

Comment 81: Commenter suggests the sources and amounts of funding for each permittee's infrastructure should be disclosed to the public and recommends that this management approach include language to commit to that disclosure. Commenter also concerned that this management approach doesn't adequate portray the state of disrepair the forest's range infrastructure is in and suggests specific language emphasizing that much of the range infrastructure forestwide is non-functional and poses a safety hazard. **Associated Letter: 713**

Response: Management approaches are not direction, do not compel management action, and are not commitments to act. The forest plan is not the appropriate place to disclose Federal or private expenditures on range infrastructure. That information can be requested through the Freedom of Information Act. The statement regarding the condition of range infrastructure is accurate as written.

Rangeland Monitoring Management Approach

Comment 82: There is a concern about language in the Livestock Grazing management approach "Rangeland Monitoring." This language is "Annual allotment inspections could be conducted in the field with the permit holder to facilitate discussion of any issues that may be a factor." The concern is that for allotment inspections to have any meaning they must be conducted in the field with the permit holder. You cannot inspect something without observing it. It is requested that the word "could" in that sentence be changed to "must." Furthermore, this statement should have language that states this requirement requires a properly funded and staffed range coordinator at the Supervisor's Office to be a necessary part of the interdisciplinary team. Then, it the inspection concept is still desired, preface this statement to state that range monitoring is first in place for effective annual inspections. **Associated Letters: 24, 100, 164, and 631**

Response: Management approaches are not direction and are not commitments to take action. They describe principal strategies and priorities the forest supervisor intends to employ to implement the plan. They may discuss potential processes such as analysis, assessment, inventory, project planning or monitoring (FSH 1909.12 Chapter 20 Section 22.4). The commenters' suggestions are not appropriate for a management approach. Field inspections have been and remain a routine part of range program management and permit holders are always welcome to actively participate. The draft language was an attempt to incorporate input received in a conversation with Grant Soil and Water Conservation District board members. This language has been reworked to better respond to that and other conversations. That revised language is included in the final management approach Collaboration, Adaptation and Monitoring in the Livestock Grazing section of the plan.

Comment 83: Commenter is concerned that monitoring does not appear to be driving the plan. Commenter states monitoring should provide the information needed to determine whether plan direction is being followed. Commenter notes this management approach states a commitment to collaborative monitoring but

doesn't pledge to commit staff to prioritize monitoring. Rather it suggests staff should train or co-sponsor training for outside resources. Commenter is also concerned that parties identified as likely monitoring partners have a conflict of interest and may not be objective. Given the wide-spread nature of livestock grazing and budget and staffing limitations, commenter recommends resources to accomplish rangeland monitoring with qualified Forest Service personnel based on the best available scientific information should be the priority.

Commenter recommends the following to address the lack of resources for monitoring:

1) Divert the funds from proposed rangeland restoration (mechanical and herbicidal treatments) to both Forest and non-Forest personnel (as described in item 2) for on-the-ground monitoring and data collection to be completed semi-annually in all active grazing allotments.
2) Recruit and pay as contractors (or interns), college students, as well as professional consultants whose educational and professional disciplines include plant, soil, livestock grazing management, range or other environmental sciences.
3) Recruit community volunteers with backgrounds suited to understanding plant and soil ecology, and who do not have family, social, employment or political relationship to allotment holders.
4) Adopt strategies from other USDA agencies to ensure permittee compliance, such as random field checks and aerial photos.

Associated Letter: 548

Response: Management approaches are not commitments to action, nor do they guarantee certain outcomes. We agree that monitoring at the plan and allotment level is important. Chapter 5 of the draft plan is devoted to plan-level monitoring and includes over 70 questions, many of which will generate information about rangeland conditions. For example, question 9 asks: Are temperature and precipitation patterns supporting movement toward desired conditions for livestock grazing?" Indicators are trends in herbaceous production season start, peak, and end, and trends in annual herbaceous productivity. Question 13 asks "How is the extent of bare soil changing over time?" Satellite imagery can provide the information to answer both of these questions for areas with less than 25 percent tree cover and would provide coverage from 1985 to present. We recognize there are differing opinions on which parties would provide objective monitoring data (see also response to comment 76 on Livestock Grazing G8). This management approach has been combined with the Working with Other Entities management approach to create the final Collaboration, Adaptation and Monitoring management approach. This includes a discussion of bias and ways to promote unbiased data collection.

Regarding the suggestion to reallocate dollars, plan objectives are not a commitment of funds and they do not include herbicide use. Herbicide use may be proposed during other National Environmental Policy Act processes separate from the plan, but it is not part of plan objectives (see also response to comment 1 in the Herbicide Use section of this appendix). Plan objectives do include mechanical treatments to move toward desired conditions for vegetation communities but reallocating those dollars to rangeland monitoring is not something we can do in the plan or in practice. Congress determines how much funding we receive for what types of activities. Objectives were based on what we have been allocated for vegetation treatments in the recent past. Neither can the plan create funding for the contracts or internships that might be used to increase staff capacity. Knowledgeable and skilled volunteers will be welcome additions to future multi-party monitoring efforts during plan implementation. Compliance is an implementation issue, not a planning issue.

Comment 84: Commenter would like to see the public included in this management approach. **Associated Letter: 713**

Response: This management approach has been combined with the Working with Other Entities management approach to create the final Collaboration, Adaptation and Monitoring management approach. The narrative includes members of the public who would like to volunteer.

Restoration and Relationships Management Approach

Comment 85: Commenter is concerned that this management approach doesn't state that forage for wildlife and fine fuels are the priority over livestock use. Commenter prefers the term "herbaceous vegetation" be used rather than the term "forage." Commenter suggests the management approach should be to keep vacant allotments unstocked and considered for permanent closure to reduce costs borne by the public. **Associated Letter: 713**

Response: Please refer to response to comment 1 under the Multiple Uses heading in this appendix as it relates to priorities and response to comments on Livestock Grazing guideline 6 in this section of the appendix related to vacant allotments.

Unauthorized and Excess Livestock Management Approach

Comment 86: Commenter is concerned that this management approach does not identify the bulk of the issue as excess livestock use by existing permittees and "some" unclaimed cattle in unallotted portions of the Gila Wilderness. Commenter is also concerned the management approach does not convey that the agency will take all necessary action to address unauthorized and excess use by permittees. Commenter provides specific language changes that address their concerns. **Associated Letter: 713**

Response: Unauthorized and excess use are illegal and are implementation and enforcement issues. They are not planning issues.

Working with Other Entities Management Approach

Comment 87: Commenter would like to see the public included in this management approach. **Associated Letter: 713**

Response: This management approach has been combined with the Rangeland Monitoring management approach to create the final Collaboration, Adaptation and Monitoring management approach. The narrative includes members of the public who would like to volunteer.

Suggested Management Approaches

Comment 88: Commenter would like the final plan to include the following management approach for annual operating instructions to reduce the impacts of livestock grazing on the Mexican gray wolf and other predators.

"Best Practices for protecting livestock and grazing operations where predators are present have been successful in reducing negative interactions between predators and livestock. These best practices must be followed and include:

1) Removing, destroying, burying, or placing electric fencing around dead livestock discovered on allotments if carcasses would attract predators into high use areas such as currently grazed meadows, salting grounds, water sources, or holding corrals.
2) Removing sick or injured livestock from grazing allotments to prevent them from being targeted by predators.
3) Increasing range riding to provide a more consistent human presence around your cattle. This has proven to be one of the most effective means for reducing predator-livestock interactions and

depredation. There is nothing in your Grazing Permit, Allotment Management Plans (AMPs), or in these Annual Operation Instructions (AOI) that authorizes predator control.

For this allotment, the permittee is aware:

1) The allotment does include predator habitat and the possibility of predator-livestock conflicts exists and will be an ongoing part of managing livestock on the allotment;
2) The permittee has an obligation to comply with the Endangered Species Act, among all other federal laws;
3) The Forest Service will provide conflict-reduction resources as they are developed;
4) A grazing permit in non-use status shall not be allowed to increase allowable animal unit months when returning to use to help prevent livestock-predator conflicts;
5) The Forest Service has provided notification to the permittee regarding BMPs to minimize the potential for predator-livestock interactions;
6) Permittees must implement specific best management practices to reduce livestock-predator conflicts, including, at a minimum, the removal of predator attractants during calving season, increased human presence during vulnerable periods, use of range-riders and diversionary and deterrent tools such as fladry fencing, airhorns, crackershells, etc.;
7) Measures to reduce livestock-predator conflicts, including a clause notifying the permittee of the potential for modification, cancellation, suspension, or temporary cessation of livestock activities to resolve livestock-predator conflicts;
8) Permittees are prohibited from using leg-hold traps to manage livestock predation on any allotments.

All AOIs should include a notice to grazing permittees that they may take conservation non-use for the sake of reducing livestock-predator conflicts on these allotments, pursuant to the Forest Service regulations at 36 CFR 222.3 Issuance of grazing and livestock use permits; Issuance of grazing and livestock use permits 36 CFR 222.3(C)(1)(iv)(D); Forest Service Handbook 2209.13(17.2) Nonuse for Resource Protection or Development. Drought management planning should take into consideration increased competition between predators, native prey and livestock for forage and resources and the Forest Service should maintain an adequate supply of food for wildlife it intends to avoid livestock-predator conflict."

Associated Letter: 713

Response: Livestock grazing is directed by regulations set in 36 CFR 22 Subpart A, which mandates the agency to develop, administer, and regulate the grazing use. The use, timing, duration, and other considerations are evaluated by an interdisciplinary team through regulations set by the National Environmental Policy Act. The responsible official, typically a district ranger, considers the interdisciplinary team's evaluation, input and feedback received during the public process mandated by the National Environmental Policy Act, and decides what will be authorized. This decision is then outlined in a multi-year allotment management plan, which guides adaptive management. Grazing permits incorporate the Allotment Management Plan and may also include additional allotment-specific terms. Both the issuance of the permit and the development or amendment of an Allotment Management Plan that becomes part of the permit is considered an administrative action that implements the National Environmental Policy Act decision (FSH 2209.13 chapter 90 section 94). Permanent grazing management modifications are authorized through the term grazing permit, consistent with the National Environmental Policy Act decision.

Annual operating instructions are developed to carry out the allotment management plan. They are reviewed annually as an opportunity to make any adjustments needed to respond to environmental conditions. Rangeland utilization and infrastructure monitoring are conducted to provide information on conditions to inform the need for adjustments. Annual operating instructions allow for temporary adjustments while implementing the terms and conditions of the permit. Annual operating instructions do not constitute a permit

modification and are not an appealable decision (36 CFR 214.4). Grazing permits, allotment management plans, permit modifications, and Annual Operating Instructions are site-specific and outside the scope of the forest plan.

The Livestock Grazing management approach Livestock and Wildlife Conflicts (now Livestock and Wildlife) has been revised to include examples of husbandry practices such as the commenter suggests that forest leadership and staff would support and encourage permittees to adopt. In general, the requirements suggested by the commenter are not appropriate in a management approach and practicable as absolutes. Specifically:

1) Sometimes it takes time to locate deceased livestock, and if not discovered in a timely manner, it could be too late for the suggested practices to be effective. See 2.
2) It is not always possible to know that animals are sick or injured before they are targeted by predators. That would require constant presence.
3) Increasing presence is also a good idea but we can't require the constant presence it would require for these practices to be absolutes. Permittees are required to obey the law like everyone else, including the Endangered Species Act. Predator control is not authorized as part of any grazing permit.

With respect to the remainder of the numbered items in the comment summary, allotment management plans already in place address the Mexican gray wolf, and other federally listed species such as the Mexican spotted owl, as appropriate, and encourage conflict reduction practices like range riders (for example USDA FS 2013). These conflict reduction practices include range riders, The agency has a responsibility to take the appropriate permit action if the permittee breaks the law. Grazing permits may enter non-use for reasons having nothing to do with the Mexican gray wolf or any conflicts with livestock. When restocking allotments that have been in non-use, many factors would need to be considered, including factors related to the Mexican gray wolf, resource conditions, and permittee preference. Whatever decisions are made would have to be within the National Environmental Policy Act decision and conditions of the permit.

Literature Cited in Response:

USDA FS (United States Department of Agriculture – Forest Service. 2013. Allotment Management Plan: Deadman Allotment. Southwestern Region, Gila National Forest, Reserve Ranger District. 8 pp.

Maps

Comment: Commenters are concerned that the Continental Divide National Scenic Trail was not included in all the maps provided in appendix C of the draft plan. Commenters state that it would have helped them understand the impacts of the activities and the alternatives on the Trail. Commenter recommends that this be remedied in the final plan and the Trail displayed on all the maps, especially on maps of utility corridors, recreation opportunity spectrum, roads, and timber suitability. **Associated Letters: 180 and 231**

Response: The map appendix is now appendix B to the final plan. The Continental Divide Scenic Trail has been added to all the maps contained in that appendix.

Military Training Flights

Comment 1: There is opposition to military presence, in or over the Gila National Forest, and specific opposition to military overflights. Commenters request the agency find a meaningful way in the plan and elsewhere to be more pro-active in helping thwart the possibility of military flights over the forest, residential areas, and wilderness. One commenter expressed disappointment that the plan only mentioned it in a management approach and provided specific suggestions that include moving this management approach to a section that is applicable forestwide; language to clarify terms, jurisdictions, rights, and obligations under the law; and how this should be documented in the plan's project record.

This commenter detailed the recent proposal to use the airspace above the Gila National Forest and its wilderness areas for military trainings and suggests the Air Force's draft EIS was extremely substandard. One commenter is specifically concerned that the analysis did not consider the migration corridors of birds and other wildlife. Another commenter notes that the Gila National Forest did not request cooperating agency status with the Air Force and "has been largely and disappointingly silent on the issue" that would violate the Wilderness Act and agency regulations for wilderness areas. Commenter suggests that National Environmental Policy Act requirements have gone unfulfilled and that the final documents must evaluate the impacts of military trainings on wilderness areas, wildlife, watersheds, riparian areas, air and water quality, habitat, human visitors, and opportunities for primitive recreation and solitude. Others suggest the Gila National Forest should be a cooperating agency on any federally funded project that impacts the forest, like the project proposed by Holloman Airforce Base because it would provide a direct line of communication for local stakeholders. **Associated Letters: 14, 116, 200, 233, 608, 634, 696, 697, 712, 728.277, 728.350, 728.354, 729.6, 729.15, 730.65, OWS115**

Response: We have no jurisdiction over airspace. Regulation of all aircraft, military and civilian, is the jurisdiction of the Federal Aviation Administration and Department of Defense and is outside of the jurisdiction of the Forest Service and outside the scope of forest plan revision. We provided comments on the Air Force's draft EIS, but we did not have the staff time to provide the expertise we would have been expected to bring to the table as a cooperating agency. Military overflights are discussed as cumulative effects in the FEIS. We have also expanded the discussion and moved the Overflights management approach from the Designated Wilderness section to the plan-wide management approaches section as it applies to many resources and activities.

Minerals

General

Comment 1: There is a suggestion that the plan prohibit all current and future drilling and mining. **Associated Letter: 207**

Response: The Forest Service can regulate, but not prohibit, mining activities to minimize, to the extent we can, the adverse effects of such activities on national forest resources. The forest plan cannot override mineral laws established by Congress, such as the General Mining Act of 1872, which allows United States citizens to explore for minerals and establish rights to the locatable mineral resources on public lands. National Forest System lands are generally available for exploration and mining unless specifically precluded by an act of Congress or other formal withdrawal. The Forest Service is limited to requesting withdrawals only in circumstances where there are sensitive, unique surface resources that cannot be adequately protected under current public laws and Federal regulations. All withdrawal requests are subject to approval from the Chief of the Forest Service before that request is submitted to the Bureau of Land Management (FSM 2822.21). There is no guarantee of a favorable response from the Bureau.

Comment 2: Commenter states that mining activities need to have exemplary water protections in place so that no aspect of the mining process pollutes water, including the disposal of mine waste. **Associated Letter: 68**

Response: Mineral projects must comply with the laws and regulations regarding surface and ground water. Operators are specifically required to comply with applicable Federal and State water quality standards, including regulations issues pursuant to the Clean Water Act by 36 CFR 228.8. Mitigation measures are likely to be specific to the material being mined and the method of mining and would be addressed in a Plan of Operations specific to the site and proposed operation.

Comment 3: Commenter is concerned that plan components for mineral development are insufficient to meet the desired conditions for cultural resources, water resources, stream habitat and native fish. Commenter recommends that the Rio Grande National Forest's plan components for placer mining be incorporated into the final plan. **Associated Letter: 672**

Response: The recommended language from the Rio Grande National Forest Plan is repetitive of regulation and policy direction requiring the Forest Service to attempt to minimize or prevent, mitigate, and repair adverse environmental impacts on National Forest System lands. In accordance with 36 CFR 228.8, the Forest Service must regulate all operations to minimize adverse environmental impacts on air quality, water quality, solid wastes, scenic values, fisheries and wildlife habitat, and roads. Operators must comply with all laws and regulations to protect water quality, wildlife, heritage resources, air quality, et cetera.

Comment 4: Commenter states that the draft plan should make it clear that future demand and locatable mineral development is highly likely to occur on Gila National Forest lands around both the Chino-Cobre and Tyrone mines. Commenter states both mines intend to expand operations over the coming decades with Freeport-McMoRan's public remarks about expansion to the north of Chino and Cobre in the next ten years or so. Commenter states that mapping around the Tyrone mine shows large areas of ore on the Gila National Forest. **Associated Letter: 679**

Response: The background information in the final Minerals section (Locatable Minerals subsection) of the plan does anticipate future demand. Even without statements of intention from Freeport-McMoRan, more mining activity should be anticipated. Given the renewed emphasis on developing clean energy sources, many of which are copper intensive, it is highly likely that mining activities will increase as demand outpaces supply. Analysis has been added to the relevant cumulative effects discussions to reflect this.

Suggested General Guidelines

Comment 5: Commenter suggests the following guideline from the Flathead National Forest's plan be included to help meet desired conditions for water quality and aquatic and riparian habitat: "To protect water quality and inland native fish habitat, wildlife, and other riparian- associated resources, mineral operations should not be authorized in riparian management zones. If the riparian management zone cannot be avoided, the authorization should include measures to maintain, protect, and rehabilitate fish and wildlife habitat that may be affected by the operations." **Associated Letter: 672**

Response: The Flathead's guideline is repetitive of law, regulation and policy direction and provides no additional protection. The Forest Service can regulate, not prohibit, mining activities to minimize, to the extent we can, the adverse effects of such activities on national forest resources. The Code of Federal Regulations (36 CFR 228.8) establishes the requirements for environmental protection, including water quality, fisheries, wildlife habitat and reclamation. The Forest Service can only approve mining Plans of Operations that minimize environmental impacts under 36 CFR 228.5(b). Reclamation is included in Plans of Operations. The suggested guideline has no force or effect above and beyond what is required by law and regulation.

Comment 6: Commenter is also concerned with the potential for suction dredge mining (placer mining) activities suggests the Rio Grande National Forest's final plan for examples of language that would address their concerns. Commenter requests the plan take a proactive approach to suction dredge mining by incorporating a set of guidelines specific to this type of activity in the final plan. Specifically, commenter would like to see a permit requirement that combines a site visit with best management practices for any new mining activities. **Associated Letter: 672**

Response: The final plan's Riparian and Aquatic Ecosystems S1 requires all authorized activities in riparian management zones to incorporate best management practices.

Locatable Mineral Standard 2

"Adequate reclamation bonds will be required from operators for all proposed mineral activities."

Comment 7: There is a suggestion that this standard should state how bond amounts are determined to ensure that adequate monies are available for reclamation and remediation if an operator abandons a mining site, and what criteria would be used to determine when reclamation bonds would be released. **Associated Letter: 151**

Response: After further review and consultation with the Cibola National Forest's Geology and Minerals staff, this draft guideline has been reworded to better reflect our authority. The process for determining bond amounts, provisions for abandonment, and release of bonds are outlined in the Forest Service's Reclamation Bond Estimation and Administration Guide. We also work with the State of New Mexico's Department of Energy, Minerals and Natural Resources, Mining and Minerals Division on reclamation bonding.

Locatable Minerals Suggested Standards

Comment 8: Commenter states it is critical that the standards section makes clear that state mining standards and regulations will apply for mining operations, cleanup and reclamation and is more than simply a management approach. Commenter suggests the standards section should also make it clear that mine plans of operation will be subject to the National Environmental Policy Act. Commenter also suggests the standards section should emphasize agency regulations under CFR 36 Part 228.13 because those regulations prohibit the use of corporate or self-guarantees to cover reclamation costs, which protects taxpayers from bearing the financial risk for cleanup and reclamation should the mine operator default. **Associated Letter: 679**

Response: Plan direction is in addition to the requirements of law, regulation, and policy. It is not necessary for the plan to include the regulations the commenter refers to for those regulations to be applicable and function as intended.

Comment 9: Commenter is concerned that plan direction does not provide sufficient protections for ephemeral and intermittent streams. Commenter suggests these streams need to be explicitly protected in all relevant sections of the plan because they are integral parts of a watershed, and their condition affects the health of the entire ecosystem. Commenter states that ephemeral streams are much more sensitive to climate or anthropogenic disturbances than perennial streams and therefore they should be afforded stronger protections, rather than weaker ones. Based on this, commenter recommends an additional standard that prohibits mining activities within riparian management zones, including ephemeral and intermittent streams. **Associated Letter: 712**

Response: Riparian management zones may be associated with intermittent streams and areas with riparian vegetation dependent on subsurface flow, which would include ephemeral streams with riparian vegetation. These areas are defined in the Riparian and Aquatic Ecosystems section of the plan as: "those portions of watersheds around lakes, perennial and intermittent streams, groundwater-dependent ecosystems, wetlands, and high-elevation wet meadows that have characteristic riparian vegetation and provide riparian function or have the ecological potential to do so. It encompasses any surface water and its associated aquatic habitat, connected shallow groundwater, aquatic and riparian vegetation, associated soils (that is, hydric and alluvial), and contributing fluvial landforms." We do not have the authority to prohibit mining activities. The Forest Service plays a role in regulating mining activities, to minimize, to the extent we can, the adverse impacts of mineral projects.

Locatable Minerals Guideline 5

"Long-term or final reclamation should return the land to a planned use that is consistent with the overall land use objectives of the area. Reclamation plans should be appropriate for the setting (for example, soils, vegetation, climate, or slope). Seed mixes, vegetation, and soil used for reclamation should be representative

of the local ecosystem (see also Non-native Invasive Species). Areas reclaimed should blend in with the surrounding landscape."

Comment 10: There is a recommendation that this guideline be elevated to a standard and specify that all reclamation activities must use certified weed-free, native plant seed mixes and mulches. Seed test results should be requested from the vendor to avoid inadvertently introducing non-native species to the revegetation site. Additionally, any alternate seed used to substitute for primary plant species that are unavailable at the time of reclamation should also be native. **Associated Letter: 151**

Response: This concern is addressed by Non-native Invasive Species standards 4 and 5, which would apply to approval of Plans of Operation.

Locatable Minerals Guideline 7

"Where settlement ponds, tailing dams, or impoundments are planned and implemented, each should be located, designed, constructed, and inspected under the development and supervision of a professional engineer."

Comment 11: Commenter suggests this guideline should be a standard as it is already required by state law. Commenter points to recent catastrophic tailings dam failures that have occurred in Brazil and Canada and recent attention paid in the mining industry and investor community to design and operational standards for tailings storage facilities. Commenter also suggests that the industry Best Management Practices for Tailings Storage Facilities be included in the standard. **Associated Letter: 679**

Response: If a plan of operations includes a proposed tailings facility, the environmental analysis will include a technical evaluation to determine suitability of the site and facility. The agency scrutinizes these types of facilities very closely, coordinating with our own national headquarters and multiple State and Federal agencies. The best available science, including current industry best practices, and site-specific considerations will be used to identify the appropriate best management practices. Operators would have to comply with state law, regardless of whether the forest plan reiterates those requirements or not.

Locatable Minerals Guideline 10

"Abandoned mines that are used by bats should be managed to prevent disturbance to species and spread of disease (for example, white-nose syndrome). (See also Caves and Abandoned Mine Lands.)"

Comment 12: Commenter points to their comment on the referenced plan direction in the Caves and Abandoned Mine Lands section and states that comment also applies here. **Associated Letter: 678**

Response: This guideline refers to the Caves and Abandoned Mine Lands section where the commenter has multiple concerns and suggestions. Please refer to the response to comments in the Caves and Abandoned Mine Lands for how those concerns and suggestions are addressed because all this guideline does is refer to that direction.

Locatable Minerals Suggested Guidelines

Comment 13: There is a recommendation that this section include a new guideline clearly stating what vegetation standards must be met before a reclamation site will be released. There is a suggestion that vegetation standards could be comparisons to undisturbed reference areas, or technical standards for vegetation cover and diversity. **Associated Letter: 151**

Response: Vegetation standards for mine reclamation are site-specific prescriptions described in the Plan of Operations. The bond is held until the authorized officer determines performance measures outline in the Plan of Operations have been met and the reclamation work is done. The State of New Mexico's Department of

Energy, Minerals and Natural Resources, Mining and Minerals Division has thorough revegetation standards that the operator must comply with. We coordinate with multiple state agencies on these standards specific to each operation and site, so it would not be advisable to include specific vegetation standards in the forest plan.

Locatable Minerals Reclamation Management Approach

Comment 14: Commenter notes the statement "The bond can be returned once satisfactory reclamation is completed by the operator." There is a concern that the word satisfactory is vague and a suggestion that it should be more clearly defined. **Associated Letter: 151**

Response: The authorized officer determines when completion is satisfactory based on the National Environmental Policy Act analysis and performance measures in the approved Plan of Operations. Clarifying language has been added to the final management approach.

Locatable Minerals Relationships Management Approach

Comment 15: Commenter suggests the documents need to point out that it will be necessary to work quite closely with state agencies on the reclamation bonding. Commenter states: "BLM and the Forest Service have made it clear in other mining projects on Federal lands that if state agencies allow a corporate, self- guarantee or third-party guarantee for financial assurance, then the state would be liable for the guarantee. Negotiations and discussions on reclamation bonding will be one of the most important issues that will be discussed between GNF, the state Mining and Minerals Division, and the NM Environment Department." **Associated Letter: 679**

Response: The Relationships management approach in the Locatable Minerals section of the plan references the important relationship with the Mining and Minerals Division. It has been expanded to include the New Mexico Environment Department.

Locatable Minerals Abandoned Mine Lands Management Approach

Comment 16: Commenter states that for cleanup and restoration of Abandoned Mine Lands to occur, the Gila National Forest will have to actively budget for funding. This has been the major limitation for cleanup of Abandoned Mine Lands in the area. **Associated Letter: 679**

Response: Funding and budgeting priorities are outside the scope of the forest plan. The Abandoned Mine Lands program is funded and administered at the regional and national office levels based on national priorities.

Locatable Minerals Information for Recreational Prospecting Management Approach

Comment 17: Commenter is concerned about the following statement in the management approach: "Make information on recreational rock collecting and gold prospecting (panning, sluicing, etc.) available to the public." Commenter would prefer that the plan discourage sluicing by issuing only permits that do not disturb streambeds. **Associated Letter: 697**

Response: Recreational prospecting, including sluicing, is a legitimate and legal recreational activity. However, it is still subject to the provisions of mining law and 36 CFR 228. If the recreational activity creates insignificant disturbance and does not use mechanized equipment, no permit is required. If the recreational activity involves mechanized equipment and significant disturbance, then mining law applies and the recreationist would need to work with the District Ranger to determine if the level of disturbance will require a Plan of Operations and a detailed environmental analysis.

Salable Minerals Suggested Standards

Comment 18: Commenter suggests an additional standard to restrict removal of materials within water resource features, riparian management zones or within minimum buffer distance to water features to protect these resources from mining and gravel operations. **Associated Letter: 151**

Response: Draft Salable Minerals S1 and G6 (final Minerals S1 and G11) in combination with Riparian and Aquatic Ecosystems S1 are relevant to this concern. With salable minerals, the agency has the discretion to identify places where we do not want mining activity to occur. Salable Minerals S1 requires permits and authorizations to include terms and conditions to prevent or mitigate degrading effects to natural resources and other uses. This could include buffer zones appropriate to the site and scale of the proposed activities. Salable Minerals G6 (final Minerals G11) requires that activities should not be authorized if it prevents attainment of riparian, channel morphology, or streambank desired conditions. Riparian and Aquatic Ecosystems S1 requires management to provide preferential consideration for riparian management zones and dependent resources by including best management practices to mitigate adverse impacts.

Comment 19: Commenter recommends all guidelines be elevated to standards to achieve the desired condition for water quality, riparian habitat, wildlife, and other natural resources. **Associated Letter: 679**

Response: Plan direction is in addition to the laws, regulations, and policies in place to protect or conserve natural resources from the degrading effects of mining. There are pros and cons associated with standards and guidelines. Meeting the intent of a guideline is not optional, but there is flexibility in how that intent is met. The forest supervisor will make decisions about which items are appropriate for guidelines and which would be better as standards based on public input and the analysis in the FEIS.

Comment 20: Commenter suggests the standards section must also point out that operators must comply with bonding requirements laid out in CFR 36 Part 228.51 because restoration will not happen unless there is bonding. **Associated Letter: 679**

Response: Plan direction is in addition to the laws, regulations, and policies in place to protect or conserve natural resources. There would be no additional force or effect in incorporating the requirements of 36 CFR 228.51 than the regulation itself.

Monitoring

General

Comment 1: There is a concern that the guiding principles for development of the monitoring plan demonstrate a lack of commitment to monitoring and relegated to a neglected stepchild role, despite the importance the agency professes monitoring to have. Commenters state that monitoring data about the impacts of management is sorely lacking and request the agency have higher standards for decision making and prioritize monitoring in the Gila forest plan. Commenters state the forest can do a better job. Controls should always be included, and long-term thinking and data collection are essential. Commenters question why forest staff are resisting a strong monitoring program because it could pay off in the long term. **Associated Letters: 8, 36, 193, and 720.6**

Response: The 2012 Planning Rule requires plan-level and broader-scale monitoring to inform adaptive management. The Forest Service regional offices are responsible for broader-scale monitoring programs. The rule requires plan-level monitoring of select ecological, watershed conditions, focal species, and socioeconomic contributions to assess progress toward desired conditions and objectives. It also requires that the monitoring program be within the financial and technical capabilities of the agency.

The forest supervisor has the discretion to set the scope, scale, and priorities for plan monitoring within the financial and technical capabilities of the Gila National Forest but must include one monitoring question for the eight items set out in the planning rule (36 CFR 219.12 and FSH 1909.12 Chapter 30 Section 32.1). More questions may be included but are not required.

The Gila National Forest draft and final plan (chapter 5) exceed this requirement and prioritize monitoring with more than a dozen required monitoring questions and over 50 questions to be addressed as capacity allows. The monitoring program also discusses the importance of partners and stakeholders in the monitoring effort under the headings Coordination, Collaboration and Capacity Building and Potential Additional Monitoring As Capacity Allows (final Capacity Dependent Monitoring). Further support is provided by management approaches that encourage collaborative monitoring throughout the plan. In the Wildlife, Fish, and Plants section, there is a guideline that incorporates approved recovery plans by reference, which includes the monitoring requirements in those recovery plans.

Comment 2: Commenter notes that monitoring was important enough to the draft plan to have its own chapter and that the documents repeatedly mention the importance of monitoring to adaptive management. However, there is a concern the Guiding Principles contradict that and demonstrate a lack of commitment with "Capacity" being one of the principles. The minimum required monitoring that the plan commits to doing seems to consist of data already being gathered and is hardly a tax on "capacity." The remaining questions are only optional. There is a suggestion to rewrite the guiding principles with a more positive approach and one that is more convincing regarding the importance of monitoring to the plan. **Associated Letter: 193**

Response: Please refer to response to comment 1. As the responsible official, the forest supervisor provided the guiding principles for the development of the monitoring plan. Capacity was not intended to downplay or undercut the importance of monitoring. Budget and staffing issues are very real, and this guidance was intended to make sure we did not make commitments we could not keep. The forest supervisor values honoring commitments. A positive approach won't make these limitations less real. Robust public involvement in plan implementation and monitoring could.

It is true that most of the minimum required monitoring questions align with data we or others already collect. Many of the other 57 questions also align with data already being collected. Making full use of data already being collected is efficient and may provide the opportunity to evaluate more than the minimum required monitoring questions.

Comment 3: Commenter states that there is a significant problem seeing the connection between some of the questions and forest management. "For example, several sets of questions rely on climatic measurements like precipitation and fire weather. The reason for concern is that management direction or decisions have no control over the weather. The measurement of weather patterns might help guide management decisions, but it is not directly related to management effectiveness or how progress toward desired conditions is determined. Further, the questions are only indirectly related to the indicated plan components that address sustainability and ecosystem functioning." Commenter does not see how these questions meet the criteria for monitoring. **Associated Letters: 193, 548, and 712**

Response: Management outcomes are affected by the weather and climate is a stressor, something management must adapt to. Therefore, it is useful to track climate trends. These questions were never intended to be evaluated alone, rather they would be evaluated alongside the information generated by all the other questions to determine if the plan is sufficient or if change is needed. It may prove that there are some desired conditions that are not attainable because of climate. Or we may need additional or different standards and guidelines related to some activities and uses to maintain or move toward desired conditions. Or we may need different or more aggressive objectives to respond to trends in climate.

Comment 4: There is a concern that the sheer number of questions is rather unwieldy. There is a suggestion that this could be pared down and refined in the final plan and that the number should be reduced to make room for new questions that emerge because of comments. Specific suggestions include combining questions 5-7. Questions 8-10, 29-30, and 62-65 and their respective indicators should be rewritten (or combined/deleted) to more directly address plan components so that management effectiveness is apparent and measurable. Others could be combined as well. **Associated Letters: 36 and 193**

Response: There are a lot of questions but that doesn't mean there isn't room to incorporate suggestions we received from commenters. We have reviewed all the monitoring questions and indicators carefully and made some refinements to improve clarity.

Comment 5: Commenter observes that there appears to be two questions numbered 14. **Associated Letter: 193**

Response: Thank you for catching this error. It has been corrected in the final.

Comment 6: Commenter suggests that riparian areas would be less vulnerable to climate change if the forest's halfhearted commitment to monitoring, as evidenced by "no capacity" and "optional" language in the monitoring plan, were improved. **Associated Letter: 193**

Response: Ecosystem vulnerability is basically the likelihood of climate stress (Triepke 2017), such as drought and higher temperatures. Monitoring will not change vulnerability. Monitoring helps us evaluate whether management actions (or inactions) support movement toward desired conditions. When riparian areas are moving toward or at desired conditions, they have more adaptive capacity and resilience. The forest supervisor has the authority and responsibility to set the scope, scale, and priorities for plan monitoring within the capacity of the available resources (FSH 1909.12 Chapter 30 Section 32.1). Staff capacity is a limiting factor the forest supervisor determined to be an important consideration.

Literature Cited in Response:

Triepke, F.J. 2017. Assessing the climate change vulnerability of ecosystem types of the southwestern U.S. Dissertation, University of New Mexico. Albuquerque, NM. 166 pp.

Comment 7: There is a suggestion that monitoring questions should be asked wisely and not in adherence to outdated ideas. Suggestions for new questions include long-term research regarding the effectiveness of restoration projects; post-fire vegetation patterns; why some forest areas are so healthy; the patterns of forest recovery from big burns; vegetation shifts and trends that might affect management. **Associated Letter: 193**

Response: Long-term research serves a different purpose than monitoring and evaluation under the 2012 Planning Rule and agency directives (plan and broadscale). The Forest Service's research branch is actively engaged in studies that address the commenter's suggestions. The effectiveness of restoration projects is the subject of many published and ongoing studies. The published literature supports the draft plan and EIS as evidenced by references throughout the documents. The causal factors for forest health are also well-documented in the science and are the basis for the desired conditions for vegetation.

The plan does include monitoring questions that will allow us to evaluate the effectiveness of restoration projects, post-fire recovery and vegetation patterns, vegetation shifts and trends over time. For example, question 2 asks how seral state diversity is changing over time. Whether toward or away from desired conditions, restoration treatments could be correlated to those changes, as could lack of restoration treatments. Climate variables may also be a causal factor for changes. Evaluating the information acquired from question 2 would need to be done alongside climate information such as that discussed in comment 3 and its response previously in this section of this appendix.

Comment 8: The monitoring plan was not easy to read. Some commenters identify Table 7 as confusing stating it does not seem to correspond with the provided explanation, and it is unclear how the questions were identified. **Associated Letters: 36 and 47**

Response: The monitoring plan has been reformatted in response to this comment, including some editorial changes for clarity.

Comment 9: There is a recommendation that the monitoring plan should focus on collecting data needed to manage for resiliency in the face of climate change. **Associated Letters: 167 and 579**

Response: The plan's desired conditions are resilient conditions. The monitoring plan is based on evaluating trends toward or away from the desired, resilient condition. Considered alongside climate information, if monitoring information establishes a trend toward desired conditions regardless of climate trends, then there is no need to change management. Similarly, if monitoring information establishes a trend away from desired conditions, then that would indicate a need to change management or reevaluate the desired condition considering climate change.

Comment 10: Commenter suggests the questions need to be re-phrased to draw a direct link between the forest plan and the status and trends of forest resources being monitored. Commenter provides the following examples:

> "the intent of using focal species to assess ecological conditions is to measure the success in meeting desired conditions for certain resources like water quality, riparian vegetation, etc. Relying on a single species will often fail to provide a complete picture of ecological conditions specific to a habitat type. Therefore, a better question than "What is the status of the black hawk?" would be "Are forest management activities within riparian areas increasing biodiversity or populations of riparian obligate species?" Common black-hawk would then be a single indicator for assessing the answer to the monitoring question, rather than the question itself.
>
> Similarly, for many of the questions pertaining to climate (Questions 8, 9, and 10 – pg. 266), it's hard to see the link between plan components and the monitoring questions. Again, we suggest asking questions specific to plan components. Assessing climate, precipitation, and stream flow trends are critical, but this information alone cannot be used to assess the forest plan's success in meeting desired conditions because they have no direct correlation to plan components. For example, Question 8 asks how the frequency, intensity, and duration of droughts are changing over time, referencing the corresponding plan component for Soils (1a). A more specific monitoring question related to that plan component would be to assess changes to the soil condition class over time. The answer to this question would allow forest managers to assess the impacts of drought on forest resources, which in turn allows for an evaluation of the plan's success in meeting desired conditions."

Commenter suggests a similar re-evaluation of monitoring questions for all the minimum required monitoring to ask more relevant questions that have a more direct link to plan components and will provide for answers which can inform adaptive management decisions. Commenter also observes that the suite of monitoring questions fails to accomplish all three types of monitoring identified in the introductory section of chapter 5 of the draft plan. **Associated Letter: 672**

Response: We acknowledge that there is room for improvement in the draft monitoring plan. The monitoring questions associated with focal species have been revised based on response to comment and further consideration. Questions pertaining to climate are not intended to be evaluated alone. They are intended to be evaluated alongside all other relevant questions, like question 13 which tracks trends in bare soil, to help parse out factors contributing to trends toward or away from desired conditions, and what kinds of changes in plan direction may be needed to respond to climate trends. However, some revision of these climate related questions has been made in the final monitoring program. We acknowledge the suite of questions is focused

on implementation and effectiveness monitoring, with very few questions that are evident as validation monitoring. The monitoring program's description of validation monitoring acknowledges that we often rely on research institution partners to accomplish this type of monitoring.

Comment 11: There is a concern that there are no monitoring questions that sufficiently address riparian and aquatic ecosystems. Commenter states that the focal species common black hawk is the only monitoring question for riparian and aquatic ecosystems, and it is a poor indicator species for any of the forest's riparian systems other than cottonwood and sycamore gallery forests. Commenter suggests there should be questions that would provide information about (1) The efficacy of any restoration activities undertaken in riparian areas; (2) The effectiveness of range plan components in controlling livestock use of riparian areas; (3) Movement towards the sole desired condition for water quality; and (4) Whether Riparian Management Zones are accomplishing their intended purpose. **Associated Comments: 712**

Response: Regarding focal species, see response to comment 12 below. Seven of the 12 indicators in the Watershed Condition Classification (MQ1 "How are watershed condition indicators and the overall condition score changing over time?) address riparian and aquatic ecosystems. These indicators include water quantity, water quality, aquatic habitat, aquatic biota, channel shape and function, large woody debris, and riparian/wetland vegetation. The desired condition for all these indicators is a functioning properly condition. Through MQ1, if a trend away from desired conditions is detected, then there may be a need to adapt management, change management direction, or both. If conditions are trending toward desired conditions, then plan direction for riparian management zones and the activities and uses that occur within them are sufficient. The draft question about native and non-native fishes has been reworded (final MQ6) to clarify the link to aquatic ecosystem condition. The final plan monitoring program now includes an additional question (final MQ2) for riparian condition.

Focal Species

Comment 12: Commenters are concerned that the monitoring program's two focal species are insufficient to meet planning rule requirements. One commenter suggests that if capacity is limiting the number of focal species, then community or guild-level monitoring, given that the group of species included a species that was responsive to forest management, could be a solution. Commenter states that such an approach would provide greater statistical power and reveal composition and structure patterns informative of habitat conditions. Community-level data could indicate whether overall composition is changing, and individual focal species such as the species listed below could be used to assess whether management was responsible for trends toward or away from desired conditions. Commenter suggests that biologists with the New Mexico Department of Game and Fish would be available to provide technical assistance in designing such a monitoring system for focal species. Commenter suggests forest staff may also be in possession of previous species monitoring data that would inform selection of focal species. There is a suggestion that the following groups of birds could serve this function for the associated ecosystems: Grace's warbler, Virginia's warbler, pygmy nuthatch, and northern goshawk for ponderosa pine; Grace's warbler and northern goshawk for mixed conifer; Lewis's woodpecker, Gila woodpecker, olive-sided flycatcher, southwest willow flycatcher, Bell's vireo, common black-hawk for riparian; and pinyon jay, juniper titmouse, black-throated gray warbler for piñon-juniper.

Another commenter is concerned that the selected focal species (Mexican spotted owl and black hawk) have such restricted ranges and such specialized habitat needs and suggests that a valid reason why many vegetation types and developmental stages are without focal species needs to be provided. This commenter identifies the following species and rationale for them to be identified as focal species:

- Beaver, a strongly interactive keystone species indicating functioning riparian/aquatic ecosystems.
- Brown creeper, a late-seral high elevation forest inhabitant which serves as an umbrella species for numerous mature, old-growth forest dwelling species.

- Northern goshawk, a sensitive species which requires ecological conditions described in the desired conditions for forested ERUs.
- Hairy and American three-toed woodpeckers, which require unlogged, burned habitats with complex snag and early seral structure.
- Adopt cougars, a wide-ranging, strongly interactive species, as a focal species for forest wildlife management.

Commenter suggests that if these species are not selected as focal species, a valid rationale must be provided. Commenter also observes nothing in the monitoring plan that addresses the forest canopy needs of Mexican spotted owl or northern goshawk. Commenter states: "The reliance on seral state diversity is a poor surrogate, as the remotely sensed data which informs the seral state and transition model approach is too coarse of a scale to measure actual forest structural conditions. This problem is reflected in the recent Notice of Intent to file suit against the Forest Service for failing to monitor Mexican spotted owl forest structural attributes (including canopy cover) according to the MSO Recovery Plan." Commenter also observes nothing in the monitoring plan addresses the status of any rare species or focal species that can answer questions about old or mature forest or the recovery of rare wildlife and states that the failure to properly address key characteristics of terrestrial ecosystems or focal species or at-risk wildlife violates National Forest Management Act.

To address this, the commenter suggests northern goshawk be selected as a focal species. Commenter's rationale includes that the northern goshawk is a Bureau of Land Management (BLM) listed species, a local conservation concern based on expert opinion, and on the Southwest Regional Foresters 2013 Sensitive Species List. Commenter states:

> "Northern goshawks use a variety of forest types, but nest primarily in ponderosa pine and Douglas-fir forests and prefer mature forest structure with high canopy cover, large trees, and relatively high trees per acre. They are indicators of the integrity of mature, old growth forest structure and composition and a sufficient forest prey base of small mammals and birds and have been recommended as indicator species in several studies. Threats to the northern goshawk include timber harvesting, in particular, and uncharacteristically high severity fires as well as fuel reduction treatments. The Forest Service has a monitoring guide for the northern goshawk (Woodbridge and Hargis 2006), so monitoring should be fairly easy to conduct. Over 70 percent of the goshawk's prey species depend upon mid-aged forests or older for nesting, foraging or both, making their population levels and viability an excellent indicator for forest conditions generally, especially within ponderosa pine habitat. More science is needed to determine which management practices actually benefit the goshawk, and what its population trajectories are. This species should be closely monitored through the focal species monitoring program."

Another commenter observes that what is provided as "rationale" for the identification and selection of focal species is just a description of the two species identified, their home range, and additional information on their life history. Commenter requests an actual rationale be provided and an explanation as to why the Mexican gray wolf was not identified and selected as a focal species.

A commenter suggests there should be a native fish and an amphibian focal species because it's possible to envision a situation where common black hawk trends differ from those of native fish. Commenter suggests we should take a focal species approach like that of the Santa Fe National Forest. **Associated Letters: 151, 180, 672, 712, and 713**

Response: A single focal species would fulfill the 2012 Planning Rule requirements (FSH 1909.12 chapter 30 section 32.13c). Focal species are selected based on their functional role in the ecosystem. To be effective, they should have relatively straightforward relationships between status and the ecological conditions managed for and not be impacted by other stressors. The status of focal species should provide information about the effectiveness of management actions, so it is also useful if those species can be linked to specific

ecological conditions in areas where management actions occur with some frequency. Focal species should not be rare, cryptic, or otherwise difficult to monitor and abundant enough to measure change. There should not be factors, like hunting, off-forest land use, or disease, affecting the species' status that would mask a response to management activities.

The Mexican spotted owl and northern goshawk will serve as focal species for the Gila National Forest because they rely on the vegetation communities that are likely to see the most vegetation management activities. The rationale for selecting these two focal species and their associated monitoring questions have also been revised based on response to comment (see appendix C to the final plan). The other species suggested by commenters were not selected because they would not fulfill the role of focal species as well as Mexican spotted owl and northern goshawk. We welcome any monitoring data on any species or guild that our partner agencies and organizations would be willing to share or to gather on our behalf.

Monitoring and Evaluation Implementation Guide

Comment 13: There is a concern that there is important information in the "Monitoring and Evaluation Program Implementation Guide" that makes commenting on the monitoring plan difficult. This document should be made available so that commenters have all the information. **Associated Letters: 36 and 51**

Response: We recognize that there is important information to be captured in the Monitoring and Evaluation Program Implementation Guide that is not in the monitoring plan itself. While there is no requirement that this document be produced as part of plan revision, we would have liked to develop it concurrently. We just did not have the staff capacity to do so. The development of the guide is something that we anticipate being able to develop after the final documents are released to the public and the Notice of Opportunity to Object is published in the Federal Register. It will be made available to the public as soon as it is completed.

Priority Ranking Criteria

Comment 14: There is a concern that "difficulty" is not a good variable for priority ranking and a suggestion that it be dropped. **Associated Letter: 36**

Response: The forest supervisor has the discretion to set the scope, scale, and priorities for plan monitoring within the financial and technical capabilities of the Gila National Forest but must include one monitoring question for the eight items set out in the planning rule (36 CFR 219.12, FSH 1909.12 Chapter 30 Section 32.1). Difficulty was chosen as a prioritization criterion to address the forest supervisor's guiding principle "Capacity" as described in the draft monitoring plan. With staff limited by funding, the amount of time it takes staff to collect and process the data is directly applicable to the financial capability of the forest. The forest supervisor does not want the monitoring plan to create additional burdens on the workforce; nor does the forest supervisor want to create public expectations or the appearance of commitments to do work that staff cannot keep.

Comment 15: There is a concern about the balance and relative importance of the monitoring questions. Some of the "as capacity allows" questions are arguably more important that some of the minimum questions. **Associated Letter: 193**

Response: The minimum required questions were selected based on the leader's intent provided by the forest supervisor's guiding principles to meet the 2012 Planning Rule requirements. As stated in the monitoring plan: "All of the monitoring questions identified in this chapter are important, which is why they are included. However, to address the 'capacity' guiding principle, a small subset of questions is identified as the 'minimum required monitoring' with the remaining questions being addressed when and if time, funding, priority of work, and stakeholder support allow." Many of the questions that would be addressed as capacity allows are based on data that is already being collected by other Forest Service programs, like the Forest Inventory and Analysis program, it just needs to be extracted and evaluated for the Gila National Forest.

Similarly, there are several questions that leverage methodologies for processing satellite data developed by the Forest Service Research Stations, or products developed by the research stations.

Public Participation

Comment 16: There is a question regarding if the public can be involved with the recording of data by volunteering to help the technicians. **Associated Letter: 51**

Response: Yes. The public is welcome and encouraged to volunteer to help implement the monitoring program and collect data. More information about opportunities for involvement will be made available when the plan is implemented.

Comment 17: Commenter states effective monitoring is key to measuring success in achieving desired conditions and improving management strategies and on-the-ground treatments over time. Commenter recommends we make this a priority and offers their organization to partner with forest staff and leadership to help implement effective monitoring protocols where their interests align. **Associated Letter: 672**

Response: We agree and look forward to working with you.

Monitoring Questions and Indicators

Comment 18: Commenter states several monitoring topics required by the 2012 Planning Rule are of interest to them: the status of select watershed conditions, select ecological conditions, focal species, measurable changes on the plan area related to climate change and progress toward meeting desired conditions. Commenter state's their organization believes that managing for watershed health with an emphasis on riparian habitat and water resources should be a driving force in future management. Commenter suggests both restoration of watersheds that are not in properly functioning condition and maintenance of those that are is important and monitoring both is important. Commenter states tracking acres treated is an important component of monitoring, and while it isn't a perfect tool, they support using the agency's Watershed Condition Classification for measuring watershed improvement. Commenter suggests a similar measure be included for stream and riparian habitat. Commenter would also like to see miles of decommissioned roads included as an indicator for watershed health, as roads often cause water quality impairment and other ecological degradation. **Associated Letter: 672**

Response: The first monitoring question asks about each Watershed Condition Classification indicators and the overall condition score changing over time. The classification has several indicators directly related to stream and riparian habitat. These include water quality, water quantity, aquatic habitat, aquatic biota, channel form and function, and riparian and wetland vegetation. There is also a roads indicator including attributes of road density and proximity to water. There is also a monitoring question that tracks progress toward meeting objectives, that would include acres treated and miles of decommissioned roads. An additional question was added to the minimum required monitoring that addresses riparian condition.

Comment 19: There is support for questions 44 and 60 in the draft monitoring plan. **Associated Letter: 25**

Response: These questions have been retained in the final monitoring plan.

Comment 20: Monitoring questions 8-10 are not designed so their relevance to ecosystem desired conditions can be readily known. What will the questions or indicators reveal about the desired conditions? If there are underlying assumptions that climate will lead toward or away from desired conditions, they should be specified. Either way, the questions do not directly track progress nor is climate something the forest has control over. "I suggest new questions and indicators here, maybe around effects on restoration, planning, or vegetation shifts, more than just observing weather." **Associated Letter: 36**

Response: While these questions are asked independently, they are not intended to be evaluated independently. Evaluating this information alongside what is generated from other monitoring questions could elucidate climate change impacts (see also response to comment 3 in this section)**.** These questions were re-evaluated, and some changes made in response to comment and the availability of new data products.

Comment 21: There is a concern that monitoring questions 29 ("What are the economic impacts of drought on livestock grazing?") and 30 ("How is the availability of water for livestock changing over time?") are not designed to measure management effectiveness around livestock grazing and as worded the trend could go toward or away from desired conditions. Drought and precipitation are only indirectly related to plan components and unrelated to forest management. **Associated Letter: 36**

Response: Please note there was an error in the draft monitoring plan that associated these questions with livestock grazing desired condition 1 and standard 6, rather than guideline 6. Desired condition 1 and guideline 6 are the correct associations. The desired condition is "Sustainable livestock grazing contributes to the long-term social, economic and cultural diversity and stability of local communities, and helps to preserve the rural landscape, cultural heritage, and long-standing tradition." Guideline 6 is "Vacant allotments should be considered for temporary use by holders of a current permit during times or events when their allotment(s) require growing season recovery time because of wildfire or other disturbance, or to minimize livestock and wildlife conflicts."

There was a logic behind these questions related to the sustainability of the forest's socioeconomic contributions arising from livestock grazing as a use of the forest. We thought the information generated by each question would be valuable on its own, but more valuable when evaluated together. Draft monitoring questions 29 through 31 (question 31 "How is rangeland productivity changing over time?") were intended to work together to detect climate driven changes in the Gila National Forest's ability to provide for the desired condition of sustaining contributions to long-term social, economic, and cultural diversity and stability (Livestock Grazing DC1) and the effectiveness of livestock grazing guideline 6.

However, your comment triggered further review. With new tools available, draft question 31 was revised and is now final question 9. The other two questions are retained in the final monitoring program as we believe there is value in understanding the trends related to climate change and the effectiveness of plan direction intended to sustain the socioeconomic benefit of livestock grazing as a use of the forest.

Comment 22: There is a concern and lack of clarity about how monitoring questions 62-65 will track progress toward desired conditions. Measuring weather patterns might help guide management decisions but is not directly related to management effectiveness. These questions should be more robust and have a clear purpose tied to desired conditions. **Associated Letter: 36**

Response: Questions 61 through 63 relate directly to desired conditions for natural fire regimes found in the All Upland Ecological Response Units as referenced in the monitoring program. They also pertain to similar desired condition in the Wildland Fire and Fuels and Watersheds sections of the plan as referenced in the monitoring program. Fire rotation, frequency, and severity are all part of describing and evaluating the status of fire regimes. Questions 64 through 66 are intended to work together to detect climate driven changes which may signal a need to change the vegetation communities we focus our prescribed fire efforts on, or a need to reexamine desired conditions for vegetation or wildland fire and fuels management in the context of what is attainable.

Comment 23: There is a concern that monitoring question 46 was not prioritized correctly and a request that the prioritization score and ranking be recalculated. The question asks what progress has been made to inventory, characterize, and assess the condition of riparian areas, including those associated with springs and seeps. Commenter states that inventory and assessment of riparian areas would seem to be a high priority. **Associated Letter: 36**

Response: The question referenced by the commenter tracks progress toward the plan's desired condition that "The location, characteristics, and conditions of all riparian management zones are known." The prioritization score and ranking were recalculated to make sure there weren't procedural errors. This question was given three additional priority points because of a procedural err. At draft, it was given a score of zero for difficulty, because the actual workload to do the inventory according to established protocols, over the entire forest is monumental. However, this question just asks what progress we've made, so that we can be accountable for progress toward this desired condition. It did not rank higher because is not necessary for legal or regulatory compliance, it is not a regional monitoring indicator, and it doesn't inform the management of as many resources as other monitoring questions. Riparian areas are prioritized in the monitoring plan as described in response to comment 11 previously in this section of this appendix.

Comment 24: There is a concern that monitoring question 12 is unclear and a suggestion that clarity could be improved by including references to the data sources for the indicators given.

Draft question 12 asks "what economic contributions are forest-based recreation, wood and botanical products, grazing, wildlife, and fisheries making to local communities and how are they changing over time?" Indicators include program outputs, dollars per program area, inflation adjusted gross receipts by source, and number of user days related to hunting and fishing. **Associated Letter: 36**

Response: Data sources and analysis methods will be identified and discussed in the Monitoring and Evaluation Program Implementation Guide, consistent with agency directives (FSH 1909.12 Chapter 30 Section 31 page 4). Data sources are likely to be to those used in the socioeconomic analysis used in the economic contribution section of the assessment report and EIS and include National Visitor Use Monitoring program survey data and Forest Service annual upward reporting data. Some revisions have been made to the indicators.

Comment 25: There is a suggestion to combine monitoring questions 5 through 7 because one recreation question is enough. Commenter states three separate questions is a distraction. **Associated Letters: 36 and 193**

Response: The 2012 Planning Rule requires monitoring plans to assess the status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives (36 CFR 219.12). Question 5 allows us to track trends in visitor use. Question 6 allows us to track trends in visitor satisfaction. Question 7 allows us to track progress toward plan objectives for recreation.

Comment 26: Commenter notes that question 4 uses native fish density and ratio of native to non-native fish density as an indicator of rare and endemic species plant and animal species and habitats desired condition 2 which states "Habitats and refugia for rare and endemic species are intact, functioning, and sufficient for species persistence." Commenter would like the monitoring question wording to clarify if this is a single metric, or species-specific because a single density metric fails to account for species-specific status or population declines. This is particularly of concern with habitat specialist species or species whose life history traits make them more vulnerable and slower to recover following disturbance. **Associated Letter: 151**

Response: This monitoring question now includes another indicator for native fish species assemblage composition and richness to better address commenter's concerns.

Comment 27: Commenter observes the emphasis on monitoring, adaptive management, capacity building and collaboration in the draft plan and states that the local community has a desire to be more involved in forest health and management. To better serve this emphasis and desire, there is a suggestion that stronger indicators for questions 14 through 17 are needed to show how the forest intends to make and retain community connections and collaboration as an ongoing program. There is also a suggestion that these strengthened questions and indicators should be considered for minimum required monitoring. **Associated Letter: 193**

Response: The forest supervisor has the discretion to set the scope and scale of the plan's monitoring program. The indicators for these questions were based on Paperwork Reduction Act considerations and information we could collect from community interactions without placing a burden on members of the public. While not included in the minimum required monitoring, it could be a simple exercise to collect and compile this information with the proper tracking mechanisms in place. We hope to be able to include this in all our monitoring and evaluation reports.

Comment 28: There is general support for the monitoring plan, but commenters recommend that question 26 should be a higher priority and included in the minimum required monitoring instead of potential monitoring as capacity allows because preserving designated wilderness is very important to wildlife. **Associated Letter: 44**

Response: The forest supervisor has the discretion to set the scope and scale of the plan's monitoring program. We will be doing this monitoring to fulfill national monitoring requirements. We hope to be able to include it in all our monitoring and evaluation reports.

Comment 29: Commenter suggests the monitoring plan includes monitoring of road and trail construction and how it affects the distribution of invasive plant species and wildlife, especially elk. **Associated Letter: 44**

Response: The forest supervisor has the discretion to set the scope and scale of the plan's monitoring program. The distribution of invasive plant species and wildlife are affected by many variables. It would be extremely difficult to design a set of monitoring indicators that could tie changes in distribution specifically to road and trail construction. While it is possible that new roads and trails may be built under the direction provided in the revised plan, there is no current identified need for new roads or proposals for new road or trail construction.

Comment 30: There is a concern that monitoring questions 2 and 4 (Table 7) are linked to a draft desired condition for Rare and Endemic Plant and Animal Species and Habitats (DC2) but that it would not provide any answers on the status of rare and endemic plants. **Associated Letter: 47**

Response: It is correct that these questions would not provide information about the status of rare and endemic plant species. It would provide information on habitat conditions. The desired condition these questions are linked to states "Habitats and refugia for rare and endemic species are intact, functioning, and sufficient for species persistence." Question 2 ("How is seral state diversity changing over time?) provides information on habitat conditions. The information would not tell us if a species population was increasing or decreasing but it could raise or lower the level of concern for the persistence some rare and endemic species based on their life history requirements. For example, if late seral conditions in Spruce-Fir Forest continue to decline, it might indicate that the need for more specific management plant species like Mogollon death camas, which depend on late seral conditions in Spruce-Fir Forest. Question 4 ("What is the status of native fish populations?") tells us nothing about plants and was never intended to. It provides information on endemic fish species.

Draft monitoring question 70 (final question 65) does ask about the status and trend of rare plants across the forest. It is a potential additional monitoring question that will be addressed as capacity allows. We anticipate being largely reliant on partners and multi-party monitoring efforts. We are optimistic that partners such as the New Mexico State Forestry Department's Endangered Plants Program that already collect this type of data will be willing to share with us.

Comment 31: Commenter observes that the draft plan is based on current knowledge of fire ecology and projected climate change, there is much about the future that cannot be known at this time. Commenter suggests the monitoring plan must focus on collecting data needed to manage for resiliency in the face of climate change. Toward that end, commenter recommend s that the second part monitoring question 40

("Have recommended BMPs been implemented? Are recommended BMPs effective?") be elevated from a potential question to be answered if resources allow, to the set of Minimum Required Monitoring. Commenter is particularly interested in the information this monitoring would provide about restoration projects and Burned Area Emergency Response actions. Commenter would also like to see a question added to record the detailed trajectory of the natural recovery of burned areas because of the number of large fires over the last two decades. Commenter suggests that information about natural recovery processes will be useful to prioritize response actions. **Associated Letters: 640 and 653**

Response: Even though monitoring question 40 is identified as additional monitoring as capacity allows, the agency has had a target for monitoring best management practices for several years and that is anticipated to continue. This means some of this monitoring will get done every year. Burned Area Emergency Response has its own program direction and monitoring program for treatment effectiveness and often recommends noxious weed monitoring as a treatment. There are also some plan monitoring questions that could be used to make inferences about natural recovery over longer timeframes, such as trends in seral state proportion (monitoring question 3).

Comment 32: Commenter would like to see monitoring question 68 ("What is the status and trend of invasive and noxious plant species?") be elevated to Minimum Required Monitoring. Commenter states that while we have no reason to believe that weeds are a major problem on the forest at this time, early warning through targeted surveillance will be crucial to successfully addressing weed problems should they occur due to changing conditions. **Associated Comments: 640 and 653**

Response: The forest supervisor has the discretion to set the scope and scale of the plan's monitoring program. We agree that early detection is a critical component of weed management. The plan emphasizes this in the management approach Early Detection Rapid Response (EDRR) in the Non-native Invasive Species section. This section also contains an objective to inventory 2,000 acres for noxious weeds every year. This question was included so that it would require us to report out to the public, and to highlight potential opportunities for multi-party monitoring as we have stakeholders with expertise that could help us accomplish more.

Comment 33: Commenter notes that monitoring question 70 ("What is the status and trend of rare plants across the forest?") has been assigned relatively low priority, presumably because of the large effort required to collect such information. Commenter states that plant diversity and endemism is an important component of what makes the forest special and encourages staff and leadership to actively pursue collaborations and funding to make those efforts possible. **Associated Letters: 640 and 653**

Response: The commenter understands the priority ranking correctly. We are actively pursuing collaborations to make this possible and will continue to do so.

Comment 34: Commenter is concerned that question 52 is not minimum required monitoring. Commenter observes that this question is specific to landscape-scale desired conditions for old growth in forested ecological response units, asking "What is the status and trend of large trees in timber types?" and stating that the desired conditions number varies by the ecological response unit - but no such numbers exist. Commenter is concerned about claims in the draft EIS that there are "Coarse-filter plan components to maintain appropriate levels of old trees," which are desired conditions. Commenter notes that of these, only six have quantifiable metrics specific to patch or group size, not the density or frequency of old and large trees. Commenter is concerned there are no safeguards for trees of exceptional age or diameter, or percentage of forest under tree canopy. **Associated Letter: 712**

Response: The statement about desired condition numbers refers to the numbered desired condition, not that there are specific numbers of large trees identified in the desired conditions. Efforts to clarify this were made in the final monitoring program. Forest Inventory and Analysis data is the intended data source. Given that

Forest Inventory and Analysis staff are already collecting this information, it is likely that we will be able to process and evaluate that data, even though it is not identified as minimum required monitoring. There is a table in the Timber, Forest, and Botanical Products Affected Environment section of the FEIS that includes what would be the baseline data. It is not the number of trees, but the trend in the larger size classes that would be evaluated.

Although we admit it isn't obvious, this is not the only question that addresses old or large trees, and canopy cover is addressed. All Upland Ecological Response Units DC 3b states: "All seral states are present. The relative proportions of seral states are at least 66 percent similar to the reference proportions as described in the most recent Region 3 Seral State Proportion Supplement." This desired condition is tied to minimum required monitoring question 2, which asks "How is seral state diversity changing over time?" As described in the environmental analysis methodology for Upland Vegetation, Fire Ecology and Fuels Seral state proportion or diversity reflects the structural variability in dominant vegetative lifeform (sparsely vegetated, herbaceous, shrub or tree), woody species canopy cover and size class, number of stories or age classes. It is incorporated into the plan by reference (Region 3 Seral State Proportion Supplement), so that if the science about any particular community reveals new information the supplement can be updated, and the plan will remain consistent with the science without an amendment. Further, since the draft was released, Southwestern Regional Office staff have developed relationships, based on Forest Inventory and Analysis Data, that link state classes with dominant overstory age class. This allows an approximation of the area expected to be dominated by old trees, regardless of size. Draft monitoring question 52 has been retained, with language revised to include large and old trees with an additional indicator for old trees.

Comment 35: Commenter points to monitoring question 12, which asks "What economic contributions are forest-based recreation, wood and botanical products, grazing, wildlife, and fisheries making to local communities and how are they changing over time?" Commenter observes the indicators of program outputs, dollars per program area, inflation adjusted gross receipts and number of user days and disagrees with the draft plan's assertion that this question addresses the 2012 Planning Rule's monitoring requirements for the status of visitor use, visitor satisfaction and progress toward meeting recreation objectives or progress toward meeting desired conditions and objectives in the plan for providing multiple use opportunities. Commenter states that this is an extremely outdated and inappropriate approach toward monitoring the extent to which the plan is achieving the social and economic sustainability requirements. Commenter states that measures of success such as "program outputs" like timber board feet and livestock animal unit months have proven to be ecologically and economically unsustainable. **Associated Letter: 712**

Response: Monitoring questions 5, 6, and 7 complete those requirements to fulfill the 2012 Planning Rule's monitoring requirements for the status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives. Monitoring question 12 uses the same data to evaluate progress toward desired conditions and objectives pertaining to social and economic sustainability and multiple use management as it relates to recreation. The other indicators and data elements address the other multiple uses, fulfilling the monitoring requirement that was added to the final directives based on response to comments received from the Federal advisory committee that worked on the 2012 Planning Rule. This is explained in the Requirements subheading of the plan's monitoring program.

Comment 36: Commenter points to monitoring question 4, which asks "What is the status of native fish populations." Commenter notes the rationale for selecting this question to meet the requirement for select ecological conditions was because there are existing permanent monitoring sites along several streams or rivers that are already tracking the indicators, as well as a multitude of research and fisheries work that captures this across the forest. Commenter is concerned the question doesn't ask about the status of rare plants, but they are listed as one of the resource areas the question applies to. Commenter is more concerned that this question doesn't ask about any other at-risk species besides fish and suggests that to meet planning rule requirements, each species of conservation concern needs to be addressed, not just a subset of them. Commenter requests that there should be questions and indicators for old growth protection and recruitment,

conservation diversity of plant and animal communities, ecological integrity, invasive species, and feral livestock. **Associated Letter: 712**

Response: Monitoring question 4 references desired conditions for Rare and Endemic Plant ***and*** Animal Species. Monitoring question 70 (final question 65) asks about the status of rare plants. There is no requirement for the plan monitoring program to include species of conservation concern, rather there is a requirement to include a minimum of one focal species, which may or may not be a species of conservation concern. Related to old growth monitoring, see response to comment 34 in this section of this appendix. The monitoring program includes many questions and indicators about ecological integrity and the ecological conditions that support plant and animal communities. Final monitoring question 63 asks about the status and trend of noxious plant species, like monitoring question 4, which the commenter points to asks about native and non-native fishes. The feral cattle issue is not a plan issue, but a compliance issue that will be monitored independent of the plan's monitoring program.

Comment 37: As part of the minimum required monitoring, commenter requests vegetation monitoring in key areas of grazing allotment be added to inform adaptive management and assess movement toward desired conditions. This could include long-term photo points and vegetation sampling transect data. **Associated Letter: 151**

Response: Allotment level monitoring will feed into plan-level monitoring through the Watershed Condition Classification indicator for rangeland vegetation (monitoring question 1).

Comment 38: Commenter points to the last statement in the draft plan's management approach "CDNST Management" and states that forest plans must monitor progress toward meeting desired conditions and objectives for National Scenic Trails. Commenter suggests the following questions and indicators for inclusion in the monitoring plan.

1) "Have plan components for desired natural-appearing or naturally evolving landscapes? Indicator: Acres meeting the high or very high scenic integrity levels."
2) "Are the current recreation settings providing for or moving toward desired ROS classes? Indicator ROS indicators consistency with desired ROS class."
3) "Is the CDNST travel route maintained to standard? Indicator: Miles of trails maintained annually."
4) "Has a CDNST unit plan been prepared and approved? Indicator: CDNST unit plan scoping, draft and final."
5) "Have the effects from any uses or activities been as predicted that were allowed due to a not likely to substantially interfere with the nature and purposes determination (NTSA, Section 7(c))? Indicator: Monitoring plan as described in the other uses or activities approving decision document."

Another commenter is concerned about the carrying capacity of the Continental Divide National Scenic Trail, the ability to accommodate increased use and move toward desired conditions. This commenter suggests the following monitoring questions be included:

6) Include a monitoring indicator measuring the number of water sources to be developed in the next 5-10 years.
7) Add a monitoring indicator to measure increases in signage and suitable access over the next 5 years.
8) Establish carrying capacity and monitoring with standards and indicators relative to the CDNST.

9) If the Trail has not been formally located/surveyed, or if the Trail is currently located on motorized roads/trails, a monitoring indicator should be added to measure how many miles would be located/surveyed/relocated.

Associated Letters: 73 and 180

Response: All the suggestions offered appear to be elements of the 2009 Continental Divide National Scenic Trail Comprehensive Plan, which we have been and will continue to implement in addition to the forest plan.

Comment 39: Commenter recommends that the impacts of grazing, mechanical treatments, prescribed and naturally ignited wildfire, herbicide treatments, recreation and other ground-disturbing activities be monitored in botanical areas. Commenter also recommends these areas be a priority for increased inventory surveys, population trend monitoring and habitat restoration projects. **Associated Letter: 47**

Response: Monitoring question 70 would provide the information necessary to evaluate the effects of management on rare and endemic plants wherever they occur. We continue to pursue collaborations to monitor these species.

Comment 40: Monitor flow and temperature regimes in stronghold habitats for Gila trout and future planned restoration zones. We recommend that stream temperature monitoring of native trout waters be included as an indicator for ecological conditions that contribute to recovery of at-risk species (4) and measurable changes related to climate and other stressors (6) in the minimum required monitoring plan. Develop a permanent stream temperature-monitoring program on all Gila trout streams in New Mexico, as stream temperature will be the biggest indicator for monitoring the long-term survival of Gila trout. Stream temperature is also strongly coupled with climate variables (air temperature and precipitation), which are expected to significantly change over the 21st century. A consistent, reliable system for stream temperature monitoring is the key to evaluating and adjusting Gila trout conservation efforts over the long term. We recommend that stream temperature monitoring of native trout waters be included as an indicator for ecological conditions that contribute to recovery of at-risk species (4) and measurable changes related to climate and other stressors (6) in the minimum required monitoring plan. **Associated Letter: 672**

Response: Gila National Forest staff had a stream temperature monitoring network precisely for these purposes, but it was abandoned due to capacity issues. Those capacity issues make this question unable to meet the forest supervisor's intent for the minimum required monitoring. We would love to be able to reestablish and maintain a similar, but sustainable network over the long term and look to partners to help us do that. A question and indicator for stream temperature monitoring in native trout waters has been added to the capacity-dependent monitoring section in chapter 5 of the final plan.

Comment 41: An assessment of progress toward meeting forestwide objectives in the plan will be valuable for analyzing the success of plan implementation (Did we do what we said we would do?). For example, the draft plan proposes to restore or enhance 100 miles of stream habitat every ten years (pg. 114). The final plan's monitoring section should include questions that assess progress toward meeting these objectives – this also provides an element of accountability to the public, which is a primary purpose of the monitoring program (draft plan, pg. 261). **Associated Letter: 672**

Response: The draft and final monitoring plan have questions to assess progress toward meeting objectives (final questions 35 and 37).

Comment 43: Commenter states that the monitoring plan doesn't address their concerns about roads. Commenter requests the following questions and indicators be added in the final monitoring plan.

1) How many miles of road have been improved or maintained to meet objective maintenance standards?

2) How many miles of road have been treated to meet best management practices?
3) How many miles of road have been effectively treated within at-risk and impaired watersheds according to the WCF roads and trails indicator, and within watersheds contributing to sediment or temperature impairment under section 303(d) of the Clean Water Act?
4) What percentage of road miles have been decommissioned in subwatersheds with a "poor" WCF roads and trails indicator?
5) What percentage of unneeded road miles have been decommissioned and reclaimed within inventoried roadless areas or areas with identified wilderness characteristics, critical habitat, or other areas with recognized conservation values.
6) What is the percentage of forest with decreased habitat fragmentation in areas important for providing connectivity and wildlife habitat?
7) What percent of the road system is regarded as climate ready?
8) What percentage of subwatersheds have an identified minimum road system?

Associated Letter: 712

Response: The forest supervisor has the discretion to set the scope and scale of the plan's monitoring program. Monitoring question 1, which tracks trends in watershed condition scores and individual indicator scores, includes the Roads indicator that includes road maintenance, proximity to water, and open road density attributes. Since there is a plan objective for decommissioning unneeded closed roads, that will also be tracked (final monitoring questions 35 and 37), as would any road work done to accomplish plan objectives for soils, watersheds, riparian and aquatic ecosystems, and species. Best management practices monitoring is included in the draft and final monitoring program (final question 40) and would include any best management practices monitoring done on roads. The minimum road system was identified in the travel management process, with the decision signed in 2014. The final plan includes an additional desired condition in the Roads section for a climate-resilient transportation system, but no monitoring question related to a climate-resilient transportation system and a vulnerability assessment.

Multiple Use

Comment 1: There are differing perspectives on the way the plan supports multiple-uses or traditional uses of the forest. Some suggest that wildlife, fish, native plants, and all physical and chemical ecosystem components and processes should be prioritized over human uses in the plan and that people be characterized as guardians, not users of the forest. These commenters express disappointment with the plan as the observe the plan panders to industries rather than managing for the long-term public interest. Some point to increasing threats posed by climate change, invasive species, and past fire suppression as reasons why no level of human use should take priority over ecological resilience and sustainability. Some would like the plan to ban logging, grazing, mining, motorized recreation, and chemical use as "they are not consistent with modern ecological concepts." Others express appreciation for the way that the plan supports traditional and tribal uses of the forest. Some would like the plan to do more to "protect our traditional ways of life that rely on a healthy and wild forest while also conserving historic and cultural sites, and the lands wildlife call home. Hunting, fishing, hiking, and herb and firewood gathering are important opportunities within the Gila and along the Gila River. Outdoor recreation supports our local jobs and generates important tax revenues to Grant County." Another commenter would like to see the emphasis be on eco-tourism.

Some commenters observe a bias toward environmentalist viewpoints in the plan and state that the plan is "unworthy of, and in opposition to, the foundational purposes and principles of the United States Forest Service." One commenter states the bias against multiple use extends to the environmental analysis where special designations and recreation are glorified and only negative conclusions are drawn related to other uses, especially livestock grazing. Other commenters want the plan to reduce restrictions and rules on multiple uses

because of the economic damage they have already caused. These commenters state opposition to recommended wilderness, wild and scenic rivers, wildlife corridors, wolves, or some combination thereof, preferring instead that the plan support ranching, hunting, mining, and logging to the fullest extent possible. **Associated Letters: 6, 39, 41, 138, 142, 159, 451, 596, 631, 647, 673, 675, 683, 706, 707, 718.4, 718.16, 718.29, 718.3699, 718.3702, 718.3704, 718.3705, 718.3716, 718.3721-6, 718.3730, 718.3735, 718.3736, 718.3751, 718.3757, 718.3760, 718.3763, 718.3771, 718.3772, 718.3775, 718.3776, 718.3777, 718.3779, 718.3781, 718.3782, 718.3783, 718.3784, 718.3786, 718-3787, 718.3789, 718.3790, 718.3795, 718.3797, 718-3799, 718-3800, 718.3804, 718.3805, 718.3806, 718.3807, 718-3809, 718.3811, 718.3812, 718.3813, 718.3814, 718.3816, 718.3817, 718.3818, 718.3825, 718.3832-6, 718.3833, 718.3840, 718.3841, 718.3842, 718.3843, 718.3844, 718.3845-6, 718.3849, 718-3851, 718.3853, 718.3857, 718.3858, 718.3859, 718-3860-6, 718.3861, 718.3862, 718.3863, 718.3866, 718.3868, 718.3872, 720.5-4, 720.8, 720.11, 720.12, 720.14, 720.30, 720.31, 720.32, 720.33, 720.38, 720.39, 720.43, 720.44, 720.46, 720.51, 720.54, 720.55, 721.1 through 721.3, 724.11, 726.0 through 726.12547, 726.12351, 726.12359, 726.12363, 726.12367, 726.12370, 726.12371, 726.12375, 726.12388, 726.12396, 726.12402, 726.12403, 726.12405, 726.14208, 726.12409, 726.12411, 726.12414, 726.12415, 726.12427, 726.12428, 726.12435, 726.12442, 126.12450, 726.12458, 726.12467, 726.12476, 726.12483, 726.12485, 726.12538, 726.12539, 726.12540, 726.12542, 726.12544, 726.12448, 726.12502, 726.12505, 726.12509, 726.12510, 726.12513, 726.12514, 726.12520, 726.12525, 726.12527, 726.12532, 726.12534, 726.12545, 727.4237, 727.4243, 727.4247, 727.4249, 727.4259, 727.4260, 727.4265, 727.4266, 727.4270, 727.4272, 727.4276, 727.4277, 727.4283, 727.4288, 727.4296, 727.4301, 727.4308, 727.4316, 727.4317, 727.4319, 727.4326, 727.4330, 727.4337, 727.4341, 727.4348, 727.4357, 727.4362, 727.4364, 727.4369, 727.4371, 727.4373, 727.4377, 727.4381, 727.4385, 727.4389, 728.239, 728.241, 728.244, 728.245, 728.248, 728.249, 728.250, 728.253, 728.263, 728.266, 728.269, 728.273, 728.278, 728.279, 728.281, 728.284, 728.287, 728.292, 728.296, 728.304, 728.308, 728.310, 728.316, 728.318, 728.332, 728.335, 728.337, 728.339, 728.340, 728.347, 728.353, 728.357, 728.361, 728.362, 728.374, 728.376, 728.381, 728.382, 728.389, 728.396, 728.397, 728.399, 728.402, 728.405, 728.407, 728.413, 728.416, 728.419, 728.423, 728.427, 728.434, 729.7, 729.12, 730.60, 732.7**

Response: The Forest Service operates under the Multiple-Use, Sustained-Yield Act of 1960. This law authorizes the Secretary of Agriculture to develop and administer the renewable resources of timber, range, water, recreation, and wildlife on the national forests for multiple use and sustained yield of the products and services. The act defines multiple use as "the management of all the various renewable resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people..." and sustained yield as" the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the national forests without the impairment of the productivity of the land."

The National Forest Management Act of 1976, which is the legislation that places the requirement for every national forest and grassland to have a strategic land management plan, directs the Forest Service to "provide for multiple use and sustained yield of the products and services obtained therefrom in accordance with the Multiple-Use, Sustained-Yield Act of 1960, and in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness." The 2012 Planning Rule also requires that plans provide for integrated resource management, which is defined as "Multiple use management that recognizes the interdependence of ecological resources and is based on the need for integrated consideration of ecological, social and economic factors" (36 CFR 219.19), without one being a priority over another.

An outright ban on timber production is inconsistent with law, regulation, and policy and is contrary to the purpose and need for change identified during the assessment and would impair the management's ability to move toward desired conditions for vegetation communities, fire regimes, and fuels. The range of alternatives does explore the level of contribution timber production provides. Alternative 5 restricts mechanical treatments to the wildland-urban interface, reducing the suitable timber base from more than 350,000 acres to under 30,000 acres. Motorized recreation is a legal recreational use, only as it occurs on the designated open road system, and many of the recreating public enjoy the motorized opportunities the forest provides. About

livestock grazing, see response to comment 1 under the Livestock Grazing heading in this appendix. About minerals and mining, see response to comment 1 under the Minerals heading in this appendix. About herbicide, see response to comment 1 under the Herbicide heading in this appendix. About recommended wilderness, see response to comment 53 under the Wilderness heading in this appendix.

Comment 2: Youth commenters from a local school have these things to say about multiple uses: "…some of the groups want similar things, such as roads. These groups can some to some sort of agreement to satisfy everyones [sic]beliefs and opinions. Beef and firewood are nesessities [sic]for some people. Some people like to be in the woods to camp and hunt too. We can't satisfy just one groups needs, there has to be a compromise."

> "…in my opinion, I think all parts of our forest should get equal amounts of money in order to make our whole forest look more equal and organized. Without a nicely put together forest, what kind of tourists will come to visit the Gila?"
>
> "…I have a better understanding of how much of an impact the forest plan has on not only us but our communities and economy. I personally come from a long line of successful farmers and ranchers so it is very important for me to advocate for the beef industry. I also believe it is important for me to understand where the other industries stand. Just like the cattle industry all aspects and industries of the forest plan are going to stand firm in what we believe in, until we can bridge the gap between all of these industries. I believe if we can advocate a positive message about all industries, we can gain awareness from not only other industries but also people. Ultimately, we can reach the hearts of many people and gain their acceptance and support by simply reaching out.
>
> When asking people where would we be without cattle many people say, 'we wouldn't have beef!' Which is very true but many people don't understand just how important it is. Cows provide us with food to feed our families, milk to quench our thirst, and many other things like makeup and bubblegum to satisfy us. I do see the point of view that people like recreationists have, but, if these people can not fulfill their duties such as opening/closing the gates and leaving the animals alone the rancher lose a lot of money and stock animals."
>
> "I personally go camping and swimming at the rivers down here, and the idea of the showers kind of destroy the idea of camping for me (Just an opinion). I also like being able to go ride around on our four wheelers, but I have a lot of friends that own ranches and many of them say things like that disrupt many of their chores and other things and ranches are very important, so I think they should be priority."
>
> "…I learned a lot about the struggles that the Forest Service have to go threw [sic]. Keeping the forest safe. Safe for animals to forage and to have a place for them to live safelly [sic] away from prediters [sic]. I learned that all of the Forest Service workers have to work together and it is hard to give people what they want but also giving the community what it needs while still trying to keep peace. Peace that ranges from farmers and ranchers to the publics. Also trying to keep the traditions of our natural life and keep our forest life alive for many years to come for benefit to both men, women, and animals."
>
> "I think that we need to just make sure people know that they need to leave gates how they found them. A lot of people camp, ride four wheelers and hike on these lands, so we need to put out signs that state 'leave gates as found'. Many ranchers have cattle in the forest so this is important to be known."
> **Associated Letters: 220, 221, 222, 223, 225**

Response: We appreciate your comments and opinions. We are grateful for the time and thought you all have invested in your public lands. We have made our best efforts to provide you a balanced forest plan that fulfills the Forest Service mission, which is "to sustain the health, diversity and productivity of the Nation's forests and grasslands to meet the needs of present and future generations." That means providing sustainable

opportunities for cattle grazing, firewood gathering, camping, hunting, hiking, swimming, and other types of recreation that people enjoy.

Natural Processes

Comment 1: There is a concern that there is an overdependence and emphasis on restoring natural processes such as fire, insects and disease, erosion, and flooding because they have altered and most often degraded the condition and function of watersheds and ecosystems for millions of years. The idea that human activities are unnatural is detrimental to healthy ecosystems. The plan should place more emphasis on the use of well planned, science-based, and proven management and treatment techniques when addressing the basic resource needs and the vital functions of the watersheds, soils, water quality, and key vegetative communities. **Associated Letters: 24, 100, 164, and 631**

Response: Natural disturbance processes, such as fire, insects and disease, erosion, and flooding, support healthy ecosystems and watersheds when the frequency, extent, and magnitude, severity or intensity are at levels science indicates occurred historically. The 2012 Planning Rule's coarse filter-fine filter approach to providing for the diversity of plant and animal species is based on the premise that "native species evolved and adapted within the limits established by natural landforms, vegetation and disturbance patterns prior to extensive human alteration." (Preamble to 2012 Planning Rule Federal Register, Volume 77, Number 68, April 9, 2012, page 21212). The draft plan contains desired conditions that describe these natural disturbance patterns in the All Upland Ecological Response Unit section, subsequent individual Ecological Response Unit sections, and the Riparian and Aquatic Ecosystems, Watershed and Soils sections. The 2012 Planning Rule specifically recognizes the importance of fire to sustainability and requires plans to identify opportunities to restore fire-adapted ecosystems (36 CFR 219.8).

All plan alternatives include direction to support project-level planning and emphasizes science-based and proven management and treatment techniques including prescribed and naturally ignited wildfire, mechanical harvest, and other thinning treatments. In alternative 2, management uses all these techniques. There is an emphasis on fire, but the plan does not impose a limitation on the number of acres that may receive mechanical treatments. Alternatives 3 and 4 also use all these techniques but limit the number of acres of prescribed fire and emphasize mechanical treatment techniques. Alternative 5 uses all these techniques but limits mechanical treatments and emphasizes fire. The science basis for the use of these tools and associated trade-offs with other disturbance processes such as insects and disease, erosion, and flooding is included in the effects analyses for Soil and Watershed Resources; Upland Ecological Response Units, Fire Ecology and Fuels; and Riparian and Aquatic Resources within the FEIS. The forest supervisor will decide the relative emphasis the plan places on which tools based on public input and the analyses in the FEIS.

Comment 2: There is a concern that while the plan acknowledges fire has both positive and negative effects, it is still considered the primary restoration tool. Concerned commenters question the science basis for using fire as a restoration tool and the rationale for it being the primary tool suggesting that treatment effects rather than cost-effectiveness should be the basis for management. Commenters also suggest that recent large wildfires prove that fire is not a consistent or reliable tool. **Associated Letters: 24, 100, 164, and 631**

Response: We recognize that there are risks and trade-offs associated with the use of prescribed or naturally ignited wildfire. The best available science was used to develop the plan and support the analysis, which discusses those risks and trade-offs in terms of their effects on resources and uses. We also recognize that commenters have different preferences about which management tools should be emphasized. Therefore, the range of alternatives explores differing levels of emphasis and limitations on the use of fire and mechanical treatments within the constraints of projected budgets (project record file name 20181113_VegObjDevelopment_Calculator), consistent with the 2012 Planning Rule's requirements. The 2012 Whitewater Baldy Complex and 2013 Silver fires were two of the largest fires the Gila National Forest has seen since before the fire suppression era. When and where weather and fuel conditions were favorable,

these fires were used for restoration, but for the most part they were managed under a suppression objective because weather and fuel conditions were not favorable.

Comment 3: There is a concern about implications created by language in the background information provided for Wildland Fire and Fuels Management and Livestock Grazing desired condition 2. The language in the background information for Wildland Fire and Fuels Management is: "Alternately, livestock grazing can compete with fire restoration objectives because the fine fuels necessary to support fire occurrence, spread, and flame lengths sufficient to thin stands, is also the forage crop grazing permittees depend on. There are times and locations where a lack of adequate fuel loading is the challenge to restoring the natural role of fire." The Livestock Grazing desired condition is: "Livestock use provides for conditions that support movement toward natural fire regimes." Commenters state: "With the plan prioritizing fire as a restoration tool, these statements set the stage for a future increase in grassland wildfires which will destroy not only the shrub and tree vegetative components but also many of the grasses that are not adapted to fire. There is science that says that healthy grassland communities out-compete and prevent the invasion of woody species over time. It is only after events like years of severe overgrazing or intensely hot or repeated wildfires that woody species become established where grassland communities once existed. The idea that fire inhibits shrub and tree establishment over the long term in grassland ecosystems is not support by research or current proper grazing management practices. It is requested that the plan be revised to better reflect what the people who live and depend upon the Gila National Forest and not so driven by the desire to restore the natural role of fire. There are many examples on the forest where fire has not resulted in a historic healthy and functioning ecosystem especially in the long term. Most of the recent wildfires on the forest have destroyed healthy and functioning ecosystems and it will take hundreds, if not thousands of years for these climax ecosystems to ever return to the landscape. If forest management turns everything into a fire-adapted ecosystem where periodic fire occurs, climax ecosystems will be a rare feature on the landscape. **Associated Comments: 24, 100, 164, and 631**

Response: There is science that demonstrates healthy grassland communities, and healthy grass communities in the understory of woodland and dry forests, out-compete and prevent woody encroachment and infill over time (DEIS Upland Vegetation, Fire Ecology and Fuels Effects Common to All Vegetation Types and Alternatives). There are also many interacting factors that influence woody encroachment, with the most important drivers of encroachment varying in different locations due to climate (Archer et al. 2017). Additional science and discussion have been incorporated in the FEIS to better acknowledge these complexities and the effectiveness of various management approaches in restoring healthy grasslands and understory grass communities.

Under all alternatives, management will be directed toward achieving and maintaining desired conditions for a diversity of successional or seral states across the landscape and over time. Desired conditions for vegetation communities are based on the best available science and include a diversity of seral states appropriate for the vegetation type. Climax, or late successional states are part of the desired seral state diversity in every vegetation type, as are early and mid-successional states. The plan also includes science-based desired conditions for fire regimes specific to each vegetation type and not all of them are frequent-fire. We acknowledge that successional processes take a long time and that in some vegetation types there is less area in climax, or late successional states as we would like because of wildfire (EIS: Effects to Spruce-Fir Forest and Effects to Mixed Conifer with Aspen). In other systems, stand-replacement wildfire is not responsible for departure from desired conditions in (EIS Effects to Mixed Conifer-Frequent Fire, Effects to Ponderosa Pine Forest, Effects to Ponderosa Pine-Evergreen Oak, Effects to Madrean Piñon-Oak Woodland, Effects to PJ Woodland, Effects to PJ Grass Woodland, Effects to Juniper Grass Woodland, Effects to Montane/Subalpine Grasslands, Effects to Colorado Plateau/Great Basin Grassland, and Effects to Semi-Desert Grassland). In the analysis of Upland Vegetation, Fire Ecology and Fuels, the alternatives are evaluated in terms of how they help management move toward desired conditions for seral state diversity and

fire regime. The forest supervisor will consider public input and the analysis in the final EIS before determining the relative emphasis the final plan will place on fire as a restoration tool.

Response Literature:

Archer S.R., E.M. Andersen, K.I. Predick, S. Schwinning, R.J. Steidl, and S.R. Woods. 2017. Woody Plant Encroachment: Causes and Consequences. In: Briske D. (eds) Rangeland Systems. Springer Series on Environmental Management. Springer, Cham. https://doi.org/10.1007/978-3-319-46709-2_2

Comment 4: There is a suggestion that the plan needs to mention the extent of dead and dying trees from drought and beetle infestations. **Associated Letter: 39**

Response: The plan does mention the extent of dead and dying trees. For example, desired conditions for adaptive capacity to drought and climatic variability are included for vegetation communities (All Upland Ecological Response Units LS-DC2) and for insect infestations and disease outbreaks to be within limits that maintain fully functioning ecosystems and native vegetation communities (All Upland Ecological Response Units LS-DC1). Information regarding insect and disease agents and tree mortality was discussed in the assessment report and in the Upland Vegetation, Fire Ecology and Fuels Affected Environment section of the EIS. The plan also includes a monitoring question about trends in insect infestations, disease outbreaks and tree mortality (final monitoring questions 54 and 55).

Natural (Historic) Range of Variation

Comment 1: There is a concern about summary of the assessment in the draft plan. This concern arises from the acknowledgement the assessment summary provides of current soil, watershed and vegetative conditions being very different than the desired conditions in the plan and totally outside the historic range of variability. Conditions are acknowledged but it is not clear how this will be addressed in the future. There is a suggestion that the plan needs to recognize that many highly degraded acres on the Gila National Forest will never return to a condition that is within their once historic range of variability and that these areas can at least be managed to provide resources that are beneficial to man. Using pre-European settlement conditions as the baseline for determining the desired future condition results in plan direction that is not achievable and will result in detrimental unintended consequences. One commenter states their repeated protests using pre-European settlement conditions as the baseline throughout the revision process were ignored. **Associated Letters: 24, 100, 164, and 631**

Response: Desired conditions are aspirations or visions of what the plan area, or portions thereof should look like in the future. They must be feasible or attainable through integrated resource management for multiple uses. Progress toward these desired conditions is to be made during the life of the plan, but achievement of desired conditions is not required (FSH 1909.12 Chapter 20 Section 22.11). Progress toward the plan or any of its alternatives will be made by implementing objectives, adhering to standards and guidelines, and taking adaptive management actions when monitoring indicates it is necessary.

The 2012 Planning Rule requires plans to provide for ecological integrity, species diversity and multiple uses. The planning rule defines ecological integrity as “the quality or condition of an ecosystem when its dominant ecological characteristics (for example composition, structure, function, connectivity, and species composition and diversity) occur within the natural range of variation and can withstand and recover from most perturbations imposed by natural environmental dynamics or human influence” (36 CFR 219.19). The 2012 Planning Rule and the final Forest Service directives require the planning team to default maintaining or restoring the natural range of variation for specific key ecosystem characteristics which is defined as pre-European settlement – also referred to as the historic range of variation (FSH 1909.12 Chapter Zero Code Section 5).

We recognize there are differing perspectives amongst our stakeholders and the science community about whether the historical range of variation is a realistic basis on which to base desired conditions due to climate change and other factors. We have not ignored those that have voiced their opinions on this matter. We have adhered to the planning rule, agency directives and the best available science. The science that supports development of the future range of variation is rapidly developing but is not yet mature. When it does, there may be a need to re-evaluate some aspects of land management in some places.

The final directives do provide the forest supervisor the authority to determine that it is not appropriate, practical, possible, or desirable to contribute to restoring conditions to the natural range of variation for specific areas within an ecosystem under some circumstances. If and where this determination is made, desired conditions should be constructed based on an understanding of what conditions would sustain key ecosystem characteristics and at-risk species (FSH 1909.12 Chapter 20 Section 23.11a). Until there is sufficient understanding to operationalize the future range of variation, the historical range of variation is the best way to understand what resilient ecosystems look like.

Desired conditions are not tied to one version of an ecosystem map. Understanding and communicating gradual shifts in site potential and ecosystem features helps to identify the adaptation options best suited for meeting desired conditions which are not static to a particular area but remain applicable to the overall ecosystem, forest, and life of the forest plan (USDAFS-2023 Box 5). In our climate reality, desired conditions need to reflect the current and foreseeable potential of the ecosystem and be informed by the best available scientific information to support long-term ecosystem function (USDA FS 2023). The natural range of variation provides a likely and reasonable starting point in understanding the conditions that support ecological sustainability (FSH 1909.12 chapter 20 section 23.11a item 3). Therefore, desired conditions based on the natural range of variability define realistic management goals and a basis on which to evaluate the success of adaptation efforts (USDA FS 2023).

Literature Cited in Response:

USDA FS (United States Department of Agriculture-Forest Service). 2023. Regional climate adaptation strategy: Integrating existing tools, science, and collaborative outcomes for climate adaptation, mitigation, and socioeconomic vulnerability. Version 9. USDA Forest Service technical guide. Southwestern Region, Albuquerque, NM. 158 pp.

Needs for Change

Comment 1: There is a concern about the following language in the summary of the needs for change in the plan: “Past fire suppression, historic overgrazing and other activities have disrupted many natural processes, such as wildfire and natural vegetation succession.” Specifically, the concern is that fire suppression is lumped with historic overgrazing and other activities that occurred during the late 1880s and early 1900s. The lumping of fire suppression into the same category of a disruptor of natural processes is very misleading and more of a politically correct theory than it is based in fact. It is also difficult to understand how fire is a desired natural process when it impedes and often destroys “natural vegetation succession.” Natural vegetation succession results in dynamic and diverse plant communities, healthy functioning ecosystems and watersheds, and highly productive soils. Just because fire is causing the disturbance doesn't mean the resulting impacts are beneficial or natural. There is a request to revise the language in the plan to make it clear that wildfires burning under unnatural conditions can and have resulted in unnatural impacts that are way beyond the historic range of natural variability. **Associated Letters: 24, 100, 164, and 631**

Response: This statement in the summary of the needs for change is consistent with the best available science (Allen 1984 and 1989, Covington and Moore 1994, Swetnam et al. 1999, Swetnam and Baisan 1996, Davis and others 2002, Kaib and others 1996, McPherson and others 1995 among others as cited in Smith 2006a, Smith 2006b, Smith 2006c, Schussman 2006, Schussman and Gori 2006, Smith 2007 and Gori and Bate 2007). Early successional theories conceptualized natural vegetation succession occurring in the absence of

disturbance but has since been supplemented with an understanding of the ecological importance of fire and disturbance processes.

Related to the request to add language to plan summary of the Needs for Change, the assessment did state that recent wildfires were beyond the natural or historic range of variability. However, the assessment was completed prior to planning staff becoming aware of a study done in the Mogollon mountains (Margolis et al. 2011). The results of this study, as well as another by Shoennagel and others (2004) suggest the 2012 Whitewater Baldy Complex Fire probably did not burn outside the natural or historic range of variability, just outside contemporary human experience. The Rodeo-Chediski Fire, which included large, contiguous areas of stand-replacement fire in ponderosa pine, is an example of a fire burning outside the historic range of variability.

The Upland Vegetation, Fire Ecology and Fuels Affected Environment, updated for the FEIS to include data from the 2022 fire season, now demonstrates a slight upward trend in area experiencing wildfire because the 2022 Black Fire provided the third data point it takes to establish a trend (FEIS Figure 4). There has been a very slight increase in moderate severity wildfire, but overall, severity distributions have not changed substantially (FEIS figures 7, 8 and 9 Upland Vegetation, Fire Ecology and Fuels Affected Environment). Further, the changed circumstances analysis in the FEIS for the 2022 Black Fire, which looked at individual ERUs, does not demonstrate the need for change is different from the assessment (for example see Mixed Conifer-Frequent Fire).

Literature Cited in Response:

Gori, D. and J. Bate. 2007. Historical Range of Variation and State and Transition Modeling of Historical and Current Landscape Conditions for Pinyon-Juniper of the Southwestern U.S. Prepared for the USDA Forest Service, Southwestern Region by The Nature Conservancy, Tucson, AZ. 141 pp.

Margolis, E.Q.; T.W. Swetnam; and C.D. Allen. 2011. Historical stand-replacing fire in upper montane forests of the Madrean Sky Islands and Mogollon Plateau, southwestern USA. Fire Ecology 7(3): 88-107.

Schoennagel, T., T.T. Veblen, and W.H. Romme. 2004. The Interaction of Fire, Fuels and Climate across Rocky Mountain Forests. BioScience 54:7 pp. 661–676.

Schussman, H. 2006. Historical Range of Variation and State and Transition Modeling of Historical and Current Landscape Conditions for Semi-Desert Grassland of the Southwestern U.S. Prepared for the USDA Forest Service, Southwestern Region by The Nature Conservancy, Tucson AZ. 53 pp.

Schussman, H. and D. Gori. 2006. Historical Range of Variation and State and Transition Modeling of Historical and Current Landscape Conditions for Madrean Pine-Oak of the Southwestern U.S. Prepared for the USDA Forest Service, Southwestern Region by The Nature Conservancy, Tucson AZ. 35 pp.

Smith, E. 2006a. Historical Range of Variation and State and Transition Modeling of Historical and Current Landscape Conditions for Ponderosa Pine of the Southwestern U.S. Prepared for the USDA Forest Service, Southwestern Region by The Nature Conservancy, Tucson AZ. 21 pp.

Smith, E. 2006b. Historical Range of Variation and State and Transition Modeling of Historical and Current Landscape Conditions for Mixed Conifer of the Southwestern U.S. Prepared for the USDA Forest Service, Southwestern Region by The Nature Conservancy, Tucson, AZ. 31 pp.

Smith, E. 2006c. Historical Range of Variation and State and Transition Modeling of Historical and Current Landscape Conditions for Spruce-Fir of the Southwestern U.S. Prepared for the USDA Forest Service, Southwestern Region by The Nature Conservancy, Tucson, AZ. 37 pp.

Smith, E., and H. Shussman. 2007. Historical Range of Variation and State and Transition Modeling of Historical and Current Landscape Conditions for Montane Grassland of the Southwestern U.S. Prepared for the USDA Forest Service, Southwestern Region by The Nature Conservancy, Tucson, AZ. 43 pp.

Comment 2: Commenter notes that along with Distinctive Roles and Contributions, the Need to Change the Plan is critical for setting the framework and context in which plan components are developed. Commenter suggests that desired conditions, as a required plan component, should be explicitly added to the list of other plan components for management of terrestrial, riparian, and aquatic habitat and population connectivity in Statement 25. This would mirror the framing of Statement 24 for at-risk species, as well as Statement 28 for Recreation. **Associated Letter: 85**

Response: The reference to statement numbers indicates this comment is on the needs for change document finalized in 2017, not the summary of the needs for change in the draft plan. However, excluding desired conditions from this statement was an oversight on our part and we appreciate the attention being called to that error.

Comment 3: Commenter recognizes the high conservation value of public lands and the benefits they provide nature and people. There is support for the plan's characterization that past fire suppression, historic overgrazing, and other activities have disrupted many natural processes, such as wildfire and natural vegetation succession. **Associated Letter: 201**

Response: Thank you for your comment.

Comment 4: There is support for all the statements made in this section of the draft EIS. **Associated Letter: 180**

Response: While some fine-tuning has been done in the FEIS, the substance of this discussion remains the same.

Comment 5: Commenter supports the needs for change for watershed condition, riparian and aquatic ecosystems, and habitat connectivity because bats have a high demand for free water which makes those living in arid environments particularly susceptible to drought and high temperatures. **Associated Letter: 678**

Response: The plan's desired conditions would address the needs for change and provide the ecological conditions necessary for the persistence of both common and uncommon species.

Non-native Invasive Species

General

Comment 1: The plan should specifically mention that the Gila National Forest will aid, promote and assist private landowners in addressing non-native invasive weed issues to benefit all lands as private lands are often the seed source for introduction and spread on federal public lands. The plan should specifically authorize financial and technical assistance, equipment, and labor to be provided by the Gila National Forest to private landowners whose property lies within the forest's administrative boundary to facilitate rapid response. **Associated Letter: 1**

Response: In the Nonnative Invasive Species section of the plan, there is a management approach titled "Integrated Pest Management and Relationships" that discusses Cooperative Weed Management Areas. Cooperative Weed Management Areas represent partnerships between federal, state, and local governmental agencies; Tribes; private landowners, and non-governmental agencies. Participation in these partnerships is the avenue through which forest staff and leadership can contribute to efforts to address non-native invasive

weed issues on lands that are not National Forest System lands. More information can be found on the New Mexico Department of Agriculture's website.

Comment 2: While the commenters express understanding of the constraints that limited budget and human power Gila National Forest staff and leadership are operating within, early detection of noxious species is the foremost part of fighting non-native encroachment and because many of these species grow and reproduce quickly, surveys conducted at regular intervals are necessary to ensure the health of the forest. **Associated Letter: 42**

Response: Plan objectives for noxious weed inventory surveys are based on what has been able to be accomplished in recent years with the funding we receive. Partnerships are critical to increasing our capacity to conduct these inventory surveys as discussed in the Non-native Invasive Species management approach Early Detection Rapid Response (EDDR). Early detection is the foremost part of managing noxious weed infestations and maintaining communities of native species.

Comment 3: Commenter is concerned that noxious and invasive plants are slowly replacing native forage for elk and other species. Commenter encourages the Forest Service to actively manage landscapes to control and reduce noxious weeds through an integrated weed management approach. Commenter states that early detection and rapid response remains a critical component of effective weed management and encourages a collaborative approach for prompt containment and treatment. Commenter notes that native plant communities provide the highest nutritional value for grazing wildlife and encourages the use of native plant seed mixes. **Associated Letter: 119**

Response: Noxious and invasive plants are a big problem across the West and nationally. The plan uses: integrated weed management (Non-native Invasive Species S2 and Integrated Pest Management and Relationships management approach); requires the use of noxious weed-free products and native plant materials with appropriate exceptions for emergency watershed response actions (Non-native Invasive Species Ss3-5); emphasizes early detection and rapid response (Non-native Invasive Species Early Detection Rapid Response management approach); and collaboration (Non-native Invasive Species DC2 and Integrated Pest Management and Relationships management approach).

Comment 4: Commenter points to the background information in the draft plan's Non-native Invasive Species section and agrees that triploid rainbow trout should not be considered invasive species since they are managed to provide recreational opportunities. Commenter suggests there are other non-native fish species that are managed for recreational fishing that should also not be considered invasive in those contexts but would appropriately be considered invasive in other streams such as those identified for Gila or Rio Grande cutthroat trout restorations. Commenter suggests that the New Mexico Department of Game and Fish's 2016 Statewide Fisheries Management Plan could provide additional details on management focus for individual stream reaches. **Associated Letter: 151**

Response: We have reviewed the Department of Game and Fish's Statewide Fisheries Management Plan (see appendix D to the FEIS). In most cases, our plans are compatible, including the management of triploid rainbow trout, which cannot reproduce. Unfortunately, there are a few streams identified as smallmouth bass or channel and flathead catfish fisheries that conflict with our management for native, federally listed loach minnow and spikedace.

Comment 5: Commenter states: "Mullen, tumble weed, goats heads, cheat grass. Grazing permittee should be responsible for removal." **Associated Comment: 718.3871**

Response: Non-native invasive and noxious weeds may be introduced by hikers and other recreationists, permittees, firefighting personnel, animals, vehicles, wind, water, et. cetera. It is often not possible to determine the method of introduction or hold a particular party responsible. The plan supports a collaborative

approach as the most effective way to address these issues (Non-native Invasive Species DC2 and Integrated Pest Management and Relationships management approach).

Comment 6: Commenter points to statement in the background information section of the plan that says more than half of the Gila National Forest's riparian and aquatic ecosystems are not properly functioning and the objective to complete at least one riparian improvement project annually beyond noxious weed treatments. Commenter states the best method to remove non-natives in riparian areas is hand pulling since the goal is so small each year and volunteers from local plant groups should be used. **Associated Letter: 233**

Response: The objective noted in the comment is not for noxious weed treatment, it is for other improvements such as installing exclosures, planting native riparian species appropriate to the site, streambank stabilization, or other restorative techniques appropriate to the site and the contributing issues. Objectives for treating noxious weeds are included in the Non-native Invasive Species section of the plan. Those objectives may be met by treating in riparian or upland areas. The intent behind the objective in the Riparian and Aquatic Ecosystems section of the plan was to encourage management to address more than noxious weeds in these areas. While there are some noxious weed species that can be addressed by hand-pulling, there are others that require chemical treatment if management is to be successful. Examples include saltcedar and Siberian elm. Forest staff and local volunteers working with us have been using cut-stump herbicide application methods to contain, control and hopefully someday eradicate saltcedar from the Gila River and San Francisco Rivers and their tributaries for years.

Comment 7: Commenter requests that we do our best to eliminate non-native species. **Associated Letter: 730.60**

Response: The plan contains desired conditions for native plant and animal communities, and objectives to contain, control or eradicate the non-native species that threaten the persistence of native species and communities.

Objective 1

"Contain, control, or eradicate at least 100 acres of noxious weed species annually."

Comment 8: There is a concern that the objective to treat 100 acres per year of noxious weeds is totally arbitrary. **Associated Letter: 39**

Response: Plan objectives must be within the forest's anticipated budget (36 CFR 219.1(g) and FSH 1909.12 Chapter 20 Section 22.12). This objective uses what has been accomplished in the recent past with available funding as a minimum ("at least"). We could treat more if there were resources and reasons to do so. The draft management approach "Integrated Pest Management and Relationships" describes how managers may work with other agencies, organizations, volunteers, and other stakeholders to increase the capacity to treat noxious weeds.

Objectives 3 and 6

"Reduce non-native fish and other aquatic species within native aquatic populations in at least four to six stream reaches during each 10-year period."

"Eradicate non-native fish populations from at least one stream reach containing a natural or constructed barrier in compliance with recovery plans over a 10-year period."

Comment 9: Commenter recommends efforts to reduce or eliminate non- native fish populations should align with the objectives set forth in the Department's 2016 Statewide Fisheries Management Plan and be implemented in collaboration with the Department. Commenter suggests that objective 3 could use similar "at least" language as in objective 6 rather than stating a range. **Associated Letter: 151**

Response: We think this is a good suggestion. Using the "at least" language and a range is confusing. Objective 3 now reads "….at least four stream reaches during each 10-year period."

Suggested Objectives

Comment 10: There is a request that an objective be added under Non-native Invasive Species that the agency should consider trying to eradicate the invasive insects, disease and pathogens that pose an increasing threat to both aquatic and terrestrial native species. **Associated Letter: 54**

Response: Objectives are a concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. They should be based on reasonably foreseeable budgets (36 CFR 219.7). Desired condition 1 in the Non-native invasive Species section of the plan will drive management to contain, control, or eradicate, when possible, all populations of non-native invasive species. Progress toward this desired condition is supported by plan objectives that are based on what has been accomplished with recent budgets under the assumption future budgets will be similar. If more can be accomplished there is nothing in the plan that would prohibit that.

Standard 2

"Integrated pest management (IPM) will be used to prevent, control, contain, or eradicate noxious species to maintain or improve ecosystem and watershed function, while minimizing treatment impacts on native species and human health. Chemical and biological methods of pest control will be used only when physical or cultural methods are unlikely to be successful."

Comment 11: Commenter notes that integrated pest management can be applied to species that are not defined as noxious but are still considered invasive and suggests the standard be reworded to be broader. **Associated Letter: 151**

Response: It is true that invasive species that have not been designated as noxious can be managed according to integrated pest management principles. However, many of invasive plant species are well-established and have not replaced the native vegetation community or altered disturbance regimes. Instead, they have integrated with the native vegetation community with populations that fluctuate based on disturbance history. Common dandelion and mullein are examples of these non-native invasive. Efforts to control, contain, or eradicate these invasive may or may not be justified based on the limited resources, the wide-spread nature of these species and the likelihood of treatment success. However, we see an error in the original thinking because there is not a designation equivalent to noxious for non-plant species. We have incorporated your suggestion into the final standard.

Standard 5

"Projects and special uses will use native plant species, preferring local sources where the quantities required are available within project timelines. Exceptions apply to the use of non-native annual cereal grains for emergency watershed stabilization, as long as those cereal grains are not designated as noxious by NMDA" [New Mexico Department of Agriculture].

Comment 12: Commenter suggests that instead of using non-native cereal grains for emergency watershed stabilization that native perennial grasses be used, preferably ecotypes specific to the area. **Associated Letter: 233**

Response: This plan standard requires native perennial species be used and encourages the use of local ecotypes when and where they appropriate species are available to meet project requirements. The only exception being granted for emergency stabilization purposes after high severity fire because without this exception, unacceptable risk to downhill and downstream life, property and natural and cultural resources cannot be mitigated. This standard is and must remain consistent with agency policy direction for emergency

stabilization (FSM 2500 Chapter 2520 Section 2523 Emergency Stabilization-Burned Area Emergency Response (BAER) subsection 2523.2 Emergency Response Actions). The plan standard that all plant materials must be certified noxious weed-free (Non-native Invasive Species S3) complements the standard commented on here and further supports compliance with FSM 2523.2.

Annual herbaceous plants are poor competitors but well adapted to disturbed sites where competition for space, nutrients, water, and light is low. Annual cereal grains are used in emergency stabilization projects because an unacceptable risk to downhill and downstream life, property, and natural and cultural resources have resulted from high-severity fire. They are ideal for this application for several reasons. They germinate and grow very quickly after high-severity fire because competition is very low. Their blades are coarse, wide, and well-suited to intercepting and reducing the impact of raindrops in the first year. The second year, these plants form a litter layer. This litter layer protects the soil from raindrop impact and sheet erosion. Treatment effectiveness monitoring has shown that these cereal grains can keep as much as 60 percent more soil in place than no treatment (Koehler and Kiesow 2017).

Perennial plants are strong competitors, but they are slower to germinate and grow. They do not provide effective groundcover for emergency stabilization in the first post-fire year. If annual cereal grains did not constitute the largest part of the seed mix, treatment would not be effective. Emergency stabilization seed mixes do contain native perennial grasses to give the system a jump start at long-term recovery in year two and beyond. Over time, they outcompete the annual cereal grains and those annuals leave the system. Given the short window to implement these treatments, the scale at which they are generally applied, local ecotypes of native perennial grasses have not been available or available in sufficient quantities.

Literature Cited in Response:

Koehler, N. and M. Keisow. 2017. Signal Fire Treatment Effectiveness Monitoring: Monitoring Seeding Effectiveness in the Southwest. U.S. Department of Agriculture, Forest Service, Southwestern Region. 36 p. Available by request from the Gila National Forest Supervisor's Office or Southwestern Regional Office.

Standard 6

"Domestic goats and sheep will not be used to control invasive plants in bighorn sheep-occupied range."

Comment 13: There are differing perspectives on plan content related to prohibiting domestic goats and sheep in bighorn sheep-occupied range. Those that oppose this plan content acknowledge the science that demonstrates domestic sheep can pass deadly pneumonia to bighorn sheep and point to a study that suggests domestic goats can pass pneumonia, but it isn't deadly. These commenters are concerned that this standard perpetuates misinformation which will eventually lead to a ban on pack goats. Others suggest that the standard doesn't go far enough and should be amended to include a 10-mile buffer around occupied range.
Associated Letters: 98, 133, and 713

Response: This standard does not apply to the use of goats as pack animals. Still, Besser and others (2017) concluded goats could induce pneumonia in bighorn sheep, but it wasn't severe enough to kill them. This is very different from the science about domestic sheep disease transmission. When domestic sheep transmit the pathogens that induce pneumonia, it is nearly always fatal to bighorn sheep. However, there are other factors to consider related to the use of domestic goats and sheep for the express purpose of controlling invasive plants. If not strictly managed, these animals can be just as effective as spreading invasive plants as some propagules may survive digestion. For that reason, this standard has been modified to prohibit authorization of domestic goats and sheep for controlling invasive plants forestwide. Those concerned about the use of goats as pack animals, please refer to response to comment 4 under the Recreation Special Uses heading in this appendix.

Literature Cited in Response:

Besser, T.E., E.F. Cassirer, K.A. Potter, and W.J. Foreyt. 2017. Exposure of bighorn sheep to domestic goats colonized with *Mycoplasma ovipneumoniae* induces sub-lethal pneumonia. PLoS ONE 12(6):e0178707.

Guideline 7

"Habitat improvement and aquatic restoration projects within or adjacent to water sources occupied by Chiricahua leopard frogs, Northern Mexican or narrow-headed gartersnakes, or native fish should include provisions to remove non-native invasive animals."

Comment 14: There is support for this guideline and a recommendation that the plan include a standard that will compel management actions that will reduce non-native species in these riparian and aquatic habitats. **Associated Letter: 712**

Response: This guideline is supported by objectives that compel management actions to reduce non-native species in these habitats (Non-native Invasive Species O3 and 4, and Wildlife, Fish, and Plants O3)**.**

Suggested Standards

Comment 15: There is a suggestion that a standard be added to forbid herbicide use in cultural areas used for medicinal purposes, plants, and sacred sites because of potential damage to dyes. **Associated Letter: 230**

Response: There are likely areas where herbicide use is not appropriate because of cultural resources and tribal uses, but not all cultural resources are equally sensitive to a particular chemical. This is best addressed at the site level when the specific materials, uses, herbicide application scenarios, and tribal concerns are known.

Comment 16: Commenter supports the objectives in this section of the draft plan and suggests that a supporting standard of methods of non-native fish removal be added. **Associated Letter: 151**

Response: The best methods for removal of non-native fishes depend on the specific circumstances. A standard that locks in specific methods would not provide the flexibility to address all situations or incorporate new approaches that may be developed in the future.

Suggested Guidelines

Comment 17: Guidelines should specifically mention the Department's Aquatic and Invasive Species Program's "Clean, Drain, and Dry" Guidelines, which are critical to keeping New Mexico free of invasive quagga and zebra mussels. The Department also recommends adding management approaches to follow protocols such as the Declining Amphibian Task Force Fieldwork Code of Practice. These practices minimize the threat of transmitting aquatic pathogens and parasites to both amphibians and fish. **Associated Letter: 151**

Response: These suggestions have been incorporated into the final plan in the background information subsection of the Non-native Invasive Species subsection. Clean, Drain and Dry is also now referenced with the Declining Amphibian Task Force Fieldwork Code of Practice in the footnote to G1 in the Non-native Invasive Species section of the plan.

Information, Education and Research Management Approach

Comment 18: There is support for the management approach "Information, Education and Research" in the section of the plan that provides direction for managing non-native invasive species. **Associated Letter: 42**

Response: This content has been retained in the final plan.

Comment 19: Commenter is concerned about how this management approach relates to wilderness and states that any prescribed fire or thinning treatments in wilderness should be evaluated with a full EIS. Commenter states no categorical exclusions should be permitted. **Associated Letter: 627**

Response: Forest plans provide a programmatic framework that guides site-specific actions, but do not mandate, authorize, fund, or carry out any project or activity. Any activities proposed in designated or recommended wilderness are subject to forestwide plan direction and direction for those management areas. The most restrictive direction would apply. Thinning treatments in wilderness are prohibited by the Wilderness Act and are not proposed as part of the forest plan. Prescribed fire for the purposes of fire management is legal and subject to the National Environmental Policy Act. If a proposal fits a categorical exclusion, the plan does not disallow its use. If a categorical exclusion is used for an activity in wilderness, it must also be put through the Minimum Requirement Decision Tool process to be authorized, as would an activity requiring an environmental assessment or environmental impact statement. That process fulfills the legal and policy requirements related to the Wilderness Act.

Comment 20: Commenter would like to see a focus on collaboration and relationships, including grazing permittees, water right holders, project leaders and others to prioritize and develop mutually beneficial projects, such as pairing upland restoration projects with improvements to streams and riparian habitat. **Associated Letter: 672**

Response: There are over 30 management approaches in the plan that emphasize collaboration and relationships between all interested parties to accomplish mutually beneficial projects. As it relates to non-native invasive species management, this discussion can be found in the Integrated Pest Management and Relationships management approach.

Proposed and Possible Management Practices Appendix

Comment 1: Commenter suggests preparing a unit plan for the Continental Divide National Scenic Trail should be included as a proposed and possible management practice. **Associated Letter: 73**

Response: Preparing a unit plan for the Continental Divide National Scenic Trail will be done under the direction provided by the 2009 Continental Divide National Scenic Trail Comprehensive Plan, not the forest plan.

Comment 2: Commenter is pleased to see the inclusion of practices that will affect and improve the Continental Divide National Scenic Trail and wants to help implement those practices as appropriate. **Associated Letter: 180**

Response: We look forward to working with all interested stakeholders to implement the final plan. We did replace the content of the draft appendix listing proposed and possible management actions because they are detailed in management approaches and the appendix was essentially repeating them. The final appendix describes what proposed and possible actions are, what they are not, and where readers can find them in the plan (that is in the management approaches).

Comment 3: Commenter requests this section include the following statements: “The forest will work with grazing permittees and provide guidelines for wildlife friendly fences to facilitate wildlife movement and habitat connectivity.” “The forest will work with grazing permittees to reduce impacts and protect Riparian Management Zones.” **Associated Letter: 151**

Response: We replaced the content of the draft appendix listing proposed and possible management actions because they are detailed in management approaches and the appendix was essentially repeating them. The final appendix described what proposed and possible actions are, what they are not, and where readers can

find them in the plan. We work with grazing permittees on all aspects of range management. The plan includes requirements for wildlife friendly fences and references to the resources that can support the design and construction of those fences. Livestock grazing will be managed to move toward desired conditions including those for riparian management zones.

Comment 4: There is support for the inclusion of monitoring, but commenter would like this section to be more detailed so that the public can understand the actual methods, tools and efforts that will be taken to accomplish these activities. **Associated Letter: 180**

Response: This information will be provided in the separate, standalone Monitoring Plan Implementation Guide. Due to staff capacity, it was necessary to prioritize the completion of the plan and environmental analysis prior to shifting focus to the implementation guide. It will be made available to the public as soon as it is completed.

Comment 5: Commenter states support for the importance placed on partnerships in this section because the future will be dependent on a shared stewardship model. Commenter also supports the focus on engaging youth and providing materials in multiple languages and offers to work with forest staff on providing information on the Continental Divide National Scenic Trail in multiple formats and languages. **Associated Letter: 180**

Response: We look forward to working with you as well. See response to comment 3 regarding the content of this appendix.

Comment 6: Commenter supports the practices identified in this section, specifically with respect to public engagement, collaboration, and volunteers. **Associated Letter: 180**

Response: See response to comment 3 regarding the content of this appendix.

Comment 7: Commenter expresses support for the Adopt a Trail program identified in this section and hopes that this will be clearly communicated and implemented throughout the forest. **Associated Letter: 180**

Response: See response to comment 3 regarding the content of this appendix.

Comment 8: Commenter states: "Pg.13 Chapter 2- Priority watershed WCF= Watershed condition Framework=objectives to restore, maintain or improve watershed. Appendix B=possible actions of projects 3-5 years to achieve objectives - proposed and possible management practices=Appendix B. Types of projects to use next 3-5 years to move toward desired conditions and objectives." **Associated Letter: 233**

Response: There are objectives to restore, maintain or improve watershed condition in chapter 2 of the draft and final plan in the Watersheds section (O1 and O2) on page 86. About watersheds, Appendix B states:

> "Watershed restoration projects and activities addressing riparian and aquatic habitat conditions, water quality, soil condition, motorized roads and trails, probability of stand-replacement fire, negative fire effects, poor range conditions and invasive species will be accomplished using a variety of methods, depending on the specific issues needing to be addressed.
>
> Riparian and aquatic ecosystem restoration projects will be part of watershed restoration projects and activities, as well as being integrated into landscape-scale restoration and other projects. Methods used will be based on the site and the specific issues needing to be addressed. If they involve stream channel restoration and/or aquatic passage(s), professional expertise will be sought with natural channel design experience being preferred."

We suspect the commenter is suggesting we add additional specificity what these projects and activities will be over a 3- to 5-year time span. This appendix does not represent a project proposal nor is it a commitment to

take any particular action (FSH 1909.12 Chapter 20 Section 22.34). Additional specificity will be part of proposals formulated at the project level. See response to comment 3 regarding the contents of this appendix.

Comment 9: Commenter would like to see faucets on water holding tanks for livestock management being installed and left on for hikers to use listed as a proposed and possible action and suggests hikers could report issues or leaks on a phone app. Commenter then asks if permittees turn off water supplies. **Associated Letter: 233**

Response: This is an allotment-level cooperation issue, not a planning issue. Please see response to comment 3 about the contents of this appendix.

Comment 10: Commenter suggests that following the New Mexico Rare Plant Conservation Strategy as a guidance document and listing the New Mexico State Forestry Department's Endangered Plant Program as a partner be added to this section. Commenter recommends the following language: "Coordinate with the NM State Forestry Division and the NM Rare Plant Conservation Strategy regarding information, education, and knowledge gaps as they relate to promoting and improving wildlife, fish, and plant resources and management. Maintain strong partnerships between the Forest Service, State and Federal agencies, county and local governments, and nongovernmental organizations to accomplish conservation planning and management toward achieving desired conditions. Work with the NM State Forestry Division and other partners to develop conservation measures (for example, public education to reduce human impacts) to prevent listing." **Associated Letter: 47**

Response: These suggestions have been incorporated into the Wildlife, Fish, and Plants final management approach Adaptation, Restoration and Relationships. Please see response to comment 3 regarding the contents of this appendix.

Comment 11: This section should state "Work with New Mexico Department of Game and Fish to identify and designate management areas to address wildlife values including wildlife habitat connectivity, and to ensure that wildlife are free from harassment and human disturbance at a scale that does not impact vital functions of populations (e.g., breeding, feeding, rearing young and migration and dispersal) resulting in a negative impact to the persistence of the species in the forest." **Associated Letter: 151**

Response: The final Wildlife, Fish, and Plants management approaches Adaptation, Restoration, and Relationships and Wildlife Corridor Action Plan discuss our continued partnership with New Mexico Department of Game and Fish. Please see response to comment 3 regarding the contents of this appendix.

Public Engagement

Comment 1: There is an assertion that Gila National Forest staff and leadership do not seem interested in providing more than superficial public meetings and obtuse online documentation to the public. One commenter states the Forest Service appears to be concerned primarily with maintaining and furthering its own highly politicized interests and monolithic power structure than true cooperation, mutual respect, and concern. **Associated Comments: 32 and 81**

Response: Draft appendix E and final appendix C provide documentation of the public engagement process and opportunities for involvement. Forest staff and leadership have worked with independent third-party contractors to design meaningful meetings, gather the public input that is most useful to where we have been in the process, and demonstrate how we have listened to and used that input. Prior to the official beginning of the process, we worked with the National Collaboration Cadre and conducted a series of community conversations. The purpose of these meetings was to introduce the plan revision process, learn about how community members wanted to interact with us, and to learn about local concerns and knowledge before kicking off the assessment phase of revision. This input resulted in our Public Participation Strategy.

In the assessment report, local concerns and knowledge were summarized and highlighted in our findings (see multiple sections under the headings "Stakeholder Input Received"). This input came not just from our first meeting, but also from another round of community meetings held during the assessment phase. Community members also had an opportunity to provide feedback on our findings and the draft needs for change that resulted from the assessment report in a comment period and round of public meetings that followed the publication of the assessment report. The final needs for change document was refined based on stakeholder comment.

During preliminary plan development, we hosted two desired conditions workshops and field trips, as well as technical meetings on topics stakeholders identified as important to them. Then we released the preliminary draft for an informal comment period and held another round of community conversation to ask for feedback on the preliminary draft plan. That feedback, as well as all the feedback received up until this point in the process, was used to revise the preliminary draft into the draft plan and its alternatives. We hosted another round of community conversations to make sure that we had captured the range of perspectives and preferences stakeholders held in the alternatives From there, the draft plan and the draft EIS analyzing the draft plan and its alternatives were released for a formal comment period. Realizing the volume of material released could be daunting to some, we structured our final round of public meetings around the key differences in plan direction between the alternatives as a place to get started. Most of these meetings were spent explaining the choices and answering questions asked by those that attended the meetings.

In all the documents generated as part of this process and posted online, we have strived to balance the technical aspects of planning and analysis with plain language requirements. The final plan and environmental analysis have been updated in another concerted effort to improve clarity and readability.

Comment 2: Commenter states: "I attended the final meeting in Silver City, which was essentially a training meeting where a great deal of emphasis was placed on the manner of input–specifically the document we were given and spent 2+ hours discussing. I recognize that the COVID-19 epidemic and subsequent measures taken have affected how many things operate. However, given the critical importance of this plan and the significant amount of emphasis that was placed on how the comment document was going to be used, the fact that this online comment platform does not reflect that document is unconscionable." **Associated Letter: 186**

Response: The worksheet used at the public meeting was one of several formats that could be used to submit comments. The draft plan and EIS contain a lot of information. The intent of the worksheet was to highlight the decision points within the draft plan alternatives and provide one format that captured commenter's preferences related to those decisions and their reasoning behind those preferences. Commenters were free to use that worksheet format and submit additional comments, related to draft decision points or anything else, in other formats as best suited their needs. We regret that this was not clear to the commenter.

Comment 3: Commenter was provided a copy of the options worksheet used to gather public comment during the public meetings held after the release of the draft documents. In reference to that worksheet, commenter asks what the value of the Mexican spotted owl, what plants are at risk and who decides or determines this? Commenter states that the revised plan is full of agency jargon with lots of words that say nothing, and the wording is so loose that the Forest Service can do anything and everything they want to. Commenter asks what "restricted" means in terms of the options provided in the worksheet and if that means something can't be done at all. Commenter states the presentation of "options" is too limiting in scope, doesn't fully inform the public and leaves too much out, and paints an either/or scenario. Overall, the commenter states the plan appears to be skewed in favor of individuals who are complaining the Forest Service isn't doing their job and the Forest Service game plan appears to make them happy in the hopes that the complaining stops. **Associated Letter: 598**

Response: We regret that the commenter found the meeting materials problematic. The Mexican spotted owl is federally listed under the Endangered Species Act. At-risk species include those that are federally listed

under the Endangered Species Act or meet the requirements to be listed as a Forest Service Species of Conservation Concern. These requirements are outlined in the 2012 Planning Rule and final agency directives for implementing the planning rule and defined in the plan's introductory section. The revised plan provides the flexibility we need to adapt to changing conditions, many of which we cannot foresee. Where the meeting materials say "restricted" it means that things can't be done at all without a plan amendment and another, separate public engagement effort. Our options, or alternatives, were based on issues that were identified from previous opportunities to comment. Please also refer to response to comment 1 in this section regarding our public process.

Comment 4: Commenter states: "You did not listen to us at your public meetings at all. You twisted what we said and did not include our points to help local residents keep their livelihoods and protect the environment in one alternative but spread them out over several alternatives. This ensured that ranchers and loggers will not both benefit. Instead of standing with the long-time residents and partners of the Forest Service like grazing permittees, loggers, miners, and local residents, you have abandoned us for liberal environmentalist policies." **Associated Letter: 647**

Response: We acknowledge your opinion. Alternative development is described in chapter 2 of the EIS. The forest supervisor can choose any combination of elements from the alternatives and is not restricted to the way they are packaged in an alternative.

Comment 5: Commenter appreciates the opportunities for engagement that have been provided by Gila National Forest staff and looks forward to continued engagement in this process and the other partnership opportunities the plan provides for. **Associated Letter: 672**

Response: Thank you for the effort you have invested. We look forward to continued collaborations and partnerships during implementation of the revised plan.

Comment 6: Commenter appreciates the opportunity to comment but is concerned that having all of the New Mexico national forests in revision at the same time creates significant barriers to public involvement as individuals and organizations only have so much time to invest. **Associated Letter: 713**

Response: We recognize that some individuals and organizations have interests in more than one revision effort and that multiple concurrent processes can create difficulties. The revision schedule is set by national headquarters in consultation with the agency's regional offices.

Comment 7: Please do more to engage the public in shaping the Forest Plan revision process. **Associated Letter: 720.9**

Response: Please refer to response to comment 1 in this section of the appendix.

Rare and Endemic Plant and Animal Species and Habitats

General

Comment 1: Commenter is concerned that this section of the plan does not address animals and should be renamed "Rare and Endemic Plants and Habitats." **Associated Letter: 47**

Response: The Rare and Endemic Plant and Animal Species and Habitats section of the draft plan is accurately named because it does address both plants and animals. This section has been incorporated into the Wildlife, Fish, and Plants section of the final plan.

Suggested Standards

Comment 2: There is a concern that this section does not contain sufficient guidelines or standards to meet the desired conditions. There is a suggestion that the following management approach be elevated to a standard at a minimum. "Develop effective and long-term programs to survey, monitor, and collect data on rare and endemic species." **Associated Letter: 137**

Response: Monitoring question 70 addresses rare and endemic plant species and we will continue to pursue collaborations that increase our capacity to address this monitoring question. The draft management approach Rare and Endemic Species Conservation and Relationships also discusses collaborative approaches to conserve rare and endemic plan and animal species. This content has been incorporated into the final Wildlife, Fish, and Plants management approach Adaptation, Restoration and Relationships with additional discussion in response to comments. Standards should not compel processes such as inventory and monitoring (FSH 1909.12 Chapter 20 Section 22.13).

Suggested Guidelines

Comment 3: There is a concern that this section does not contain sufficient guidelines or standards to meet the desired conditions and recommends including the following guidelines:

> "Identify, document, and correct any management conflicts to the species or their habitats"
>
> "Utilize newly designated botanical areas/ rare and endemic plant management areas as a monitoring baseline to evaluate population dynamics and stability of Species of Conservation Concern, as well as other rare and endemic species of the Gila."
>
> "Ensure all forest projects, plans, restorations, and post-fire activities identify target species habitats and include protection, and mitigation for and species/and or their habitat."

Associated Letter: 137

Response: Monitoring question 70 addresses rare and endemic plant species and we will continue to pursue collaborations that increase our capacity to address this monitoring question. The draft management approach Rare and Endemic Species Conservation and Relationships also discusses collaborative approaches to conserve rare and endemic plan and animal species. This content has been incorporated into the final Wildlife, Fish, and Plants management approach Adaptation, Restoration and Relationships with additional discussion in response to comments. All projects and activities will be designed and implemented to move toward desired conditions for species habitats, including avoidance and mitigation measures as appropriate to the site, species, and activity. This suggestion is not appropriate as a guideline Guidelines should not compel processes such as analysis, assessment, inventory, or monitoring (FSH 1909.12 Chapter 20 Section 22.14).

Recreation Special Uses

General

Comment 1: Commenter is concerned about fee increases associated with permits issued to educational institutions. Commenter states fees are currently expensive for a school and suggests schools should not be charged the same rate as outfitters. **Associated Letter: 99**

Response: Permit fee increases are beyond the scope of the forest plan.

Comment 2: A commenter is concerned about the discussion of potential future "needs and capacity use" studies regarding outfitter guides. Commenter encourages the managers to consider that the industry is already heavily regulated in the area of "use" by the New Mexico Department of Game and Fish. Commenter

points out that, by statute, the outfitter/guide industry is allocated just 10 percent of the total hunting permits available on public lands statewide. These opportunities are allocated to the industry through a lottery system. A study by the Forest Service that would result in reductions to permits issued by the Gila National Forest could cause conflicts with that lottery system. **Associated Letter: 160**

Response: The needs and capacity use study has been completed. The Gila National Forest is not near capacity at this time and no reductions are expected. Even if the forest were to reach capacity at some future date, it would be unlikely to create conflicts with the lottery system. If it did, we would need to design and implement a process to resolve those conflicts.

Comment 3: Commenter is generally supportive of the plan direction for recreation special uses. **Associated Letter: 180**

Response: This content has been moved to the Sustainable Recreation section in the final plan.

Standard 3

"Authorized commercial use of domestic sheep or goats (for example, outfitter-guide and filming) in bighorn sheep ranges is prohibited."

Comment 4: Commenters would like pack goats to be on the recreational use list and not prohibited in any way because the science does not support domestic goats as a threat to bighorn sheep. Commenters would prefer that the plan adopt the North American Packgoat Association Best Management Practices for recreating with goats. One commenter suggests the plan should adopt the policies on goats recently adopted by the Umatilla and the Wallowa Whitman National Forests on the use of recreational and commercial goat packing. One commenter points to this standard and requests Interested Person status during the objection period regarding any language that limits the use of pack goats in any way to protect bighorn sheep. Other commenters support this standard to prevent disease transmission to bighorn sheep. but would like it expanded to include historic range and a 10-mile buffer because domestic sheep and goats can wander great distance if separated from their band or herd and bighorn sheep do not always stay in their home range. **Associated Letters: 74, 95, 97, 98, 148, 671, and 713**

Response: Besser and others (2017) concluded goats could induce pneumonia in bighorn sheep, but it wasn't severe enough to kill them. This is very different from the science about domestic sheep disease transmission. When domestic sheep transmit the pathogens that induce pneumonia, it is nearly always induce fatal to bighorn sheep. There is also testing and vaccinations for pneumonia-causing pathogens. This draft standard has been retained as final Sustainable Recreation S5 with modification allowing for exceptions outside of bighorn sheep occupied range if the prospective recreation special use permittee can demonstrate their animals have tested negative for pneumonia-causing pathogens, have been vaccinated against those pathogens, and are up to date with those vaccinations. With this standard, Non-native Invasive Species S6 which prohibits the authorization of domestic sheep and goats for the purposes of invasive plant control, Livestock Grazing S4, which prohibits grazing permit conversions from cattle, horses, or both to domestic sheep and goats, the suggestions to include historic range and larger buffers adds no additional protection for bighorn sheep.

Literature Cited in Response:

Besser, T.E., E.F. Cassirer, K.A. Potter, and W.J. Foreyt. 2017. Exposure of bighorn sheep to domestic goats colonized with *Mycoplasma ovipneumoniae* induces sub-lethal pneumonia. PLoS ONE 12(6):e0178707.

Comment 5: Commenter suggests issuing recreational use permits for outfitter or equestrian guides to deliver and pack out food, water, and trash for Continental Divide National Scenic Trail through-hikers would benefit tourism and the economy. **Associated Letter: 233**

Response: There would likely be an economic benefit associated with an outfitter guide providing this type of service and the plan would allow for that.

Research Special Uses

Comment 1: Commenter is concerned that the draft plan did not provide any direction for research special uses and provided an example of research special use permit issued by the Coronado National Forest. **Associated Letter: 70**

Response: Plan direction for research special uses is lumped with Lands Special Uses and discussed in the background information for that section. The only direction provided is the desired condition that "Research conducted in the forest continues to be permitted, with the research and studies promoting a greater understanding of the ecological and socioeconomic systems studied." The intent of the desired condition was to promote research on the forest. Forest Service manual and handbook provide the direction necessary to issue and administer research special use permits (FSM 2710 – Special Uses Management and FSH 2709.11 – Special Uses Handbook).

Research Natural Areas

Comment 1: A commenter appreciated the correction of the geospatial data and the map that displays the location of the Turkey Creek Proposed Natural Research Area. Another suggested it be dropped because there is uncertainty about its exact location due to description conflicts between the original proposal and the Gila National Forest's geospatial data. **Associated Letters: 38 and 39**

Response: There was a mapping error in the geospatial data that has been corrected based on the original proposal. There is no uncertainty about the exact location. An error was made when digitizing the original, hand-drawn maps. The forest supervisor will decide whether to retain the proposed Turkey Creek Research Natural Area based on the information contained in Appendix H: Documentation of the Research Natural Area Evaluation Process, the effects analysis in the FEIS and public input.

Comment 2: Commenter notes that the Rabbit Trap Research Natural Area abuts private land with a residence and questions how it can be accessed without an easement. **Associated Letter: 39**

Response: The proposed Rabbit Trap Research Natural Area can be accessed without interfering with the private land and residence.

Comment 3: There are differing perspectives on research natural areas and which areas should be proposed as part of the plan. Some commenters prefer the alternative that retains the Gila River Research Natural Area and the Turkey Creek, Rabbit Trap, Largo Mesa, and Agua Fria proposed research natural areas because it would provide the greatest opportunity to advance scientific knowledge and improve management. Others support this alternative because it would provide more resistance and resilience to climate change or because it would prohibit grazing on more acres.

Some commenters prefer the alternative that retains the Gila River Research Natural Area and the Turkey Creek and Rabbit Trap proposed research natural areas. These commenters state that since the evaluation found Largo Mesa and Agua Fria ineligible for designation they shouldn't be proposed. One commenter suggested that maybe half of the Largo Mesa area could be proposed because from their understanding of the evaluation not all of it was necessarily ineligible. Another commenter suggested the Turkey Creek proposal might be better dropped due to heavy recreational use. Others think research natural areas should only be located where educational institutions have demonstrated interest.

Other commenters would prefer no new proposals because the agency can't take care of what is out there now, and more rules and regulations will just hinder flexibility and proper management. Some state that

research can happen anywhere on the forest without any special designation and that the designation process is a waste of time and resources. **Associated Comments: 233, 561, and OWS-1 through 144**

Response: Based on the evaluation documented in draft appendix H (final appendix J), Largo Mesa and Agua Fria do not qualify for research natural area status. The Largo Mesa area is already relatively small and reducing its size would not improve its eligibility because it becomes difficult to manage for the purposes of the designation. We do recognize the popularity of the Turkey Creek area for recreational uses. The forest supervisor will consider public comment, the evaluation, and the analysis in the EIS before determining which areas will or will not be proposed as part of the final plan.

Riparian and Aquatic Ecosystems

General

Comment 1: Commenters state the plan must do more to guard against livestock damage in riparian and aquatic ecosystems which support many at-risk species, reducing or eliminating livestock use in riparian zones. Some commenters state that grazing in riparian areas is "an ecological sin" and provide a list of "substantial" impacts that result from grazing in riparian areas and scientific publications that should be included in the analysis of alternatives. Many commenters are concerned that climate change will compound the negative impacts of livestock grazing and that removing grazing pressure from riparian areas would save the most biodiversity on a per acre basis. Some commenters see this as the only way to demonstrate compliance with plan direction for riparian and aquatic ecosystems, watersheds, and species. Some commenters are particularly concerned with the Gila River because its possibly the last free-flowing river in New Mexico.

Commenters are not satisfied that the suggestion to permanently exclude livestock grazing from riparian management zones was considered but not analyzed in detail primarily based on budget restraints due to fencing material, labor, and maintenance costs. They suggest that budget constraints can be overcome and should not be used as an excuse not to even analyze this as part of the alternatives. Volunteers could be used to overcome budget challenges. Others suggest that if budgetary constraints make this difficult, perhaps the Forest Service should rethink its priorities. Also, a commenter states that because riparian areas occupy less than one percent of the forest, the economic losses to the local ranching economy would be insignificant.

Other commenters suggest the plan should identify the most sensitive riparian areas and prioritize their protection. Others would be okay with grazing in riparian areas if it was monitored and not overgrazed. They suggest a line-item be added for monitoring, fence maintenance and repair, and removal of trespass cattle be a part of each year's annual budget. Commenters also suggest that in conjunction with excluding livestock grazing, the plan should leverage the help of beavers to restore all riparian systems to reference condition.

Other commenters state that the mixture of standards and guidelines in the Livestock Grazing section is not adequate to promote and maintain healthy riparian areas. A commenter suggests plan components that require herding to make sure riparian utilization does not impede recovery or influence species composition, consistent with Forest Service Handbook 2209.13, chapter 90, section 92.14. Commenters would also like to see objectives or guidelines for riparian exclosures because management cannot demonstrate preferential consideration, consistent with Riparian and Aquatic Ecosystems standard 1, without exclosures.

Commenters state that allotments or pastures containing riparian areas could simply be closed and that would be totally fiscally feasible, reasonable, and ecologically intelligent. Commenters remind planning staff that the agency as a legal obligation to protect the resources under its care and if decisions are being made based on economics that is a violation of the law. Commenters point to recent riparian lawsuits and state that in the long run, fencing livestock out of riparian areas, which constitute less than 2 percent of the Gila NF's land base, is less expensive. Commenters also state that the plan should ensure that exclusions are monitored and enforced, unlike they have been in the past. One commenter suggests the final plan and analysis must at least

explain how riparian grazing is compatible with plan components for riparian and aquatic ecosystems, watersheds, at-risk species, and other resources.

Another commenter is concerned about standards and guidelines that limit grazing near riparian areas or place limitations on access for the purposes of grazing management. Commenter suggests that limitations on grazing management will increase fire and fuel hazards, encourage woody species growth, and reduce water supply and habitat for wildlife. **Associated Letters: 11, 48, 68, 107, 108, 123, 130, 142, , 157, 165, 167, 184, 185, 188, 201, 233, 249, , 361, 482, 514, 542, 548, 561, 579, 612, 619, 648, 656, 673, 683, 685, 696, 707, 712, 718.1 through 718.3873, 718.4, 718.3855, 718.3871, 720.5, 724.6, 725.1 through 725.7, 728.1 through 728.433, 728.322**

Response: Excluding all riparian areas from livestock grazing was considered as part of an alternative but not analyzed in detail (see FEIS volume 1, Alternative and Alternative Elements Considered but Eliminated from Detailed Study). Plan direction for livestock grazing includes a desired condition that livestock grazing is compatible with the desired conditions for ecosystems, soils, watersheds, native plant and animal species, and other activities and resources (DC-3). Desired conditions for riparian and aquatic ecosystems in both the draft and final plan describe diverse, functioning, and sustainable riparian conditions. Direction for livestock grazing includes standards and guidelines that establish considerations for riparian and aquatic ecosystems (S1, 2 and 4; G1, 3, and 4) to facilitate progress toward desired conditions.

Plan direction for riparian and aquatic ecosystems also requires preferential consideration by including best management practices (final S1). The loss of economic contribution to the local ranching community would be disproportionate to the amount of area lost to grazing because of access to water and the infrastructure it would take to pipe it out of the riparian zone. Riparian exclosures are just one possible best management practice. They are not always necessary or practicable. There are riparian areas that are being grazed and are in proper functioning condition or trending toward it, which demonstrates excluding livestock is not necessary in all cases. Where exclosures are deemed the necessary best management practice, on a site-specific basis, we will continue to coordinate and collaborate with permittees and other stakeholders to accomplish all the monitoring and fence work we can.

To analyze plan direction, it is necessary to assume that decisions and actions will be compliant with that direction. If future decisions and actions are not compliant with plan direction, that is program issue that would need to be addressed at the implementation level, not a planning issue. Trespass cattle are an implementation issue that forest leadership is actively working to resolve. See also response to comment 1 under the Feral Cattle heading. A management approach about beavers and restoration has been added to the Riparian and Aquatic Ecosystems section of the plan. The effects of livestock grazing, as it would be managed under the revised plan and its alternatives, are analyzed in the FEIS.

Comment 2: Commenter states that the draft documents violate requirements for riparian management because the natural or historic range of variation did not include domestic livestock grazing as a disturbance regime. Commenter suggests that managing for natural range of variation is inherently incompatible with domestic livestock grazing and a reasonably foreseeable risk to ecological sustainability. Commenters state that the Forest Service admits that livestock grazing "can adversely affect hydrologic processes and water quality (e.g., compaction, erosion, sedimentation, stream shade, nutrient enrichment, and waterborne pathogens), especially where animals are concentrated within riparian areas."

Commenter states that livestock grazing is currently authorized on almost the entire Gila National Forest and observes that the plan does not propose to restrict the physical extent of grazing and may expand it to allotments that are currently vacant. Commenter interprets this a violation of the 2012 Planning Rule and the Multiple-Use Sustained-Yield Act, which says that not all uses need to be allowed on all places. Commenter asserts that experts at the New Mexico Department of Game and Fish have stated: "Where multiple consumptive biological uses occur (e.g., national forests), concerns persist regarding the ability to maintain habitats in the condition, connectivity, and quantity necessary to sustain viable and resilient populations of

resident [Species of Greatest Conservation Need]. Whether or not national forests can host a variety of land uses without heightened resource conflicts is a serious question."

Commenter suggests that the final documents must explain how continued grazing by non-native cattle is within the natural range of variability. Commenter also states that the plan must initiate phasing out livestock grazing in riparian areas and include the following guideline from the Santa Fe National Forest: "Management activities, including vegetation treatments, in riparian areas should only be implemented to maintain or restore the diversity of both native riparian plant species and vegetation structure." **Associated Comment: 712**

Response: Domestic livestock grazing is one of the multiple uses for which the Forest Service is required to manage. Please refer to response to comment 1 in the Livestock Grazing section of this appendix. The plan's Riparian and Aquatic Ecosystems S1 requires that riparian management zones are given preferential treatment over activities and uses by incorporating best management practices. While we appreciate the Santa Fe's guideline, it is not necessary. That's how the plan works. Management practices and activities that do not maintain or move toward desired conditions for riparian and aquatic ecosystems, including desired conditions for vegetation community diversity and structure, would not be compliant with the plan.

Comment 3: Commenter is concerned that the draft documents fail to accurately disclose the legacy effects of livestock grazing and that the information used to prepare the assessment report and establish baseline conditions represents an impaired state. Commenter states that many intermittent streams and dry washes in the Gila National Forest historically supported riparian vegetation but no longer do. The documents should identify and commit to restoring degraded streams. Commenter provides a few examples, including Houghton Canyon, which contains remnants of prehistoric dwellings indicative that is once provided a reliable water source. Commenter concludes this canyon no longer provides year-round water and has largely lost its riparian vegetation because it was never protected from cattle. Commenter notes the requirements of the 2012 Planning Rule that require plan components, including standards or guidelines, to maintain or restore the ecological integrity of riparian areas in the plan area, including plan components to maintain or restore structure, function, composition, and connectivity. Commenter provides a detailed discussion of the restoration methods that they prefer, including breaching of stock tanks, herbivore exclusion, predators and beavers, and recommends the plan should be to restore the widest-possible restoration of riparian vegetation along each stretch of stream. Commenters identify a few streams that exemplify the restoration need and state that dozens if not hundreds of others could be similarly listed. Commenters recommend the final environmental analysis should evaluate historic evidence, such written accounts and as place names like "Beaver Creek" for clues to the past presence of riparian vegetation. This should then translate to an aggressive and rapid schedule of restoration in the forest plan, or an alternative analyzed in detail. Commenter concludes this is the only way the Gila National Forest's plan revision can comply with the planning rule requirements for riparian areas. **Associated Letter: 712**

Response: The legacy effects past management is reflected in the existing conditions described in the assessment report, summarized under in the introductory chapter of the plan, and the Soil and Watershed and Riparian and Aquatic Ecosystems Affected Environment sections of the FEIS. We recognize that the best available information upon which to establish baseline conditions for riparian and aquatic ecosystems may have gaps. The plan defines riparian management zones as "those portions of watersheds around lakes, perennial and intermittent streams, groundwater-dependent ecosystems, wetlands, and high-elevation wet meadows that have characteristic riparian vegetation and provide riparian function, *or have the ecological* [and hydrologic] *potential to do so* [*emphasis added*]…" This includes areas where legacy effects and climate have not pushed the system over a tipping point and the potential to support riparian or riparian and aquatic ecosystems still exists. This can only be assessed in the field on a site-specific basis.

Commenter suggests one approach to riparian restoration and there are many others. Given the diversity of these ecosystems, the watersheds they occur in, and the contributing causes of impaired or degraded conditions, a one-size fits all approach is not appropriate. The appropriate actions would be identified during

project-level planning and design. Please refer to response to comment under the Objective 1 heading in this section for more on restoration objectives.

Comment 4: Commenters are concerned that the plan indicates more than half are not properly functioning. Commenters state the plan must do more to guard against motorized use and recreation to riparian and aquatic ecosystems and incorporate quantitative plan components. **Associated Letters: 11, 142, 147, 201, and 672**

Response: The Roads section of the plan includes a standard that prohibits motor vehicle uses off the designated system of roads, trails and areas identified on the most current motor vehicle use map. It also includes guidelines related to the construction and maintenance of roads that provide consideration for riparian areas (G1, G2, G3). The management approach "Road System Management" discusses relocation of roads away from floodplains, perennial stream channels and riparian areas as opportunities and funding allow and priority factors for decommissioning unneeded and closed roads. These priority factors include proximity to water, water quality impacts, and at-risk species. Many of the at-risk species on the Gila National Forest are aquatic. Plan direction for riparian and aquatic ecosystems also requires preferential consideration be provided by incorporating best management practices (S1).

Comment 5: There is a suggestion that in the discussion of effects common to all alternatives in the Riparian and Aquatic Ecosystems section of the EIS, recreational access be added to the list of uses facilitated by the motorized transportation system because each set of users share in the impacts. **Associated Letter: 38**

Response: Recreational use was not included in the draft discussion of effects common to all alternatives because of the analysis assumption that recreation does not occur at an intensity that contributes substantially to effects at the plan scale. In the final analysis, the assumption is now stated that aside from use of the motorized transportation system, recreation in the Gila National Forest does not occur at an intensity that contributes substantially to effects at the plan scale. Recreational use has been added to the discussion of the motorized transportation system.

Comment 6: There is concern about how the draft documents reference 100-year flood plains. It is not clear if these are FEMA-designated floodplains. **Associated Comment: 39**

Response: FEMA, the Federal Emergency Management Agency, delineates floodplains to support the National Flood Insurance Program. FEMA does not map floodplains to support management of federal public lands. Depending on the reason a floodplain needs to be identified, agency hydrologists, soil scientists and engineers, or similarly qualified professionals contracted from private firms may do the delineation. Again, depending on the reason a floodplain needs to be identified, a detailed engineering study, topographic maps, historic flood data, and detailed soil maps may be used to accomplish the mapping.

Comment 7: A group of commenters refer to the following statement in Chapter 3, Designated Areas, Inventoried Roadless Areas section "The Roadless Area Conservation Final Rule (Roadless Rule) prohibits road construction, reconstruction, and timber harvest, except under certain circumstances, in inventoried Roadless areas because they have the greatest likelihood of altering and fragmenting landscapes, resulting in immediate long-term loss of roadless area values. Some existing roads may be present within inventoried roadless areas. The Roadless Rule does not prohibit motorized travel on existing roads or motorized trails." Commenters then state: "RMZ potential impacts: The above GNF Plan statement that past inventoried roadless areas will be set aside and managed under very restricted and limiting special rules, jeopardizes future integrated ecosystems management of watersheds and public multiple use on the GNF almost impossible over most of the forest." They state that these designations could potentially prevent needed natural resource restoration, wildfire reduction and water production within the forest.

Commenters assert that the draft EIS fails to disclose significant impacts related to:

"1. Effects on ecological restoration

2. Catastrophic wildfire and watershed health

3. Invasive species management

4. Threatened and endangered species management

5. Downstream water yield and water quality management

6. Law enforcement

7. On-site and down-stream safety of people and their property

8. The management of both game and non-game wildlife species"

Commenters go on to identify specific negative impacts to permitted livestock grazing, mining claims, forest management objectives and private property rights not disclosed in the EIS. Commenters suggest that to remedy their concerns, the planning team should reconsider the use of the 2001 planning rule to designate 733,836 acres as "Inventoried Roadless Areas" and to clarify that these "RMZ" lands have been providing timber, forage, water, wildlife habitat, recreation opportunities, minerals and a host of other products and benefits that humans have used and managed for over 100 years. They also suggest the EIS should more accurately analyze the proposed "RMZs" adverse impacts on watershed restoration projects; fuel load reduction projects; wildfire hazard potential; wildland urban interface projects; timber/logging sites and access; livestock grazing improvements and constructed features; private inholdings property rights and access rights; private water rights and access rights; other private property rights and protectable interests; heavily mineralized areas; private mineral leases and access rights; Firewood gathering for customary, subsistence and commercial uses; recreation uses and sites; hunting and camping sites; and all Forest Service roads, County roads, and user-created roads and motorized routes and trails that have been used by the public for emergencies and private access. All plan content related to the "RMZ" that is responsible for these problems should be removed and all watersheds in less than properly functioning condition should be removed from the "RMZ designation" to ensure restoration and fuel load reduction projects can occur without restrictions.

Specific discussions commenters would like to see in the environmental analysis include the potential impacts of RMZs on range improvements that have contributed towards improving forage production, changing vegetative composition to more desirable plant communities, controlling patterns of use, providing water, stabilizing water and soil conditions, and providing habitat for livestock and wildlife. Also, the potential effects that could restrict cooperative range improvement projects from using mechanized equipment which could jeopardize the upward trends.

Commenters go on to state "We concur with New Mexico Department of Agriculture comment," applying it to the proposed RMZs:

> 'The continued availability of grazing allotments is important in terms of public priorities, economic vitality of rural economies, range health, and the customs and culture of many people in New Mexico. It is paramount that your staff consult and coordinate with all affected grazing permit holders in the Gila NF throughout this process to ensure agricultural producers retain unrestricted access needed to maintain range improvements and manage livestock grazing on their allotments. Specific constructed features and range improvements that need to be considered include user roads, water developments (including earthen stock waters, tanks, windmills, pipelines, drinkers, and all other water infrastructure), corrals, fences, gates, and all other range improvements. Any areas that include these constructed features and range improvements should be removed from further consideration…. All six of the ranger districts on the Gila NF have these constructed features and improvements.'
>
> Additionally, access to range improvements … require regular access and maintenance that may not be allowed if an area is managed for wilderness character. NMDA requests all lands that contain range

improvements be removed… to ensure land users have access to these important improvements. (Source: NMDA Gila Forest Plan Revision Comment, 1/3/18)."

Lastly, commenters state that forest managers are required to recognize and protect all private property rights and protectable interests from an intrusion and the "RMZ" designation is doing just that. They suggest the final environmental analysis document should explain and display all private property rights and protectable interests and exclude them from "RMZ" restrictions due to all the points they have made. They assert doing so would show good faith and full disclosure that the priority of Gila NF managers is the protection of private property rights and protectable interests. **Associated Letter: 100**

Response: Inventoried roadless areas contain riparian management zones just as any other part of the forest does. Riparian management zones are portions of a watershed where riparian-dependent resources receive primary emphasis, and for which plans include plan components to maintain or restore riparian ecological functions (36 CFR 219.19). They are a requirement of the 2012 Planning Rule, and each plan must contain components that ensure no management practices causing detrimental changes in water temperature or chemical composition, blockages of water courses or deposits of sediment that seriously and adversely affect water conditions or fish habitat are permitted (36 CFR 219.8). Many factors influence the width of a riparian management zone, and the 2012 Planning Rule and agency directives allow for site-specific delineation (CFR 219.8, FSH 1909.12 Chapter 20 Section 23.11e). Under all the draft plan alternatives, no default riparian management zone width is established. Riparian management zones will be delineated at the project level, given the large variability in width that is present across the forest's riparian systems (see "Riparian Management Zones" in the draft plan's Riparian and Aquatic Ecosystems section). This site-specific delineation will determine where plan standards and guidelines for riparian management zones apply.

Standards and guidelines relevant to riparian management zones can be found in the Riparian and Aquatic Ecosystems section of the plan, as well as sections for activities and uses such as Sustainable Recreation, Roads, and Livestock Grazing. Final Riparian and Aquatic Ecosystems standard 1 requires preferential consideration be provided by incorporating best management practices. Nothing in the draft or final standard precludes any management activity or use. Any existing or future management activity or use is permissible provided site and circumstance specific best management practices are taken to maintain or improve the condition of riparian management zones. Riparian management zone delineations and plan direction have no effect on private property or legally protected rights or interests no matter where they occur.

The effects of riparian management zone direction are accurately analyzed in the draft EIS. Riparian management will have no effect on range infrastructure where that range infrastructure supports movement toward desired conditions. If and where it does not, forest staff would work with the affected permittee and any supporting partners to come up with a site and circumstance specific solution that does contribute movement toward desired conditions for natural resources and livestock grazing as a use of the forest. Plan direction does not exclude the use of mechanized equipment in riparian management zones. All action alternatives place some degree of restriction on the location of new range infrastructure, which is intended to support integrated multiple use management. Alternatives 2 and 5 meet that intent by requiring new infrastructure be located outside riparian management zone. Alternatives 3 and 4 leave room for new range infrastructure to be in riparian management zones IF it meets the intent and will not contribute to downward trends in riparian condition. The no-action alternative is silent on this issue but still requires preferential treatment be given to riparian and riparian-dependent resources that would require similar considerations.

Comment 8: There is a concern that the following statement on page 160 of the DEIS is patently false, at the very least because there is no mention of feral cattle grazing: "However, the outcomes for riparian and aquatic ecosystems depend on how livestock grazing is managed (for example, Lucas et al. 2004; George et al. 2011). Through a mixture of desired conditions, standards and guidelines, livestock grazing under any of the action alternatives will support achievement and maintenance of desired conditions for all riparian and aquatic ecosystem characteristics." **Associated Letter: 111**

Response: Feral cattle are an unauthorized use, and as such, are not compliant with the plan or any of its alternatives. It is an implementation and enforcement issue, not a planning issue. The purpose of the EIS is to evaluate the effects of plan direction; therefore, it is necessary to assume all activities and uses will be compliant with the plan. This was not articulated in the draft EIS. It is articulated in the FEIS at the beginning of chapter 3 under the heading Assumptions Common to All Analyses.

Comment 9: Commenters are concerned because the draft plan's definition of riparian management zones is vague and likely inadequate to protect the important habitat provided by ephemeral and intermittent streams. Commenters state research demonstrates the benefits of larger riparian buffers for native trout and water quality. Commenters recommend that the final plan establish large protective stream buffers along all perennial rivers and streams, clearly define the size of riparian management zones per planning rule requirements and include intermittent and ephemeral waters in the final plan's definition of RMZs. Commenters discuss the planning rule and agency directives' requirements for establishing riparian management zone widths and the draft plan's failure to comply despite adequate tools to do so (LiDAR, aerial photos, remote sensing, and other data). Commenters state that without establishing a width, plan direction for management activities within riparian management zones has little value. Commenters suggest a default width of 500 feet would address their concerns.

Commenters state that ephemeral and intermittent streams need to be explicitly protected in all relevant forestwide and management area plan direction because of the significant number of waterways they represent within the forest and the broader landscape. Commenters state that these streams are integral parts of a watershed, their conditions affect the health of the entire ecosystem, and they are more sensitive to climate change and human disturbances. Commenters also point to a lack of data on these streams and recommend the plan include monitoring.

Commenters note that all perennial surface waters located in wilderness were designated as Outstanding National Resource Waters by the State and suggest it is the Forest Service's responsibility to help secure and implement better water quality protections for ephemeral and intermittent streams. **Associated Comments: 201, 672, 712, and 724.1 through 724.11**

Response: In the Riparian and Aquatic Ecosystems section of the draft plan under the Riparian Management Zone heading, these areas are defined as "…portions of watersheds around lakes, perennial and *intermittent* streams, *groundwater-dependent* ecosystems, wetlands, and high-elevation wet meadows that have characteristic riparian vegetation and provide riparian function or have the ecological potential to do so…" [*emphasis added*]. Intermittent streams are included. Ephemeral streams that have sufficient subsurface flow [groundwater] to support riparian vegetation and provide riparian function are included, not excluded. A glossary entry for groundwater-dependent ecosystems that includes ephemeral channels that support riparian vegetation has been added to the end of the Riparian and Aquatic Ecosystems section of the final plan.

Comment 10: Commenter points to page 157 in the Riparian and Aquatic Ecosystems Analysis Methodology Area Designations section and states: "Wilderness desired conditions-ecosystem characteristics, watershed for wild and scenic. Are they consistent with opportunities to move toward desired conditions for riparian and aquatic ecosystems? While establishing an additional 500,000-700,000 potential wilderness acres?"
Associated Letter: 233

Response: The various acreages of recommended wilderness and the associated effects to riparian and aquatic ecosystems are analyzed in the EIS under the heading Effects Resulting from Recommended Wilderness Areas.

Comment 11: Commenter states the National Inventory of Wetlands should be referenced in researching project areas and if necessary local staff with the New Mexico Environment Department's Surface Water

Quality Bureau can provide additional mapping data. The bureau's Wetlands Program is developing this dataset, but it has not formally been released yet. **Associated Letter: 242**

Response: These datasets are now referenced in the plan's Riparian and Aquatic Ecosystems' Inventory, Monitoring and Relationships management approach.

Comment 12: Commenter states that despite the ecological importance of riparian areas, there is relatively little quantitative, field-based inventory and/or monitoring data related to key ecosystem characteristics of riparian areas on the forest. Commenter states that such monitoring data could better inform management and provide a means for evaluating whether management is contributing to ecological integrity and sustainability, or not. Commenter is concerned because they do not see mention of any systematic attempt to increase such knowledge in the draft documents. **Associated Letter: 109**

Response: Riparian and Aquatic Ecosystems FS-DC3 and MQ45 are about inventory. Monitoring questions 1, 2, 46, 48, and 53 are about condition monitoring. This issue is also discussed in the Riparian and Aquatic Ecosystems' Inventory, Monitoring and Relationships management approach.

Comment 13: Commenter states that no human uses should be allowed that would reduce resiliency and sustainability, states that riparian habitats are critical for the survival of many special status species and that saltcedar and other invasive species should be removed wherever possible. **Associated Letter: 683**

Response: Riparian and Aquatic Ecosystems S1 requires that all uses provide preferential consideration to riparian and aquatic resources and establishes that preferential treatment through best management practices. The plan also contains an objective for noxious weed removal (Non-native Invasive Species O1) and riparian areas are a priority area for survey (Non-native Invasive Species Survey and Documentation Strategy management approach). Forest staff and volunteers have been and will continue work to eradicate salt cedar and other invasive species in riparian areas.

Comment 14: Commenter points to the discussion of spatial scales on page 27 of the draft plan and questions how a management feature, like a grazing allotment, interferes with the start and end point of a stream reach. **Associated Letter: 233**

Response: As described in the draft plan, stream reaches are a length of stream between two points. Changes in geology, topography, dominant species, condition, or management boundaries that may affect condition can be used to identify a reach. Because of differences in allotment management, or how a particular pasture is managed can affect condition status, such boundaries are sometimes useful as start and end points.

Comment 15: Commenter disagrees that wilderness and recommended wilderness do not contribute to differences in effects to riparian and aquatic ecosystems among alternatives and disagrees with the effects analysis. Commenter asserts that wilderness protects riparian and aquatic ecosystems, and that the probability of large, contiguous extents of stand-replacement fire should not be used as a reason to eliminate areas from recommended wilderness because fire is natural and riparian areas will heal themselves. **Associated Letter: 233**

Response: We acknowledge the commenter's opinion. The effects of designated wilderness on riparian and aquatic ecosystems is not analyzed because the plan cannot change existing congressional designations, so it doesn't create differences between alternatives. There are effects that differ between alternatives because of recommended wilderness as described in the FEIS. Alternative 5 includes recommendation of areas that contain large contiguous extents of stand-replacement fire. The other alternatives do not.

Desired Conditions

Comment 16: Commenter supports the draft plan's thoughtful and specific forestwide desired conditions for riparian and aquatic ecosystems and ask that these be included in the final plan. **Associated Letter: 672**

Response: Thank you for your comment. The intent of these desired conditions remains in the final plan with some modifications and additions based on the Southwestern Region's Riparian and Aquatic Ecosystem Strategy's desired conditions.

Suggested Desired Conditions

Comment 17: Commenter states that specifying those conditions under which aquatic and riparian habitat resiliency is increased is important. Commenter suggests the draft plan hints at this, though it should be stated more clearly. Commenter supports the inclusion of a desired condition for aquatic habitat from the Santa Fe National Forest's draft plan: "Desired Condition: Aquatic and riparian ecosystems support a complete assemblage of native species and are resilient to natural and human disturbances including projected warmer and drier conditions." **Associated Letter: 672**

Response: Draft Riparian and Aquatic Ecosystems WS-DC3 incorporates resilience to natural disturbances, human activities and climate variability. These concepts are preserved in the final suite of desired conditions, although wording has changed to better align with the Southwestern Region's Riparian and Aquatic Ecosystem Strategy's desired conditions.

Watershed-Scale Desired Condition 1

"Riparian areas have ecological conditions that contribute to the recovery of listed species and support the persistence of species of conservation concern, as well as native and desired non-native aquatic and riparian-dependent plant and animal species."

Comment 18: There is a concern that this desired condition is weakly worded. There is a suggestion that it be reworded to read "Riparian areas are robust and healthy enough to support all of the species that depend on them. All communities of plants and animals, riparian forests, aquatic habitat, wetlands, at risk and endangered species, and corridors for these and other species..." Aside from suggested changes to the wording in the first watershed-scale desired condition for riparian and aquatic ecosystems, commenter expresses general support for the desired conditions. **Associated Letter: 28**

Response: As worded in the draft, this desired condition addresses riparian health in a general way as it relates to the ability to support the ecological requirements for all species. It is further supported by the rest of the watershed-scale desired conditions. As worded in the draft, this desired condition does not address movement corridors as this suggestion would have it do. Instead, connectivity and movement are addressed in watershed-scale desired conditions 2 and 3b. Final desired conditions for riparian and aquatic ecosystems retain these concepts but have been restructured and reworded to better align with the regional desired conditions that inform the Southwestern Region's Riparian and Aquatic Ecosystem Strategy.

Comment 19: Commenter disagrees that wilderness and recommended wilderness do not contribute to differences in effects to riparian and aquatic ecosystems among alternatives and disagrees with the effects analysis. Commenter asserts that wilderness protects riparian and aquatic ecosystems, and that the probability of large, contiguous extents of stand-replacement fire should not be used as a reason to eliminate areas from recommended wilderness because fire is natural and riparian areas will heal themselves. **Associated Letter: 233**

Response: The effects of designated wilderness on riparian and aquatic ecosystems is not analyzed because the plan cannot change existing congressional designations, so it doesn't create differences between alternatives. There are effects that differ between alternatives because of recommended wilderness as

described in the EIS. Alternative 5 includes areas that contain large contiguous extents of stand-replacement fire. The other alternatives do not.

Watershed-Scale Desired Condition 2

"Aquatic and upland components are linked, providing access to food, water, cover, nesting areas and habitat connectivity for aquatic, riparian, and upland species."

Comment 20: There is support for this desired condition because it promotes habitat connectivity. **Associated Letter: 652**

Response: Similar direction is included in the final plan under 4th and 5th level WS-DC8 and 6th level WS-DC11.

Watershed-Scale Desired Condition 3a

"Riparian and aquatic habitat provides for self-sustaining populations of native fish, amphibians, aquatic and semi-aquatic species within their historic distributions."

Comment 21: There is a concern that there is ample evidence that species have already shifted their distributions in response to long-term climatic variability. This wording should account for both historic and potential future ranges. **Associated Letter: 151**

Response: This suggestion has been incorporated into the final desired conditions (4th and 5th level WS-DC1 and 6th level WS-DC1).

Watershed-Scale Desired Condition 3b

"Streams exhibit full connectivity (more than 95 percent of historic aquatic habitats are still connected) except where barriers to movement are necessary to protect native species and prevent movement of non-native species (for example, fish barrier structures to protect Gila trout populations from non-native fish). Ephemeral watercourses provide for dispersal, access to new habitats, and perpetuation of genetic diversity, as well as nesting and foraging for riparian, aquatic and semi-aquatic species."

Comment 22: Commenter notes that this desired condition lacks connectivity for riparian habitat, although it is included for streams. There is a recommendation that connectivity language be added for riparian habitat because healthy riparian systems provide important movement corridors for aquatic and terrestrial wildlife. **Associated Letter: 151**

Response: 4th and 5th level WS-DC6 and 6th level WS-DC8 now include both riparian corridors and streams.

Watershed-Scale Desired Condition 3d

"The connections of floodplains, channels and water tables distribute flood flows and sustain diverse habitats. Hydric and alluvial soil functions are maintained, supporting natural sediment regimes, patterns of water flow, and amount and distribution of plant-available water and nutrients. Width-to-depth ratios are what would be expected in the absence of human influence and are stable in at least 95 percent of the 6th level watershed."

Comment 23: There is a recommendation that this desired condition include additional connectivity language. Specific recommendation is: "Channels, floodplains, and water tables are connected and facilitated regeneration of native riparian, wetland, and aquatic plants that attenuate flood flows and provide diverse habitats for fish and wildlife." **Associated Letter: 151**

Response: The final plan's desired conditions have been restructured and reworded to better align with the regional desired conditions that inform the Southwestern Region's Riparian and Aquatic Ecosystem Strategy. 4th and 5th level WS-DC4, 6 and 8 and 6th level WS-DC10 and 11 cover these elements of connectivity. Regeneration is covered by 4th and 5th level WS-DC2 and 6, 6th level WS-DC9 and fine-scale DC4 and 5. Diverse habitats are covered by 4th and 5th level WS-DC1 and 3, and 6th level WS-DC1.

Watershed-Scale Desired Condition 3e

"Within their type and capability, riparian vegetation communities are composed of a diversity of native species, functional groups, and multiple age classes (at least two) to provide large woody debris and groundcover, protect streambanks and capture sediment, dissipate stream energy, and protect and enrich soil. Native mid to late seral states occurs on more than 80 percent of the riparian/wetland areas in the 6th level watershed."

Comment 24: Commenter suggests that this desired condition should also specify desired conditions for saplings and seedlings that are indicative of natural flow regimes and floodplain characteristics that support the continued recruitment and regeneration of native vegetation. **Associated Letter: 151**

Response: The term multiple age classes captures both saplings and seedlings. However, this desired condition has been revised to better align with the regional desired conditions that inform the Southwestern Region's Riparian and Aquatic Ecosystem Strategy. Regeneration is covered by 4th and 5th level WS-DC3 and 6, 6th level WS-DC9 and fine-scale DC4 and 5.

Objective 1

"Implement at least one riparian improvement project annually, above and beyond any noxious or invasive weed treatments."

Comment 25: Commenters state targeting only one riparian improvement project each year is inadequate to achieve desired conditions. Commenters are concerned that upland areas seem to be prioritized for restoration and request riparian restoration and be given more attention and prioritized in the plan. Some suggest this objective could be improved by including a measurable size and scale of riparian improvement because as written, a riparian improvement project could consist of as little as planting a few cottonwood trees. One commenter suggests this could be achieved by pairing forest and watershed treatments with riparian and wetland restoration projects, as suggested by the guideline in the Watersheds section. Another commenter states the guideline is not enough and that the plan should include specific, measurable objectives to improve water quality, stream habitat, aquatic connectivity, and watershed, stream, and wetland restoration.

One commenter specifically suggests the following based on the Carson National Forest's draft plan: "Restore the structure and function of at least 200 – 300 acres of nonfunctioning and functioning-at-risk riparian areas and wetlands annually." And from the Santa Fe National Forest's draft plan: "Complete aquatic restoration on priority projects that restore 30 miles of aquatic habitat (e.g., increase pool quantity, provide stream cover, remove or install fish barriers, restore beaver populations, or treat aquatic invasive species) every ten years to benefit aquatic species."

Others suggest adding an objective focused on monitoring and data gathering. One commenter had a more specific idea based on the lack of detailed inventory or assessment of spring and seeps discussed in the EIS. This commenter requests an objective to assess and, if needed, improve the condition of 10-20 individual springs and seeps over each 10-year period following plan approval to create improved conditions.
Associated Letters: 28, 130, 142, 151, 193, 201, 361, 542, 672, 685, and 724.1 through 724.11

Response: The objective states "at least" one project annually. This could mean one acre around a spring or seep, or several hundred acres along a stream or river. More than one project could be done, and it is hoped that between the Watersheds S1 requirement for landscape-scale restoration projects to incorporate projects

identified in watershed restoration action plans (which often benefit riparian and aquatic ecosystems), and with the help of partnerships and volunteers more will be done. There are also objectives under Wildlife, Fish, and Plants that are relevant to riparian and aquatic ecosystems (Os 2, 3 and 4). These objectives related to constructed aquatic barriers, activities that contribute to the recovery of federally listed species and restoration or enhancement of at least 100 miles of stream habitat over each 10-year period. Wildlife, Fish, and Plants O4 aims to restore or enhance at least 100 miles of stream habitat every ten years, which is more ambitious than the Santa Fe National Forest's objective for 30 miles every 10 years.

The inventory and assessment issue are discussed in the Riparian and Aquatic Ecosystems management approach "Inventory, Monitoring and Relationships." It is hoped that staff efforts to leverage stakeholder interest and concern for these areas will increase our capacity to implement this important work and more can be accomplished in terms of inventory, assessment, monitoring, and restoration. Monitoring questions 1, 2, 10, 45, 46, and 53 would all generate important information about riparian and aquatic ecosystems.

Literature Cited in Response:

Potyondy, J.P., and T.W. Geier, (and contributing authors P. Luehring, M. Hudy, B. Roper, R. Dunlap, T. Doane, G. Kujawa, P.T. Anderson, J. Hall-Rivera, J. Keys, M. Ielmini, A. Acheson, R. Thompson, B. Davis, S. Friedman, K.D. Rosa, and T. Brown.) 2011. Watershed Condition Framework: A Framework for Assessing and Tracking Changes to Watershed Condition. United States Department of Agriculture, Forest Service, Washington DC. FS-977. 97 pp.

Suggested Objectives

Comment 26: The commenter observes the standard requiring constructed water features provide safe access and escape for wildlife (Wildlife, Fish, and Plants S1) and suggests that an objective be added for riparian restoration that these features are removed when they are no longer needed. Commenter recognizes this is a big undertaking and questions who will catalogue and prioritize these features, specifically wondering if it will be the range program manager out of the supervisor's office. **Associated Letter: 233**

Response: The need for this infrastructure and the appropriate actions would be assessed as part of the riparian restoration project planning and design.

Standard 2

"Activities in and around surface waters will follow decontamination procedures that prevent the spread of non-desirable fungus, disease, non-native, or invasive organisms."

Comment 27: Commenters request more specific language requiring decontamination of equipment used in aquatic environments to control aquatic diseases and pathogens, such as whirling disease and chytrid fungus. They also recommend referencing the Declining Amphibian Task Force Fieldwork Code of Practice because these practices minimize the threat of transmitting aquatic pathogens and parasites to both amphibians and fish.

Another commenter says it is unclear what "in and around surface waters" means and suggests the following language changes: "Ground-disturbing activities within riparian management zones or adjacent to aquatic ecosystems must take measures to avoid introducing new or spreading existing invasive species and pathogens."

A statement was made that ephemeral and intermittent streams need stronger protections for the reasons stated in comment 9 of this section. Commenter recommends this standard should explicitly include them. **Associated Comments: 151, 672, and 712**

Response: All plan direction in the Riparian and Aquatic Ecosystems section applies to riparian management zones. Not all activities that may contribute to the introduction and spread of disease or non-native organisms

are ground-disturbing in nature. For example, aquatic organism surveys and aircraft dipping water buckets for firefighting purposes are not ground-disturbing, and both could introduce or spread chytrid fungus if proper decontamination procedures are not followed. The draft and final standard include a footnote referencing the most current version of Preventing Spread of Aquatic Invasive Organisms Common to the Southwestern Region and the most current National Interagency Fire Center guidance, both of which provide more detail on the issue and specific practices. The final plan now includes the recommended reference in addition to the two that were included at draft. Please refer to response to comment 9 for the definition of riparian management zones and the applicability to intermittent and ephemeral streams.

Standard 4

"When new groundwater wells or improvements to existing groundwater wells are proposed, either in the Gila NF or on lands of other jurisdictions, potential adverse impacts to riparian and aquatic ecosystems in the Gila NF will be evaluated. If it is determined that adverse impacts (a downward trend or movement away from desired conditions) would occur as a result of proposed activities in the Gila NF, special use permits will not be issued. If it is determined that adverse impacts would occur as a result of activities on lands under other jurisdictions, the staff will communicate concerns to the State Engineer."

Comment 28: Commenter asks: "What standing does the Gila National Forest have to protest new wells on adjacent private lands?" **Associated Letter: 39**

Response: The Gila National Forest has standing to object or protest based on federal reserved water rights. These "reserved" rights are for developments that are needed to accomplish the purpose of the reservation (national forest), with a priority date being the date of the reservation. These rights include water necessary for the maintenance of favorable conditions of water flow and the production of a continuous supply of timber. Such rights include, but are not limited to, domestic water at administrative sites, water needed for fire protection and control, and water needed for construction and maintenance of roads.

Suggested Standards

Comment 29: To minimize impacts, cow tanks should be a minimum of 500 feet away from enclosures surrounding riparian to support diverse plant communities. **Associated Letter: 233**

Response: The location of stock tanks is best determined at the allotment level when site-specific circumstances are understood. There may be topographic and other considerations that influence the best placement of constructed water sources to support desired conditions (Swanson et al. 2015).

Literature Cited in Response:

Swanson, S., S. Wyman, and C. Evans. 2015. Practical Grazing Management to Maintain or Restore Riparian Functions and Values on Rangelands. Journal of Rangeland Applications, 2, pp. 1-28.

Guideline 1

"New construction or realignment of roads and motorized routes, recreation sites or other infrastructure should not be located within the 100-year floodplain or within 300 feet of an RMZ. Exceptions for stream crossings are made where determined necessary by site-specific analysis to reduce potential long-term investments in maintenance or adverse impacts (a downward trend or movement away from desired conditions) to floodplains and water resource features."

Comment 30: There are differing perspectives about this guideline. Some would prefer the plan was silent on this because they don't want more restrictions, many existing roads are in drainages, and this might not even be practicable. Some of these commenters state that people like to see the water and a 300- or 500-foot distance is totally arbitrary. Others would like to see all the roads closed in the travel management decision

signed in 2013 re-opened and maintained because closing them is a taking of private property rights from wood gatherers. There is a suggestion that the timber program could pay for this. Some suggest no new roads should be created because rogue and reckless visitors are tearing up the country and law enforcement isn't doing enough already. Some think the grazing permittee should have a say in this and be allowed to do the road maintenance if the Forest Service isn't doing it. One commenter suggested that instead of this guideline there should be one that says grazing permittees have water rights and can drive on any road for infrastructure maintenance and other management activities. One commenter suggested there needs to be exceptions allowed for this guideline to support the plan's Vision and provide access for the disabled and elderly.

Some support the draft guideline as written because it represents the middle ground. One commenter said that people do like to be near water, but sometimes it is safer to be a little farther away. A few commenters noted that it is less expensive in terms of maintenance and replacement to locate this infrastructure out of the floodplain. Others would like the guideline to be expanded to ban motorized vehicles and prohibit firewood cutting in riparian areas. Several commenters proposed the distance should depend on the value of the riparian area and suggested the guideline be stratified by stream type with a 500-foot buffer for trout-bearing streams and smaller buffers for ephemeral or intermittent streams. Another commenter suggested the plan adopt an offsetting policy where if there was a need for a new road and it was expected to negatively impact a riparian area, that would be okay if another riparian area was restored.

Others do not think it is restrictive enough and prefer it as it exists in alternative 5 with the distance from a riparian management zone set at 500 feet and elevated to a standard. One commenter preferred a half-mile buffer. Those who prefer the larger distance point to the analysis of roads and plan direction for decommissioning roads in the draft EIS to support their preference, stating people who want to visit riparian areas can get there on foot. Others cite planning rule requirements to address climate change, the larger flood events that are expected to accompany changes in precipitation, and the high vulnerability of riparian and aquatic ecosystems as a reason to widen the buffer zone. These commenters would like this standard to include ephemeral and intermittent streams and re-phrased as: "New developed campgrounds shall not be located within floodplains or other areas prone to flooding or difficult to evacuate in case of emergencies and shall have more than one point of ingress/egress in case of emergency evacuation." These commenters also recommend the plan specify a 500-foot buffer for recreation infrastructure forest staff conduct a study on the economic impacts of a fee program at half of its developed campgrounds, which are very popular with underserved populations. Several commenters prefer the plan prohibit new road construction entirely and focus on moving all existing roads out of drainages. A youth commenter from a local school said: "I think that if we keep roads away from rivers, we would not have to put so much money into the roads that get washed away from a flood." **Associated Letters: 39, 218, 231, 233, 242, 248, 361, 561, 672, 685, 712, 724.1 through 724.11, and OWS-1 through 144**

Response: It is true that many roads currently follow along and cross streambeds and arroyos. The guideline does not compel realignment of those roads. It provides direction for site-specific and project-level proposals in the future. The intent of this guideline is to support movement toward desired conditions for the road system (Roads DC4) and riparian and aquatic ecosystems. Roads in riparian management zones require more frequent and intensive maintenance. Fewer road miles in riparian management zones could allow maintenance of more miles of road overall. (Roads management approach Road System Management, DEIS Roads Effects Common to All Alternatives and Effects Common to Alternatives 2, 3, 4, and 5). Roads in drainage bottoms also have detrimental effects to riparian and aquatic ecosystems (DEIS Riparian and Aquatic Ecosystems Effects Common to All Alternatives and Effects Common to Alternatives 2, 3, and 4).

The 300-foot distance is a standard buffer zone for fish that was researched and developed in the Pacific Northwest. This research showed that roads and other disturbances that were over 300 feet away from riparian areas was enough to minimize sediment delivery to streams. The 500-foot distance was a suggestion we received during the comment period on the preliminary draft plan. Site-specific circumstances can vary widely. Guidelines allow the flexibility to meet the intent by some other means if site-specific circumstances

do not allow for the letter of the guideline to be followed. There may be sites where even the 300 feet is not achievable due to the terrain or the location of cultural heritage site but the intent of keeping riparian and aquatic ecosystems in or moving toward desired conditions can still be achieved by applying best management practices like drainage features or sediment traps. Similarly, there may be sites where a distance greater than 300 feet is advisable and achievable due to slope or other factors and would be allowed under this guideline as it appears in alternative 2. Language was modified in the final plan to make the intent of the guideline clear, which is to minimize sediment delivery to streams.

Guideline 2

"New or redesigned stream crossings, such as bridges and culverts should be wide enough to at least pass the bankfull width unimpeded and incorporate aquatic organism passage design."

Comment 31: Commenter suggests that this guideline should provide more details and best management practices consistent with the New Mexico Department of Game and Fish's bridge and culvert construction guidelines. **Associated Letter: 151**

Response: A footnote recommending the Department's bridge and culvert construction guidelines be referenced during projects that involve aquatic organism passage has been added to this guideline.

Guideline 3

"When disturbance results in degraded riparian conditions, an interdisciplinary team and interested parties should evaluate and determine RMZ readiness for continuing activities. "

Comment 32: There is a preference that this guideline be elevated to a standard. **Associated Letters: 361 and 685**

Response: After further review, this guideline has been removed because it compelled action, which is not compliant with agency directives. Guidelines (and standards) cannot compel action. They can only place constraints on our activities (FSH 1909.12 chapter 20 sections 21, 22.13, and 22.14). Interdisciplinary team reviews, which may include other interested parties, and recommendations to the District Ranger would be part of project-level work, monitoring activities, or at the request of the District Ranger.

Guideline 5

"All projects and activities that include RMZs within their project area should provide for the maintenance of those RMZs that are in properly functioning condition (or equivalent condition class) and include actions to improve RMZs that are not in properly functioning condition, within the capacity of the project. When the project or activity cannot result in upward trends for those RMZs not in properly functioning condition, it should not contribute to downward trends."

Comment 33: Commenter supports the intent behind Guideline 5 in the draft plan (pg. 93) and requests that it be included in the final plan. However, the guideline could be improved with additional specificity regarding what types of actions improve riparian management zones. Commenters recommend consideration of the following guideline from the Rio Grande National Forest's final management plan: "Management activities within the riparian management zones should maintain or restore the connectivity, composition, function, and structure of riparian and wetland areas over the long term." **Associated Letter: 672**

Response: A determination that a riparian area is in proper functioning condition comes from an interdisciplinary field-based assessment of connectivity, composition, function, and structure. The Rio Grande National Forest's guideline represents another way to frame the same idea. The types of actions that can improve riparian management zones are highly site- and circumstance-specific, so it is best determined at the project level.

Guideline 6

"New or redeveloped spring developments should provide protection for the ecosystems supported by the spring without precluding property rights recognized by federal or state law."

Comment 34: Commenter's recommend amending this guideline to "protection or restoration of proper ecosystem function that maintains water quality and quantity." **Associated Letter: 151**

Response: The final guideline has been reworded based on this suggestion. It is unnecessary to state we would follow federal and state laws governing property rights.

Suggested Guidelines

Comment 35: There is a recommendation that the Riparian and Aquatic Ecosystems section of the plan should include a guideline for livestock grazing to be seasonally managed to allow for plant development or recovery sufficient to sustain properly functioning wetland and riparian areas, including survival of young woody seedlings and saplings. **Associated Letter: 151**

Response: A desired condition (DC3) in the Livestock Grazing section of the plan states: "Livestock grazing and use is compatible with the desired conditions for ecological sustainability, biodiversity, and other uses." In an adaptive management system, season of use is an important tool in the toolbox that can help achieve and maintain desired conditions for riparian areas. There is also a riparian and aquatic ecosystem standard requiring that preferential consideration will be given to riparian and aquatic resources, with preferential consideration being determined by the inclusion of best management practices, which could include season or length of use. Resource uses and activities will occur to the extent that they support or do not adversely affect achievement or maintenance of desired conditions. Note that this desired condition is not strictly necessary as the plan is implemented as a whole and livestock grazing would be managed to maintain or support movement toward desired conditions for riparian and aquatic ecosystems.

Comment 36: Commenter is concerned about habitat impacts attributable to livestock grazing and herbivory. Commenter asserts the draft plan fails to specifically address the impacts of livestock grazing in plan direction for aquatic and riparian ecosystems and suggests incorporating the following guideline from the Santa Fe National Forest's draft plan: "Herbivory of riparian plants should not cause long-term trends away from desired riparian conditions." **Associated Comment: 672**

Response: The final plan addresses this concern with Riparian and Aquatic Ecosystems S1, which requires these areas and their dependent resources be given preferential consideration through best management practices. This applies to all management activities and uses, including livestock grazing.

Comment 37: Commenter suggests a guideline intended to limit the impacts of firewood cutting and other activities in riparian areas: "Firewood cutting or wood removal in riparian areas should be managed to protect understory species, maintain tree density (including wildlife cover and stream shading), promote large woody material recruitment, and avoid channel downcutting and accelerated erosion." **Associated Letter: 672**

Response: The Firewood Guide establishes the rules associated with firewood harvest. Cutting is prohibited within 100 feet of a live stream. Further, riparian species are typically not targeted by firewood cutters because they do not burn as well as oak, juniper, or pine.

Comment 38: Commenter suggests it should be a guideline like it is in the Santa Fe National Forest's draft plan: "Riparian management zones (RMZ) should be defined by either a site-appropriate delineation of the riparian area (including one site potential tree height) or a buffer of 100 feet from the edges (e.g., each bank) of all perennial and intermittent streams, lakes, seeps, springs, and other wetlands or 15 feet from the edges of the ephemeral channels. The exact width of RMZs may vary based on ecological or geomorphic factors or by

waterbody type but includes those areas that provide riparian and aquatic ecosystem functions and connectivity. The waterbody itself is considered part of the RMZ." **Associated Letter: 672**

Response: Riparian management zones will be defined by a site-appropriate delineation that considers the factors outlined in agency policy direction (FSH 1909.12 Chapter 20) as outlined under the Riparian Management Zone subheading. This process provides special attention to the first 100 feet from the edges of all permanent surface water, the type of ecosystem and waterbody, the species present, connectivity, the area occupied by riparian vegetation, soil type and properties, landscape features, condition of the riparian area and adjacent land use, and the threat of contamination from pollutants or chemicals.

Restoration and Relationships Management Approach

Comment 39: There is support for restoring riparian and aquatic ecosystems and a concern that a preference for natural recovery methods without a structural design component will take too long to improve conditions and further stress the species that occupy the area. There is a suggestion to integrate non-invasive structural design components early in project development to support a faster and stronger restoration effort. Furthermore, plans to mitigate the stress and harm cause to the species occupying the area during and after the restoration project is completed should be included. **Associated Letter: 42**

Response: In the Restoration and Relationships management approach for riparian and aquatic ecosystems states "When circumstances necessitate natural recovery methods be supplemented by structural design features, native riparian plantings and loose rock structures are preferred. This is because they require relatively minimal investment and maintenance and are least likely to cause unintended damage if they fail. Where structural methods other than loose rock structure are needed, professional natural channel design expertise and proven methods are preferred."

The need for structural design features will be evaluated at the project level and those features would be incorporated into project design as the site and circumstances dictate. Best management practices that would avoid harm or stress to species would be included in project design criteria.

Comment 40: Commenter notes the description of natural recovery in this management approach, which is to reduce or remove management-related stressors and after recovery to prevent degradation from reoccurring. There is a question as to what these stressors may be. **Associated Letter: 233**

Response: Management-related stressors could be related to any management action or permitted use but would most likely be associated with some combination of fire, recreational use, and livestock grazing.

Suggested Management Approaches

Comment 41: There is a concern that the management approaches under Riparian and Aquatic Ecosystems is insufficient. There is a suggestion that management approaches demonstrate a commitment to inventory and monitoring and include at least the beginnings of a plan to involve partners and volunteers and strengthening the bulleted items in the Restoration and Relationships management approach. **Associated Letter: 28**

Response: Management approaches are not plan direction, do not compel or prohibit actions, and cannot demonstrate commitments. They may discuss principal strategies, priorities, or potential processes such as inventory and monitoring, but they should be crafted with care not to create unrealistic expectations regarding the delivery of programs (FSH 1909.12 Chapter 20 Section 22.4). The management approach Inventory, Monitoring and Relationships includes involvement of partners and volunteers.

Comment 42: Commenters recommend adding a management approach or objective for restoring beaver populations. They suggest that the plan should indicate that such actions will involve coordination with the New Mexico Department of Game and Fish to ensure proper authorizations. It should also include constructed

beaver dam analogs to create similar beneficial conditions for aquatic and riparian habitats where beaver cannot be reintroduced due to potential conflicts with adjacent land-management or other factors. **Associated Letter: 151**

Response: A discussion about beavers has been added to the Restoration and Relationships management approach in the final plan.

Roads and Motorized Use

General

Comment 1: A commenter suggests the plan should not permit the use of motorized routes that are closed to the public; If the road is closed it should be closed to everyone, including government employees and ranchers. Another commenter states appreciation for logging road closures and understanding of the access concerns of grazing permittees and private landowners with inholdings. Commenter suggests we need to do a better job of letting permittees know they can have access to some roads that the public will not. Commenter asks: "A friend of mine worries that he won't be able to use his ATV to get to his herd because riding a horse gets harder as he gets older. Would there be an accommodation for him?" **Associated Letters: 1 and 508**

Response: The needs for change document identified a need to develop plan direction and management approaches to support sustainable infrastructure, including roads, while being adaptive to budgets, management needs, and demand for services. A plan component that would prohibit administrative or permitted use of closed roads is not aligned with this need for change.

Forest Service manual direction specifically exempts administrative and permitted use on closed roads or areas for specific reasons based on need (FSM 7716.2). Closed roads may facilitate fire management, law enforcement response, or other management activity given it is required for administration and protection of National Forest System lands. Livestock grazing permit holders, and other permit holders such as utility companies, may need to use closed roads to access their infrastructure to fulfill the purpose, terms, and conditions of their permit as outlined in travel management planning guidance document provided by the Southwestern Region (USDA FS 2008).

Literature Cited in Response:

USDA FS (United States Department of Agriculture – Forest Service). 2008. Travel Management Rule Guidelines. Unpublished guidance document. Southwestern Region. 20 pp.

Comment 2: There is a concern about the environmental damage caused by OHVs, cross-country travel, and user-created roads and a request for Gila National Forest staff and leadership to review related policies, restrict motorized use and end the practice of any vehicles driving in river and creek bottoms. There is a suggestion that vehicles need to be kept out of sandy washes to allow vegetation to grow back. Commenter states that wide shallow streams absorb more heat than narrow channels, which is another reason to keep vehicles out of sandy washes. There is a suggestion that road realignment out of washes will reduce sediment delivery, constraints for natural water flow, improve channel conditions, allow better habitat connectivity, vegetation to regrow, which will improve ecological processes, function, and resilience. Others would like to see any routes that adversely impact wetlands or the 13 federally recognized threatened and endangered species closed. A commenter states that as the population increases so will UTV/ATV/motorcycle use and not only will this create noise pollution but increase greenhouse gas emissions.

One commenter said they thought it was strange that plan alternatives did not explore approaches to off-roading and off-highway vehicle (OHV) use, but they did explore various restrictions on livestock grazing and outfitting and guiding operations. Another commenter states that the plan doesn't reflect the documentation they have submitted multiple times on the resource damage being caused by the public and that they do not

think it is their responsibility to keep reminding the agency of ongoing problems and the failure to address them. This commenter requests that the planning team review the meeting materials from two years ago and add that issues like this that were ignored.

Some commenters would prefer the plan provide more opportunities for OHV use because demand is increasing, and it would benefit the economy. Commenter states there is plenty of room for everyone to play. Another commenter points to the patterns of use described in the environmental analysis and suggests the plan should open more areas for motorized use and even provide a few places for unrestricted off-road use, and opportunities for splashing vehicles through streams because not all the forest needs to be kept in pristine condition. **Associated Letters: 34, 39, 120**, **231, 249, 561, 673, 729.4, OWS-108**

Response: The environmental effects of OHV use, cross-country travel, and user-created roads were analyzed as part of the travel management decision signed in 2014 (USDA FS 2014a and 2014b). Cross-country travel is restricted because of that decision. Motorized use is restricted to National Forest System roads and motorized trails. We recognize that enforcement is an ongoing issue, and we appreciate it when violations are reported to us. There is no mechanism by which forest planning can address law enforcement staffing issues, it is outside the scope of the forest plan.

Travel management decisions will continue to be made at the project level and must be compliant with the revised forest plan. The draft and final plan contain direction intended to reduce the impacts of the motorized transportation system (see final plan Roads: DCs 2, 4 and 5, O1, Ss1-3, and G1-4; Sustainable Recreation: DC14-16, S1-4, G7 and 12-17). While it is not feasible to relocate all existing roads within river and creek bottoms and still provide for the use and management of the forest, roads identified for decommissioning would prioritize those most likely to cause resource damage (see Roads management approach "Road System Management"). If new road construction were to be proposed, the plan directs management to avoid riparian areas (see Roads G3 and Riparian and Aquatic Ecosystems G1).

Specific areas where unrestricted off-road use could be allowed might be incorporated into a project-level proposal and analysis in the future. Right now, there is one established OHV play area on the Reserve Ranger District where this type of recreation is allowed. This was established in the travel management decision (USDA FS 2014a). Specific areas where unrestricted off-road use could be allowed might be incorporated into a project-level proposals and analysis in the future, but they would have to be consistent with the plan direction in place at the time.

In the Riparian and Aquatic Ecosystems section of the plan under the heading Riparian Management Zones, riparian management zones are defined by their characteristics that provide riparian function, "or have the ecological potential to do so." Not all washes have the same ecological potential to support upland, riparian or aquatic vegetation. Realignment of roads that may occur in them may not always result in the response envisioned in the comment. When riparian management zones are delineated at the project level, such roads may be identified for realignment.

Literature Cited in Response:

USDA FS (United States Department of Agriculture – Forest Service). 2014a. Record of Decision for Travel Management. Gila National Forest. MB-R3-06-08.

———. 2014b. Travel Management Final Environmental Impact Statement. Gila National Forest. MB-R3-06-07.

Comment 3: A commenter appreciates the clarification that electric bicycles are only allowed on motorized routes. Another suggests adding a statement to the EIS under the description of recreation access in the Sustainable Recreation Affected Environment that specifically states that any change in policy regarding differentiating access between electric and human-powered bicycles would be determined through a public process. **Associated Letters: 20 and 39**

Response: Policy direction for differentiating electric and human-powered bicycles is determined at the national level and is beyond the scope of the revised forest plan.

Comment 4: There is a concern that the current motorized trail system has limited and prevented responsible motorcyclists from full enjoyment of their recreation opportunity. There are many existing single-track trails that are infrequently used by the typical hiker and old 4WD roads that could be dedicated to two-wheeled motorized use. Motorcycles are very low impact compared to even horse or cattle use. **Associated Letter: 22**

Response: There are 179 miles of motorized trails across the forest and many miles of roads that motorcyclists are free to ride. We recognize that there can be conflicts between uses and the plan's desired conditions would provide a diverse range of opportunities (final Sustainable Recreation DC1) and minimize conflicts (final Sustainable Recreation DC6). Decisions about specific trails can be made at the project level, subject to a National Environmental Policy Act process including public engagement. The plan recognizes the importance of the trail system to our communities at large (assessment report; plan Vision) and the need for broad and inclusive public processes regarding the trail system and other facets of land management (Community Relationships G1 and Sustainable Recreation DC5).

Comment 5: Commenter states that OHV routes are not "motorized trails," they are roads. Commenter finds terminology extremely confusing because OHV roads are included under the Travel Management Rule and hiking-biking-equestrian trails are not. **Associated Letters: 39 and OWS-83**

Response: We acknowledge the commenter's opinion. Commenter is correct that motorized trails are subject to the Travel Management Rule and non-motorized trails are not. Motorized trails and roads are similar in many ways and there are differences too. Motorized trails are for vehicles 50 inches wide or less and roads are for any motorized vehicle regardless of width. Also, roads are managed by our engineering program and maintained with large, heavy equipment like bulldozers and graders. Motorized trails are managed by our recreation program and maintained with smaller equipment like a bobcat or hand tools.

Comment 6: There is a concern that budget constraints are being used as an excuse for managers to place priorities elsewhere and not conduct normal maintenance and reconstruction on National Forest System roads such as the Snow Lake access road on the Reserve Ranger District, in violation of the Highway Safety Act. **Associated Letter: 5**

Response: The revised forest plan provides a programmatic framework that guides site-specific actions but does not authorize, fund, or carry out any project or activity. While the plan is required to be within the fiscal capability of the forest (36 CFR 219.1(g)), the annual budget process and program of work for the road crew is outside the scope of plan revision. The access road to Snow Lake (National Forest System Road 28) is Catron County Road C021 and is not under Forest Service jurisdiction. Approximately 300 miles of National Forest System roads that fall under the Highway Safety Act were transferred to Catron County in the late 1990s under the Forest Roads and Trails easement. This easement also transferred about 80 miles to Grant County. In doing so, the Gila is no longer responsible for maintaining these miles, which allows staff to focus on the remaining roads in the transportation system. The remaining miles that fall under the Highway Safety Act are on National Forest System Road 141. Forest staff actively pursued funding opportunities until 2020 when roughly $7 million was secured through the Great American Outdoors Act. We are moving toward implementing the Road 141 project at the time this response is written.

Comment 7: Commenter requests the plan restrict off-road vehicle use. **Associated Letter: 165**

Response: Cross-country travel was restricted as part of the forestwide travel management decision signed in 2014. One small area on the Reserve Ranger District was exempted from this restriction and was designated as a utility terrain vehicle play area. The plan supports the travel management decision, and subsequent travel management decisions with the following standard in the Roads section of the plan: "Motor vehicle use off

the designated system of roads, trails, and areas identified on the Gila National Forest's most current motor vehicle use map is prohibited, except as authorized by law, permits, or orders in connection with resource management and public safety."

Comment 8: Commenters are concerned that the draft documents fail to provide for, consider, or analyze plan components that provide for an ecologically and economically sustainable forest road system, thereby failing to meet planning rule requirements and Subpart A of the Travel Management Rule. Commenters express support for many of the proposed plan components for roads but suggest stronger direction is needed to achieve a sustainable, minimum road system. Commenters are also concerned that the analysis related to the road system is incomplete and fails to take the hard look required by the National Environmental Policy Act.

Commenters state the agency doesn't have another planning tool to direct long-term and forestwide management of the road system to ensure compliance with policy and regulation. Travel Management Plans under Subpart B of 36 CFR 212 are not a substitute forest plan direction. Commenters assert that the purpose of those Travel Management Plans is to designate the open road system, not achieve a sustainable system, decommission roads, or otherwise meet the mandates of the planning rule or Subpart A of the Rule. Forest plans must use the travel management analysis completed under Subpart B to achieve compliance with Subpart A. Therefore, the final plan should incorporate by reference all applicable regulatory and policy requirements for the transportation system and include enforceable plan components to assure these requirements are met within three years and the minimum road system achieved within the life of the plan. Commenter quotes agency comments on the Road Rule as support that this was clearly the intent:

> "The planning rule provides the overall framework for planning and management of the National Forest System. The road management rule and policy which are implemented through the planning process must adhere to the sustainability, collaboration, and science provisions of the planning rule. For example, under the road management policy, national forests and grasslands must complete an analysis of their existing road system and then incorporate the analysis into their land management process."

Commenter notes that while the forest completed its travel analysis process in 2010, it did not identify the minimum road system in its travel management planning record of decision published in 2014, instead focusing specifically on designating motorized roads and trails for public use. Commenter states the decision document admits meeting Subpart A direction was not met because none of the alternatives identified a road system that could be fully maintained with current or projected funding levels. Further, the decision document implies a need to identify the minimum road system remains by stating that roads not selected as part of the designated public system can be used administratively or by written authorization (329 miles) or will be stored (908 miles) for future use or decommissioned in future project planning. Commenter suggests many more roads could be decommissioned because these roads don't represent the minimum road system or even the full extent of unneeded roads because they were identified through a process only meant to comply with Subpart B.

To move toward compliance with Subpart A, commenters suggest the plan must include objectives or other plan components to compel project-level analysis, at a district or forest scale, finally identify the minimum road system and prioritize roads for decommissioning. Commenters would also like to see a plan component that requires a new travel analysis report to be updated every five years until the minimum road system is implemented.

Commenters refer to EIS discussion of the maintenance backlog and the failure to adequately address maintenance shortfalls in its analysis or provide specific direction for roads that pose an elevated resource risk due to lack of maintenance. Commenters suggest that clearly identifying these impacts is the first step to developing plan components that address them. Commenters assert the draft plan lacks such components and relies on management approaches, which are not binding direction. Commenters recommend these management approaches be replaced with enforceable plan components that address the fiscal burden of the entire system and prioritize the available funding to effectively move toward a minimum road system.

Commenter suggests enforceable plan components will help keep managers on course given the high-turnover in decision-maker positions.

Commenters discuss the effects of roads established in the scientific literature, the Gila National Forest's deferred maintenance backlog and the significant aggregate impacts of the road system on connectivity, ecological integrity, water quality, species viability and diversity, and other forest resources and ecosystem services. Commenter suggests the final documents must analyze the cumulative and indirect impacts of forest roads and climate change. Commenter also suggests that planning rule requirements cannot be met without integrated plan components that increase the road system's sustainability and resiliency to climate change.

Commenters are concerned that the dismissal of a road density standard based on the travel management analysis and decision on the open motorized system. Commenters assert the agency cannot cite past analysis as a rationale because that analysis did not analyze the total motorized system or consider planning rule requirements. The final plan should incorporate a road density threshold and the analysis should identify current road densities, explain how the alternatives would impact road density and determine what density thresholds are necessary to meet planning rule requirements and protect ecological and watershed values, including maps at various scales.

Commenters state the draft analysis failed to adequately consider the effect of the road system on wildlife species and habitat connectivity. Commenter points to the directives (1909.12 chapter 10 section 12.13 exhibit 01) where road density is identified as a potential key ecosystem characteristic and states there is a direct correlation between road density and various markers for species abundance and viability. Commenters recommend planning staff reconsider the decision to omit road density standards, establish those standards and provide plan direction for decommissioning, seasonal closures and new construction restrictions in a way that promotes habitat quality and connectivity. Commenter suggests the generic desired conditions for roads and the general guideline that roads and trails should accommodate terrestrial and aquatic wildlife species movement and habitat connectivity are insufficient.

Commenters also state that the draft analysis failed to adequately consider the effects of the road system on watersheds. Commenters state it is unclear the extent to which road densities contribute to the roads indicator of the Watershed Condition Framework and the conclusion that 64 to 67 percent of all watersheds are functioning properly with respect to the indicator attributes of road density and proximity to streams. Commenters state: "the Forest Service would have us think that only 36 - 33 percent of watersheds functioning at risk or worse is inconsequential" and that "road maintenance in the Gila National Forest is of larger concern than road density." Commenters disagree and assert both are of equal and consequential concern.

Commenter states the analysis fails to take a hard look at the road system in the context of climate change effects and the consequences of inadequate maintenance and road densities. Commenters refer to the analysis for soil and watershed resources and the discussion of the Watershed Condition Classification roads indicator and attributes, suggesting an analysis for the mass wasting attribute was omitted.

Commenters are also concerned with the water quality indicator analysis because the discussion does not explain how much road-related sedimentation contributes to water quality problems for both 303(d) listed and unlisted streams, both of which comprise the water quality indicator score. Commenters recommend providing more information on miles of road by maintenance level within riparian management zones, the amount of deferred maintenance, estimated the differences in sedimentation between the alternatives based on Riparian and Aquatic Ecosystems guideline 1, and the potential effects to at-risk aquatic species. Commenters state that the analysis cannot just point to various standards and guidelines that assert that they will mitigate adverse effects because optional guidelines and vague desired conditions do not assure this.

Commenters would prefer quantitative analysis as opposed to the qualitative measures used to determine that consequences of the alternatives related to roads and watershed conditions. Commenters refer to the

conclusion that there are no differences between the alternatives because management of the road system is driven entirely by budgetary constraints. Commenters state such remarks do not alleviate the agency's duty to take a hard look at each alternative and that this statement is more support for stronger plan components are needed to achieve a sustainable road system.

Commenters point to another failure of the analysis associated with future construction and use of temporary roads. Commenters question the assertion made in the analysis that temporary roads would be decommissioned and naturalized after the project was complete. The analysis states this would be anticipated under all alternatives as part of restoration treatments, yet it fails to admit that temporary roads from past projects remain on the landscape to this day. Commenters state that this statement must be supported if specific analysis of past failures is foregone. Commenters generally support the guideline that reconstruction and rehabilitation of existing roads should be emphasized over new construction but recommend that should be considered in project-level analysis and the plan must establish a mechanism to track temporary roads and ensure their removal after project completion.

Commenters state the analysis overall fails to provide adequate analysis for each resource where roads pose some environmental consequence including air quality, soils, watersheds and water resources, riparian and wetlands, at-risk species, other wildlife, fish and plant species, and habitat connectivity. Commenters assert that to comply with the National Environmental Policy Act a much more robust analysis is needed including but not limited to disclosure of the following items:

1) The condition of the road system including the number of miles that are in departure from objective maintenance levels;
2) The environmental consequences of these departures to specific resources;
3) How system and unauthorized roads affects the character of inventoried roadless and recommended wilderness areas;
4) The fiscal and ecological sustainability of the transportation system, including a description of how the transportation system interacts with the hydrologic system (number of stream/route crossings; proximity of roads to streams; spatial intersection of routes and erosive soils; spatial relationship of routes and water bodies with excessive sedimentation);
5) The number, miles and location of system and unauthorized roads that are in wildlife linkage areas and possibly impeding wildlife movement;
6) The number, miles and location of system and known unauthorized roads that are proximal to streams with at-risk fish species, and the degree to which the road segments are impacting or threatening species' habitats; and
7) How climate change may impact the road system and its effects on other resources.

Other commenters suggest the plan should prohibit the construction of new roads for any reason because of negative impacts on soil quality, riparian habitat, water quality, habitat connectivity, native wildlife, fish, and plant populations, and the potential for invasive weed introduction. These commenters suggest the focus should be on a review of the road system and decommissioning of roads that cannot be maintained because of budget and staffing shortfalls so that a truly economically and ecologically sustainable road system is the end state. Others prefer the plan prohibit new roads because people will use them for illegal activities such as dumping or poaching, or harmful activities such as logging. One commenter stated the plan should only allow motorized recreation in areas that are "already fouled up beyond all recognition and not in wildlife corridors."

A commenter that wants the plan to focus on decommissioning suggests it would help with enforcing travel management decisions because sometimes people get confused and end up on closed roads accidentally. Commenter suggests enforcement would benefit from a better-informed public and that maps should be handed out to hunters, when firewood permits are sold, and when ATV and motorcycles are registered. Other suggestions include properly trained front desk staff and a program requiring all visitors to the forest to buy a

10-dollar pass to display on their vehicle would help. Maps could be distributed with the purchase of the pass. Commenter suggests this would also provide funding for forest management.

One commenter suggests the forest's road system can be expected to have immense cumulative effects both on and off forest and is concerned that those cumulative effects were not adequately disclosed in the draft analysis. **Associated Letters: 69, 165, 207, 231, 422, 672, 712, 720.4, 720.6, 720.19, 720.21, 720.22, 720.42, 725.1 through 725.7**

Response: The Gila National Forest completed a travel analysis and plan in compliance with Subpart A of the Travel Management Rule with the decision signed in 2014 (USDA FS 2014a and 2014b). The travel analysis plan identified the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands (36 CFR 212.5(b)(1). To fulfill Subpart B of the Travel Management Rule, each district on the Gila National Forest would make project-level decisions regarding the designated road system as concerns, issues, or opportunities arise.

The final plan includes components to support future project-level decisions and that allow for management of designated roads (those included on the motor vehicle use map) and unneeded roads. Unneeded roads are decommissioned to reduce impacts to ecological resources and connectivity (Roads O1). This objective would help meet the minimum road system identified in the 2014 travel management decision, including project-level adjustments that might be made in the future. Roads DC6 was added to provide direction related to vulnerability assessments and a climate-resilient transportation system. We also added a guideline to the final plan requiring temporary roads to be restored to more natural vegetative conditions upon project completion. While no new road construction is proposed as part of the revised forest plan, prohibiting new road construction in the plan would restrict the ability of the agency to fulfill its mission.

Commenter correctly points out that in the directives, road density could be a potential key ecosystem characteristic. It is not required and would not be useful in our case because there are no differences between alternatives that it would be responsive to, as our forestwide travel management process is complete. The level of analysis the commenters would like to see can be found in the FEIS supporting the 2014 travel management decision (USDA FS 2014b). A road density standard was an alternative element considered but eliminated from detailed study. The rationale in volume 1 the FEIS describing why it was eliminated from detailed study has been revised for clarity.

Regarding commenters' concerns about the effects of roads on watersheds, the cited text is not in the DEIS. It is in the assessment report in Chapter 9: System Drivers and Stressors under the subheadings Reference and Current Disturbance Regimes, Roads and Trails page 454, the full text of which reads:

> "The roads and trails indicator from the watershed condition classification describes the likelihood of altered hydrologic and sediment regimes in terms of road density, maintenance, and proximity to water attributes. Ratings of Functioning Properly indicate the hydrologic and sediment regimes are largely intact. Functioning at Risk and Impaired Function ratings indicate moderate and higher likelihoods of alteration of hydrologic and sediment regimes. Between 64 and 67 percent of subwatersheds are Functioning Properly with respect to road density and proximity to water while only approximately 12 percent are considered Functioning Properly with respect to maintenance. Roads in close proximity to water not only have some of the highest maintenance requirements, but also have the most immediate effects on riparian vegetation, channel shape and function, and sediment and hydrologic regimes."

We agree that road density, proximity to water, and road maintenance are all consequential attributes of the Watershed Conditions Classification's roads indicator. This paragraph does not state that road density or proximity to water are more, or less, consequential than road maintenance. It states that road maintenance is more often the case of impairment, on the Gila National Forest, than density or proximity to water. Thus, road maintenance is more frequently a concern.

Guidelines are not optional. The intent of the guideline must be met but there is flexibility in how it is met. Desired conditions are not vague and should be specific enough that progress toward them can be measured, either qualitatively or quantitatively. We acknowledge the commenters' preference for quantitative analysis. Quantitative analysis is not always helpful or even possible given the nature of the decision(s) the analysis supports and the data and methods available.

The distribution of travel management maps and enforcement is a program delivery and compliance issue, not a forest plan issue.

Literature Cited in Response:

USDA FS (United States Department of Agriculture – Forest Service). 2014a. Record of Decision for Travel Management. Gila National Forest. MB-R3-06-08.

———. 2014b. Travel Management Final Environmental Impact Statement. Gila National Forest. MB-R3-06-07.

Comment 9: There is support for keeping roads open and maintained so that citizens have access to the land that was put aside for their use and enjoyment. **Associated Letter: 129**

Response: The transportation system is important for public access and administration of the national forest.

Comment 10: Commenters would like to see a final plan that includes standards that will protect riparian areas and aquatic habitat from road construction and use. One commenter suggests the plan prohibit the construction of new roads in riparian areas, pointing again to page 443 of the DEIS to the discussion of roads and proximity to water. **Associated Letters: 233 and 422**

Response: The final plan includes a standard that requires preferential consideration be provided to riparian areas and dependent resources with that consideration being demonstrated by incorporation of best management practices (Riparian and Aquatic Ecosystems S1). The plan does not prohibit construction of new roads in riparian areas, but the intent of several plan components is to minimize and mitigate effects should there be no alternative than for a road to cross a drainage that contained riparian resources (Riparian and Aquatic Ecosystems G1, Roads S2 and all guidelines). With respect to the differences between and the pros and cons associated with standards and guidelines, please refer to response to comment 6 in the General section of this appendix.

Comment 11: Since Travel Management is a "dynamic process," there needs to be a better mechanism for updating related map products. **Associated Letter: 39**

Response: The plan provides strategic, overarching direction for management of the forest and its resources. The process for updating travel management map products is a program delivery issue, not a forest plan issue.

Comment 12: The Travel Management Map apparently only allows the 300-foot "dispersed parking" zone for camping and game retrieval. It should be available to day hikers as well, so their cars can get to a reasonable parking spot off the main roads. The one-car-length rule is extremely impractical. **Associated Letter: 39**

Response: You can drive off the road 300 feet from either side of the road where motorized dispersed camping corridors are designated. Outside of dispersed camping corridors, the one-car-length rule applies.

Comment 13: Commenter points to statement made on page 400 of the DEIS that the draft plan does not make any changes to the travel management decision signed in 2014. There is a concern that the draft plan does indeed make changes to the decision to allow vehicles more than 55 inches to use 900 series motorized

trails. There is a suggestion that because these trails will become roads, they should be the first to be rerouted out of washes, drainages, springs, and wetlands. **Associated Letter: 233**

Response: The draft plan does not make changes to the travel management decision. Page 400 of the draft EIS, which discusses the effects common to all alternatives for Cultural and Historic Resources, states: "The revised forest plan makes no changes to the Gila travel management plan and will not change effects to cultural and historic resources from dispersed motorized recreation."

Comment 14: Commenter points to page 401 of the draft EIS to the discussion of the draft plan objective to decommission 50 miles of unneeded roads and the complementary management approach that describes how roads are likely to be prioritized for decommissioning. Commenter then asks if firefighting truck-created roads and wood cutting areas and unauthorized routes are included in the 50-mile decommissioning objective. **Associated Letter: 233**

Response: Fire management vehicles use the existing road system. There is no practice of creating roads during fire management activities. Fire line may have the appearance of a road, but these are supposed to be rehabbed as part of the incident response. Maintenance of the pre-existing road system is also something routinely done by the fire management team prior to demobilization. Others generated by project-level activities are removed as part of the project. The objective applies to any unneeded road.

Comment 15: Commenter points to page 439 in the DEIS Roads Affected Environment section and asks if there is material that signs can be made from that bullets will not penetrate. **Associated Letter: 233**

Response: There are materials that signs can be made from that are reportedly bulletproof such as inch-thick steel. These materials are not practical in all cases.

Comment 16: Commenter points to page 444 of the DEIS and a discussion of how mechanical treatments increase heavy traffic and necessitate temporary roads. Commenter also notes effects to water, soil, vegetation communities, wildlife and wildlife habitat, air quality, noise pollution, and human-caused fire. Commenter then points to page 446 and states the expansion of wilderness in alternative 5 would help buffer the boundaries and prevent additional need of roads and road maintenance into the future. **Associated Letter: 233**

Response: It is possible that additional recommended wilderness in alternative 5 would reduce the potential need for new or temporary roads and maintenance of those roads where that alternative recommends area that is not already an inventoried roadless area. However, Forest Service Manual 2320.3 specifically prohibits maintaining buffer strips of undeveloped wildland as an informal extension of wilderness and internal buffer zones that degrade wilderness values.

Comment 17: Commenters recommend that managers seek opportunities to allow permittees and private inholding owners to maintain roads. **Associated Comments: 227, 247, and 690**

Response: This suggestion is consistent with the relationships and road system management approaches supported by the plan. In fact, there is specific language indicating management is open to opportunities to let private landowners who use forest roads to take maintenance responsibility for roads that serve primarily private uses.

Comment 18: There is a suggestion that plan direction for road construction should include avoidance of archaeological sites. **Associated Letter: 561**

Response: Consultation with the State Historic Preservation Officer will determine the need for avoidance or other mitigating actions related to potential future road construction.

Comment 19: There is a preference for bridge installation rather than fords or low water crossings when roads cross drainages. **Associated Letter: 561**

Response: We acknowledge the commenter's preference. There are times and places where low water crossings are more appropriate than bridges and vice versa. An example would be where post-fire watershed response is expected to be more than the bridge or culvert was designed to handle. Often, these crossings are converted to low water crossings until the watershed recovers sufficiently to re-install. This reduces the damage to the road, and therefore, sediment delivery downstream. The plan provides the flexibility to install whichever type of crossing is appropriate for the time and place as long as it provides for terrestrial and aquatic species movements and habitat connectivity (Roads G2).

Comment 20: Commenter requests that forest staff work with Grant County Road Department and do what is needed to improve and maintain McKnight Mountain Road. This road provides access to the highest point in Grant County and to the Aldo Leopold Wilderness. **Associated Letter: 608**

Response: We agree the McKnight Mountain Road is an important access route valued by management and forest visitors. Maintenance responsibility for specific roads is beyond the scope of the forest plan. Collaboration with the county would be consistent with the road system management approach supported by the plan.

Comment 21: Commenter notes advantages to keeping travel planning separate from land use planning but does not support keep roads in a separate motor vehicle use map and plan. Commenter states: "Planners in a city would never choose this approach to evaluate land use and roadway impacts and make decisions. Because of the separation of the roads from the Forest Plan in time, it makes for a disjointed process. In the end, I have found it extremely cumbersome to have to look at the MVUM and then also unfold the Gila National Forest map at the same time on the same hood of the truck. I was told the latest Forest Map did not integrate the two different sets of maps – they need to be integrated and evaluations of roads really need to be a major component of the overall plan. It would be nice if all maps of this were made available for computer and smart phone access." **Associated Letter: 690**

Response: We acknowledge that many users find the motor vehicle use map unfriendly. The maps are outside the scope of plan revision. The maps are available for use in formats compatible with various smart phone apps and may be downloaded from https://www.fs.usda.gov/detailfull/gila/maps-pubs/?width=full&cid=FSEPRD586426.

Comment 22: Commenter states: "Signage has always been a concern for me regarding travel within the Gila National Forest. Too many places have minimal roadway signage to help the users of the Gila National Forest. Now, with a nearly unworkable set of maps, travel and trying to figure out where you are can be frustrating. Compliance with the MVUM becomes difficult as well. It concerns me that little effort seems to have been taken to post any kind of signs in the Gila Forest that even allude to any travel restrictions (e.g., the 300-foot rule). If I get a wood permit, my signature essentially tells me that I will follow the MVUM – what about the rest of the world? I remember traveling in the Carson National Forest almost 50 years ago and finding signs that alluded to their travel restrictions – I think it was either 200 or 300 feet. A year or more ago, I looked at one the kiosk for entry into the Gila National Forest on Highway 59 and I did not see any mention of travel restrictions. Please make everyone aware, so that everyone has equal knowledge in order to comply. Obviously, signage requires money - I will not hold my breath on this one." **Associated Letter: 690**

Response: We acknowledge the commenter's opinions and frustration. Travel management implementation, including resolving signage issues, is ongoing.

Comment 23: Do not place guide signs or other signs away from the Gila National Forest that may lead people to believe they are in the Forest. **Associated Letter: 690**

Response: Commenter is encouraged to bring any instances of confusing signage to the attention of the district ranger.

Comment 24: Commenter states most forest visitors appreciate road maintenance and acknowledges road maintenance is costly and competes against all the other forest management priorities. Commenter requests road maintenance be given the priority where possible as fewer roads resulting from the travel management decision signed in 2014 would hopefully translate to better maintenance of what is left. **Associated Letter: 690**

Response: Congress determines what funds may be spent on what types of management activities.

Background Information

Comment 25: Commenter points to page 171 of the draft plan which contains the Roads section's background information and states: "low use m2, 3-5 faster 402 miles cars, 400 miles in Catron and Grant counties." **Associated Letter: 233**

Response: Maintenance level 2 roads are not maintained for passenger car use. This maintenance level indicates 4-wheel drive vehicles with clearance are recommended. As stated in the background information section, maintenance levels 3 through 5 are managed for passenger car use and there are 402 miles of those roads. The background information section states the "the forest has worked with local county agencies to clarify jurisdictional issues associated with roads passing through the Gila NF. The result is a transfer of nearly 400 miles of National Forest System roads to Catron and Grant Counties." This means the maintenance responsibility has been transferred to the counties.

Desired Condition 2

"Roads have minimal impacts on ecological and cultural resources."

Comment 26: Commenter would like this desired condition to clarify that this includes system and non-system roads because both cause ecological impacts. Commenter states the forest should be moving toward a system where roads have minimal impacts on ecological resources regardless of whether they are in the system. **Associated Letter: 672**

Response: We agree that management should be moving toward a system where roads have minimal impacts, hence this desired condition. We recognize that non-system roads can have ecological impacts, but they are a result of cross-country travel, which is prohibited by both the travel management decision signed in 2014 and plan direction (Roads S1). Thus, non-system roads are an implementation and enforcement issue, not a planning issue.

Desired Condition 5

"Unneeded roads are closed to motor vehicle use and decommissioned to reduce impacts to ecological resources (that is, watersheds, wildlife and fish habitat, and soil erosion)."

Comment 27: There is a recommendation that this desired condition should state that public comment must be taken prior to the closure of roads to determine whether it is unneeded. **Associated Comments: 227 and 247**

Response: Future road closures and decommissioning will require a separate National Environmental Policy Act process complete with opportunities for public engagement. The plan's section on Community Relationships also contains a guideline (G1) that instructs management to engage the public in the early stages of project planning and design.

Suggested Desired Conditions

Comment 28: Commenter is concerned about road densities and their cumulative impacts on native species and watershed health and would like to see the final plan include a desired condition for reducing road densities at a watershed scale with decommissioning of roads and requirements that new roads include mitigating actions as the primary tools to accomplish this. **Associated Letter: 672**

Response: The plan contains a desired condition for watersheds to exhibit high geomorphic, hydrologic, and biotic integrity as indicated by a density, distribution, and maintenance of roads and linear motorized features that do not substantially alter water and sediment regimes (Watershed DC1f). It also requires site-specific best management practices for road construction and maintenance (Roads S2). Road decommissioning is usually identified at the project level and incorporated into Watershed Restoration Action Plans as essential projects.

Comment 29: Commenter recommends adding the following desired condition from the Carson National Forest's draft plan: "Unauthorized roads and routes are determined for their purpose in the transportation system or determined to be unneeded. Unneeded roads and routes are decommissioned to reduce impacts to ecological resources (e.g., watersheds, wildlife, soils) and improve fish wildlife habitat connectivity." Commenter states the Gila National Forest should be moving toward a sustainable road network over the life of the plan. This desired condition should facilitate a continued assessment of each road or route's purpose within the transportation system and lead to the decommissioning of roads and routes determined to be unnecessary, thereby improving ecological conditions across the forest. This number must exceed the 50 miles suggested in the draft plan objective for roads. **Associated Letter: 672**

Response: Roads DCs 1, 4, and 5 work together, with the plan components discussed in response to comment 23, to address the commenter's concern. The travel management process is dynamic, and project-level assessments will be ongoing. The objective for decommissioning roads says "at least" 50 miles. If more can be done, more will be done until the need is met.

Comment 30: Commenter would like to see the significant financial challenges to achieving a sustainable road network acknowledged in the following desired condition: "The size and scale of the transportation system aligns with resources available for its maintenance." **Associated Letters: 672 and 712**

Response: Per the travel management planning record of decision published in 2014 states that a road system that fits current funding levels would be inadequate to provide an appropriate level of access for the public and forest management.

Comment 31: Commenters suggest the following desired condition to address climate change: "The design, management and maintenance of roads provides for a climate resilient transportation system able to withstand variable storm events and wide fluctuations in precipitation." **Associated Letter: 712**

Response: Final Roads DC6 incorporates this suggestion.

Comment 32: Commenters suggest the following desired condition to address connectivity: "The design, management and maintenance of the transportation system provides landscape and aquatic connectivity necessary for the recovery and viability of fish and wildlife species." **Associated Letter: 712**

Response: The plan contains a desired condition for watersheds to exhibit high geomorphic, hydrologic, and biotic integrity as indicated by a density, distribution, and maintenance of roads and linear motorized features that do not substantially alter water and sediment regimes (Watershed DC1f). It also contains desired conditions for upland and riparian and aquatic habitat connectivity (All Upland Ecological Response Units LS-DC2, 7 and 8; Riparian and Aquatic Ecosystems WS-DC2 and 3b) and requires projects to incorporate connectivity design (Roads G1 and 2) including preferential consideration of riparian and aquatic habitat quality and connectivity (Roads S1, G1, and G3; Riparian and Aquatic Ecosystems S1, S2, G1 and G2).

Comment 33: Commenters suggest the following desired condition to address sustainable access: "The design, management and maintenance of the road system provides for safe and consistent access for the appropriate utilization and protection of forest resources and ecosystem services." **Associated Letter: 712**

Response: Roads DC1 addresses safe and reasonable access for public travel, multiple uses, and land management activities, including those that serve to protect forest resources and ecosystem services.

Comment 34: Commenters suggest the following desired condition: "The forest road system meets road density standards based on the best available science." **Associated Letter: 712**

Response: Road density standards were an alternative element considered but eliminated from detailed study as described in chapter 2 of the FEIS.

Comment 35: Commenters suggest the following desired condition: "Road decommissioning is prioritized to enhance primitive and semi-primitive non-motorized ROS settings, improve the character of Inventoried Roadless Area and recommended wilderness areas, and increase habitat connectivity and the ecological integrity of sensitive areas." **Associated Letter: 712**

Response: There are many considerations that must be made when prioritizing roads for decommissioning. Some of these are described in the management approach Road System Management. Additional considerations mentioned by the commenter have been included in the management approach.

Objective 1

"Decommission 50 miles of roads within 10 years of plan approval."

Comment 36: There is observation of plan's objective to close 50 more miles of roads in 10 years and direction pertinent to new road construction and an inquiry about how many new miles will be built to support vegetation management. **Associated Letter: 39**

Response: It is possible that in the future it could be necessary to construct roads for vegetation management, which is why plan direction is provided. There are currently no proposals for new road construction and no way to foresee how many miles might be proposed in the future.

Comment 37: Commenter is concerned that this objective is not ambitious enough for two reasons: (1) it provides no objective specific to roads beyond the first ten years of plan implementation; and (2) the proposed level of decommission is likely to be insufficient for achieving desired conditions for Watersheds, Water Quality, and Riparian and Aquatic Ecosystems. Commenters suggest a target of decommissioning or minimizing impacts on at least 100 or 250 miles of road every ten years until hydrologic and ecological function are restored. Commenter suggests the following objective from the Santa Fe National Forest's draft plan, which can be revised to provide an ambitious yet pragmatic target for the Gila National Forest: "Improve watershed function by decommissioning at least 250 miles of system and non-system roads and routes to the point of restoring hydrologic and ecological function every ten years following plan approval."

Commenter supports this suggestion stating these miles represent less than 8 percent of roads open to public use, and less than 6 percent of roads and routes for which the forest is responsible. Commenter suggests that given fiscal realities, this should be the minimum target. Commenter asserts that obliterating and naturalizing roads may have far greater ecosystem benefits that decommissioning alone and suggests adding the following complementary objective from the Carson National Forest's draft plan: "Obliterate or naturalize at least 20 miles of unneeded roads during each 10-year period following plan approval." **Associated Letters: 672 and 724.1 through 724.11**

Response: The final objective has been reworded to apply to each 10-year period until the need is met. If more than 50 miles of decommissioning is needed and could be accomplished with the allotted resources in each 10-year period, more would be done.

Suggested Objectives

Comment 38: Commenter suggests it is also important to assess and repair stream crossings to meet desired conditions for water quality and aquatic habitat based on routine monitoring of water quality below stream crossings. Commenter recommends the following objective from the Carson National Forest's draft plan: "Repair at least 5 stream crossings every 10 years where chronic sedimentation is occurring." **Associated Comment: 672**

Response: Stream crossings would be addressed as determined beneficial to water quality and riparian and aquatic ecosystems as part of watershed-based plans (Watersheds O1).

Comment 39: Commenter recommends the following objectives to achieve compliance with Subpart A of the Travel Management Rule:

1) "Within 3 years of plan adoption, the forest shall identify its minimum road system and an implementation strategy for achieving that system that is consistent with forest plan direction and relevant regulatory requirements.
2) Over the life of the plan, implement the minimum road system.
3) The forest shall make annual progress toward achieving the minimum road system and road density standards, including but not limited to decommissioning 5% of roads identified as unneeded each year.
4) Within 10 years of plan approval, decommission high-priority, unneeded roads with the most benefit in achieving an ecologically and fiscally sustainable transportation network (e.g., roads posing a high risk to resources, roads in IRA's, and other ecologically sensitive areas, etc.).
5) Within 10 years of plan approval, address all roads within at-risk or impaired watersheds according to the Watershed Condition Framework's roads and trails indicator, and within watersheds contributing to sediment or temperature impairment.
6) Within 5 years of plan approval establish a publicly available system for tracking temporary roads that includes but is not limited to the following information: road location, purpose for road construction, the project-specific plan (required below), year of road construction, and projected date by which the road will be fully decommissioned.
7) Within 10 years of plan approval, all temporary roads will be reflected in the tracking system.
8) Over the life of the plan, all temporary roads without a project-specific plan will be fully treated to remove the road template, restore hydrological function, and soil conditions, and return the slope to its original contour."

Associated Letter: 712

Response: 1) The Gila National Forest completed a travel analysis and plan in compliance with Subpart A of the Travel Management Rule with the decision signed in 2014 (USDA FS 2014a and 2014b). The travel analysis plan identified the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands (36 CFR 212.5(b)(1). To fulfill Subpart B of the Travel Management Rule, each district on the Gila National Forest would make project-level decisions regarding the designated road system as concerns, issues, or opportunities arise.

2) As part of plan implementation, projects will be designed to maintain or move toward full complement of the plan's desired conditions**.** 3), 4) and 5 in part), Roads O1 addresses road decommissioning in a way we can be sure is within our fiscal capacity. More can be done if there is a need and the resources to accomplish it. The management approach titled Road Management discusses the various factors that would be considered during prioritization of that work. Additionally, unneeded roads may be identified for decommissioning, and system roads may be identified for maintenance, additional best management practices, realignment, or some combination of these activities during development of watershed-based plans and their essential projects (Watersheds O1). 5 in part) and 6) Temporary roads are identified in the relevant project-level National Environmental Policy Act analysis and decision documents, which are publicly available. Timelines to complete projects are subject to change and may require multiple entries. 7) We have added a plan guideline regarding the return of these roads to a more natural state upon project completion.

Standard 1

"Motor vehicle use off the designated system of roads, trails, and areas identified on the Gila NF's most current motor vehicle use map (MVUM) is prohibited, except as authorized by law, permits, or orders in connection with resource management and public safety."

Comment 40: There is a recommendation that this standard be modified to read: "Motor vehicle use off the designated system of roads, trails, and areas identified on the Gila NF's most current motor vehicle use map (MVUM) is prohibited, except as authorized by law." **Associated Letter: 712**

Response: There are some permitted uses that may require exemption from this standard, as provided for in the law and travel management decision signed in 2014. There are also times when it may be necessary to provide an exemption through a forest order to facilitate management activities or provide for public safety like Search and Rescue efforts, which is also allowed by law and the 2014 travel management decision.

Suggested Standards

Comment 41: Commenter suggests the plan should include a standard requiring new road construction is accompanied by mitigating action such as the following: "Construction of new system roads should be accompanied by a mitigating action (e.g., decommissioning) of other unneeded roads, and trails to offset any resource damage resulting from their construction." **Associated Letter: 672**

Response: If a need for a new system road is identified in the future, this is an idea that could be considered as part of a project-level National Environmental Policy Act procedure.

Comment 42: Commenter recommends including the following standard to reduce road impacts in areas with a primitive recreation opportunity spectrum classification: "New motorized routes or areas must not be constructed in areas designated as primitive in the ROS." **Associated Letters: 672 and 712**

Response: Where a primitive ROS setting is the desired condition, new motorized route construction or motorized area designation would not be compliant with the plan.

Comment 43: Commenters generally support the standard requiring best management practices for road construction and maintenance but suggest forest staff need to validate their implementation and effectiveness on a regular basis. Commenters also support the standard requiring compliance with motor vehicle use maps but states an expectation that any exceptions made under the proposed caveat providing for resource management and public safety be analyzed to ensure they meet regulatory requirements and revise the motor vehicle use map accordingly. Commenters prefer that the standard not allow public motorized use by forest orders. Commenters recommend the following additional standards in the draft plan or alternative to satisfy the substantive requirements of the 2012 Planning Rule and Subpart A of the Travel Management Rule:

1) Road and motorized trail density standards, based on the best available science, in important watersheds, wildlife habitat, migratory corridors, and general forest matrix based on the best available science.

2) Road and motorized trail density standards, based on the best available science, for relevant species or resources present on the forest including but not limited to threatened and endangered species and species of conservation concern.

Associated Comments: 422 and 712

Response: Best management practices monitoring is included in the plan's monitoring program, which would include road-related best management practices (monitoring question 40). Allowable exceptions to the standard are established in the travel management planning record of decision signed in 2014. Road density standards are not necessary for compliance with the 2012 Planning Rule or Subpart A of the Travel Management Rule. Road density standards are an alternative element considered but eliminated from detailed study as described in chapter 2 of the forest plan's FEIS.

Comment 44: Commenters propose the following standards to ensure compliance with both Subparts A and B of the Travel Management Rule:

1) "Construction of temporary roads in areas designated as Semi-Primitive Non-Motorized ROS will be avoided unless required by a valid permitted activity or management action. If authorized, roads should be constructed and maintained at the lowest maintenance level needed for the intended use, then rehabilitated**.**

2) During dust abatement applications on roads, chemicals shall not be applied to roads within or adjacent to Riparian Management Zones, and shall not be applied directly to watercourses, water bodies (e.g., ponds and lakes), nor wetlands.

3) For new road construction and reconstruction of existing road segments adjacent to riparian management zones, do not side-cast fill material.

4) No increase to the combined baseline total road and motorized trail density to protect important watersheds, Riparian Management Zones, migratory corridors, and general forest matrix.

5) No increase to the combined baseline total road and motorized trail density to protect important wildlife habitat, including but not limited to habitat important to threatened and endangered species, and species of conservation concern.

6) No temporary road shall be constructed prior to the development of a project-specific plan that defines how the road shall be managed, constructed, and scheduled for removal to fullest extent possible.

7) Temporary roads shall be located and constructed to facilitate removal and restoration following the needed use. All temporary roads shall be closed and rehabilitated within a reasonably short time (not to exceed 3 years) following completion.

8) Temporary roads shall be located and constructed to facilitate removal and restoration following the needed use. All temporary roads shall be closed and rehabilitated within a reasonably short time (not to exceed 3 years) following completion.

9) To reduce the risk to aquatic resources when decommissioning roads, making roads impassable, or putting roads into intermittent stored service, roads shall be left in a hydrologically stable condition.

a. For decommissioned roads, reclaimed roads, or impassable roads, this means the road must be re-vegetated, no longer function as a road, and all stream-aligned culverts must be removed.

b. For intermittent stored service roads, this means all stream-aligned culverts must be removed.

Commenters state that defining "hydrologically stable condition" is critical to implementation and effect of item 9, as is distinguishing between decommissioned, reclaimed, impassable, and intermittent stored service roads.

10) When placing physical barriers such as berms on travel routes, such as roads, skid trails, temporary roads, and trails, assure that drainage features are sufficient to avoid future risks to aquatic resources by, including but not limited to, removing all stream-aligned culverts.

11) In fish-bearing streams, construction, reconstruction, or replacement of stream crossings shall provide and maintain passage for all life stages of native aquatic organisms unless barriers are necessary to prevent spread or invasion of nonnative species. Crossings shall also allow for passage of other riparian-dependent species through the establishment of banks inside and beneath the crossing feature.

Associated Letter: 712

Response: See the first paragraph of response to comment 3 in this section of this appendix about compliance with the Travel Management Rule.

1) This suggestion is addressed by Roads G4.

2) A standard was added to the roads section that identifies water as the only acceptable agent for dust abatement.

3) Roads G3 now incorporates the suggestion to avoid side-casing fill material in riparian management zones.

4) and 5) If a need for a new road arises in the future, it would be subject to a project-level National Environmental Policy Act analysis and decision-making process. This process would disclose the effects to ecosystems, watersheds and species and explore alternatives to avoid or mitigate adverse impacts.

6), 7), and 8) Temporary roads are included in project-level proposals and National Environmental Policy Act analyses and decision-making. These include a public process, and those documents are available to the public. Timelines to complete projects are subject to change and may require multiple entries. We incorporated a guideline related to decommissioning temporary roads upon project completion (Roads G5).

9) and 10) The determination of road status will be reviewed as project-level proposals and alternatives are developed. The appropriate specifications for these activities will be determined at the project-level when site characteristics are known.

11) Roads G2 requires roads to accommodate terrestrial and aquatic species movement and habitat connectivity.

Guideline 2

"Construction and maintenance of roads and trails should accommodate terrestrial and aquatic wildlife species movement and habitat connectivity."

Comment 45: There is support for this guideline but a lack of clarity about what is meant by the term "accommodate." There is a suggestion that this guideline be modified to include how this will be accomplished to avoid confusion and ineffective implementation. **Associated Letters: 44 and 652**

Response: Accommodate means that construction and maintenance of roads and trails must fit in with species' needs to move. There may be many ways this could be accomplished depending on the site and the species in question, but the intent of the guideline needs to be met. The word "accommodate" is used to allow the flexibility to consider site- and project-specific circumstances.

Guideline 3

"Construction of new roads should be avoided in riparian areas. Where unavoidable due to terrain or topography, new road construction should incorporate best management practices to minimize impacts."

Comment 46: There is a suggestion that this guideline should include more details on best management practices for construction and maintenance of roads that are consistent with the New Mexico Department of Game and Fish's bridge and culvert guidelines. There is another suggestion that this guideline be elevated to a standard and reworded to state: "Construction or reconstruction of new roads and landings shall be avoided in riparian areas, wetlands, and unstable areas. Where unavoidable due to terrain or topography, new road construction should incorporate best management practices to minimize impacts." **Associated Letters: 151 and 712**

Response: The New Mexico Department of Game and Fish's bridge and culvert guidelines has been added to the list of potential sources of best management practices in the Soils section where best management practices are first discussed in the plan and a footnote has been added to this guideline referencing the Departments' guidelines. The Riparian and Aquatic Ecosystems section of the plan contains a guideline (G1) that also directs management to avoid new construction or realignments within a certain distance of a riparian management zone. Wetlands are a type of riparian area. Language inclusive of unstable areas has been incorporated into Roads G3.

Suggested Guidelines

Comment 47: There is a suggestion to add a guideline stating that road construction or maintenance activities should avoid or minimize noise and habitat disturbance. Furthermore, where at-risk species are present, such activities should occur outside the critical life-cycle periods (e.g., breeding and nesting for birds), or when animals may be present (e.g., during migration). **Associated Letter: 151**

Response: The need for avoidance areas and noise mitigation measures for road projects, and other potentially disturbing projects would be determined at the project level, consistent with applicable recovery plans, consultation with the U.S. Fish and Wildlife Service and conservation agreements.

Comment 48: There is a suggestion that the following guideline from the Carson National Forest's draft plan be included to support reductions to road network over the life of the plan: "Temporary roads that support ecosystem restoration activities, fuels management, or other short-term projects should be closed and rehabilitated (restored to more natural vegetative conditions) upon project completion to protect watershed condition, minimize wildlife disturbance, and prevent illegal motorized use." **Associated Letter: 672**

Response: This suggestion was incorporated into final Roads G5.

Comment 49: Commenter proposes the following as guidelines in one or more of the alternatives to provide for sustainable road system and ensure National Environmental Policy Act requirements are met:

1) The forest shall make annual progress toward achieving the minimum road system, and road/motorized trail density standards.

2) For projects with road-related actions, the purpose and need statement should include achieving a sustainable minimum road system, road/motorized trail density standards, and the analysis should consider recommendations from an updated travel analysis report.

3) Roads (unauthorized, temporary, non-system, and system) identified for decommissioning through the travel analysis reports or other processes will be closed, and then decommissioned and reclaimed to pre-disturbance conditions as much as practicable.

4) To enhance landscape connectivity and ecological integrity, prioritize road decommissioning based on:

    a. Effectiveness in reducing fragmentation, connecting un-roaded and lightly-roaded areas, and improving water quality in stream segments, with a focus on inventoried roadless areas, important watersheds, and other sensitive ecological and conservation areas and corridors;

    b. Benefit to species and habitats;

    c. Addressing impaired or at-risk watersheds;

    d. Achieving road/motorized trail density standards;

    e. Enhancement of visitor experiences; and

    f. Cost-effectiveness and feasibility, including opportunities to incorporate road decommissioning work into other forest projects.

5) To enhance public safety and efficiency of the transportation system, prioritize maintenance of needed routes based on:

    a. Storm-proofing needs and opportunities (e.g., relocating roads away from waterbodies, resizing or removing culverts, etc.); and

    b. Restoring aquatic and terrestrial habitats and habitat connections by, in part, reducing or upgrading stream crossings.

6) Design road construction, reconstruction, decommissioning, and maintenance activities to minimize adverse environmental impacts. To minimize sediment delivery to streams from roads when constructing, reconstructing, or maintaining roads, road drainage should be routed away from potentially unstable channels, fills, and hillslopes.

7) Develop and maintain road management objectives for all National Forest System roads.

Commenters state the following should be moved from the plan's existing management approach to a guideline.

8) Relocate roads away from floodplains, perennial stream channels, and riparian areas, when opportunities and funding allow, to reduce resource concerns and reoccurring maintenance.

Commenters state their suggested guidelines better address the need to prioritize decommissioning and include decommissioning at the project level, but should the final plan fail to adopt those guidelines then at a minimum, it should include the following draft plan's proposed management approaches as guidelines:

9) Prioritize decommissioning of high-risk, low-value roads based on the following factors: redundant routes; roadbeds in sensitive soils susceptible to severe erosion; built close to waterbodies; or have

adverse impacts to water quality, at-risk species, or cultural resources; or within inventoried roadless areas that negatively affect roadless character; and

10) When developing the proposed action for a National Environmental Policy Act project, consider incorporating any decommissioning of roads within the project area that meet these decommissioning priority factors while involving affected stakeholders.

Other commenters would just like to see the management approaches moved to guidelines, which still provide for flexibility but ensure the intent will be met.

Associated Comments: 672 and 712

Response:

1) The plan's objective for decommissioning unneeded roads would generate progress toward achieving the minimum road system as determined through the 2014 travel management decisions and subsequent project-level refinements.

2) The purpose and need identified for projects including road-related activities would tier to the plan's desired conditions, accounting for project-specific circumstances. Road density standards were an alternative element considered but eliminated from detailed study as explained in chapter 2 of the FEIS. The best available scientific information would be used to inform the analysis.

3) Road decommissioning is defined as "activities that result in the stabilization and restoration of unneeded roads to a more natural state." (36 CFR 212.1, FSM 7705). The goal of decommissioning is to stabilize, restore, and revegetate unneeded roads to a more natural state to protect and enhance National Forest System lands (FSM 7734.02). Roads O1 addresses decommissioning.

4) Considerations for prioritizing unneeded roads for decommissioning is discussed in the final management approach titled "Road Decommissioning."

5) Management directed toward achieving final Roads DC 6 would include a vulnerability assessment that would identify "problem spots" and adaptation responses, thus enhancing efficiency and public safety. Reducing the number of road crossings, upgrading crossings, or both, would be addressed at the project level, in compliance with Roads Gs1 and 2, to promote progress toward desired conditions for water quality, watersheds, riparian and aquatic ecosystems, species and species habitat. These types of activities are often included in watershed-based plans as essential projects (Watersheds O1) or may be proposed and implemented outside a watershed-based plan to accomplish restoration or habitat improvement projects (Riparian and Aquatic Ecosystems O1, Wildlife Fish, and Plants Os3 and 4).

6) The plan emphasizes maintenance and reconstruction of existing roads over permanent new road construction (Roads G6). These activities would be conducted to avoid or mitigate adverse environmental impacts (for example Roads standards and guidelines; Wildlife, Fish, and Plants S2, S4 and G7, Riparian and Aquatic Ecosystems S1 and Gs1, 2 and 4). There is also a regulatory permitting process through the New Mexico Environment Department and the U.S. Army Corps of Engineers when such projects may impact waters of the United States.

7) Road maintenance levels determined through the travel management process are the objectives for each road. These objectives are maintained unless a there is a future project-level purpose and need to change the status of a given road.

8) This content is appropriate as a management approach because it describes one way plan outcomes would likely be delivered (FSH 1909.12 chapter 20 section 22.4). Reframed as guideline this would

compel action, which is not compliant with the final agency directives for implementing the 2012 Planning Rule (FSH 1909.12 chapter 20 section 22.14 item 4.).

9) This content is appropriate as a management approach because it describes a set of factors that are likely to be considered during the prioritization process (FSH 1909.12 chapter 20 section 22.4). There may be additional factors or site- and circumstance-specific considerations that need to be made at the project level.

10) See 9.

Relationships Management Approach

Comment 50: There is a request that this management approach include a statement that forest staff will look for opportunities to work with the New Mexico Departments of Game and Fish and Transportation to implement large game animal-vehicle collision mitigation projects and enhance wildlife habitat connectivity. **Associated Letter: 151**

Response: The suggested language has been added to the final plan in a management approach in the Wildlife, Fish, and Plants section titled Wildlife Corridor Action Plan. The final Roads and Relationships management approach in the Roads section also discusses coordination and collaboration with the New Mexico Departments of Game and Fish and Transportation."

Road System Management Approach

Comment 51: There is a suggestion to include a "report a pothole" system on the Gila National Forest website to inform the prioritization of road maintenance. **Associated Comment: 39**

Response: We assume that you are referring to including this idea in the management approach titled Road System Management. This management approach includes this statement: "Look for opportunities to use technology to assist users and stakeholders reporting road condition issues to the forest." A "report a pothole" system on the website might be a great way to accomplish this. We added a specific reference to exploring this idea in the management approach.

Comment 52: There is a suggestion to include roads that limit habitat connectivity or impede movement of wildlife species to the list of factors to be considered when prioritizing road decommissioning. **Associated Letter: 151**

Response: The suggested language has been added to the final plan.

Scenic Resources and Character

General

Comment 1: Commenter is concerned about mining company Freeport McMoRan's reclamation work because it does not look natural, and very little grows on it even after 11 years. Commenter is also concerned that the mine's reseeding list includes species not appropriate for the soil and elevation and are not native. Further, tree of heaven and salt cedar are growing in the reclamation area along Mangas Valley Road, which does not mitigate scenic resources. **Associated Letter: 233**

Response: Freeport McMoRan's reclamation work is not on National Forest System lands and is outside the scope of the forest plan. If similar mining activities were to occur on the forest in the future, the Forest Service would have input into the reclamation plan, including the species used to revegetate the area and mitigations for scenic resources.

Comment 2: Commenter states that wilderness and all its attributes play a huge part in scenic character and recreational experience and allows for multiple uses. Commenter quotes the 2012 Planning Rule's passage on scenic character and points to policy direction that requires forests to update scenic inventory during plan revisions. Commenter interprets this statement as the best and greatest chance for recommendations provided by New Mexico Wild's Citizen's Proposal or those included in alternative 5 to be added to wilderness. Commenter requests that the responsible official accept the challenge and opportunity to provide for more scenic integrity. Commenter describes the visible impacts of mining, thinning, roads, motorized use, and illegal firewood cutting, links recommended wilderness to scenic integrity goals and states this will benefit the four surrounding counties and build overlapping working circles for the ranger districts. **Associated Letter: 233**

Response: We acknowledge the commenter's opinions. Illegal firewood cutting and motorized use are implementation compliance and enforcement issues. Legal motorized use on the designated road system, thinning, and mining are all legal uses for which the Forest Service is mandated to manage for in accordance with the relevant laws, regulations, and policies. Plan direction must comply with and is in addition to those legal instruments. We completed the planning rule's requirements related to establishing the scenery management system and scenic integrity objectives. We also completed the rule's requirements for the wilderness process. About the citizen's proposal, please refer to response to comment 70 under the Wilderness heading in this appendix.

Desired Condition 3

"High quality scenery dominates the landscape in areas the public values highly for scenery (for example, scenic byways, major roads and trails, developed recreation sites, and high scenic integrity areas such as Wildernesses and eligible Wild and Scenic Rivers)."

Comment 3: Commenter would like to see the Continental Divide National Scenic Trail included in the list of examples. **Associated Letter: 180**

Response: This suggestion has been incorporated into the final plan.

Guideline 3

"Management activities that result in short-term impacts inconsistent with the scenic integrity objectives should achieve the scenic integrity objectives over the long-term. Short-term and long-term timeframes should be defined during site-specific project-planning."

Comment 4: Commenter is concerned that the plan does not meet the requirements found in agency directives (1909.12 23.23f – Scenery, Aesthetic Values, Viewsheds, and Geologic Features). Commenter describes compliance with the directives: "Desired conditions should include a statement that the desired scenery conditions are depicted on the Scenic Integrity Objective map and include the map as an appendix to the plan. Guidelines must describe the specific purpose of the guidance. These are mandatory constraints on project and activity decision-making that provide flexibility for different situations so long as the purpose of the guideline is met. Guidelines should be written so that their intent is clear. If there is evidence that a different approach would be more or equally effective in meeting the intent, divergence can be justified."

Commenter finds G3 problematic since the guidance suggests that meeting scenic integrity objectives is optional for any project that may have undefined short-term effects. Commenter is concerned that this does not protect scenic character in areas of timber production and recommends the acceptable extent and duration of visual impacts that may result from multiple actions must be described because the additive effects could result in ongoing degradation of visual quality in areas designated for timber production and related road building. Commenter states the plan cannot put off acting on the requirements found in agency handbook direction at 1909.12 22.2 and 23.23f. Commenter suggests that if the "short-term" guidance is retained, it

should be limited to roaded-natural or roaded-modified recreation opportunity spectrum settings. Commenter suggests an alternative approach could be to establish a roaded-modified setting and a low scenic integrity objective for the areas planned for timber production, extensive vegetation management activities, and road construction and reconstruction. **Associated Letter: 73**

Response: Scenic Character final DC 5 incorporates the desired scenic integrity objective map, which is included in the plan's map appendix. Scenic integrity objectives are desired conditions, toward which management is directed. Where timber harvest is selected as a tool, the site-specific silvicultural prescription would be designed to move toward desired conditions over the long term and within the constraints of law, regulation, policy, and plan direction. This includes the constraints provided by Scenic Character G3 and Roads G4.

Socioeconomics

Comment 1: Commenter points to the socioeconomic contributions the forest provides regardless of which alternative is chosen. There is a suggestion that the COVID-19 pandemic could reasonably result in decreased funding for forest programs and an influx of new residents to the area. **Associated Letter: 103**

Response: COVID-19 was not declared a pandemic until after the release of the draft documents, and we agree that there may be cumulative effects. Additional discussion has been added to the socioeconomic cumulative effects analysis.

Comment 2: Commenter lists the qualities of the forest that contribute socioeconomic benefit including the variety of threatened and endangered species, recreation and tourism, and cultural and historical resources and values. **Associated Letter: 120**

Response: We agree that the ecological, cultural, and historic resources the forest supports provide socioeconomic benefits associated with recreational activities and tourism.

Comment 3: Commenter notes that the National Forest Management Act at Section 6 (g)(3)(A) requires consideration of the economic and environmental aspects of various systems of renewable resource management and is concerned that there are no standards and guidelines related to the economic aspects. Commenter states they do not think that forest management needs to be driven by economic concerns, but it needs to be a consideration and the Act substantiates the concern. Commenter requests that the plan somehow indicate that costs and benefits are considered in decision making. **Associated Letter: 474**

Response: Costs and benefits are weighed in decision-making processes as part of compliance with the National Environmental Policy Act and Forest Service Handbook 1909.17 – Economic and Social Analysis.

Comment 4: Commenter presents data to support the argument that the socioeconomic contributions of hunting on local and regional economies is overblown in the draft documents. Commenter suggests the final documents recognize and quantify the socioeconomic contributions of non-hunting recreational users with respect to achieving restoration and protection of the forest. **Associated Letter: 537**

Response: The data supporting the economic contributions of hunting (and fishing) are from a study commissioned by the New Mexico Department of Game and Fish as cited in the EIS. The draft and final documents do recognize the socioeconomic contributions and other benefits of non-hunting recreational uses and their participants in the Sustainable Recreation sections. Because those types of activities are largely non-commercial, data sufficient to quantify socioeconomic contributions directly are limited.

Comment 5: Commenter states: "The Forest Service has included an economic analysis that notes that the labor income related to the livestock grazing program is $12 million. However, this analysis does not include the costs to the Forest Service (and therefore, the public) related to managing livestock permits nor does it

disclose the amount of money lost to the grazing program as a result of extremely low grazing fees (just $1.35 per AUM in 2019 and 2020) as compared to private and state land livestock grazing rates. This information should be disclosed, and the public provided an opportunity to review and comment upon this important aspect of the Forest Plan revision." **Associated Letter: 713**

Response: The economic analysis is consistent with requirements identified in agency directives (FSH 1909.12 chapter 20 section 23.22 and FSH 1909.17). Grazing fees are outside the scope of forest plan revision.

Comment 6: Commenter states: "I hope you can look ahead to the near future and establish a community work and restoration plan using COVID-19 relief funds to mitigate the economic and ecologic hardships That would certainly make lemonade outta lemons and benefit the forest and local economy." **Associated Letter: 707**

Response: The plan includes over 30 management approaches related to collaborative work to achieve social, cultural, economic, and ecological desired conditions. We continue to invest the funding allocated by Congress toward those efforts.

Soil

General

Comment 1: Commenter points to a statement about how long soil formation takes in the Southwest in the background information of the Soils section of the draft plan then links it to the discussion of how the plan's restoration objectives were developed on page 28 and states: "Cattle do a lot of damage." **Associated Letter: 233**

Response: The effects of livestock grazing depend on how it is managed. Under all alternatives, livestock grazing would be managed to maintain or move toward desired conditions for soils and other resources and activities. These effects are discussed in the Soil and Watershed Resources section of the EIS.

Comment 2: Commenter notes analysis methodology in the Soil and Water Resource section of the DEIS related to area designations and climate change impacts on page 135. Commenter then states: "Biological soil crusts react to compression and disturbances such as mechanical treatments – contributions to soil function are reduced." **Associated Letter: 233**

Response: Biological soil crusts contribute to soil and watershed function. On the Gila National Forest, there is no evidence that they contribute to the degree that there would be substantial differences between alternatives based on area designations or because of climate change, which is why this is discussed as common to all alternatives.

Desired Condition 1d

"No new gullies or headcuts are forming and existing ones are stabilizing or have stabilized."

Comment 3: There is support for this desired condition. **Associated Letter: 672**

Response: This desired condition has been retained in the final plan.

Objective 2

"Implement at least 10 projects per decade to address active headcuts or gully erosion. Examples of projects meeting the intent of this objective include construction or maintenance of watershed structures, or road

maintenance and improvement of drainage features associated with active headcuts or gullies. Examples of projects not meeting the intent of this objective include prescribed fire and mechanical vegetation treatments."

Comment 4: There is a suggestion that this objective should include language specifying that routine road maintenance does not meet the intent of the objective. Commenter states they do not believe the objective is sufficient. Commenter requests the following objective from the Carson National Forest's draft plan be added: "Annually install 35 to 100 erosion control treatments, to stabilize headcuts, road drainage impacts, and other erosional features." Commenter states they see a lot of overlapping benefits for other resources so it could be an objective in several different sections and conclude that the planning team could decide where it was in the plan. **Associated Letters: 672 and 724.1 through 724.11**

Response: Plan objectives must be within the forest's anticipated budget (36 CFR 219.1(g) and FSH 1909.12 Chapter 20 Section 22.12). This objective uses what we've been able to accomplish in the recent past with the available funding as a minimum ("at least"). We could treat more if there were resources to do so. Only road maintenance that addresses headcuts and gully erosion would meet this objective, which would not generally be described as routine maintenance.

Sustainable Recreation

General

Comment 1: Commenters are concerned about the draft documents' references to the Sustainable Recreation Plan, the trail system, and associated references to decommissioning trails. Commenters are concerned because of the lack of public involvement in development of the Sustainable Recreation Plan and that the draft documents do not mention a future trail assessment, inventory, criteria or other basis or process on which decisions will be made about which trails are kept and which are removed from the system. They are also concerned that development of a trail strategy will mirror the development of the Sustainable Recreation Plan and that they will have no say in the matter. Commenters state that the plan's objective to implement 75 percent of the action items in the Sustainable Recreation Plan is difficult to evaluate because its contents, its purported "evolving" nature, and the significance to their recreation opportunities is not understood because it has not been made available to them or explained sufficiently. Commenters express a desire to review and opportunity to have input on the Sustainable Recreation Plan. Commenters state that this seems contrary to the transparent, public process that is supposed to be part of forest management and if forest leadership decides to start closing trails there will be serious impacts to the public use and enjoyment of the general forest and its wilderness areas. Commenters identify those impacts as being overuse of the remaining trails and increases in user conflicts, both of which the plan wishes to avoid. Commenters suggest giving the public an opportunity to have input on both the Sustainable Recreation plan and any future trail strategy is important because many members of the public have more place-based knowledge than forest staff. **Associated Letters: 3, 131, 180, 474, 475, 634, and 712**

Response: The Sustainable Recreation Action Plan was referenced in the draft plan's direction for Sustainable Recreation (O1 and G1), and briefly described in the draft Sustainable Recreation Strategy management approach. The draft objective for trail decommissioning and the guideline referencing the Sustainable Recreation Action Plan have been removed. The draft management approach was revised and is now the final Collaborative Sustainable Recreation Strategy management approach, which discusses the public process forest leadership and staff are likely to employ to develop a trails strategy. That public process would involve all interested parties.

Comment 2: Commenter states that the National Forest System Trails Stewardship Act of 2016 and the Forest Service 10-year Trail Challenge and National Strategy for a Sustainable Trail System are as important as the sustainable recreation plan and should be integrated into the Sustainable Rec Plan portion of the Gila Forest Plan since they are directly related to it. **Associated Letter: 52**

Response: The National Forest System Trails Stewardship Act of 2016 and the Forest Service 10-year Trail Challenge and National Strategy for a Sustainable Trail System are important to the recreation program. National forests and grasslands will be held accountable for implementing the direction provided by these documents outside of the forest plan.

Comment 3: There is a request to remove the following sentence from the sustainable recreation effects analysis because it perpetuates the idea that livestock grazing and recreation are incompatible uses of forest lands: "Under implementation of all alternatives as part of the agency's multiple-use mandate codified by the Multiple-Use Sustained-Yield Act of 1960 permitted livestock grazing would occur on many areas of the forest and would overlap with many recreation settings and opportunities. Regardless of the setting, whether in designated wilderness (and similarly managed areas), low development general forest areas, or areas with higher levels of development, the presence of cattle or the visible signs of grazing could have potential negative effects to recreation experiences of some forest visitors." **Associated Letter: 38**

Response: The language in the FEIS has been revised and acknowledges that some people may appreciate or enjoy the presence of cattle, while some may not.

Comment 4: There is support for the plan's inclusion of a summary of the Gila National Forest Recreation Facility Analysis describing the forest's niche and desired condition. **Associated Letter: 180**

Response: This revised content is now in the Sustainable Recreation Developed Recreation and Relationships management approach.

Comment 5: There is support for the way the plan supports efforts to improve and promote recreation uses where practicable because this will improve the visitor experience, which will in turn improve the economy of the forest's small gateway communities. **Associated Letter: 189**

Response: This support is retained in the final plan, although substantial reorganization and revisions have been made in response to other comments and for clarity.

Comment 6: Commenter points to the discussion under the Sustainable Recreation Effects Common to Alternatives 2 through 5 Recreation Opportunity Spectrum and Access subheadings and questions how the statements about no changes to the miles of non-motorized or motorized access being expected because of the plan related to recommended wilderness. **Associated Letter: 233**

Response: There are no changes to the miles of non-motorized or motorized access because of recommended wilderness because all open motorized routes were removed from the recommendation process during the inventory phase (see appendix H to the FEIS). Non-motorized routes are compatible with wilderness and no changes to that infrastructure are tied to wilderness recommendations.

Comment 7: There is support for plan content related to outfitter guides, off-road recreational vehicles, dispersed recreation, and recreation residences. **Associated Letter: 561**

Response: This content has been retained in the final plan with revisions based on comments and for clarity.

Comment 8: Commenter states that Grant County's plan to diversify the economy depends on access to public lands for users of all sorts. Commenter notes compatibility with completing the forest's portion of the Continental Divide Trail and effectively connecting it to nearby communities and that it doesn't interfere with maximizing recommended wilderness. Commenter states goals such as expanding opportunities for mountain biking and clarifying the rules and approved routes for motorized users are valid but secondary, since if we do not survive as a species no one will care whether they have more or fewer miles of accessible trail. Commenter recommends the draft plan should favor motorized access in areas closer to population centers. **Associated Letter: 601**

Response: The forest plan provides for diverse socioeconomic contributions by supporting motorized and non-motorized access for multiple uses. Examples of plan content that support Grant County's economic plan include Sustainable Recreation DCs 1 and 4. Wilderness recommendations can be compatible with and contribute to diverse opportunities and contributions. We acknowledge the commenter's preference for motorized access to receive emphasis near population centers.

Comment 9: Commenter would like to see the plan place greater emphasis on protecting and enhancing human-powered river recreation needs by incorporating plan components for this recreational pursuit because it is exactly the type of activity an experience covered in the 2012 Planning Rule's definition of sustainable recreation. Commenter provides these specific suggestions:

1) Add paddling to the list of high-quality backcountry opportunities on page 6.
2) Add sustainable recreation to factors that watersheds should support on page 85.
3) Locatable Mineral Desired Condition 1 should include minimizing adverse impacts to sustainable recreation.
4) On page 182 of the Draft Plan, language should be added to the last paragraph to include developed river access sites outside of the wilderness as an example.

Associated Letter: 712

Response:

1) This section of the plan was extensively reorganized from the draft. Paddling is discussed under A Description of the Gila National Forest subheading Social, Cultural and Economic Context.
2) This page of the draft plan contained the desired conditions for watersheds. Watersheds managed toward these desired conditions would support all multiple uses, including recreation. Sustainable Recreation is addressed in the Sustainable Recreation section of the plan.
3) Draft Locatable Minerals G1 and final Minerals G2 require locatable mineral operations to make diligent and honest efforts to accommodate the plan's other desired conditions, which includes Sustainable Recreation.
4) This sentence was part of a management approach that has been retained with revisions. The examples provided were not meant to be exhaustive.

Comment 10: There is a suggestion that the plan should make public areas and scenic spots available and ensure they are monitored. **Associated Letter: 728.412**

Response: The entire forest is open to the public except when temporary closure orders are issued because of fire danger or for specific areas as necessary for fire management or other health and safety issues. There are many places to view scenic vistas. Visitor use monitoring is conducted on every national forest every five years to inform the recreation program. This monitoring is leveraged by plan monitoring questions 5 and 6.

Comment 11: Commenters point to the increase in outdoor recreation since Covid-19 was declared a pandemic and state this trend will continue. One commenter suggested this is reason to expand protections to meet the increased use. **Associated Letters: 728.383 and 729.3**

Response: We have observed an increase in outdoor recreation over the last few years. The plan provides the flexibility to manage recreation and its impacts. For example, the forestwide standard establishing the default length of stay limit (Sustainable Recreation S1) would support forest orders to manage recreation and its impacts.

Developed Recreation

Comment 12: There is a concern that the plan doesn't address the current need and upward trend in demand for developed recreation opportunities. Commenters would like to see the plan include provisions for renovations and upgrades made to established campgrounds and some additional campground facilities because these facilities play a vital role in people's enjoyment of public lands and the demand is increasing. One commenter identifies campgrounds that need improvement and specific areas of the forest that are lacking campgrounds. Some suggest the solution to being able to provide these services lies in a fee system. One commenter suggests this could be expanded to include cabin rentals or on-line reservations or both.

Other commenters are concerned that implementing a fee program could negatively affect low-income communities and discourage youth and underserved populations from using the forest. This commenter states those effects need to be addressed in the environmental analysis to comply with the National Environmental Policy Act. **Associated Letters: 20, 233, 249, 561, 698, 710, and 712**

Response: Upgrades and improvements to campgrounds and other recreational facilities may be addressed at any time there is funding to address specific concerns or needs at the project level. Fees collected at developed sites may be part of the solution to decreasing allocations for recreation. The plan does not propose to establish a fee program. The fee program proposal is a separate, ongoing, region-wide National Environmental Policy Act process, which included consideration of environmental justice issues.

Dispersed Recreation

Comment 13: Commenters are concerned about people littering at dispersed campsites, especially around the Gila River. Commenters suggest that the only way to fix this is for Forest Service staff to provide education at local schools about how to be good stewards of the land. **Associated Letter: 249**

Response: Littering is a violation of New Mexico state law. We agree that there is an opportunity for collaborative education and outreach programs to reach local schools on this and other natural resource stewardship topics. The plan supports these activities as described in the Sustainable Recreation Outreach and Education management approach.

Comment 14: Commenter states that we need to continue protecting our wild lands for hunting, fishing, camping, and hiking because these things are important for our health and future generations. **Associated Letter: 720.50**

Response: We agree that these uses of federal public lands are important for public health for this and many generations to come. The revised plan provides direction that supports the sustainability of these uses, consistent with the agency's mission.

Comment 15: There is appreciation that a definition of mechanized transport was included in the Recreation Access subsection of the Sustainable Recreation Affected Environment section of the DEIS. However, commenter suggests a definition focused on the device, rather than how it is powered could provide needed clarity. Commenter suggests "Mechanical transport means any vehicle, device, or contrivance for moving people or material in or over land, water, snow, or air that has moving parts. This includes, but is not limited to, sailboats, sailboards, hang gliders, parachutes, bicycles, game carriers, carts, and wagons. The term does not include wheelchairs, nor does it include horses or other pack stock, skis, snowshoes, non-motorized river craft including, but not limited to, drift boats, rafts, and canoes, or sleds, travois, or similar devices without moving parts." **Associated Letter: 180**

Response: The FEIS includes substantial reorganization and revisions to the recreation analysis. While no longer under this heading, it is defined in the recreation section under the heading Effects Common to All Alternatives, where it is first used in the recreation analysis.

Desired Conditions

Comment 16: Commenter supports the desired conditions in the Sustainable Recreation section of the plan and states they will also enhance management of the Continental Divide National Scenic Trail. Commenter states appreciation for the importance of diversity, equity, environmental justice, a sustainable trail system, integration with travel management and shared stewardship. Commenter states the plan makes huge strides in ensuring that current and future generations have an opportunity to engage in public lands recreation AND stewardship. **Associated Letter: 180**

Response: These desired conditions have been retained in the final plan with revisions based on comments and for clarity.

Standard 3

"The Gila NF shall establish and enforce forestwide length of stay limits. Unless a decision is made otherwise by the responsible official, the default length of stay limit for any individual shall be by default 14 cumulative days within a 30-day period. Exceptions may only be granted by written permission of the forest supervisor or designated agent, including when approved as terms and conditions for special-use permits on a case-by-case basis, and groups or individuals that agree to mitigation terms and demonstrate a high proficiency for Leave No Trace Ethics. Changes shall be made to the default forestwide length of stay limits when approved by the forest supervisor and informed by recommendations from analysis of effects completed by an interdisciplinary team."

Comment 17: Commenter states opposition to this standard because it seems to indicate that long distance hikers (specifically) who often take more than 14 days over a 30-day period to traverse the Gila National Forest, would be in direct conflict with this standard. Commenter states that most seasoned hikers require 16 to 18 days to traverse the Continental Divide National Scenic Trail across the Gila National Forest, which often requires two stops for resupply in Silver City and/or Gila Hot Springs, Winston or Reserve, New Mexico, depending on their route. Commenter is concerned that most long-distance hikers would find it would be highly difficult to meet this standard and it seems inconsistent with the policies of other national forests along the Trail. Commenter states that typically, the policy is 14 consecutive nights in the same location, but not cumulative days with a 30-day period. Commenter requests changing the standard to 14 consecutive nights in the same location in a 30-day period. Commenter asks that if this standard is retained as written, would Continental Divide hikers be required to obtain a permit. **Associated Letter: 180**

Response: This standard provides the default length of stay that is enacted through a forest order, for the purposes of managing recreation. This standard reflects and supports the Southwestern Region's consistent approach to forest orders establishing length-of-stay limits. Continental Divide National Scenic Trail hikers traveling through the Gila National Forest are not being targeted. The forest supervisor, or designated agent, has the authority to exempt permittees or persons, when and where appropriate. The forest supervisor will consider public input and the analysis in the FEIS before determining whether this standard will be retained, retained with modification, or removed from the final forest plan.

Suggested Management Approaches

Comment 18: Commenter would like management approaches to discuss the use of barriers and signage to control illegal cross-country travel in areas with high potential for it to occur such as firewood areas and along motorized trails and roads. **Associated Comments: 233**

Response: Travel management implementation issues are ongoing. Barriers, signage, and education are the primary tools to facilitate implementation. Cross-country travel is often authorized in designated firewood cutting areas.

Relationships Management Approach

Comment 19: There is a suggestion that more can be said about practices that grow relationships and build trust. Specific language is recommended for inclusion in the management approach. **Associated Letter: 52**

Response: Relationships are a major theme running through the plan, which now includes an overarching management approach titled Relationships that outlines tested practices to grow relationships and build trust. This management approach responds to this and other comments. Commenter is referred to final Sustainable Recreation management approach Collaborative Sustainable Recreation Strategy and Relationships, which has been revised from draft content in further response to this comment and other comments on recreation and relationships.

Recreation Opportunity Spectrum Desired Conditions Management Approach

Comment 20: There is a concern that this management approach does not provide clarity on how recreation opportunity spectrum desired conditions as it was intended to do. Commenters describe a lack of clarity about the relationship between existing and desired classifications, the inconsistencies between the two, how those inconsistencies are resolved, and the relationship to the maps in the draft plan's Appendix C. Commenters state that the Recreation Opportunity Spectrum management approach needs to reference those maps to help clarify the process of reconciling inconsistencies. Commenters also find the examples provided problematic as they seem to conflict with management requirements for the Continental Divide National Scenic Trail and wilderness areas. **Associated Letters: 52, 73, 180, 233, and 712**

Response: This management approach was indeed confusing. It has been removed in favor of a clarifying discussion of the recreation opportunity spectrum in the background information section.

Comment 21: Commenter appreciates the recognition of the Continental Divide National Scenic Trail corridor in this management approach. **Associated Letters: 180 and 233**

Response: Thank you for your comment.

Comment 22: Commenter points to discussion of the recreation opportunity spectrum in the DEIS and suggests that this should be expanded to include a brief description of how each ROS setting or class is defined by desired conditions and indicators in agency manual direction. Commenter suggests the DEIS must only evaluate alternatives that provide for integrated resource management where plan allocations establish compatible practices within each established ROS class and that the maps in appendix C demonstrate the draft plan fails to meet this bar. **Associated Letter: 73**

Response: This discussion has been revised for clarity. The desired recreation opportunity spectrum classes are desired conditions toward which management would be directed. These desired conditions vary by alternative as described in the Sustainable Recreation in the FEIS. Differences between alternatives are based on differences in the area recommended to Congress for wilderness designation. The Recommended Wilderness section of the plan provides the management direction for these areas that would be in effect until Congress decides to designate or release these areas to other uses.

Comment 23: There is a concern that in the draft analysis discussion on recreation opportunity spectrum, use of the word "primitive" in the Wilderness Act and "primitive" in the recreation opportunity spectrum are not interchangeable. Commenter states that semi-primitive non-motorized is an appropriate classification within wilderness and that the map should not be adjusted because classifications reflect current use patterns within the area. **Associated Comment: 52**

Response: Semi-primitive non-motorized is an acceptable recreation opportunity spectrum classification within wilderness, depending on site-specific circumstances and identified management objectives. The

primitive recreation opportunity spectrum classification is always acceptable in wilderness because it aligns with the mandates of the Wilderness Act, but consideration should be given to whether semi-primitive non-motorized better suits site-specific conditions and management objectives.

Both primitive and semi-primitive non-motorized may also be appropriate for areas outside of wilderness because it is based upon distance from motorized route. The assertion that existing and desired recreation opportunity spectrum classes should be the same based on existing uses does not consider that existing uses may be non-conforming uses. Agency policy is clear that "where a choice must be made between wilderness values and visitor or any other activity, preserving the wilderness resource is the overriding value." (FSM 2320.6).

Trails

General

Comment 24: Commenters support the intent of the vision around wilderness and recreation but do not believe the poverty mentality they observe in the rest of the draft documents supports the vision. Commenters would like to see an abundance mentality in the final document facilitated by more stakeholder engagement and partnerships. **Associated Letters: 3 and 634**

Response: Draft plan direction was developed prior to the enactment of the Great American Outdoors Act, which made a substantial amount of funding available for approved projects. However, the planning rule requires that the plan be fiscally achievable. The documents reflect the assumption that future budgets will be like past budgets, which have been limiting. While there is an abundance of funding opportunities at present, it is unlikely to remain at present levels. Plan objectives relative to wilderness and recreation use objective language like many areas of the plan. Specifically, objectives generally establish a minimum, that we are confident we can accomplish even if funding levels return to pre-Great American Outdoors Act levels. If more funding and capacity is available, certainly more will be done to the extent we and our partners can capitalize upon. The plan emphasizes the importance of stakeholder engagement, relationships, volunteers, and partners, as described in the vision and in plan content under the Community Relationships heading and throughout the final Sustainable Recreation section.

Comment 25: Commenter states they endorse all the concerns contained in the comments provided by the Backcountry Horsemen. Commenter goes on to state they think the trail system is the most important obligation the agency has because a decent trail system is the only facility people need for people to enjoy the wilderness and their public lands. Commenter states that the trail system should be given far more consideration and resources than has been the case in recent years which has led to its deterioration. Commenter states: "I perceive your reference to 'sustainable trail system' as a veiled intent to do away with trails that require more maintenance. River corridor trails require more maintenance, but THESE ARE THE TRAILS PEOPLE WANT TO USE!!!" **Associated Letter: 131**

Response: Your letter number has been associated with all the comments submitted by the Backcountry Horsemen. The final management approach Collaborative Sustainable Recreation Strategy and Relationships is substantially revised from draft content in response to comments. It discusses the public process and collaborative development of a forestwide trails strategy. The status of specific trails is beyond the scope of the forest plan and will be addressed at a project level with a separate National Environmental Policy Act procedure, including public engagement.

Comment 26: Commenters suggest that the draft EIS characterization of the existing designated trail system is an overstatement and does not accurately reflect the reality on the ground. One commenter states that most of the trails in the Gila Wilderness where grade was an issue have been corrected and its only basic maintenance that is needed and recommends that if specific problem areas cannot be added to the

characterization of the trail system, then the statement should be removed. **Associated Letters: 3, 131, 52, 474, and 475**

Response: The draft characterization of the trail system applies to all trails within the Gila National Forest and is not exclusive or specific to the trails in the Gila Wilderness. There are many trails forestwide that are steep and poorly located and this is not a rare occurrence. Therefore, the word "often" was chosen, rather than "always" or "rarely." Language has been refined in the FEIS's characterization of the trail system.

Comment 27: I hope that the final Forest Plan document will provide an accurate assessment of the state of the trail system. **Associated Letter: 15**

Response: We acknowledge the commenter disagrees with depiction of the existing condition. Language has been refined in the FEIS.

Comment 28: Commenters suggest the draft EIS overstates the management challenge of user-created trails. Commenters acknowledge that this is a large problem on some forests, but not on the Gila National Forest and suggest that because of this, the narrative description characterizing existing conditions and management issues might benefit from expanding the focus to include well-maintained but overused trails and display as a map.

Others suggest that livestock trails and trails created by permittees are more of an issue needing analysis. One commenter is specifically concerned about trails created by feral cattle along the Gila River. Commenters would like this to be part of the analysis discussion and suggest plan components are necessary to mitigate the effects of these trails. There is also a concern that if there are issues with user-created trails, then it indicates the current system of trails is not serving the public that uses them. There is an accompanying suggestion that if user-created trails are going to be discussed, there should also be a discussion of how management is going to address what the public is saying when they create their own trails. **Associated Comments: 3, 131, 474, 475, and 712**

Response: This discussion has been refined in the FEIS to better reflect observations relevant to the recreation analysis. About feral cattle, please see the response to comments under the Feral Cattle heading in this appendix.

Comment 29: Commenter suggests the plan should specifically provide for the development of trailheads with interpretive signage, parking suitable for 2WD vehicles, and marked and mapped routes for destination hikes. This would encourage visitation and ecotourism. **Associated Letter: 11**

Response: An objective has been added to the final plan in response to comment (final Sustainable Recreation O3).

Comment 30: There is concern that language in the EIS (p. 344) that states there are "limited opportunities for day hiking" in the Gila is not only incorrect but also suggests the plan is to restrict hiking to system trails. **Associated Letter: 39**

Response: This discussion has been refined in the FEIS. There is no plan, or forest plan content, to restrict hiking opportunities.

Comment 31: There is a concern about the use of the phrase "unauthorized routes" [trails] in the DEIS (p. 348) because it isn't clearly defined what constitutes such a route and people should be able to walk wherever they want. **Associated Letter: 39**

Response: This discussion has been reworded to improve clarity.

Comment 32: There is a concern that even though people should be able to walk wherever they want; some popular trails could get over-used in the future and a suggestion that a permitting system might be needed for trails like the one that goes to Jordan Hot Springs. **Associated Letter: 39**

Response: Any administrative management action to require a permit system for addressing overuse issues for certain areas would be site-specific and require project-level planning to analyze and implement. This level of planning is outside of the scope of the forest plan revision.

Comment 33: There is a suggestion that the affected environment must describe the environment of the Continental Divide National Scenic Trail corridor, including the high potential route segments, that would be affected or created by the alternatives. Also, it should describe the degree to which current management direction is protecting the values for which each National Trail was designated, including protecting cultural landscapes, recreation settings, scenic integrity, and addressing the conservation purposes of the Continental Divide National Scenic Trail. **Associated Letter: 73**

Response: The current environment of the Continental Divide Scenic Trail corridor is described in the draft Trails Affected Environment section as is a description of current management. In the FEIS, the recreation sections have been substantially reorganized. The Continental Divide National Scenic Trail is analyzed under the final National Recreation and Scenic Trails heading. Current management of the Trail is analyzed under the Effects Common to All Alternatives and Effects of Alternative 1 headings.

Comment 34: There is support for keeping trails open and maintained so that citizens have access to the land that was put aside for their use and enjoyment. Some commenters acknowledge funding and staffing shortages but would like to see the original trails system revived to the extent possible and trail maintenance be a priority. Others specifically request that funding go to trail work that provides access to roadless areas. **Associated Comments: 129, 134, 165, 698, 709, and 729.6**

Response: The trail system is important for access and public use and enjoyment. The plan contains objectives for trail maintenance, realignment, and reconstructions. The final plan's Collaborative Sustainable Recreation Strategy and Relationships management approach discusses opportunities for public participation in development of a forestwide trails strategy. Funding allocation to specific trails is outside the scope of plan revision.

Comment 35: Commenter supports the analysis assumptions and states their organization stands ready and prepared to support the partnerships they have with all federal and state agencies to ensure the Continental Divide National Scenic Trail is adequately funded and maintained. **Associated Letter: 180**

Response: Thank you for your comment. We look forward to working with all interested parties to implement the revised forest plan.

Comment 36: Commenter requests the present use of bikes on trails be maintained in the plan with an emphasis being a 45-minute drive from the Town of Silver City. **Associated Letter: 246**

Response: The types of transportation allowed on individual trails is based on a number of environmental, social and legal factors to mitigate impacts to natural resources and visitor experiences. The only plan decision that would impact existing uses would be the recommendation of areas to Congress for wilderness designation. Development of the range of alternatives for wilderness recommendation provided consideration of existing mountain biking use. The forest supervisor will consider public input and the analysis in the FEIS before determining which areas will be included in the final recommendation.

Comment 37: Commenter states that the Rain Creek trail is rarely used and falling apart but it offers beautiful hiking and horseback access. Commenter requests mountain bikers also be allowed to use this trail. **Associated Letter: 246**

Response: The Rain Creek trail is mostly located within congressionally designated wilderness, and therefore it would be a violation of law, regulations, and policy to open the trail to mountain biking or any other motorized equipment or mechanical transportation.

Comment 38: Commenters suggest that plan components for motorized and non-motorized trails should be separate because they are different in terms of design and impacts. Commenters find it confusing to combine the two. **Associated Letters: 231 and 233**

Response: We acknowledge the commenters' preference. Motorized and non-motorized trails are both managed by the recreation program, so they are addressed in the recreation sections.

Comment 39: Commenter notes discussion about miles of motorized and non-motorized trails on page 421 of the DEIS and observes that the numbers do not add up. **Associated Letter: 233**

Response: Thank you for pointing out this error. It has been corrected in the FEIS.

Comment 40: Commenter observes the plan's need to develop a sustainable trail system that meets the needs of trail users and is manageable with available resources, but it doesn't talk about the backlog of maintenance. Commenter asks: "How many of the 1,927 miles of trails currently managed by GNF would be part of a sustainable trail system?" **Associated Letter: 608**

Response: That has yet to be determined. The sustainable trail system will be established through a separate process and a separate public engagement effort as described in the final plan's Collaborative Sustainable Recreation Strategy and Relationships management approach.

Comment 41: Commenter suggests that trails associated with wild and scenic qualities be added to the prioritization criteria described in the plan. Commenter provides an example: "The trail along West Fork Mogollon Creek, for example, which begins at Black Tail Spring below Mogollon Baldy and connects to Rain Creek Mesa trail around 74 Mountain, covers a range of ecosystems and offers the backpacker a unique experience of the Wilderness from the Spruce-Fir forests on high to the woodlands below." **Associated Letter: 608**

Response: The draft Trail Priorities management approach describes the primary factors management is likely to consider when prioritizing trail work. Other factors, like volunteer interest, would also be considerations and could include the trail along West Fork Mogollon Creek and others that provide access to wilderness and areas of high scenic character. This draft management approach has been replaced by discussion in the final Collaborative Sustainable Recreation Strategy and Relationships management approach, which highlights future opportunities for public input into a forestwide trails strategy.

Comment 42: Commenter is concerned about changes to the trails, landscape, and wilderness since the 2012 Whitewater Baldy Complex Fire and post-fire flooding. Commenter states they have heard from Gila National Forest staff that several of these trails are considered irreparable and that answer is unacceptable. Commenter states we can accomplish anything we set our minds to and that improvements are possible over time. **Associated Letter: 675**

Response: The fate of specific trails is a project-level consideration and will be addressed outside the forest plan revision process. The plan recognizes the value many stakeholders place on the trail system and seeks to leverage partners and volunteers to define and create a sustainable trail system. More opportunities to engage on trail issues will occur during plan implementation, as described in response to comment 41.

Comment 43: Commenter requests that the forest remain open to hikers and mountain bikers. **Associated Letter: 718.3689**

Response: Hiking and mountain biking will continue to be allowable uses across the forest except where prohibited by special designation or temporary closure order. Special designations such as wilderness prohibit the use of mechanized transport, which includes mountain bikes. Temporary closures may be needed periodically such as when a fire is in progress or post-fire conditions warrant it for safety reasons.

Comment 44: Commenter asks when the Whitewater Creek trail above the Catwalk will be rebuilt, pointing at page 425 the draft EIS. Commenter was under the impression that it was funded as part of the "renovation" for Gila trout. **Associated Letter: 39**

Response: This is beyond the scope of the forest plan. Work along Whitewater Creek and at the Catwalk are ongoing. We encourage the commenter to contact the Glenwood District Ranger or district recreation staff for specifics on status and upcoming events.

Desired Condition 2

"Motorized and non-motorized trail systems consist of interconnecting loops and trails that connect other national forest destinations. Motorized and non-motorized opportunities are generally not on shared routes, and when this occurs, they are moved to separate alignments at the earliest opportunity."

Comment 45: Commenter supports this desired condition and requests it be applied to the Continental Divide National Scenic Trail. **Associated Letter: 180**

Response: The desired condition is applicable to the trail system as a whole. The Continental Divide National Scenic Trail plays a role in achieving this desired condition, but has its own, more specific desired conditions based on its specific nature and purposes.

Objective 1

"Annually, the Gila will fully restore to standard at least 1 mile of trails (motorized or non-motorized) that have been degraded from desired conditions by past wildfires or post-fire events such as flooding or falling trees."

Objective 2

"Annually, the Gila will trail restore or improve at least 5 miles of National Forest System trails (motorized or non-motorized) to standard. This includes realignment, reconstruction, or deferred maintenance beyond that which considered routine annual maintenance by handbook direction."

Comment 46: There is a concern that the trails objectives for miles of trail maintained and improved is inadequate and unacceptable, especially considering how many trails have been impacted by fire. Some state that the relative emphasis between fixing trails and decommissioning trails (draft O3) is backwards. Commenters want to see trail maintenance be prioritized more, the minimum number of miles increased and suggest hiring someone to coordinate volunteers. Others point to the Vision's inclusion of a year-round trail crew and states that the objectives are very low for having a year-round crew. One commenter states that if this is all that can be expected there should be a re-evaluation of how the crew is set up because in 2019 volunteer groups worked on over 135 miles of trails and many of those miles were severely degraded.

One commenter suggests goals should be changed to define the approximate miles of trails that will be kept in at least a Trail Class 1 condition, within 2 years after publishing the final plan, create a proposal of the sustainable trail system that you will commit to maintain, and define how the Gila National Forest will achieve the goal of maintaining a sustainable trail system including coordination with volunteer groups. Other commenters suggest the objectives be expanded to recognize and include the contributions volunteers can

make. One commenter suggested there should be an objective to align forest staffing to coordinate and train volunteers who would then maintain some number of miles of trail per year. The final Forest Plan document should provide an accurate assessment of the state of the trail system and commit to design a sustainable trail system and to maintain the scaled-down system for the life of the new Forest Plan.

The National Forest System Trails Stewardship Act of 2016 and the Forest Service 10-year trail Challenge and National Strategy for a Sustainable Trail System are all key documents that should be the focus of the Forest for the next 10 years. These documents are changing the paradigm of the Forest Service. As a result, the documents should be referenced in the forest plan and objectives listed in these documents should be listed in the objectives for trails.

Other commenters are concerned these objectives do not address the importance of trails in the Gila Wilderness not just for recreation, but also ecological research, fire management, and historical preservation. These commenters are also concerned because impaired trails are sources of sediment into streams and recommend the objective should be to restore 10 percent of the trail system to standard annually, prioritizing areas impacted by fires and floods. **Associated Letters: 15, 20, 37, 39, 52, 56, 99, 131, 247, 474, 475, 544, 608, 634, 709, and 712**

Response: The draft objectives were developed to be within the fiscal capacity of the Gila National Forest's congressionally allocated budget that was reasonably foreseeable at the time. The objectives used the *at least* [emphasis added] language to make sure we were making commitments to the public that we could keep and allow for more if resource availability changed. Many things have changed since the draft was developed. The objectives retain a similar format but have been revised and the objective for trail decommissioning removed from the final plan. Since the draft documents were released, we have not been able to hire, train and retain a fully staffed, year-round trail crew. With an active volunteer community and partnerships, we will most certainly exceed the minimum objectives, but there will be turnover and variability within the volunteer community over time and it is not appropriate to set plan objectives based on factors that are outside agency ability or authority to control. Please refer to response to comment 41 in this section related to the sustainable trail system.

Because the forest will be participating in and accountable for upward reporting of annual performance accomplishments to meet the requirements of the Forest Service 10-year Trail Challenge in alignment with the National Trail Strategy, which implements the National Forest System Trails Stewardship Act of 2016, it would be redundant and is unnecessary to include these in the plan objectives. The draft Trail Priorities management approach recognizes the importance of the access trails provide for management activities beyond recreation and discusses factors, like minimizing erosion, which are likely to play into the priority setting process. However, the final Collaborative Sustainable Recreation Strategy and Relationships puts the focus on involving the public and partners in developing the forestwide trails strategy, rather than the factors that might be considered when prioritizing work.

Objective 3

"Within 5 years of implementing the forest plan, identify at least 20 miles of trails for either being reclassified to Trail Class 1 (minimally developed and maintained) or for full decommissioning and removal from the national forest trail system."

Comment 47: Commenters are concerned that this objective conveys an anti-trails bias that is inconsistent with public comment and use trends. Other commenters suggest avoiding decommissioning trails because even those that are currently unusable could be improved over the life of the plan, but once a trail is decommissioned a new National Environmental Policy Act analysis and decision would be required to build a new trail.

Commenters suggest that having a well dispersed trail system coupled with trail information is what helps preserve the resource. Commenters note that the Gila Wilderness is very close to the same trail density as

many of the wilderness areas nationwide, some of which are often considered the premier wildernesses in the system. Also, commenters state that as wilderness use continues to increase, many of the existing trails in the wilderness will be needed to maintain the outstanding solitude opportunities that the Gila Wildernesses presently provides. Commenter suggests forest staff do not currently have the data to base this type of objective in the plan and a better objective would be to evaluate, with public input, a certain number of miles of trail each year to determine proper management.

Another commenter states they have repeatedly heard forest staff say there are too many miles of trails on the forest and that in repeating this statement only made forest employees feel it is true. Commenter would like to see information that validates this statement. Commenter states that over the last 40 plus years, they have seen non-wilderness trails disappear through road building and other management activities and that before they moved here many miles of trails were removed from the system. Commenter shares a brief analysis comparing the Gila Wilderness trail system with other wilderness trail systems stating an understanding that there may be more miles than can be maintained but that is different than stating there are too many miles of trails. Commenter concludes that the Gila Wilderness has very close to the same trail density as many of the wilderness areas nationwide, some of which are often considered the premier wildernesses in the system. **Associated Letters: 3, 20, 52, 131, 474, and 475**

Response: This objective has been removed from the final plan in response to comment.

Comment 48: There is support for flexible trail maintenance standards discussed in the DEIS, a concern about decommissioning trails and a suggestion that all the "unauthorized" hikers should be able to keep using those trails. **Associated Letter: 39**

Response: Hikers may travel wherever they please unless specifically prohibited by a temporary closure order enacted for reasons of safety or protection of resources as required by law, policy, and regulation.

Comment 49: There is a suggestion to post maps and information on plants and wildlife, along with the warnings about bears, wolves, and fire at trailheads because people don't read the onerous "do not do" signs anyway. **Associated Letter: 39**

Response: The information posted on trailhead information kiosks is beyond the scope of the forest plan. These decisions are site and circumstance specific. However, it is important that the public has access to timely and relevant information such as rules and regulations for use of the national forests, as well as information on topics such as Leave No Trace outdoor ethics.

Guideline 1

"National Forest System trails should not be used for management activities, including timber harvest activities (for example, landings and skid trails) that negatively impact trail conditions, unless alternatives entail greater resource damage. Adverse impacts to system trails should be mitigated upon project completion."

Guideline 2

"When National Forest System trails intersect fences, accessible, activity-specific pass-through areas should be provided to allow for easier passage."

Comment 50: There is support for Trails G1 and G2. **Associated Letter: 180**

Response: Thank you for your comment. These guidelines have been retained with modification.

Relationships Management Approach

Comment 51: Commenter would like to see an adopt-a-trail program for motorized trails discussed here suggesting that volunteers could replace signs and help block closed roads. Commenter would also like to see

this management approach discuss travel management education and picking up litter. **Associated Letter: 233**

Response: The management approaches discussion of an adopt-a-trail program is inclusive of both motorized and non-motorized trails. This content was retained in the final Collaborative Sustainable Recreation Strategy and Relationships management approach. Travel management education is an ongoing activity. Littering is an illegal activity prohibited by state statute and beyond the scope of the plan. We recognize this is also an ongoing issue and we appreciate it when stakeholders report problem areas or help by picking it up. Forest staff pick up litter in the course of other work as time allows.

Sustainability Management Approach

Comment 52: Commenter supports the intent of the vision around recreation but does not believe the wilderness and recreation management content of the draft plan and EIS adequately support the vision. There is a specific concern about this management approach because the term "right-sized" is ambiguous. Commenter points to the general lack of public engagement around the Sustainable Recreation Strategy expresses concern is that "right-sized" may be determined without robust public engagement. **Associated Letter: 3**

Response: Please refer to response to comment 40 previously in this section of this appendix.

Motorized Trails

Desired Condition 2

"Off-highway vehicle trailheads provide a relatively dust-free environment that prevents erosion. Trailheads provide parking and access to trails where they are most critically needed."

Comment 53: Commenter states that this desired condition makes no sense and wonders how we would make a motorized trail relatively dust free. Commenter also asks what the guidelines are for building a sustainable motorized trail. **Associated Letter: 277**

Response: We agree that it would be difficult and potentially cost-prohibitive to achieve this desired condition if it applied to the entire length of the trail. The desired condition is applicable to trailheads, not the trails themselves. Gravel is one way to reduce or eliminate dust at trailheads.

Suggested Desired Conditions

Comment 54: Commenter is concerned that the draft plan removed a preliminary draft plan desired condition that stated: "Unneeded trails are closed to motor vehicle use and naturalized to reduce impacts to ecological resources." Commenter would like to see this added back in because the remaining plan components do not adequately address the need to decommission and naturalize unneeded motorized trails. **Associated Letter: 712**

Response: Sustainable Recreation DC16 was added to address this concern.

Suggested Standards

Comment 55: Commenter recommends that all action alternatives should prohibit increasing the width of the 900 series motorized trails, tying this prohibition to draft guideline 1 in the Riparian and Aquatic Ecosystems section. Commenter further suggests that the plan require these motorized trails to be rerouted out of washes and wetlands before they were to be widened and a new travel management map printed to reflect the reroutes. Commenter requests no new travel management map be printed until the 900 series realignments are corrected and taken out of washes and riparian areas. **Associated Letter: 233**

Response: There is no proposal to increase the width of motorized trails. Nothing in the draft or final guideline the commenter refers to necessitates an additional forest plan component. Site- and activity-specific best management practices would be used to move toward desired conditions. The location, alignment, and width of motorized trails is something appropriately considered at the project level, when site-specific circumstances can be evaluated and the best course of action to move toward desired conditions can be determined. The publication of new travel management maps is a program delivery issue and outside the scope of plan revision.

Comment 56: Commenter supports Motorized Trails Guidelines 3 through 8 because they address the serious resource damage caused by motorized trails and roads. However, they would like to see them elevated to standards as they do more to correct the damage than what is currently in the standards section. **Associated Letter: 712**

Response: There are differing opinions regarding the utility and overall balance of standards and guidelines. Often there is advocacy for a standard because there is a misconception that guidelines are optional and there is a preference for a greater level of protection to be afforded to a particular resource or use. Guidelines are not optional, they are flexible. This flexibility is useful when all the possible site- and activity-specific circumstances are not known. The forest supervisor's decision and rationale on what direction is appropriate for a standard or guideline is documented in the draft record of decision.

Guideline 4

"New motorized trails should avoid hilltops, ridges, and any landform with more than 10 percent surface grade to mitigate potential erosion and to promote sustainable design principles."

Comment 57: Steeper grades are more technically challenging and are desired where they can be accommodated without resource damage. **Associated Letter: 228**

Response: This guideline has been reworded to preserve the intent and be responsive to this comment (final Sustainable Recreation G15).

Guideline 8

"Motorized trails should be designed and located so as to not impede terrestrial and aquatic species movement and connectivity."

Comment 58: There is support for this guideline because it promotes habitat connectivity. **Associated Letter: 652**

Response: This guideline has been retained as Sustainable Recreation G14 with some additional language in response to other comments.

Continental Divide National Scenic Trail

General

Comment 59: There is support for including the Continental Divide National Scenic Trail (CDNST) as a designated area the narrative included in the background information of the draft plan. There is also support for most of the direction provided in the plan and the observations and conclusions reached in the environmental analysis. Commenter appreciates the half-mile corridor on either side of the trail and the focus on relationships. Commenter especially appreciates the management approach Relationships as they strongly believe this represents the future of public land management. Commenter looks forward to being included as a partner, especially for relocating segments of the trail that currently coincide with motorized routes. **Associated Letter: 180**

Response: This direction and other plan content has been maintained with editorial changes for clarity in the final plan. Partner organizations and individuals are encouraged to approach forest staff at any time to assist the forest with trail stewardship.

Comment 60: Commenters are concerned that the following statement in the background section of the draft plan provides conflicts with the direction in the Continental Divide National Scenic Trail Comprehensive Plan, Forest Service Manual direction, or both: "New motorized vehicle use by the general public is prohibited on the CDNST, unless such use is consistent with the applicable policy set forth in the comprehensive plan. In general, established motorized uses, both summer and winter, are allowed to continue, but new motorized uses will not be designated on the Trail."

Further, the commenter is concerned that this statement does not provide any documentation as to when motorized routes were in existence and specifically in the Burro Mountains where the trail coincides with motorized routes. Commenter states that the recent travel management decision ignored the comprehensive plan and allowed motorized use across the trail, including recently constructed section. Commenter states that proximity to motorized use does not provide solitude and self-reliance and instead causes safety concerns for all non-motorized trail users. Keeping a distance from any type of motorized use should always be the goal. Commenter recommends the plan provide more specific direction and reference to the comprehensive plan to clarify requirements for when, where and how motorized use may be permitted along the trail and when it is not. Commenter points to Desired Condition 5 as support for relocating the trail in the Burro Mountains to a non-motorized location.

Commenter supports the analysis conclusions where the trail and a motorized route are co-located, or when illegal motorized incursions happen, are user experiences are negatively impacted. Commenter extends an offer to help forest staff plan for realignments to help correct these occurrences as soon as possible.
Associated Letters: 180 and 75

Response: This statement does not conflict with the comprehensive plan or manual direction (FSM 2353.44b (8)); however, language was added to the background information section to help clarify. The desired condition is to relocate the trail away from established motorized uses, or to realign motorized uses from the trail where they coincide (DC1). During the travel management process, approximately 41 miles of the trail were identified as sharing the same location as an open, motorized road including areas in the Burro Mountains. The FEIS published in 2014 also identified 17 miles of re-routes to non-motorized locations that were already planned. Most of the trail in the Burro Mountains has been moved to non-motorized locations in the last year. Forest staff continue to look for opportunities to reduce the number of miles the trail shares with motorized routes consistent with plan direction (G4 and O1) (and the 2009 Comprehensive Plan) to move toward desired conditions. Partner organizations and individuals are encouraged to approach forest staff at any time to assist the forest with trail stewardship.

Comment 61: Commenter states that the plan cannot legally adopt an unknown, "most current version" of the Continental Divide National Scenic Trail Comprehensive Plan and the phrase must be deleted from the revised plan. **Associated Letter: 73**

Response: The comprehensive plan is incorporated by reference to assure the forest plan remains consistent with future updates. There is no legal prohibition on incorporating other plans into the forest plan by reference.

Comment 62: Commenter states that the plan must establish a corridor for the trail along existing and high-potential route segments with supporting plan components that provide for the nature and purposes of the trail. Commenter is concerned that the draft plan does not address the requirements of law, policy, and regulation for management of the trail. Commenter suggests the final plan must be modified to clarify and strengthen the direction for the integrated management of recreation, scenic resources, other resource

programs, and congressionally designated areas. Commenter also suggests the final plan should include a corridor broad enough to protect natural, scenic, historic, and cultural features to recommend to the Chief and establish compatible recreation opportunity spectrum plan components. **Associated Letter: 73**

Response: The trail itself is a congressionally designated area and is included as a designated area in the plan. The background information for the trail identifies the corridor as within a half-mile on either side of the trail. The plan's desired conditions, objectives, standards, and guidelines provide for the nature and purposes of the trail and are consistent with applicable law, regulation, agency policy (FSM 2353.44(b)(1). It is also consistent with the Regional Foresters' guidance on plan direction for the Continental Divide National Scenic Trail (USDA FS 2017), which is recommended for the purpose of providing consistent management along the entire length of the trail. The National Scenic Trails Act allows for the trail to be in recreation opportunity spectrum classes other than primitive and semi-primitive non-motorized if the nature and purposes of the trail are protected. Guideline 1 requires management activities to meet the intent of having most of the trail within primitive and semi-primitive non-motorized primitive classes.

Comment 63: There is concern that the Regional Foresters' components that provide the basis for the revised Gila forest plan direction for the Continental Divide National Scenic Trail do not protect the nature and purposes of the trail from developments and other incompatible uses such as timber production and road construction. Commenter suggests that a supplemental draft and the final EIS should describe that the "Recommended Forest Plan Components approved in August 2016, by the regional foresters of the four Forest Service regions the trail passes through" was eliminated from detailed study since the direction does not provide for the nature and purposes qualities and values of the trail. Commenter states that planning and management guidance enacted through Regional Forester or other correspondence may supplement but does not supersede the guidance found in the National Trails System Act, Executive Orders, CDNST Comprehensive Plan, regulations, and directives. Commenter asserts that the Regional Foresters' formulation and adoption of this guidance was not in compliance with section 14(a) of the Forest and Rangeland Renewable Resources Planning Act (16 U.S.C. 1612(a)) and 36 CFR 216 processes. **Associated Letter: 73**

Response: The Regional Foresters based their recommendations on existing law, regulation, and policy to provide for consistent management of the trail across its entire length and to reduce duplication of effort to develop direction in each plan revision effort.

Comment 64: Commenter suggests the cumulative effects analysis should recognize that management direction for semi-primitive motorized, roaded natural, rural, and urban recreation opportunity spectrum classes allow uses that would substantially interfere with the nature and purposes of the trail. The establishment of primitive and semi-primitive non-motorized classes and high and very high scenic integrity objectives would normally protect the nature, purposes, qualities, and values of the trail. **Associated Letter: 73**

Response: Cumulative effects for forest plans are slightly different than those undertaken for project-level analyses. Forest plan programmatic cumulative effects take a multi-jurisdictional look at actions and their associated effects, but the focus is on reasonably foreseeable future actions likely to occur during implementation that could have effects on neighboring lands, as well as actions likely to occur under the plans of other jurisdictions that could affect the forest. The effects of plan direction on the trail are discussed in the effects sections for the alternatives.

The National Scenic Trails Act does allow for the trail to be in recreation opportunity spectrum classes other than primitive and semi-primitive non-motorized if the nature and purposes of the trail are protected. Guideline 1 requires management activities to meet the intent of having most of the trail within primitive and semi-primitive non-motorized primitive classes. Guideline 2 requires management activities to meet the intent of having scenic integrity objectives of high or very high.

Comment 65: Commenter requests that the agency documents "Vegetative Management Best Management Practices" and "Management Tool: Managing Recreational Uses along the CDNST" be referenced in the plan to assist decision makers in the evaluation of activities that may be proposed to occur within the corridor. **Associated Letter: 180**

Response: We agree that these are good resources and have added specific reference to them in the management approaches.

Comment 66: Commenter states that the trail was adequately addressed in the plan but would like to see a few changes in the EIS. Commenter points to the following statement on page 424: "Sections of the CDNST pass through areas of the forest with limited water sources and the majority of the trail crosses remote regions of the forest, with long sections having limited road access, which limits resupply options for through-hikers and inhibiting visitor use overall. Some sections of the CDNST have been impacted by wildfires in the recent past, making it difficult to follow in some areas. Poor trail conditions, a desire [to] minimize travel distance, access to water sources, and prohibition of mechanized travel through wilderness prompts some CDNST visitors to follow alternative routes."

Commenter states that most visitors enjoy the long roadless sections with limited access and low visitor use. Commenter states that the trail was created primarily for hiker and equestrian use and that while this may limit access or inhibit use in certain areas, wilderness does not create a negative experience as implied in the quoted statement. Commenter would like to see this removed from the document. **Associated Letter: 180**

Response: The intent of this narrative was to describe a lack of access for resupply. Many through-hikers depend upon resupply points that are accessible by motorized vehicles. This narrative has been modified for clarity in the final document in the National Recreation and Scenic Trails section's Affected Environment.

Comment 67: Commenter asks if the Gila NF keeps statistics on use of the Continental Divide National Scenic Trail considering the increased popularity of the trail for through-hiking. The revised forest plan should recognize that hikers rarely use the statutorily designated route of the trail through the Aldo Leopold Wilderness along the Black Range Mountains and instead follow a route that follows Tadpole Ridge, the Gila River, and the Middle fork Gila River because of concerns of water availability. Commenter suggests that maintenance planning should take this into consideration.

Another commenter is concerned that the use of the alternate route could have effects on water quality. This commenter suggests the plan should develop an infrastructure and management strategy to address the scarcity of water including actions such as providing cache boxes or other strategies similar to those used on the Arizona National Scenic Trail. **Associated Letters: 39 and 180**

Response: We do collect visitor use data as a matter of program management and are aware that many through-hikers are using this alternate route. We acknowledge that water availability is an ongoing challenge affecting users of official route. These concerns are discussed in the environmental analysis and were the reason the following statements were included in management approaches: "Consider minor realignments of the trail, or identify minor route diversions, to provide user access to known, reliable water sources. Coordinate with grazing permittees and wildlife program staff to identify opportunities to develop water sources within or near the CDNST corridor that might also serve CDNST users and pack or riding stock". However, the official route of the trail is a congressional designation. Anything more than a minor realignment or diversion is beyond the scope of the forest plan.

Comment 68: There is a suggestion that timber harvest and other vegetation treatments should only be allowed within the trail corridor for the purposes of health and human safety. Commenter states that the trail provides a unique opportunity to provide educational opportunities about forest management practices that support long-term healthy forest. If vegetation treatments are proposed within the corridor, commenter

suggests engagement with the Continental Divide Trail Coalition will help ensure impacts are avoided or mitigated appropriately. **Associated Letter: 180**

Response: The plan contains guidelines designed to avoid or mitigate impacts to the trail that could result from activities associated with vegetation management activities (Gs8-11). There will also be opportunities to engage the Coalition and interested stakeholders at the project level when site-specific circumstances are known.

Comment 69: Commenter suggests that the cumulative effects analysis should more closely analyze the upward trend in mountain bike use and the potential for it to significantly impact the trail. **Associated Letter: 180**

Response: Trends related to mountain bike use are discussed in the Affected Environment section of the final Sustainable Recreation section of the FEIS under the subheading Recreation Issues and Trends. In conjunction with the 2009 Comprehensive Plan, and forest plan direction, management will be directed toward protecting the nature and purposes of the trail from any adverse recreational impacts.

Comment 70: Commenter asks if the half-mile corridor on each side of the Continental Divide National Scenic Trail excludes motorized vehicles. **Associated Letter: 233**

Response: It depends on site-specific circumstances. Although it is a desired condition (DC1) that the trail does not coincide with motorized routes, there are existing segments that do. These occurrences can continue by law and plan direction until there is an opportunity to move toward desired conditions (G4). Also, there may be circumstances that necessitate the trail is near motorized routes. In those instances, even if there are no motorized uses allowed on the trail itself, motorized uses may occur within corridor.

Comment 71: Commenter points to the analysis for the Continental Divide National Scenic Trail on page 430 in the Trails section of the DEIS and states that level 1 guidelines require scenic integrity objectives of High to Very High. **Associated Letter: 233**

Response: Managing toward high and very high scenic integrity objectives is consistent with DC3 and G2 in the draft plan's section for the Continental Divide National Scenic Trail. However, level 1 trails are generally not required to have these scenic integrity objectives. Trail development classes do not mandate specific objectives for scenery, rather the Scenery Management System is used to resolve the impacts of trails on the physical setting (FSH 2309.18).

Comment 72: Commenter is concerned that exclusionary corridors around the Continental Divide Trail and other National Trail System Act routes have been created during resource planning across the country. These corridors are being made non-motorized without addressing existing uses. Commenter is concerned that plan direction for the trail restricts multiple uses doesn't allow for nonconforming uses to cross the corridor. Commenter draws a comparison to the Rio Grande National Forest plan on which they filed an objection. Commenter states the resolution overturned the decision. **Associated Letter: 386**

Response: The Continental Divide National Scenic Trail is managed to provide for its nature and purposes. Those purposes are to provide high-quality scenic and primitive hiking and horseback riding opportunities and to conserve natural, historic, and cultural resources. The National Trails Act, 16 U.S.C. 1246, FSM 2353.4, and the CDNST Comprehensive Plan mandate that activities that would substantially interfere with the purposes for which the trail was designated should be avoided to the extent practicable.

The Objection Officer's response to the Rio Grande National Forest objection begins by stating "Upon review of the record, I find that the responsible official developed plan components that were consistent with both the National Trails System Act (NTSA) and the CDNST Comprehensive Plan. Therefore, I affirm forest supervisor Dan Dallas' decision." However, the Objection Officer determined that the plan language could

use some clarification regarding travel within and across the trail corridor and instructed the responsible official to provide that clarification. A review of the Gila National Forest plan demonstrates that the lack of clarity identified in the Rio Grande's plan direction is not present.

Comment 73: Commenter asserts that mountain biking can be appropriate use along a given segment of the Continental Divide National Scenic Trail if the plan does not prohibit it but only after the use is evaluated by a project-level decision through a public process. Commenter states there must be a determination of no substantial interference and a monitoring plan to ensure long term sustainability of that use. Commenter points to a statement in the DEIS that does not align with direction in the 2009 Comprehensive Plan and could mislead the public: "The Continental Divide National Scenic Trail (CDNST) allows mechanized transport outside of wilderness and recommended wilderness unless otherwise closed by a Forest Service Closure order."

Commenter requests decision documents, determinations for no substantial interference, and the monitoring plans be included in the final document. Commenter also requests the plan identify what actions would be taken if future impacts or user conflicts were to occur. Commenter encourages the planning team to review the recent decision for the Rocky Mountain National Park the East Shore Trail segment of the Trail for an example of what they are looking for. **Associated Letter: 180**

Response: The plan does not prohibit mountain bike use along the trail outside of designated or recommended wilderness. Mountain biking is allowable under the plan, consistent with the 2009 Comprehensive Plan. The plan provides the flexibility to manage mountain bike use of the trail at the project level. Management can be adjusted as needed to respond to future possible conflicts or issues. There are multiple ways to address user conflicts and address future management needs. A public process such as the one the commenter describes would align well with the plan's focus on relationships. The discussion in the EIS referenced by the commenter has been revised in favor of more accessible language.

Comment 74: Commenter representing the Continental Divide Trail Coalition supports the draft document's clarification and discussion about electric bicycles being considered and managed as motorized vehicles. Commenter states that for existing segments of the trail that are co-located with motorized routes and have yet to be rerouted off those routes, they would support allowing e-bikes where management has made a project-level decision through a public process. **Associated Letter: 180**

Response: The Forest Service has released national level policy on e-bikes (FSM 7700 and 7710). E-bikes are allowed on motorized routes only.

Alternatives

Comment 75: Commenter provides alternative plan direction for the Continental Divide National Scenic Trail and suggests that of the alternatives analyzed, alternative 5 best protects the trail with the amount of recommended wilderness and other special designations. Commenter states that chapter 2 of the EIS should recognize this, and chapter 3 should describe the benefits of protecting the nature and purposes of the trail if alternative 5 is selected. **Associated Letter: 73**

Response: The alternative plan direction provided by the commenter provides nothing that isn't covered by, or was a substantive improvement over law, regulation, policy direction, the Regional Foresters' recommended plan components, and draft plan direction. There are no differences between the action alternatives (alternatives 2 through 5), because the Trail is protected under the National Trails System Act, Forest Service Manual, the Continental Divide Trail Comprehensive Plan, and forest plan direction for the trail, not the Wilderness Act. The purpose of the Wilderness Act is to preserve wilderness for the use and enjoyment of the American people. Any benefits to the trail derived from being co-located with wilderness are secondary to the purposes of the legislation.

Comment 76: Commenter points to pages 23 and 25 of the DEIS**,** which describe creating alternate Continental Divide Trail routes as considered but eliminated from detailed study. Commenter suggests that this is not consistent with law, policy, or regulation. Commenter asserts that the rights-of-way for the trail is yet to be selected by the Chief of the Forest Service and alternative routes presented in scoping comments are reasonable corridors to be analyzed in detail. **Associated Letter: 73**

Response: The suggested reroutes were substantial and are outside the scope of plan revision because the trail is a congressional designation ((16 U.S.C. 1246(b) in FSM 2353.43(c)). Citizen's proposals for reroutes may be submitted at the project level or directly to Congress.

Desired Condition 1

"The CDNST is a well-defined trail that provides for high-quality, primitive hiking and horseback riding opportunities, and other compatible non-motorized trail activities, in a highly scenic setting along the Continental Divide. The significant scenic, natural, historic, and cultural resources along the trail's corridor are conserved. Where possible, the trail provides visitors with expansive views of the natural landscapes along the Divide."

Comment 77: Commenter requests this be rewritten to state: "The nature and purposes of the Continental Divide National Scenic Trail are to provide high-quality scenic and primitive hiking and horseback riding opportunities and to conserve the natural, historic, and cultural resources along the trail corridor." Commenter is concerned that using the term "well-defined" could lead to over engineering of the travel route tread attributes, which occurred for the Pacific Crest National Scenic Trail through the Pasayten Wilderness. Commenter is also concerned the phrase "other compatible non-motorized trail activities" is too broad and that bicycle use should be managed according to the direction in the CDNST Comprehensive Plan Chapter IV.B.5 and FSM 2353.44(b)(10) so that it will not substantially interfere with the nature and purposes of the trail. **Associated Comment: 73**

Response: The trail will be constructed and maintained in compliance direction provided by the 2009 Comprehensive Plan Trail and Facility Standards, FSM 2300.53.44 and FSH 2309.18. Bicycle use will be managed according to the comprehensive plan and the policy direction referenced by the commenter. See also response to comment 73 in this section of this appendix regarding bicycle use of the trail. The language regarding compatible non-motorized trail activities is intentionally broad because we cannot anticipate what may become popular in the future.

Desired Condition 3

"Viewsheds from the CDNST have high scenic values. The foreground of the trail (up to 0.5 mile on either side) is natural-appearing. The potential to view wildlife is high, and evidence of ecological processes such as fire, insects, and diseases exist."

Comment 78: Commenter suggests this desired condition must be described in the technical terms of the Scenery Management System and that it should be modified to reference Natural-Appearing instead of Naturally Appearing to be consistent with the Landscape Aesthetics Handbook. **Associated Comment: 73**

Response: The draft and final desired condition says "natural-appearing," consistent with the Landscape Aesthetics Handbook and the Scenery Management System.

Desired Condition 4

"The CDNST can be accessed from multiple locations, allowing visitors to select the type of terrain, scenery and trail length (such as ranging from long-distance to day use) that best accommodate their desired outdoor recreation experience(s).

a. Wild and remote backcountry segments provide opportunities for solitude, immersion in natural landscapes, and primitive outdoor recreation.

b. Front-country and easily accessible trail segments complement local community interests and needs and help contribute to their sense of place."

Comment 79: Commenter is concerned that this wording suggests a desire for developments and uses that would lead to degradation of National Scenic Trail qualities and values. For example, unfettered bicycle use on the Monarch Crest Trail in Colorado is desired by many in the local community, but the resulting bicycle use substantially interferes with the equestrian and pedestrian use of the CDNST. **Associated Comment: 73**

Response: We acknowledge the commenter's opinion, but we don't understand how this desired condition could be interpreted in such a manner. See also response to comment 73 in this section of this appendix regarding bicycle use of the trail and how possible future conflicts or interference would be addressed.

Desired Condition 6

"The trail is well-maintained, signed, and passable. Alternate routes are made available in the case of temporary closures resulting from natural events, such as fire or flood, or land management activities."

Comment 80: Commenter states land management activities cannot interfere with the nature and purposes of the trail. **Associated Letter: 73**

Response: A temporary closure due to hazardous conditions of land management activities does not represent substantial interference, especially if information about temporary alternate routes is made available.

Objective 1

"Restore or relocate 5 miles or more of the CDNST by 2025 to better align with law, regulation and policy; improve access to safe water sources; improve scenic viewing opportunities; and provide for better quality non-motorized recreation experiences."

Comment 81: A commenter suggests the plan should describe how much of the 254 miles of the Continental Divide National Scenic Trail located within the Gila National Forest needs restoration or relocation so that the reader can assess whether the objective to restore or relocate 5 miles in 5 years is reasonable or would lead to significant or insignificant improvement. Other commenters are concerned the number of miles is way too low. Commenter suggests the plan should be more ambitious to reflect tremendously successful partnerships, the 10-year Trail Challenge and the USDA's Sustainable Trails Strategy. **Associated Letters: 20 and 180**

Response: The FEIS discusses the miles of trail that need relocation off existing motorized routes in the Affected Environment under the National Recreation and Scenic Trails heading (approximately 33.3 miles as of the preparation of the FEIS). A specific number of miles is not listed in the plan because it is subject to change annually, as more resources are being made available to accomplish this work. The 2012 Planning Rule requires plans to be implementable within reasonably foreseeable budgets. The objective sets a minimum of 5 miles based on what we were able to get done in the recent past. More miles will be restored or relocated if resources are available to do so, until the need is met. It is highly likely that will be the case, given that since the draft plan was prepared even more resources have been made available that can be used for this purpose.

Suggested Objectives

Comment 82: There is a concern that the plan leads management toward re-routes that would reduce the level of difficulty and cater to those who want to speed-hike across the nation or would like better access to water. There is a suggestion to include an objective that emphasizes restoration, so the trail is consistent with the original designation and intent. **Associated Letter: 37**

Response: We did receive comments requesting substantial reroutes. That was identified as something that was considered but not analyzed in detail in chapter 2 of the FEIS because it is not within the authority of the agency to do that. The official route is a congressional designation. Plan direction for re-routes only refers to moving the trail where it is currently coincident with motorized routes. Relatively short trail realignments within the designated trail corridor may be necessary in the future to address impacts to natural or cultural resources and would be allowable under the forest plan and other relevant direction.

Standard 1

"No surface occupancy for geothermal energy leasing activities shall occur within the CDNST corridor."

Comment 83: Commenter recommends that this standard should reference a management area corridor that conforms with the 2009 Comprehensive Plan and agency directives. **Associated Letter: 73**

Response: The corridor is established by Congress and is described in the background information section for the trail. The description conforms with the 2009 Comprehensive Plan and agency directives.

Standard 3

"Motorized events and motorized special-use permits shall not be permitted or authorized on the CDNST. Existing motorized use may continue on the CDNST. New motorized events shall not be permitted on the CDNST. Motorized use shall not be allowed on newly constructed segments of the CDNST."

Comment 84: Commenter states this standard is not consistent with law, regulation, policy, and the 2009 Comprehensive Plan. This standard should state: "Motor vehicle use by the general public is prohibited on the CDNST, unless that use is consistent with the applicable land management plan and…" and then list all the elements contained in the 2009 Comprehensive Plan that must be met verbatim. **Associated Letters: 73 and 180**

Response: This standard is consistent with law, regulation, policy, and the 2009 Comprehensive Plan. It has been retained with modification to promote clarity.

Guidelines

Comment 85: Commenter supports guidelines 1-11 but would like to see these elevated to standards. **Associated Letter: 180**

Response: Please refer to response to comment 6 in the General section of this appendix.

Guideline 1

"To retain or promote the character for which the trail was designated, new or relocated trail segments should be located primarily within settings consistent with or complementing primitive or semi-primitive non-motorized recreation opportunity spectrum classes. Road and motorized trail crossings and other signs of modern development should be avoided to the extent possible."

Comment 86: To be consistent with the National Trails System Act, the Comprehensive Plan and related directives, commenter recommends that the plan should locate the corridor in existing primitive or semi-primitive non-motorized recreation opportunity spectrum classes to the extent practicable. Furthermore, plans must establish primitive or semi-primitive non-motorized recreation opportunity spectrum classes and address any uses that are not consistent with the nature, purposes, qualities, and values of the trail and high-potential route segments. **Associated Letter: 73**

Response: The National Scenic Trails Act allows for the trail to be in recreation opportunity spectrum classes other than primitive and semi-primitive non-motorized if the nature and purposes of the trail are protected. Guideline 1 requires management activities to meet the intent of having most of the trail within primitive and semi-primitive non-motorized primitive classes.

Guideline 2

"To protect or enhance the scenic qualities of the CDNST, management activities should be consistent with scenic integrity objectives of high or very high within the visible foreground of the trail (up to 0.5 mile either side)."

Comment 87: Commenter suggests this should be a standard and described as a scenic integrity level. In any case, the guidance should not be restricted to only the foreground. Some of the most visual impactive uses and activities may occur in the middle ground. **Associated Letter: 73**

Response: We acknowledge the commenter's preference about language. The guideline is intended to support movement toward, achievement and maintenance of high or very high scenery management objectives (Concern Level 1). The flexibility provided by having this direction as a guideline rather than a standard would allow management actions such as restoration treatments that may have short-term visual impacts if they contribute toward meeting desired conditions over the long term. If we were to extend the area subject to this direction to include the middle ground, having the flexibility of the guideline likely becomes even more important. Desired scenic integrity objectives forestwide were developed through the process outlined in the Landscape Aesthetics Handbook.

Guideline 3

"If management activities result in short-term impacts to the scenic integrity of the trail, mitigation measures should be included, such as screening, feathering, and other scenery management techniques to minimize visual impacts within and adjacent to the trail corridor (within visible foreground of the CDNST at a minimum)."

Comment 88: Commenter states that forest health and timber harvest projects may only be allowed where the direct, indirect, and cumulative effects of the timber harvests and related activities do not result in the substantial degradation of the trail's qualities and values. Short-term impacts are only allowable if the action contributes toward meeting desired conditions. Commenter states that timber production is inconsistent with the trail's desired conditions. **Associated Letter: 73**

Response: This guideline directs tree cutting prescriptions to include design features appropriate for the site to minimize short-term visual impacts. Prescriptions will be designed to move toward desired conditions for all resource values and uses.

Guideline 4

"To promote a non-motorized setting, the CDNST should not be permanently relocated onto routes open to motor vehicle use."

Comment 89: Commenter states that the trail route must be located within the selected CDNST rights-of-way, which is partially addressed in FSH 1909.12 part 24.43. Commenter also cites additional guidance in FSM 2353.44(b) "Locate a CDNST segment on a road only where it is primitive and offers recreational opportunities comparable to those provided by a trail with a Designed Use of Pack and Saddle Stock, provided that the CDNST may have to be located on or across designated routes because of the inability to locate the trail elsewhere." **Associated Letter: 73**

Response: Commenter correctly identifies applicable policy guidance. All plan direction related to the Continental Divide National Scenic Trail is applicable to the trail corridor as designated by Congress, and not outside it. This guideline was reworked in the final plan to improve clarity. Plan direction does not conflict with or supersede relevant policy direction. Both would be followed during plan implementation.

Guideline 5

"The minimum trail facilities necessary to safely accommodate the amount and types of use anticipated on any given segment should be provided."

Comment 90: Commenter suggests this guidance should describe that facilities must be compatible with the established recreation opportunity spectrum classes of primitive and semi-primitive non-motorized classes and be consistent with the established carrying capacity. **Associated Letter: 73**

Response: Trail facilities projects would consider the desired recreation opportunity spectrum settings and other relevant information, such as carrying capacity, during planning and design to move toward desired conditions.

Guideline 6

"To protect the CDNST's scenic values, special-use authorizations for new communication sites, utility corridors, and renewable energy sites should not be allowed within foreground (up to 0.5 mile) and should not be visually dominant in the middle-ground viewshed (up to 4 miles)."

Comment 91: Commenter suggests that this guideline should also state that special use authorizations must not result in a substantial interference to the nature and purposes of the trail. **Associated Letter: 73**

Response: This guideline is in addition to the direction provided by law, regulation, policy, and other plan direction that protects the nature and purposes of the trail.

Guideline 7

"Linear utilities and rights-of-way should be avoided. Where unavoidable, these should be limited to a single crossing of the trail per special-use authorization to maintain the integrity of the trail corridor and values for which the CDNST was designated."

Comment 92: Commenter states that linear utilities and rights-of-way should be addressed through forest planning processes with unavoidable exceptions accepted as inconsistencies with the recreation opportunity spectrum. **Associated Letter: 73**

Response: This guideline provides the necessary direction for site- and project-specific planning and permit authorization. We cannot foresee all future utility and right-of-way needs. This guideline has been reworked to address situations where a proponent cannot reasonably be made to comply with the single crossing per special use permit stipulation. Plan direction relevant to utilities special use permits is also addressed in the Facilities section of the plan and the Utilities Management Area. Where the Utilities Management Area intersects the Continental Divide National Scenic Trail corridor, the most restrictive plan direction would apply.

Guideline 8

"To promote a natural-appearing, non-motorized setting, constructing temporary or permanent roads or motorized trails across or adjacent to the trail should be avoided unless needed for resource protection, private lands access, or to protect public health and safety."

Comment 93: Commenter states this guideline should be addressed through establishing appropriate recreation opportunity spectrum settings through forest planning. **Associated Letter: 73**

Response: The plan includes desired recreation opportunity spectrum settings in the Sustainable Recreation section of the plan, with a corresponding map included in the plan's appendix. This guideline provides a constraint on project-level activities to promote maintenance or movement toward desired conditions for most of the Trail to be within primitive and semi-primitive non-motorized recreation opportunity spectrum settings.

Guideline 9

"To promote a natural-appearing setting and avoid visual, aural and resource impacts, using the CDNST for timber pile landings or as a temporary road for any purpose should not be allowed."

Guideline 10

"Hauling or skidding along the CDNST itself should be allowed only where the CDNST is currently located on an open road or no other reasonable options are available."

Comment 94: Commenter suggests guidelines 9 and 10 should be addressed by establishing appropriate recreation opportunity spectrum classes for the trail corridor, which is not suitable for timber production. **Associated Letter: 73**

Response: The plan includes desired recreation opportunity spectrum settings in the Sustainable Recreation section of the plan, with a corresponding map included in the plan's appendix. The desired condition for the trail is that most of it is within primitive and semi-primitive non-motorized classifications. Timber management is a tool. There may be circumstances where it is appropriate to harvest timber within the trail corridor or its viewshed. Where this is determined to be the case, the cutting prescription will use the desired recreation opportunity spectrum classes and incorporate design criteria to move toward those desired outcomes over the long term.

CDNST Management Approach

Comment 95: Commenter points to the fifth statement in this management approach, expresses support and requests that the Continental Divide Trail Coalition, citizen scientists and recreation ecologists be involved in monitoring and evaluation efforts. There is an associated recommendation to use sections 9 and 10 from the 2009 Comprehensive Plan to guide the process of determining carrying capacity. **Associated Letter: 180**

Response: We have added specific mention of the Continental Divide Trail Coalition, citizen scientist and recreation ecologists to the management approach. The 2009 Comprehensive Plan will guide the process.

National Recreation Trails

Suggested Objectives

Comment 96: There is a concern that there are no objectives included for the Sawmill Wagon Road and Woodhaul Wagon Road National Recreation Trails. Commenter states that there should be because portions of these trails are in poor condition and if they are worthy of the designation, there should be objectives for maintenance and restoration. **Associated Letter: 20**

Response: Trail maintenance for these trails would be included in the Sustainable Recreation objectives.

Timber, Forest, and Botanical Products

Biomass

Comment 1: There is a concern that there is no reference to biomass as a forest resource or any reference to local businesses that have been established for two decades that serve to reduce the costs of fuel load reduction in both the wildland-urban interface and the forest while improving ecosystem and watershed health. Commenter states that these businesses have developed products for utilizing slash and other non-merchantable woody material that address erosion, soil carbon and water retention while creating jobs and drawing down atmospheric carbon. There is a concern that the only reference to forest products in the draft plan is related to sawlogs and firewood, neither of which address the climate crisis, or mitigation of catastrophic fire threats, or temperature and drought pressures on forest ecosystems. These issues are completely missing from the draft document, which reflects the disinterest and lack of support that Gila

National Forest managers have shown to biomass interests over the past 15 years. Commenter states that "a long-term forest plan that does not even recognize potential solutions that are replete with triple-bottom-line benefit objectives (social, environmental, and economic) is seriously deficient. Associated with this deficiency is a near complete failure on the part of the GNF to collaborate, or communicate, with area businesses that seek to achieve these objectives. Comments made by us during the public involvement process about the need for real collaboration were not included in post public meeting summaries." **Associated Letter: 202**

Response: Biomass is wood and wood waste. While we recognize the word "biomass" is not used extensively in the draft documents, the potential biomass market is not completely missing from the plan or the environmental analysis that supports it. We do acknowledge that there is room in both documents to better highlight existing and emerging opportunities biomass industries represent. In the background information of the final plan's Timber, Forest, and Botanical Production section it states: "Timber products include but are not limited to firewood, sawtimber, pulpwood, non-sawlog materials removed in log form and biomass for electricity." Additional language has been added to recognize other products that can be generated from biomass such as wood mulch, or wood-based mulch products and biochar. The management approach "Integrating Restoration and Social, Economic, and Cultural Diversity and Stability," also in the Timber, Forest, and Botanical Products section of the final plan, states [italics indicate emphasis added]:

> "The forest continues to *improve existing relationships, and build new ones* with other Federal, State, and local agencies, tribes, private organizations and individuals to accomplish restoration work and promote the use of forest products that result from restoration activities. The forest maintains and shares a 5-year treatment plan and continues to (1) *design projects to accommodate both small- and large-scale operators; (2) promote and develop markets for low-value timber and other wood products; (3) use stewardship contraction authority when appropriate to achieve integrated natural resource management goals, including ecological restoration and provisioning of wood products.*"

Over the last two decades, forest managers have worked with local businesses representing the biomass industry and its innovations. We acknowledge that some of the agency's business requirements and processes and environmental regulations that require us to know exactly what is in each product we might purchase for application on the ground, have not always made those relationships easy, simple, or mutually rewarding. This management approach was intended to value good working relationships with the wood product (biomass) industry so that together, we can provide a social, environmental, and economic benefit. The plan's draft and final Vision section further emphasizes how important this is with the following two statements revised for the final plan:

> "We envision a future in which fuelwood harvest is sustained as a culturally and economically important use of the forest by opening new areas specifically for fuelwood collection, providing gathering opportunities as restoration activities generate fuelwood products, and leveraging opportunities to contribute to industry innovations by using commercial fuelwood harvest as a climate-informed management tool."

> "We envision a future in which local operators thrive, industry innovation is enhanced, new markets emerge, and sustainable timber harvest contributes to rural prosperity and ecological restoration. Leadership advances this vision through partnerships and strategic placement of climate-informed vegetation treatments that include timber sales."

The industry innovations and markets referenced here could be related to products other than firewood and timber. On the climate change, drought, and wildfire front, we agree there are social, economic and ecological benefits from treatments that move us closer to desired conditions. We also agree that not all products have the same carbon benefit, but all contribute to mitigating climate change. Additional discussion of wood products and the role of industry and its innovation in mitigating climate change has been added Climate and Carbon section of the final EIS.

The project record demonstrates that we did receive comments from the commenter during the assessment phase of revision (2017), which resulted in revisions to the assessment report. Planning staff sent an email confirming that the comment was received and how it was used to improve the report. Technical meetings were open to the public, and announced by press releases, emails or written correspondence to the entire contact list depending on individual preferences. Meeting summaries only included input and feedback from meeting attendees and were not intended to be a summary of comments received outside of those meetings.

Comment 2: One commenter asks: "Why is this forest so stingy with Christmas tree tags? Why are the elderly required to go to the woods and either cut their own tree or accompany someone else who is able to cut it for them?" Another commenter asks: "Why is there a rule that Christmas trees must be harvested a minimum of 200 feet away from the road? To improve the landscape or view?" This commenter goes on to state "If trees are growing too close to the road, one does not have a view of the landscape and can only see the trees. Conversely, when trees grow close to the road, drivers cannot see the deer, elk, javelinas, fox, etc., because the animals jump out and surprise them. This is deadly for the wildlife." **Associated Letters: 17 and 687**

Response: The number of Christmas tree tags and permit requirements are outside the scope of the forest plan. The forest sells permits to harvest Christmas trees with a limit of one per household. If someone wants more than one in their household, they can buy a different kind of permit that would enable them to do that. Any person can designate a cutter; there is no requirement that the permit purchaser must do the cutting or be present when the tree is cut. There is a restriction on harvesting Christmas trees 200 feet from a paved road primarily for safety reasons. Vehicles generally travel paved roads at higher speeds and roadside accidents are more likely to be lethal.

Firewood Program

Comment 3: A commenter is a concerned about a prohibition on the cutting of dead and down firewood because it could help with fuel reduction. Another commenter asks why firewood cutting is limited to dead and down and suggests green firewood harvesting could be a management tool. Another prefers that Gambel oak and other hardwoods not be cut because they provide canopy cover and moist sites for animals, plants, and insects. This commenter also expresses concerns about the threat firewood gathering poses to habitat features such as snags and old-growth trees and suggests the plan should include guidelines to protect them. Commenters are also concerned about firewood gatherers spreading non-native plants and litter. **Associated Letter: 17, 233, and 647**

Response: The plan does not prohibit cutting of dead and down trees for firewood and there are areas designated for green firewood harvest that are identified in the annual firewood guide. The plan recognizes the value of forest's firewood program and continues to support it. The Vision states "Gila National Forest mangers envision a future in which they advance firewood harvest as a culturally and economically important use of the forest by opening new areas specifically for firewood collection, providing gathering opportunities as restoration activities generate firewood products, and leveraging opportunities to contribute to industry innovations by using commercial firewood harvest as a restoration tool." More description of how the forest is likely to further the firewood program is included in the management approaches Integrating Restoration and Social, Economic, and Cultural Diversity and Stability (draft; final "An Integrated Approach to Ecological and Socioeconomic Sustainability") and Firewood Program (draft and final) in the Timber, Forest, and Botanical Products section of the plan.

Gambel oak and other hardwoods are generally not harvested during prescribed cutting activities. Where Gambel oak is a component, the objectives of silvicultural prescriptions often include promoting recruitment of Gambel oak. The plan does not prohibit prescriptions from cutting Gambel oak because there may be situations where some cutting to enhance vigor and stimulate mast production, improve genetic quality, or reduce the threat of fungal disease and insect infestation is appropriate. Gambel oak is desired by firewood

harvesters, but it can only be harvested based on the provisions in the most current Gila National Forest Firewood Guide. Per recent Firewood Guides, it must be dead. If it is standing dead, it must be under 9 inches in diameter at root crown. It can only be cut June through September so that it is easy to tell if it is dead or not.

Firewood gathering can pose a threat to snags and old trees. Diameter restrictions in the firewood guide are there to protect snags. Cutting large and old trees that are still alive is not authorized by firewood permits. These elements of the firewood permitting program support the revised plan's desired conditions for snags and old growth. It is possible that firewood gatherers could spread non-native plants, just as other uses and activities can. The plan encourages management to participate in collaborative outreach and education about non-native invasive species (Non-native Invasive Species DC2 and Integrated Pest Management and Relationships management approach). Littering is illegal by state statute.

Comment 4: Commenter acknowledges firewood harvest is important economically and culturally and can help the forest restoration program. However, the commenter states too often the forest is left littered and unsightly. There is a suggestion for more monitoring and management here to improve watershed conditions, habitat, and scenic quality with similar monitoring at recreational facilities and dispersed campsites. Commenter states harvest is a privilege (as is grazing) and should be secondary to forest health. **Associated Letter: 193**

Response: The Gila National Forest Firewood Guide that is distributed with every permit purchase includes requirements and specifications for the portions of wood that have been cut and not used. It must be scattered and no more than 24 inches off the ground. Enforcing permit requirements is outside the scope of the forest plan. Firewood may be cut anywhere on the forest except prohibited areas like wilderness or the sites specifically mentioned in the firewood guide. Given budget and staffing constraints, this suggestion is not practicable. Forest visitors are encouraged to report violations of permit requirements to the local district ranger. Having photographic evidence and a license plate number for the vehicle allows law enforcement to address issues.

Comment 5: There is a suggestion that the plan should prohibit posting firewood collecting signs in sandy washes and drainages so as not to encourage vehicle disturbance. The plan should require signs to be posted at least 500 feet from washes and drainages. **Associated Letter: 233**

Response: Signs are posted along the designated road system serving as access routes into designated firewood cutting areas, which may coincide with washes and drainages. Firewood permit holders must obey travel management rules and stay on the designated system of roads, motorized trails and areas open to cross-country vehicle use. The firewood guide that outlines the terms of the permit prohibits cutting within 100 feet of the centerline of any live, flowing stream.

Comment 6: Firewood gathering poses a threat to habitat features such as snags and old-growth trees. Vehicles also spread non-native plants and litter. Law enforcement patrols should be doubled in these areas. **Associated Letter: 233**

Response: Firewood gathering can pose a threat to habitat features particularly along open roads and in designated areas where cross-country travel is permitted for the purposes of firewood cutting. The firewood guide that outlines the provisions of the permit contains restrictions to protect these habitat features. Law enforcement patrols are beyond the scope of the forest plan.

Comment 7: Commenters are concerned that the plan expands present day cultural local firewood gathering to the use of commercial firewood harvest as a restoration tool. Commenters would like an explanation of why the plan should cater to unknown commercial interests, the magnitude of those interests and activities

and how it would accomplish restoration. Commenters suggest the illegal taking of trees should be a consideration. **Associated Comments: 567 and 663**

Response: Final plan content discusses opportunities to use commercial firewood harvest in the Vision and in a management approach. The Vision states "Gila National Forest managers envision a future in which they advance fuelwood harvest as a culturally and economically important use of the forest by opening new areas specifically for fuelwood collection, providing gathering opportunities as restoration activities generate fuelwood products, and leveraging opportunities to contribute to industry innovations by using commercial fuelwood harvest as a restoration tool." The Firewood Program management approach in the Timber, Forest, and Botanical Products section of the plan states: "The forest looks for opportunities to contribute to the sustainability of ecological, social, economic, and cultural systems by using firewood harvest as a restoration tool to restore grasslands and historically open canopy woodlands and forest/timberland vegetation types." Interest in commercial fuelwood harvesting is an emerging trend on the Gila National Forest and we don't know how it might change in the future. All future activities would be subject to project-level National Environmental Policy Act processes, including public engagement. Cutting prescriptions consistent with the plan's desired conditions for vegetation communities would provide for harvests that accomplish restoration objectives. Illegal tree cutting is an implementation and law enforcement issue, not a planning issue.

Comment 8: Commenter expresses support for placing the same travel management restrictions on hunters as it imposes on firewood gatherers. Commenter notes that since gathering dead firewood is effectively confined to roadway corridors, gatherers are significant contributors to clearing and maintaining protective fire lines that the agency would otherwise have to pay for. Commenter requests this be acknowledged. Commenter also notes that when the agency does pay for clean-ups along the road, there is very little wood left for private citizens to collect. **Associated Letter: 690**

Response: We agree that firewood collection along roadsides provides a mutual benefit and have added that acknowledgement to the Firewood Program management approach in the Timber, Forest, and Botanical Products section of the plan. The plan contains a guideline that directs management to provide products to people whenever there is an opportunity (Timber, Forest, and Botanical Products G2). The volume of wood available for private citizens to collect after roadside thinning depends on the site and contract specifications.

Comment 9: Commenter states appreciation for the recent reduction in cost for a cord of wood because some of the local counties are among the poorest counties in the United States. **Associated Letter: 690**

Response: We know that many residents rely on firewood to heat their homes and recognize that a reduced cost permit is has been helpful to these households.

Comment 10: Youth commenters from a local school are concerned about the forest's firewood program:

> "We should clear out the dead wood on the ground so when there's a fire it won't make the fires bad. We should make road so they can get the dead wood out."
>
> "I think wood cutters should be able to make their own roads to get to dead trees. Just in case of a fire it may not spread as far and may not get so intense and may be [not so hard] to put out and it can make thinning projects cheaper and the people who use the wood to heat their homes can get more fire wood so that don't have to worry about being cold and hopefully the people who can't afford fire wood we can make it easier for them to get because I think no one should be cold and no one should worry about being cold and I think there should be more thinning projects for the people who cannot afford fire wood."
>
> "My family depends on the forest for firewood therefore we don't freeze to death. If the forest shuts down wood cutting (logging) then many of people will be forced to install a propane heating system. That will cost a lot of people tons of money."

> "Another point that stuck out to me was the type of wood able to be cut down. In my eyes I think being able to cut down only one type of tree is good for us, in order to keep other trees alive for recreational purposes. The one tree being cut down may be used for firewood, paper, etc. I really hope with all respect that you take my word into consideration." And "…I think to improve the Gila National Forest we need to go in and clean-up the dead timber and this is why. We live in New Mexico and seeing how we are always in danger of fire's we need to go in and take out all the dead tree's because they are just going to make a fire harder to put out."

Associated Letters: 218, 220, 224, and 225

Response: The plan recognizes the value of forest's firewood program to local families and individuals and continues to support it. The firewood program is part of the plan's Vision section and is featured in management approaches in the Timber, Forest, and Botanical Products section of the plan. This section of the plan also contains a desired condition (DC2) and a guideline (G2) that would have management make any firewood that was cut as part of thinning projects available for people to collect. Firewood gathering can help reduce fire danger, but the forest needs some dead and dying trees because they are important habitat features for some animals and they eventually provide organic matter and nutrients to the soil to feed creatures that live in the soil and other plants. The kinds of trees available for firewood depends on a lot of different things but there are enough trees that people can harvest firewood and there will still be trees for people doing other things in the woods to enjoy. Roads are important for harvesting firewood, but decisions about roads in specific areas is not something addressed by the plan. Those decisions are made on a site-specific basis as part of local projects.

Timber Management

Comment 11: There is support for the plan's acknowledgement that longer fire-free periods may be needed for tree regeneration during climate change and a concern that the 30-year rotation intervals assumed for the modeling analysis isn't realistic. **Associated Letter: 39**

Response: Thirty-year harvest rotation intervals are regionally standard assumptions to estimate the sustained yield limit and harvest volumes as required by the 2012 Planning Rule (CFR 219.11). This assumption is disclosed and discussed in the Timber, Forest, and Botanical Products analysis methodology and associated appendix.

Comment 12: There is concern about the decline in timber harvest over the past 30 years due to regulations intended to protect endangered species, but that the plan's goal to reduce tree density requires the timber industry. The commenter was pleased at the mention of local mills. **Associated Letter: 39**

Response: The decline in timber harvest and the impacts to local industry were discussed in the assessment report and in the Timber, Forest, and Botanical Products Affected Environment section of the EIS. Plan objectives for vegetation treatments would require the local timber and wood product industry to accomplish. This is reflected in the plan's desired conditions for Timber, Forest, and Botanical Products (DC2), supported by the plan objectives for vegetation treatments, and discussed in a draft and final plan management approach. The final management approach is titled An Integrated Approach to Ecological and Socioeconomic Sustainability.

Comment 13: There is a question as to why projected timber harvest decreased in the second decade compared to the first decade and if it is due to losses projected from prescribed fire suggestions to do salvage sales or open more roadless areas to ensure a sustainable supply of timber. **Associated Letter: 39**

Response: These are estimated values for vegetation management practices. The decrease displayed is purely the result of probability-based model inputs (FEIS Appendix E State and Transition Modeling Process Inputs and Assumptions Transition Pathways Prescribed Cutting Methods and appendix F Timber Production

Suitability, Estimated Vegetation Practices and Projected Harvest Levels Methodology) and may not actually be demonstrated. The models are not capable of reflecting interactions between fire and mechanical treatment types.

Comment 14: There are differing perspectives on logging or commercial timber harvest. Those that support it state that it can provide greater flexibility in using the full array of active vegetation management activities are more effective at meeting desired vegetative conditions. Some commenters are okay with it if all activities are well-planned selective cutting with emphasis on maintaining good watershed practices. Others specifically want the plan to contain provisions that limit the removal of large-diameter and old trees. Some would like to see the plan limit logging to salvage only or eliminated entirely. One commenter states that it is important to maintain a supply of logs to local mills but suggests that consideration of other resources should result in no increase in volume removed. Commenter supports maintaining current timber volumes and minimizing clear cuts and emphasizing firewood sales and sales of other forest products. **Associated Letters: 68, 119, 165, 207, 273, 479, 561, 718.23, and 720.50, 726.12533, and 728.258**

Response: Prohibiting timber harvest or restricting logging to post-fire salvage would not be aligned with the agency's multiple-use sustained-yield mandate, nor would it meet the ecological, cultural, or socioeconomic purpose and need to change the plan. Regarding the harvest of large-diameter and old trees, please refer to response to comment 12 in the Upland Vegetation, Fire Ecology and Fuels section of this appendix.

The final plan and alternatives include a range of projected timber volumes that would be produced by restoration treatments that move vegetation communities toward desired conditions over the long term. Alternative 1 would maintain current timber volumes. Clear cuts are a type of even-aged management. All alternatives minimize even-aged management (Timber, Forest, and Botanical Products S6) to comply with the National Forest Management Act and because based on the ecology of most southwestern timber types, most stands have the desired condition of uneven-age. The draft and final plan also emphasize the forest's firewood program (Traditional Uses section of the Vision and Timber, Forest, and Botanical Products Firewood Program management approach) and the sales of other forest products (Timber, Forest, and Botanical Products DC2, G2 and final management approach An Integrated Approach to Ecological and Socioeconomic Sustainability).

The final plan contains strategic direction that will inform project-level planning and cutting prescriptions. This includes all requirements established by the National Forest Management Act and 2012 Planning Rule (36 CFR 219.11). Plan direction is also aligned with New Mexico State Forestry's best practices. Timber, Forest, and Botanical Products DC 1 directs all prescribed cutting to promote movement toward, achievement, and maintenance of ecosystem and watershed desired conditions. There is also a requirement for site-specific best management practices to mitigate impacts to soils, water quality, riparian and aquatic ecosystems and other indicators of watershed condition (Timber, Forest, and Botanical Products S4 and All Upland Ecological Response Units S2-4).

Comment 15: Commenter states that as part of timber harvest, tops and slash should either be removed or chipped or burned to reduce fire intensity. **Associated Letter: 561**

Response: The plan provides strategic direction. The methods to address activity-generated slash are tactics and best determined at the project level when site- and activity-specific factors are known.

Comment 16: There is support for plan content that supports a reforestation program. **Associated Letter: 39**

Response: This content has been retained in the final plan.

Comment 17: Commenters note the importance of standard 5 in the Timber, Forest, and Botanical Products section of the plan that reads: "Project planning and implementation must provide for forest health through

detection, monitoring and control." There is a suggestion that it would be beneficial to include more details on detection, monitoring, and control. **Associated Letter: 42**

Response: This standard includes a footnote that provides a detailed explanation. Field visits are a routine part of project planning. Essentially, forest staff that are trained to identify forest health agents like bark beetles and other insects, as well as pathogens and diseases make observations about these forest health agents during field visits. If a concern is identified about site conditions and the level of activity observed, then appropriate provisions to control the problem are incorporated into the project. This might include approaches to the cutting prescription that are tailored to specific species of insects, pathogens, or disease agents.

Comment 18: Commenter objects to the highly toxic marking paint used by the agency. **Associated Letter: 497**

Response: While the commenter's concern is outside the scope of plan revision, marking paint is specially formulated to minimize health risks while providing adequate performance when stored and used in adverse weather conditions and deterring and detecting timber theft. However, traditional marking is very time consuming and there is an emerging trend toward approaches that use less or no paint.

Comment 19: Commenter observes that the acres of suitable timber and allowable sale quantity have increased a bit from the old plan, and that there are no objectives in the timber section. Commenter states they are having a tough time finding much to comment on. Commenter states that like many other sections, there is no way to tell where management is planning to go in the future. Commenter is concerned that the plan ignores the fact that the level of activity is just as important to the public as the why the activity is performed. Commenter asks: "Will the timber program likely increase, decrease or stay the same?" **Associated Letter: 474**

Response: The plan contains objectives for vegetation communities that will be the source of timber and other forest products. The future of the forest's timber program varies by alternative as discussed in the draft and final EIS Timber, Forest, and Botanical Products Environmental Consequences. Also, chapter 4 of the plan is dedicated to the display of the suitable timber base and estimated vegetation management practices.

Comment 20: Commenter suggests the plan should include an in-depth discussion of what represents a sustainable level of harvest relative to different use categories for the units as a whole and with respect to other New Mexico national forests, degrees of climate change, and anticipated effects on water availability and increased fire activity. Commenter is concerned because of project proposals on the Lincoln National Forest and states they do not find assurances in the Gila National Forest's draft plan that overcutting beyond the forest's regeneration capacity will not occur and that old-growth forest will be maintained. Commenter states there is no statistical presentation of what is considered the allowable cut that could sustainably be made while restoring forested conditions and suggests there needs to be more than vague reassurances. **Associated Comments: 567 and 663**

Response: The National Forest Management Act requires the agency to limit the amount of timber that can be removed. This is done through the timber suitability process by calculating the forest's sustained yield limit, which is the average amount of timber that can sustainably be removed annually in perpetuity (FSH 1909.12 chapter 60 section 64.31). The Gila National Forest's sustained yield limit is displayed in table 1 of the FEIS. This volume does not change with alternative because it is based on lands identified as biologically capable of timber production where there isn't law prohibiting it (for example, lands designated as wilderness). The process by which these lands are identified and more detail on timber calculations can be found in the methodology section of the FEIS under the Timber, Forest, and Botanical Products heading and final appendix F (draft appendix C): Timber Production Suitability, Estimated Vegetation Practices and Projected Harvest Levels Methodology. The suitability process and calculation tools used in the agency's Southwestern Region are not currently set up to account for climate change scenarios, but the projected harvest levels are

well below the sustained yield limit under all alternatives. Even alternative 4, which has the highest projected volume of timber harvest, only 22 percent of the sustained yield limit would be cut. The other alternatives range from between 1 and 7 percent of the sustained yield limit.

All harvesting activities will be designed to promote movement toward desired conditions for vegetation communities, habitats, and watersheds (Timber, Forest, and Botanical Products G3). Desired conditions for vegetation communities include science-based old-growth components appropriate to each vegetation type (Spruce-Fir Forest LS-DCs 3 and 4; Mixed Conifer with Aspen LS-DCs 3 and 4; Mixed Conifer Frequent Fire LS DCs 3 and 4 and MS-DCs 4 and 5; Ponderosa Pine Forest LS-DCs 4 and 5 and MS-DCs 4 and 5; Ponderosa Pine-Evergreen Oak LS-DCs 3-5 and MS-DCs 4 and 5). For more detail on how the plan provides for old growth on the landscape over time, please refer to response to comment 12 in this section of this appendix. The plan also provides standards and guidelines that limit timber harvest, consistent with the National Forest Management Act, the 2012 Planning Rule, and agency directives. These include assurances for regeneration (Timber, Forest, and Botanical Products S7) and the allowable cut (Timber, Forest, and Botanical Products S9).

Comment 21: Commenter suggests the plan needs to discuss how each type of use will contribute to an increase in tree density and how uses will be balanced so that species composition does not become skewed toward a particular type of commercial species. Commenter is particularly concerned about the use of herbicides being used to wipe out specific species in favor of monoculture forestry. **Associated Comments: 567 and 663**

Response: Not all uses, or activities increase tree density nor is that necessarily a desired outcome in all locations. Cutting prescriptions will be designed to support movement toward desired conditions, including species composition, which is referred to as ecological status in the plan (All Upland Ecological Response Units LS-DC3a). Herbicides are included in the plan's Management Approach to Restoration as a tool management is likely to use to reduce the density of alligator juniper and evergreen oak species where they are overly abundant. An overabundance of alligator juniper and evergreen oak species reduce the abundance of other species native to the plant community and are not supportive of desired fire behavior or regimes. There is nothing in the plan that suggests herbicide would be used to wipe out anything other than noxious weed populations. For more on the herbicide topic, commenters are referred to response to comment 1 under the Herbicide heading in this appendix.

Comment 22: The impact of current timber removal methods needs attention with respect to topsoil loss. **Associated Letters: 567 and 663**

Response: The plan prohibits timber harvest where the technology to prevent irreversible damage to soil, slope or other watershed condition is not available (Timber, Forest, and Botanical Products S3) and requires the use of best management practices to mitigate potential soil loss (Timber, Forest, and Botanical Products S4).

Comment 23: Commenter is concerned about the impact that travel management decisions have had on several activities and suggest the forest plan could help address those issues. Commenter identifies obtaining ponderosa pine for small-time sawmills seems to have gotten more and more difficult over time. Commenter notes that in the past, the strategy seems to have been to locate dead or dying trees in relatively close to the operator but now they must go farther away, which increases operating costs. Commenter suggests small operators should be allowed to go up to 500 feet off the road if they can do so without causing ruts and obscure the entry point with branches after harvest. Commenter suggests vehicles with rubber tires are probably best. Also, commenter recommends that allowing them to take a few green trees might not hurt because dead and dying trees usually have some rot anyway and eventually provide habitat for insects and wildlife. **Associated Letter: 690**

Response: Depending on the size and scope of the harvest and the contract, permit, or agreement authorizing harvest, operators may be authorized to travel outside of the limitations established by travel management to complete authorized activities. Depending on the situation, green trees, dead and dying trees, or both may be involved. These details would be addressed at the project level. The plan provides a strategic framework to guide project-level activities and move toward desired conditions. The wood product industry is critical to what progress may be achieved (see also response to comment 24 below).

Timber Suitability

Comment 24: There is acknowledgement that timber production is important and a suggestion that it be integrated with restoration needs and forest health. Commenter suggests that if timber harvest were limited to restoration, all healthy areas, whether old growth or younger seral states would be protected. The planning process has told us that timber suitability needs further revision so it would be a good time to rethink timber issues, as contributing to restoration, rather than "harvesting." **Associated Letter: 193**

Response: The philosophy that timber is a byproduct of restoration has been in place in the Southwestern Region for many years. The term "harvest" means that an action creates a product that is made use of. It does not mean that the primary purpose is production. Timber can, has, and will continue to be a product created by restoration actions that also contributes a socioeconomic benefit to local and regional communities and markets.

Timber production or timber harvest are integrated with restoration needs and forest health in all alternatives. The range of alternatives explores varying levels of emphasis on mechanical treatment and a timber suitability analysis was conducted for each alternative. Alternative 5 limits mechanical treatments to the wildland-urban interface unless there is science-based evidence that mechanical treatments in specific locations will allow fire to be restored to its natural role within the range of effects we can accept. This also restricts the suitable timber base to under 30,000 acres, which is substantially less than all the other alternatives.

Nevertheless, the direction for Timber, Forest, and Botanical Products does not change with alternative. Beginning with desired condition 1 that states, in part: "Silvicultural treatments (for example prescribed fire, manual, mechanical, and chemical treatments) and utilization of products promotes movement toward, achievement, and maintenance of ecosystem and watershed desired conditions…" The desired condition goes on to describe this in further detail. It applies to lands identified as suited and not suited for timber production. Desired conditions drive the plan.

One of several supporting standards states: "When selecting the timber harvesting system, cost efficiency, infrastructure and harvest requirements must be considered, but the selection must be based on how effectively it will achieve desired conditions and not its ability to provide the greatest dollar return." This also applies to lands both suited and not suited for timber production.

Comment 25: There is a suggestion that the plan offer private landowners within and adjacent to the forest's administrative boundary sharply reduced property taxes in exchange for them working with a New Mexico state forester to develop a management plan for timber production on their private lands, complete with best management practices. Commenter states this program would be like one in Wisconsin that helped them preserve old pines with periodic harvest of other species in the stand. **Associated Letter: 200**

Response: That is a great idea that is beyond the scope of the forest plan. We have no jurisdiction or ability to cut property taxes for these private landowners or otherwise offer financial incentives. New Mexico State Forestry does have good programs to assist private landowners, including the Forest Stewardship and Legacy programs. Information on those programs can be found on their website.

Comment 26: Commenter points to table 4 on page 246 of the draft plan, which displays the timber production suitability classifications for the Gila National Forest and questions that there were no lands identified as not suited due to irreversible damage. Commenter also states that the way row C is labeled is confusing. **Associated Letter: 233**

Response: There were no lands identified as "not suited for timber production because the technology to harvest timber without causing irreversible damage is not available" (draft plan page 246 table 4 row B2) was made because irreversible damage can be avoided through the selection of the appropriate harvesting system, equipment, and best management practices (draft appendix C and final appendix F to the EIS). Aerial equipment, cable systems and new ground-based equipment are available and can be used to cut trees in areas where conventional ground-based equipment can't safely operate. Best management practices, such as slope or soil restrictions for inclusions in larger cutting units can be included in the project and contract design to provide further insurance that no irreversible damage would be incurred. Plan standards (All Upland Ecological Response Units S1-4) provide the foundation for such best management practices. We admit that there is room for confusion in the table. The tables are constructed to conform with Regional Office expectations for fulfilling National Forest Management Act and agency directive requirements. An understanding of the full process should provide greater clarity, and the narrative preceding the table directs the reader to that information. In short, C. identifies lands that may be suitable for timber production as the difference between the total administrative area of the forest, less the private property and lands of other ownerships within the administrative boundary and those lands identified as not suited due to legal or technical reasons.

Comment 27: Commenter references Table 4 and expresses concern that of the 683,090 acres identified as "may be suitable for timber production" only 352,922 acres were deemed suitable. Commenter states this seems "dogmatic and 'wishy-washy'" Commenter suggests that if the area grows 90 cubic feet per year and is on less than 40 percent slope it should be suitable for timber production. **Associated Letter: 247**

Response: We acknowledge the commenter's opinion. Table 4 of the draft plan displays the timber production suitability classifications for alternative 2- proposed action. The answer to the commenter's question is in the draft EIS Timber, Forest, and Botanical Products Effects Common to All Alternatives and Alternative 2-Proposed Action effects discussions. They were determined following the process outlined by the National Forest Management Act, 2012 Planning Rule, and final agency directives at FSH 1909.12 chapter 60, in accordance with Southwestern Regional Office procedures and guidance using Gila National Forest specific data. The following acres were ultimately removed from suitability:

1) 22,925 acres of highly erodible Datil soils on slopes greater than 15 percent
2) 49,993 acres that either occur on erosional landforms or have little to no soil development on slopes greater than 25 percent.

Soils with little to no development have low natural stability and are less resilient. Furthermore, some of these soils are not capable of producing a significant herbaceous response, due to natural soil properties, which leaves their stability entirely reliant on conifer canopy cover, basal area, coarse woody debris, and needle litter.

3) 54,259 acres of slopes over 40 percent
4) 2,561 acres were removed from suitability because they represent pockets of suitable timber less than 10 acres in size within larger areas that were determined not to be suited. These acres were removed because it is not economically realistic and may not be operationally feasible to manage them for timber production.

5) Inventoried roadless areas that were not accounted for under the categories stated above, or because they are not timbered vegetation types, were removed from the timber base because periodic, recurring timber harvest is not compatible with maintaining roadless characteristics. These acres total 442,950.

6) Recommended wilderness for alternative 2-proposed action were removed because timber harvest is not compatible with maintaining wilderness characteristics. These acres total 110,402.

Comment 28: Commenter points to page 247 in the draft plan which contains a map spatially displaying the location of the suitable timber base and asks if some of the area identified as part of the suitable timber base under alternative 2 overlaps with recommended wilderness. Commenter states that expanding wilderness is more important than harvesting timber. **Associated Letter: 230**

Response: There is no overlap between recommended wilderness and the suitable timber base in alternative 2. We acknowledge that it is hard to tell with the resolution at which the maps were published and the small acreage of suitable timber base between the recommended wilderness polygons.

Comment 29: Commenter points to page 249 in Chapter 4: Suitability and Estimated Vegetation Management Practices and a reference to 2005–2017 volumes of posts, poles and stays; dead and down firewood; and green firewood harvested under permit and asks what the estimated yield for illegal wood harvesting is over a 10-year period. **Associated Letter: 233**

Response: There is no way to estimate the volume of wood products removed illegally. Even if we know the volume associated with people who have been caught illegally removing wood products, we know there are people who don't get caught. We have no way to account for that. It is also inappropriate for the plan to include projections or estimations associated with illegal activity. This is a strategic guidance document for agency actions. Illegal activity is a compliance and enforcement issue.

Comment 30: Commenter is concerned that the suitable timber base identified for alternative 2-proposed action is too large to be compliant with the 2012 Planning Rule. **Associated Letter: 51**

Response: While meeting the 2012 Planning Rule requirements for sustainability (36 CFR 219.8) and the diversity of plant and animal communities (36 CFR 219.9) the plan must provide for ecosystem service delivery and multiple uses, including timber, within agency authority and the capability of the plan area (36 CFR 219.10). The 2012 Planning Rule requires a timber suitability analysis and establishes the basic process for determining lands not suited and suited for timber production based on compliance with the National Forest Management Act (36 CFR 219.11). The planning team's approach to the suitability analysis complies with the 2012 Planning Rule and is described in detail in the Timber, Forest, and Botanical Products section of the environmental analysis and in appendix C to the environmental analysis.

Plan direction for Timber, Forest, and Botanical Products contains desired conditions, consistent with the 2012 Planning Rule's requirement for integrated resource management (36 CFR 219.10) that describe how silvicultural treatments, including timber harvest, will promote movement toward, achievement and maintenance of ecosystem and watershed desired conditions (DC1a-c) as well as provisioning a sustainable supply of wood products (2a-f).

Comment 31: One commenter states that timber production is incompatible with achieving National Trails System Act objectives and the Continental Divide National Scenic Trail nature and purposes desired conditions, citing the definition of timber production and the planning rule at 36 CFR 219.11(a)(i) and (iii). Commenter states that short- and long-term effects degrade Continental Divide National Scenic Trail values and are not consistent with the recreation opportunity spectrum classes and Scenic Integrity Objectives that should be applied to the trail. Another commenter would prefer the trail corridor is removed from timber

suitability to protect the groves of large trees along the trail above Little Cherry Creek. **Associated Letters: 73 and 214**

Response: The objectives of the National Trails System Act are to "provide for the ever-increasing outdoor recreation needs of an expanding population and appreciation of the open-air, outdoor areas of the Nation, trails should be established (i) primarily near the urban areas of the Nation, and (ii)) secondarily, within established scenic areas more remotely located." The nature and purposes of the Continental Divide trail described in the Comprehensive Plan are "to provide for high-quality scenic, primitive hiking and horseback riding opportunities and to conserve natural, historic and cultural resources along the CDNST corridor."

Desired recreation opportunity spectrum classes and scenic integrity objectives are an outcome. timber management is a tool that can be used, within the confines of the National Environmental Policy Act, to achieve or maintain the nature and purposes of the trail and the objectives of the National Trails System Act. Sometimes we need active timber management to achieve the integrated desired outcome and site-specific analyses during project planning will determine the appropriate timber harvest prescriptions to achieve desired conditions. Removing an area from the suitable timber base does not mean that timber harvest cannot be selected as a tool to move toward desired conditions. It can be authorized outside the suitable timber base where it is not prohibited due to law or because the equipment to harvest without doing irreversible damage to soil, slope, or other watershed conditions. However, it must be compatible with desired conditions.

Comment 32: Commenter asks about the economics of logging the suitable timber base and states it doesn't seem to be a consideration in determining the suitable timber base. **Associated Letter: 474**

Response: Commenter correctly observes that economics are no longer a consideration in timber suitability analyses. However, economics may still determine whether timber is actually harvested from these areas.

Comment 33: Commenter is concerned that the only suitability analysis that was done was for timber because planning regulations require plans to identify lands that are suitable and unsuitable for "for various multiple uses or activities based on the desired conditions applicable to those lands." Commenter is concerned that because other suitability analyses were not conducted that the plan ignores all other stressors on plants of conservation concern and plant community diversity. Commenter asserts that timber suitability analysis did not consider the incompatibility of logging with maintenance and restoration of plant community diversity, including rare plant communities. **Associated Letter: 712**

Response: The timber suitability analysis is the only suitability analysis required by the National Forest Management Act and the 2012 Planning Rule. All other suitability analyses are subject to the forest supervisor's discretion (36 CFR 219.11 and FSH 1909.12 chapter 20 section 22.15). Timber harvest is not incompatible with maintenance and restoration of plant community diversity or the management of rare plants. Cutting prescriptions will provide for plant community diversity (Timber, Forest, and Botanical Products DC1 and G3). Provisions for rare plant populations such as avoidance areas would be established at the project level where relevant and tailored to site conditions and the specific species needs (Timber, Forest, and Botanical Products S1; Wildlife, Fish, and Plants DCs1-6, S2, S4, G7). How the plan provides for specific plant species of conservation concern is summarized in appendix G in the FEIS.

Desired Condition 1a

"Silvicultural treatments (for example, prescribed fire, manual, mechanical, and chemical treatments) and utilization of products promotes movement toward, achievement, and maintenance of ecosystem and watershed desired conditions.

Treatments mimic the outcomes of natural ecological processes, integrating considerations for socioeconomic values, soil and water quality, wildlife habitat, recreation, and aesthetics."

Comment 34: There is support for this desired condition because dead and dying trees and snags are important roosting habitats for several bat species that occur within the Gila National Forest. **Associated Letter: 678**

Response: Thank you for your comment. These are important habitat features for many species, including bats.

Desired Condition 2b

"Sustainably scaled industry infrastructure and capacity are supported by predictable forest product yields that meet local and regional market demand."

Comment 35: Commenter asks: "Does that [DC 2b] mean that if industry grows to the point that they can use all of the timber that could be grown on suitable lands the Forest would ramp up the timber program to support that?" **Associated Letter: 474**

Response: The plan's desired conditions work together to provide healthy ecosystems and a sustained supply of timber from suitable lands. There are biophysical limitations to the amount of timber that can be produced from suitable timber lands within the desired conditions for each of the forested ERUs. This would limit the ability to ramp up beyond what can be sustained over time. This one is best interpreted in conjunction with DC 2c. In other words, the desired conditions are for an industry that can help us move toward, achieve, and sustain desired conditions. Harvest levels would not exceed the sustained-yield limit unless it was necessary to move toward desired conditions (Timber, Forest, and Botanical Products S9).

Desired Condition 2c

"Lands identified as suitable for timber production have a regularly scheduled timber harvest program that contributes jobs and income, while achieving and maintaining ecosystem and watershed desired conditions, and other management direction."

Comment 36: Commenter asks: "All suitable timber lands? Does that mean that the Forest is going to encourage the development of a much larger timber industry?" **Associated Letter: 474**

Response: At current capacity, the wood product industry is limited in its ability to help us move toward desired conditions for ecosystems, watersheds, and biodiversity. A larger industry capacity is something that would benefit forest management and economies. Please refer to response to comment 35 above.

Suggested Plan Components

Comment 37: Commenter recommends desired condition and standards include information on roads. Commenter acknowledges the roads section in the plan but is concerned it does not specifically address roads created by timber activities. Commenter suggests plan components address questions like: "will there be additional roads, how will the roads be managed after timber activities (will they remain open, managed for motorized use, closed, closed and returned to original contour etc.)." Commenter states this is important because roads associated with timber activity can have major environmental effects. **Associated Letter: 474**

Response: The plan does not propose or authorize any activities. New temporary or permanent roads would be permissible under the plan. Future projects including proposals for temporary or permanent roads would be subject to a project-level National Environmental Policy Act process, including public engagement and environmental analysis. Such projects would be required to comply with relevant laws, regulations, and policies, including those related to travel management. They would also have to comply with plan direction, including plan components in the Roads section of the plan, which address the fate of unneeded roads and decommissioning.

Tribal Importance, Use and Relations

Comment 1: Commenter states that tribes understand that a healthy functioning resilient ecosystem is a heathy and sacred place and asserts that more wilderness will lead to an environment more conducive to the preservation and protection of traditional resources by stabilizing soil, improving vegetative cover, and treating watersheds in their natural state. Further, commenter asserts that because mechanized uses, roads and structures are not allowed in wilderness, more wilderness offers better protection of cultural properties and sacred sites and more opportunities and settings for educating tribal youth which supports a desired condition of the plan. **Associated Letter: 233**

Response: We acknowledge the commenter's opinions about what tribes and tribal members understand and what might best support tribal youth. See response to comment 1 in the Cultural and Historic Resources section of this appendix.

Suggested Standards

Comment 2: Commenter suggests a standard prohibiting livestock grazing on sacred sites. Commenter goes on to link this comment with one they made on guideline 5 in the Cultural Resources section of the plan, implying plan direction related to user-created and system trails should also be applied to sacred sites, specifically identifying trail 906, which goes right through an archeological site. **Associated Letter: 233**

Response: Tribal concerns about sacred sites, livestock grazing, and trails are addressed through consultation. About the suggestion to expand the draft guideline to include sacred sites, please refer to response to comment 4 in the Cultural and Historic Resources section of this appendix.

Comment 3: Commenter points to page 419 of the DEIS and states: "Tribal comments and concerns of increased development, impacts of off road travel, mining and protection of agave have been heard." **Associated Comments: 233**

Response: Commenter accurately summarizes the statement made on page 419 of the DEIS.

Comment 4: Commenter points to the discussion in the draft EIS related to Tribal consultation and coordination and community meetings. Commenter states that Tribal consultation and coordination should continue as appropriate. **Associated Letter: 251**

Response: Tribal consultation and coordination will continue as appropriate.

Upland Vegetation, Fire Ecology and Fuels

General

Comment 1: Commenters are concerned about insect infestations and fire impacts and attribute current conditions to either the fire suppression era or the government catering to the timber industry. Those concerned would like the plan to provide solutions to these issues. One commenter references hazard mitigation for endangered species. **Associated Letters: 147 and 317**

Response: Science-based desired conditions for vegetation communities, natural disturbance regimes and plant and animal species diversity are some of the primary drivers of the plan. The range of alternatives explore different objectives, standards, and guidelines to achieve these desired conditions. All alternatives make progress toward desired conditions, but there are trade-offs associated with each approach. The FEIS contains a summary of the effects of the alternatives.

Comment 2: There is a concern that the trees in New Mexico forests are turning brown, especially ponderosa pine and that there are many rumors on the Internet as to why this is happening. Commenter suggests the forest plan should including funding to find out the real reasons why this is happening so that a reasonable plan to mitigate the damage can be developed. **Associated Letter: 728.320**

Response: Funding scientific studies is outside the scope of the forest plan. Conifers like ponderosa pine turn brown and die for a variety of reasons such as drought stress, temperature patterns, disease, or normal needle shedding like broad-leaf trees go through in the fall. Foresters and other professionals and scientists with the Forest Service, New Mexico State Forestry, land grant university extension services, and other agencies and organizations actively monitor and investigate these events.

Comment 3: The commenter has observed thinning and prescribed fire practices in the Burro Mountains and has a concern about the amount of activity slash, how long the disturbance remains evident, whether monitoring is being done to determine treatment effectiveness, and that soil productivity and vegetation potential may not have been appropriately considered in treatment design. **Associated Letter: 39**

Response: This project work was based on a National Environmental Policy Act decision supported by an environmental analysis that included consideration of soil and vegetation. No formal project-level treatment effectiveness monitoring has occurred. We encourage you to contact the Silver City Ranger District regarding this project.

Comment 4: Commenter sees an opportunity to use spatial analysis tools to further analyses and planning and was pleased to see the discussion in the Proposed and Possible Management Actions appendix about how an ongoing process will be science integration into forest-level restoration project planning and prioritization. They point to a methodology cited in the draft plan and encourage an in-depth analysis, such as the cited reference, that incorporates numerous resources and assets, evaluates tradeoffs, and ultimately prioritizes management actions around restoration goals related to forests, watersheds, and riparian areas. **Associated Letter: 201**

Response: We recognize that using these types of analyses to inform planning and prioritization is becoming more important. With the amount of restoration and adaptation work that is needed on the forest and across the broader landscape, these kinds of tools can help the forest be more competitive for limited resources and effective on the ground by demonstrating the comparative value of project proposals. We appreciate that our stakeholders see this as a wise investment. Although the content in the Proposed and Possible Management Actions appendix has been revised to point back to the plan's management approaches, this remains a feature within the plan.

Comment 5: Commenter points to a statement in the cumulative effects analysis that indicates reductions in open road density because of travel management implementation may lead to a small reduction in noxious weed introductions. Commenter says that it is hard to prove but the litter and tossed beer cans would be reduced. **Associated Letter: 233**

Response: We acknowledge the commenter's opinion. Given that roads, vehicle traffic, humans and their animals are all well-established vectors for noxious weed introduction, it is reasonably foreseeable that any reduction in open road density would have the stated effect. Littering is a violation of state law and beyond the scope of the plan and its analysis.

Ecological Response Unit Framework

Comment 6: There is a concern that the use of ecological response unit concepts and the associated desired conditions for vegetation within the plan may be in line with the historic (or natural) range of variability but are not in line with reality, compatible with the agency's multiple use-sustained yield mandate, or with other

2012 Planning Rule requirements. There is a suggestion that a predicted future range of variation under continued multiple use-sustained yield management should be used to develop alternative desired conditions.
Associated Letters: 24, 100, 164, and 631

Response: Ecological response units (ERUs) are a landscape mapping system for organizing planning, analysis, monitoring, and research of some ecological features. Like other landscape mapping, ERUs are constructs of spatial data and map categories. ERUs account for current ecological understanding of Southwestern ecosystems in their underlying classification concepts and map data, both of which represent best available science, and are updated periodically to incorporate new mapping and references on vegetation, disturbance, and environment.

ERUs **are not** the natural or historic range of variation, seral state proportions, Vegetative Structural Stage (VSS), vegetation states or management targets, even though they are useful in organizing this type of information to understand past, current, and future conditions. The ERU concept represents both site potential and disturbance regime (Wahlberg et al. in draft), similar to other landscape mapping (Barrett et al. 2010, Comer et al. 2003). For example, two sites with similar site potential but different disturbance regimes would be classified and mapped as different ERUs. Site potential, or potential natural vegetation, remains a valuable concept for understand basic land capability (Somodi et al. 2012). Historic potential natural vegetation concepts of climax vegetation are not reflected in desired conditions and have long been dismissed as management targets in favor of an understanding of the dynamics, diversity (for example, seral states), and potential services of a given vegetation type as noted in both the 2012 Planning Rule (CFR 219.19) and agency directives (FSH 1909.12).

The Southwestern Region's desired conditions for vegetation, which are the Gila National Forest's desired conditions for vegetation with minor deviations based on Gila National Forest-specific data, are organized by ERU. These desired conditions are based on what is known about the historic range of variation of vegetation from the body of relevant, peer-reviewed, published literature. This best available science has been informing vegetation management on the Gila National Forest and does not constitute a substantial change other than that it incorporates approved recovery plans for federally listed species by reference instead of hard wiring them into the plan. Admittedly, the science is packaged differently, and that change is substantial.

For these reasons, we disagree that movement toward these science-based desired conditions is not compatible with the agency's multiple-use sustained-yield mandate or preclude fulfilling the socioeconomic requirements of the 2012 Planning Rule. The plan includes strategic direction that specifically provides for multiple uses and the effects of this direction and direction for natural resources on the socioeconomic environment are analyzed in the EIS.

The Forest Service acknowledges that spatial predictions of the future range of variation would be informative to management, and the final plan allows for the integration of new scientific information and climate forecasts into the future. ERUs form a reasonable baseline from which to assess natural or historic variation (FSH 1909.12 Ch zero code), current departure and loss of ecological integrity (Keane et al. 2018), the future range of variation (Somodi et al. 2012), and to consider climate adaptation options (USDA FS 2023).

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Keane, R.E., R.A. Loehman, L.M. Holsinger, D.A. Falk, P. Higuera, S.M. Hood, and P.F. Hessburg. 2018. Use of landscape simulation modeling to quantify resilience for ecological applications. Ecosphere https://doi.org/10.1002/ecs2.2414.

Somodi, I., Z. Molnár, and J. Ewald. 2012. Towards a more transparent use of the potential natural vegetation concept-an answer to Chiarucci et al. Journal of Vegetation Science, 23(3), pp. 590–595.

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Wahlberg, M., W. Robbie, S. Strenger, J. Triepke, D. Vandendriesche, E. Muldavin, J. Malusa, P. Shahani, J. Moreland, R. Crawford, and C. Bogart (in draft). Ecological Response Units of the Southwestern United States. USDA Forest Service technical report. Southwestern Region, Regional Office, Albuquerque, NM. 207 pp.

Comment 7: Commenter is concerned that the Ecosystem Response Unit classification system does not account for our current ecological understanding of ecosystems, making it insufficient for determining the seral-stage proportions for different vegetation types. Commenter states:

"The Ecosystem Response Unit (ERU) system is based on Potential Natural Vegetation (PNV) and runs counter to the idea that ecosystems are dynamic and change over time. This concept is not supported by the best available science. The PNV concept, introduced by Tuxen (1956), is focused on past and present conditions and is the imagined vegetation community at a location if human influence were removed (Zerbe 1998). Ecosystems are dynamic, as noted in FS1909.12, and the ecosystems of the southwestern US have been heavily impacted by human land use for centuries (Liebmann et al 2016). Thus, it is unlikely that we can even imagine a vegetation community in the absence of human influence, let alone model PNV (Chiarucci et al. 2010). Further, the ERU and PNV concepts do not account for the fact that we are currently experiencing a period of rapid climate change driven by human-caused greenhouse gas emissions (IPCC 2014). Actual evapotranspiration and deficit (unmet evaporative demand) have direct physiological importance for plants and are well correlated with vegetation type distributions (Stephenson 1990). As temperature increases, deficit will increase. Thus, while site characteristics, such as soil type, remain relatively stable over time, the climate space a site experiences is changing and will continue to change as the climate warms. This negates the validity of using ERU/PNV as a management target.

Natural range of variation, as defined in FSH 1909.12, provides a more flexible framework for management planning because it acknowledges that ecosystems "are dynamic and change over time". Implementation of the natural range of variation concept in a forest plan provides a more robust approach to management. Reducing the natural range of variability, in the case of ERU/PNV this equates to pushing the ecosystem in a location toward some idealized condition, reduces variability and equates to a loss of resilience (Holling and Meffe 1996). The ERU/PNV concept and basing management action on the ERU/PNV concept should be replaced with the natural range of variation concept, which is scientifically supported and is in compliance with FSH 1909.12. This change will acknowledge that just because a patch of ground was previously grassland and is now a juniper savanna does not mean that converting it back to grassland should be the objective." **Associated Letter: 78**

Response: Please refer to comment 6 and its response above. The Forest Service acknowledges that seasonal change, warming, and increased aridity (IPCC 2014) will affect both site potential and disturbance regime, and that ERUs form a reasonable baseline from which to assess past variation (FSH 1909.12 Ch zero code), the future range of variation (Somodi et al. 2012), and to consider adaptation options (USDA FS 2023). The Forest Service and partners have developed vulnerability assessments (for example Hand et al. 2018), tools to address changing climate and fire regimes (for example Friggens et al. 2019) and are developing a climate

adaptation strategy. The Southwestern Region also understands that shifts in site potential by a changing climate may already be ongoing and should be addressed in an adaptation strategy (Muldavin and Triepke 2019, Triepke et al. 2019).

The uncharacteristically high levels of woody encroachment or ingrowth into grasslands, and in frequent-fire ecosystems in general, on contemporary landscapes is well established in the scientific literature as are the impacts to grassland function, plant and animal diversity, and ecological processes (Archer et al. 2017). The issue of grassland loss and degradation, by woody encroachment and other factors, and the departure from NRV is a clear issue identified by all Forests of the Southwestern Region and fellow land agencies (Fletcher and Robbie 2004, Schussman and Gori 2004, Yanoff et al. 2008). The Forests have established the historic location and current condition using TEUI information and various data sources including rangeland monitoring, existing vegetation mapping (Mellin et al. 2008), and prior assessments (for example TNC 2006). Identifying ecosystem departure and developing plan components (including desired conditions) are separate processes. Approaches used by the forests for ecological assessment, identifying need-for-change in policy, and for developing desired conditions for grassland ERUs are consistent with the 2012 Planning Rule and agency directives, in the application of best available science and in the way that current condition is compared to an ecological reference model such as natural range of variation (CFR 219.19, FSH 1909.12 Ch. 10) to assess integrity and inform the development of plan components. Forests have also provided language in revised and draft plans to consider climate change effects at implementation (project level) and whether NRV and restoration are still appropriate given the climate vulnerability and stressors of a particular area. The Southwestern Region also developed post-revision guidance for climate adaptation, which explains that desired conditions are not tied to one version of an ecosystem map (USDA FS 2023 Box 5).

Literature Cited in Response:

Archer, S.R., E.M. Andersen, K.I. Predick, S. Schwinning, R.J. Steidl, and S.R. Woods. 2017. Woody plant encroachment: Causes and consequences. In Rangeland Systems. Springer, Cham. Pp. 25-84.

Fletcher, R., and W.A. Robbie. 2004. Historic and current conditions of southwestern grasslands. Pages 120-129 in D. M. Finch, editor. Assessment of grassland ecosystem conditions in the Southwestern United States. USDA Forest Service General Technical Report RMRs-GTR-135. Volume 1. Rocky Mountain Research Station, Fort Collins, Colorado, USA.

Friggens, M.M., K.E. Bagne, D.M. Finch, D. Falk, F.J. Triepke, and A. Lynch. 2013. Review and recommendations for climate change vulnerability assessment approaches with examples from the Southwest. USDA Forest Service General Technical Report RMRS-GTR-309. Rocky Mountain Research Station, Fort Collins, Colorado, USA.

Hand, M.S., H. Eichman, F.J. Triepke, and D. Jaworski. 2018. Socioeconomic vulnerability to ecological changes to National Forests and Grasslands in the Southwest. USDA Forest Service General Technical Report RMRS-GTR-383. Rocky Mountain Research Station, Fort Collins, Colorado, USA.

IPCC (Intergovernmental Panel on Climate Change). 2014. Climate change 2014: impacts, adaptation, and vulnerability. In C. B. Field and V. R. Barros, editors. Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK.

Mellin, T.C., F.J. Triepke, W.A. Robbie, and P.E. Joria. 2008. Mapping existing vegetation at the mid-scale level in the Forest Service Southwestern Region. In Proceedings of the Twelfth Biennial USDA Forest Service Remote Sensing Applications Conference (RS-2008), 15–17 April 2008, Salt Lake City, UT. Remote Sensing Applications Center, Washington Office, Washington DC. Map data available online http://www.fs.usda.gov/detail/r3/landmanagement/gis.

Muldavin, E., and F.J. Triepke. 2019. North American pinyon–juniper woodlands: Ecological composition, dynamics, and future trends. Encyclopedia of the World's Biomes https://doi.org/10.1016/B978-0-12-409548-9.12113-X.

Schussman, H., and D. Gori. 2004. An ecological assessment of the Bureau of Land Management's current fire management practices. The Nature Conservancy technical report available online http://azconservation.org/downloads/assessment_of_blm_fire_management_practices. TNC Arizona Chapter, Tucson AZ. 86 pp.

Somodi, I., Z. Molnár, and J. Ewald. 2012. Towards a more transparent use of the potential natural vegetation concept–an answer to Chiarucci et al. Journal of Vegetation Science, 23(3), pp.590–595.

TNC (The Nature Conservancy). 2006. Southwest Forest Assessment Project: Historical range of variation and state and transition modeling of historical and current landscape conditions for potential natural vegetation types of the southwestern U.S. The Nature Conservancy technical report available online http://azconservation.org/projects/southwest_forest_assessment, November 2013. TNC Arizona Chapter, Tucson, AZ.

Triepke, F.J., E.H. Muldavin, and M.M. Wahlberg. 2019. Using climate projections to assess ecosystem vulnerability at scales relevant to managers. Ecosphere 10(9):e02854.

USDA FS (United States Department of Agriculture-Forest Service). 2023. Regional climate adaptation strategy: Integrating existing tools, science, and collaborative outcomes for climate adaptation, mitigation, and socioeconomic vulnerability. Version 9. USDA Forest Service technical guide. Southwestern Region, Albuquerque, NM. 158 pp.

Yanoff, S., P. McCarthy, J. Bate, L.W. Miller, A. Bradley, and D. Gori. 2008. New Mexico rangeland ecological assessment. The Nature Conservancy technical report available online https://www.nmconservation.org/field-notes/2018/12/6/rangeland-ecological-assessment. TNC Arizona Chapter, Tucson AZ. 75 pp. plus appendices.

Comment 8: Commenter asserts that plant community diversity was omitted from the assessment phase of planning and is absent the plan because the agency distilled vegetative species diversity to a new system of coarse-scale classification called Ecological Response Units, which violates the National Forest Management Act and the 2012 Planning Rule. Commenters point to the desired conditions for Ecological Response Units and states that each Ecological Response Unit houses dozens of plant communities and hundreds of variants, yet there are no desired conditions that address them individually or collectively in terms of their distribution and abundance. Commenters suggest that a desired condition for plant community diversity forestwide should at least address the number of distinct plan communities present, their relative abundance with reference to the natural range of variation, variations within each plant community including genetic diversity and the ability of each to adapt and migrate in response to climate change. Further, commenters state that specific plan components are likely to harm plant community diversity. Commenters point at both guidelines for All Upland Ecological Response Units and state that they encourage more intensive logging and less public involvement. Commenters assert the final documents must supply answers to the following questions to satisfy requirements of the National Forest Management Act and 2012 Planning Rule:

1) What is the number of distinct plant communities existing within the planning area and within each ERU, and what is their relative abundance?

2) What plant community types are rare, including relict old growth stands and forests?

3) Within each plant community, how many variations exist on the landscape?

4) What are the key stressors affecting plant communities, for example livestock grazing, invasive plants, or soil impacts from heavy equipment?

5) What standards and guidelines are targeted at maintaining or restoring plant community diversity?

6) What land use designations are targeted at maintaining or restoring plant community diversity, including rare plant communities and specific species that need special management attention?

7) What activities will the Forest Service implement to restore plant community diversity where it has been degraded?

8) What scientific information indicates the efficacy of proposed plan components?

Commenters suggest it would be helpful to include an objective establishing at least minimum amount for specific plant communities across the landscape like "maintain 50% of the ponderosa pine forest as old growth." Alternately they suggest an objective to restore a particular plant community to a level of diversity known to support viability of that community. Commenters note that instead, the plan contains a flexible standard slightly constraining steep-slope logging and objectives for mechanical treatments far beyond the rate and scale of the past. **Associated Letter: 712**

Response: Plant community diversity was included in the assessment phase of revision as displayed and discussed in Chapter 4 of the final assessment report under the Analysis of Key Characteristics, Ecological Status headings. The dataset describing plant communities is the Terrestrial Ecological Unit Inventory, which uses the same scale as a standard U.S. Geological Survey 7.5-minute topographic map and is based on field-collected information. Neither is ecological status, or plant community diversity, absent from the plan. It is included as All Upland Ecological Response Units DC3a and Riparian and Aquatic Ecosystems 4th and 5th Level WS-DC4 and is part of soil condition assessments (MQ 51; USDA-FS 2023). It is also included in the monitoring plan (MQs 43 and 44). Plan components for resource uses and activities that support desired conditions for plant community diversity include but are not limited to: Non-native Invasive Species (DC1, Os1 and 2, Ss1-22, and Gs2, 3, and 5); Wildland Fire and Fuels Management (DC5c, DC6 and S4); Livestock Grazing (DC3, O1, and S1); and Timber, Forest, and Botanical Products (DC1a-c, DC2g, S10, G1, 3 and 5a-c). All Upland Ecological Response Units LS-DC2 and LS-DC3a address the commenter's concern and suggestion for a desired condition inclusive of all native vegetation communities and climate change.

Related to items 1 and 3, it is a matter of scale and classification system. It could be interpreted as Terrestrial Ecological Units being the distinct plant communities within each Ecological Response Unit. Variations within each Terrestrial Ecological Unit are characterized as map unit components, but not all map unit components are indicative of a distinct plant community or variant. Some represent unvegetated conditions such as rock outcrop. Further, some plant communities can be found on different soil types and would be mapped as different map units. The relationship between the Terrestrial Ecological Unit Inventory and the Ecological Response Unit framework is described in chapter 1 of the assessment report under the Ecological Response Unit Framework heading. All plan components and ecological status point back to the Terrestrial Ecological Unit Inventory data. For example, the landscape-scale DC3a for All Upland Ecological Response Units states "Overstory and understory plant species composition are each at least 66 percent similar to site potential as measure by each particular terrestrial ecological unit..."

Item 2 is partially addressed in the Upland Vegetation, Fire Ecology and Fuels analysis in the final EIS which includes an analysis of old growth attributes. Without being provided a definition of what the commenter considers rare plant communities, we cannot be responsive. If plant communities that contain rare plants are what is meant, those are identified by the state as Important Plant Areas, discussed in the final plan and included as botanical areas in alternatives 2 and 5. If the commenter considers rare plant communities as Terrestrial Ecological Unit Inventory map units with limited distribution on the Gila National Forest, that's another matter entirely and may not have anything to do with plant community composition as illustrated in the previous paragraph.

Item 4 is addressed in chapter 9 of the assessment report, which is titled System Drivers and Stressors and relevant stressors as they relate to plan direction are analyzed in the Upland Vegetation, Fire Ecology and Fuels section of the EIS. Item 5 is addressed in the first paragraph of this response. Maintaining or restoring plant community diversity is a requirement of the 2012 Planning Rule for all lands designated as National Forest System lands. Additional land use designations are not necessarily a mechanism to fulfill that requirement (item 6 in the commenter's list). The range of alternatives includes acres that could be designated as botanical areas based on the presence of rare plant species (alternatives 2 and 5). About item 7, the actions that will best address plant community diversity will be determined at the project level when the site-specific circumstances and management factors are known. Noxious weed treatments, pasture rest-rotations, tree cutting prescriptions, and avoidance areas are examples of things that might be appropriate where issues are identified. Regarding the last numbered item in the comment summary, plan direction provides a strategic and adaptive framework for management specifically so that we can be responsive to new science and technology and adjust when management outcomes are not what were expected or desired. The scientific information related to the efficacy of proposed actions will be evaluated at the project level when the site-specific circumstances and management factors are known.

On the suggestion related to old growth, please refer to the response to comment 11 under the Old Growth heading in this section of the appendix. Regarding slope constraints for mechanical treatments, please refer to response to comment 43 under the All Upland Ecological Response Units Standard 4 heading in this section of this appendix. Finally, on the number of acres to be treated, the plan establishes a range of acres to be treated and the maximum is indeed significantly higher than what has been treated in the past. However, those objectives use a mixture of mechanical treatments, prescribed fire, and naturally ignited wildfire. The plan's Vision specifically states that fire will be the primary restoration tool. The plan places emphasis on fire because it is a natural process that plays an important ecological role in each of the forest's vegetation communities and because our ability to use mechanical treatments is limited by funding constraints to a much greater extent than fire. The analysis of alternative 2-proposed action demonstrates this as well.

Literature Cited in Response:

USDA-FS (U.S. Department of Agriculture-Forest Service). 2023. Soil Technical Guidance for Soil Quality Monitoring in the Southwestern Region. Southwestern Region (R3), Albuquerque, NM.

Comment 9: Commenter states that the desired conditions for each forest vegetation type do not provide scientifically supported targets for the distribution of seral stages within a vegetation type. Commenter suggests desired conditions for seral stage distributions should be developed using data on what is present on the landscape and not what hypothetically occurs at a given location in the absence of human-caused disturbance and climate change. This should be replaced with an imputation approach to classifying the landscape into different vegetation types, rather than on the Ecological Response Unit classification, and a distribution of seral stages based on where different vegetation types occur on the landscape should be developed**. Associated Letter: 78**

Response: Please refer to comment 6 and its response above. We already use existing ("actual") vegetation mapping to assess current vegetation structure, composition, and connectivity. We find no research to support using existing vegetation mapping to determine the natural or historic range of variation, let alone dismiss the wealth of research that was applied to characterize the natural or historic range of variation. Existing vegetation mapping is thematically coarser than Ohmann and Gregory (2002) but without the accuracy issues that imputation-only approaches present at mid scales. The Forest Service developed mid-scale mapping of plant communities with methods and tooling specific to Southwest vegetation and data (Mellin et al. 2008), now being revised with new imagery and technology by Oregon State University (Henderson et al. 2019). Also, using an existing vegetation map (snapshot) as an ecosystem stratification, let alone to determine the natural or historic range of variation, is problematic given: (1) how existing vegetation conditions can change with each event (e.g., fire, beetle outbreak, regeneration harvest) and (2) given how generic existing

vegetation can be across ecosystem types or even life zones; for example, Douglas-fir cover types can occur in dry- and wet-mixed conifer types as well as spruce-fir forest.

Literature Cited in Response:

Henderson, E.B., D.M. Bell, and M. Gregory. 2019. Vegetation mapping to support greater sage-grouse habitat monitoring and management: multi-or univariate approach? Ecosphere 10(8):e02838.

Mellin, T.C., F.J. Triepke, W.A. Robbie, and P.E. Joria. 2008. Mapping existing vegetation at the mid-scale level in the Forest Service Southwestern Region. In Proceedings of the Twelfth Biennial USDA Forest Service Remote Sensing Applications Conference (RS-2008), 15–17 April 2008, Salt Lake City, UT. Remote Sensing Applications Center, Washington Office, Washington DC. Map data available online https://www.fs.usda.gov/detail/r3/landmanagement/gis.

Ohmann, J.L. and M.J. Gregory. 2002. Predictive mapping of forest composition and structure with direct gradient analysis and nearest-neighbor imputation in coastal Oregon, USA. Canadian Journal of Forest Research 32: 725–741.

Comment 10: Commenter asserts that using Terrestrial Ecological Unit Inventory data to determine the location of ERUs is not grounded in our current scientific understanding of the factors that determine the distribution of vegetation types across landscapes. Commenter quotes from the assessment report page 14: "While the ERU map is ultimately a remote sensing product, on Forest Service lands the Terrestrial Ecological Unit Inventory (TEUI), formerly known as the Terrestrial Ecosystem Survey (TES), is the foundational dataset for ERU mapping."

Commenter continues, saying: "The TEUI Technical Guide (Winthers et al. 2005) states that a number of abiotic attributes are related to PNV to derive the TEUI classification. As a result, the TEUI is likely to have substantial uncertainty with respect to ecosystem classification and will dictate that a particular unit should be a specific vegetation type when it may not be possible to support that vegetation type at that location, particularly under changing climate. The Forest should be basing vegetation classification on actual vegetation data. Ohmann and Gregory (2002) developed a predictive mapping system that uses gradient analysis and nearest-neighbor imputation to impute vegetation characteristics across the landscape from satellite data and Forest Inventory and Analysis data. This imputation approach forms the basis for decision-making under the Northwest Forest Plan. This imputation approach should be adopted for vegetation classification across the forest because it is based on vegetation currently on the landscape and it also provides a mechanism for quantifying uncertainty. Uncertainty quantification is absent from the TEUI making it less scientifically- valid for vegetation classification because it is treated as truth rather than a model." **Associated Letter: 78**

Response: The description of the ERU map product in the assessment report was in err, reflecting a misunderstanding that has since been resolved. In the Southwestern Region, Terrestrial Ecological Unit Inventory (TEUI) mapping underpins ERU mapping both spatially (map line work) and thematically (technical grouping of TEUI units similar in site potential and disturbance history). TEUI mapping is developed from field plots, field surveys, and photo interpretation (Winthers et al. 2005, USDA Forest Service 1986), reflecting more census than sample, updated with new information, and clearly the best available science for ecological mapping on National Forest System lands. Nevertheless, other landscape mapping has been considered in the Southwestern Region, including Ecological Systems and LANDFIRE Biophysical Settings (Comer et al. 2003, Barrett et al. 2010), but deferred in favor of a TEUI-derived mapping based on a data quality comparison among available map sources and an independent sample of Forest Inventory and Analysis (FIA) plots.

We acknowledge that seasonal change, warming, and increased aridity (IPCC 2014) will affect both site potential and disturbance regime, and that ERUs form a reasonable baseline from which to assess past

variation (NRV; FSH 1909.12 Ch zero code), the future range of variation (Somodi et al. 2012), and to consider adaptation options (USDA FS 2023). The Forest Service and partners have developed vulnerability assessments (for example Hand et al. 2018), tools to address changing climate and fire regimes (for example Friggens et al. 2019) and a climate adaptation strategy (USDA FS 2023). The Southwestern Region also understands that shifts in site potential by a changing climate may already be ongoing and should be addressed in an adaptation strategy (Muldavin and Triepke 2019, Triepke et al. 2019).

Literature Cited in Response:

Barrett, S., D. Havlina, J. Jones, W. Hann, C. Frame, D. Hamilton, K. Schon, T. DeMeo, L. Hutter, and J. Menakis. 2010. Interagency Fire Regime Condition Class guidebook. Version 3.0. USDA Forest Service, US Department of the Interior, and The Nature Conservancy.

Comer, P., D. Faber-Langendoen, R. Evans, S. Gawler, C. Josse, G. Kittel, S. Menard, M. Pyne, M. Reid, K. Schulz, K. Snow, and J. Teague. 2003. Ecological Systems of the United States: A working classification of US Terrestrial Systems. NatureServe technical guide available online http://www.natureserve.org. Home Office, Arlington, VA. 83 pp.

Friggens, M.M., K.E. Bagne, D.M. Finch, D. Falk, F.J. Triepke, and A. Lynch. 2013. Review and recommendations for climate change vulnerability assessment approaches with examples from the Southwest. USDA Forest Service General Technical Report RMRS-GTR-309. Rocky Mountain Research Station, Fort Collins, Colorado, USA.

Hand, M.S., H. Eichman, F.J. Triepke, and D. Jaworski. 2018. Socioeconomic vulnerability to ecological changes to National Forests and Grasslands in the Southwest. USDA Forest Service General Technical Report RMRS-GTR-383. Rocky Mountain Research Station, Fort Collins, Colorado, USA.

IPCC (Intergovernmental Panel on Climate Change). 2014. Climate change 2014: impacts, adaptation, and vulnerability. In C. B. Field and V. R. Barros, editors. Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK.

Muldavin, E., and F.J. Triepke. 2019. North American pinyon–juniper woodlands: Ecological composition, dynamics, and future trends. Encyclopedia of the World's Biomes. https://doi.org/10.1016/B978-0-12-409548-9.12113-X.

Somodi, I., Z. Molnár, and J. Ewald. 2012. Towards a more transparent use of the potential natural vegetation concept–an answer to Chiarucci et al. Journal of Vegetation Science, 23(3), pp.590–595.

Triepke, F.J., E.H. Muldavin, and M.M. Wahlberg. 2019. Using climate projections to assess ecosystem vulnerability at scales relevant to managers. Ecosphere 10(9):e02854.

USDA FS (United States Department of Agriculture-Forest Service). 2023. Regional climate adaptation strategy: Integrating existing tools, science, and collaborative outcomes for climate adaptation, mitigation, and socioeconomic vulnerability. Version 9. USDA Forest Service technical guide. Southwestern Region, Albuquerque, NM. 158 pp.

Winthers, E., D. Fallon, J. Haglund, T. DeMeo, G. Nowacki, D. Tart, M. Ferwerda, G. Robertson, A. Gallegos, A. Rorick, D.T. Cleland, and W. Robbie. 2005. Terrestrial Ecological Unit Inventory technical guide: Landscape and land unit scales. USDA Forest Service Gen. Tech. Report W0-68. Washington Office, Ecosystem Management Coordination Staff, Washington DC. 245 pp.

Old Growth

Comment 11: Commenters are concerned that the plan doesn't do enough to protect old-growth forests and large-diameter trees. Some specifically mention concerns for Mexican spotted owl, northern goshawk, and

purple martin habitat, asserting the plan fails to meet planning rule requirements for plant and animal diversity and the persistence of species due to lack of old-growth protections. Some commenters recognize the forest needs to be thinned and that the large-diameter trees that mills traditionally made their profit from need to be kept, concluding that the focus needs to be on removing smaller diameter trees so that forest-product businesses can help the forest and sustain local jobs. Others do not want any logging of old-growth forests and would like to see a large and old tree retention strategy in the plan, suggesting a standard or guideline establishing a 16-inch or 18-inch diameter cap, a 150-year-old limit, or both. These commenters reference publications that indicate these trees could be expected to be the most resilient to future droughts. One commenter suggested old-growth resources should no longer be considered renewable by because of climate change.

Other commenters support the provisions in the draft plan and appreciate the way old growth is supported. Another commenter suggested that old-growth protections in the plan could be expanded to include special groves stating: "Perhaps "old groves" might expand appreciation. Old trees deserve a full life and full death, including full decomposition. The nomination of special groves of trees for protection is another way citizen monitoring could be included in the plan."

Some commenters point back to comments previously made concerning the science supporting the desired conditions for mixed conifer and ponderosa pine systems and tie them to their concerns about old growth. These commenters appreciate the addition of the subsections titled "Application of Tree Density Ranges of Values" to the desired conditions sections for each forested Ecological Response Unit and suggest adding a statement to the basal area specific mid-scale desired condition that directs the reader to the important contextual information provided in those subsections. However, commenters remain concerned that this important contextual information will not avert the undesirable outcome of homogenizing the landscape under the guidance of technical reference GTR-310, upon which the desired conditions are based.

Commenters assert planning staff are aware of the considerable controversy over the inferences made in GTR-310 and the misapplication of the "Flagstaff Model" of forest restoration to areas that are markedly different, especially the Gila National Forest. Commenters suggest planning staff go back to their previous comments and review the science-based arguments against the application of tree density, canopy and other values reported in GTR-310 and the draft plan's desired conditions. Commenters note that optional plan monitoring refers to numerical goals, but none exist in the plan. Commenters state the draft plan curtails the only protections for old-growth forests and woodlands, which are wilderness areas and steep mountainous terrain. Commenters prefer that the final plan include firm commitments and enforceable standards and guidelines for protecting old-growth trees and forests that make up the backbone of fire-resistant ecosystems and support some of the rarest wildlife in the Southwest instead of treating the forest like a regulated system designed to produce a continual flow of timber. **Associated Letters: 41, 142, 151, 152, 167, 193, 579, 601, 608, 653, 684, 712, 718.1 through 718.3873, 718.4, 718.14, 718.3758, 718.3855, and 718.3867, 725.1 through 725.7, 727.4338**

Response: Desired conditions and objectives are what drive the plan. The plan's desired conditions for forests and woodlands include all tree age classes and are based on forest restoration principles related to creating and sustaining stands with large and old trees across the landscape over time (USDA-FS 2018). The final plan includes modifications to Upland Ecological Response Units G1 designed to address concerns about mature and old-growth forests.

There are studies that suggest "a blanket policy of diameter-limit cutting impairs the ability of resource managers to achieve or maintain desired conditions and is not sustainable in the mid to long term" (Triepke et al. 2011; Abella et al. 2006 and Higgins 2011 as cited in Treipke et al. 2011). Triepke and others concluded that while diameter caps may be appropriate and helpful in some cases, when applied consistently over time leads to increasingly dense, even-aged, single-storied stands (2011). This information suggests the utility of diameter caps, or age caps, is best evaluated at the project level.

The current scientific understanding related to old growth does not support the suggestion for establishing old groves for protection. Because of the complex and dynamic nature of forests, efforts to conserve biodiversity by providing old growth in landscapes all developmental stages need to be considered (Spies 2004), not just groves of old trees. The regional guidance that synthesized the science and developed the desired conditions for vegetation communities says this about old growth:

> "…The point here is that even though social values are at the heart of many old growth controversies, ecological perspectives must be taken into account if new policies are to lead to successful management for creating and sustaining old growth (Spies 2004). After all, at its most fundamental level, old growth is the product of structures and processes associated with the maturation and senescence of a population of trees (Spies 2004). While past strategies for protecting old growth created reserves of existing old trees, many of these reserves in the Southwest are degraded. Degradation of old growth reserves is an outcome of the persistent interruption of frequent low severity fires that historically typified Southwestern forests. To reverse this degradation, long-term management strategies are needed to develop dynamic landscape populations of old growth that are able to withstand wildfire, parasites, diseases, human disturbances, and climate change. Desired forest conditions that include all tree age classes and are based on forest restoration principles and objectives are such a strategy."

Managing for seral state diversity (All Upland Ecological Response Units DC 3b and G1) is the best protection for old and large trees across the forest over time, as well as achievement and maintenance of ecologically appropriate tree densities, canopy cover and landscape diversity. As explained in the EIS Upland Vegetation, Fire Ecology and Fuels Analysis Methodology section, seral states for forest and woodland ecosystems are defined by specific combinations of dominant tree size, canopy cover and canopy layers (also referred to as storiedness) based on the best available science. The final plan now contains additional analysis about the area expected to be dominated by old trees. Methodology to support this analysis was developed by the Southwestern Regional Office based on relationships between Forest Inventory and Analysis data and seral state diversity.

Those seral state proportions are incorporated into the plan by reference to the Southwestern Region's Seral State Proportion Supplement, so that when new information becomes available the plan will remain reflective of the best available science. The final plan now contains an Old Growth and Seral State Diversity management approaches intended to promote clarity about the relationship between seral state diversity and old-growth and how the plan provides for both. Seral state proportion or diversity is also better defined in the final documents (Upland Vegetation, Fire Ecology and Fuels section glossary under vegetation succession; example in the methodology section of the FEIS). Under the planning rule, ecological, social, and economic systems are recognized as interdependent, without one being a priority over the other. Vegetation management, including the harvest of timber and forest products plays a role in achieving sustainability goals (36 CFR Preamble). Cutting prescriptions will be designed to achieve or maintain desired conditions.

Literature Cited in Response:

Triepke, F.J., B.J. Higgins, R.N. Weisz, J.A. Youtz and T. Nicolet. 2011 Diameter caps and forest restoration - Evaluation of a 16-inch cut limit on achieving desired conditions. USDA Forest Service Forestry Report FR-R3-16-3. Southwestern Region, Regional Office, Albuquerque, NM. 31 pp.

Post-Fire Rehabilitation

Comment 12: There is a request for the plan to prioritize removal of post-fire material and reforestation along the Black Range and Mogollon Crest Trails. **Associated Letter: 11**

Response: The removal of post-fire material, such as snags, down logs and rocks and debris deposited within the trail tread are an ongoing issue on both crest trails. The final Collaborative Sustainable Recreation

Strategy and Relationships management approach discusses opportunities for public participation in the development and implementation of a forestwide trails strategy. Natural reforestation is generally preferred, especially outside of the suitable timber base and in wilderness. The Timber, Forest, and Botanical Products section of the plan includes a management approach discussing the forest's reforestation program. There is active work to develop and implement the reforestation plan.

Comment 13: There is a request for more rehabilitation efforts for the area on the south side of state highway 59. **Associated Letter: 728.333**

Response: Post-fire rehabilitation efforts are ongoing.

Restoration

Comment 14: There is a concern that amount of area identified in the plan objectives for restoration treatments is extreme compared to past practices and that by creating additional pressure to treat this number of acres will result in more uncontrolled wildfires and devastation. Others express this concern as an "over-use" of fire.

Conversely, still others are concerned that the acres treated per decade modeled for the frequent fire forest types are insufficient to meet the objective of restoring frequent fire forests and reducing the risk of high-severity wildfire. These commenters argue that the rates of treatment modeled for frequent fire vegetation types are insufficient to meet the stated desired conditions for these vegetation types. As an example, page 77 states that 79 percent of ponderosa pine is departed from desired conditions. Table 9 states that alternative 2 modeled 7,404 acres of mechanical treatment per decade and 5,508 acres of prescribed fire per decade. Based on the figure on page 47, there are over 600,000 acres of ponderosa pine. Using the high end of the mean fire return interval range in table 4 (35 years), achieving desired conditions for ponderosa pine would require burning almost 18,000 acres per year. The preferred alternative should be to restore frequent fire to these ecosystems at rate that moves them toward desired conditions as quickly as possible. This will facilitate building ecosystem resilience to a range of disturbance processes and to ongoing climate change.

A group of commenters note that previous practices were conservative and did little to help re-establish natural fire regimes and state that research has shown that allowing more mixed-severity fire over larger areas of historically frequent, low-severity fire ecosystems is necessary for fire to act as a restoration tool. This carries additional risk but has the most potential for restoration. Commenters also note that smoke and ozone production are concerns associated with fire, but statistical data show that smoke from prescribed burns is significantly less than those of the massive wildfires that will occur if nothing is done. **Associated Letters: 39, 41, 78, and 162**

Response: Vegetation treatment objectives contain a broad range of acres to be treated with any combination of wildfire, prescribed fire, and mechanical treatment methods. The range of alternatives explores varying emphasis on fire and mechanical treatments, but all alternatives must be within the fiscal capacity of the forest to implement as required by the 2012 Planning Rule and agency directives. Under all alternatives, the low end of the range represents what we feel confident about our ability to achieve with congressionally allocated dollars across all the historically frequent-fire vegetation types. With respect to alternative 2 – proposed action, the high end of the range is substantially larger than the number of acres that have been treated in the past and we acknowledge that what was modeled for the analysis does not represent a full restoration of fire to the landscape, only movement toward it. It is hoped that much more than the low end of the objectives, or what was modeled, will be accomplished.

However, there is more to consider in designing plan objectives than achieving the desired conditions for fire regimes and vegetation structure. The desired conditions for the other resources and uses that we manage must be considered as well. It is not anticipated that we will be able to accomplish the high end of the range. It was intended to drive management beyond what we've accomplished in the past and to illustrate that even by

conservative calculations, the ecological need is much higher than the funding we receive or the social license we have. This is discussed in in the plan under the heading Upland Ecological Response Unit Objectives with some changes in the final for clarity.

In terms of modeling the objectives, the broad range of acres to be treated in the objectives presented choices that had to be made. It was determined unrealistic to model the high end of the range. What was modeled for each alternative and why the numbers were chosen is discussed in draft appendix B under the Transition Pathways Wildfire, Prescribed Fire and Prescribed Cutting Methods headings (now final appendix E). The body of science supports fire as a natural, necessary part of a healthy ecosystem. The evolution of fire management, what research concludes about the need for more mixed-severity fire and the trade-offs associated with risk is discussed in the EIS effects analysis for Upland Vegetation, Fire Ecology and Fuels. Smoke impacts, including what is known about ozone production, is discussed in the Air Quality Affected Environment section.

Comment 15: There are differing perspectives on which methods or tools the plan should emphasize in its restoration objectives. mechanical treatments, prescribed fire, and naturally ignited wildfire. Some commenters prefer that naturally ignited wildfire, prescribed fire, and mechanical treatments are all needed and should be used where appropriate. Rationale for this preference includes finding a balance between what would happen naturally and the fact that human impact makes that balance difficult; reducing fire risk as quickly as possible; to balance habitat protection and wildfire mitigation; it provides forest products to people; it allows the best tool or tools for the situation to be selected; all of these methods create jobs; it's cost effective and best use of budget; and it's consistent with the agency's mission. One commenter suggests that the infrastructure for small-diameter timber on suitable lands needs improvement and that we should look at what they are doing in Montana on state lands to reduce lawsuits. Others suggest that industry innovations are the solution, such as sawmills that operate 24 hours a day, pallet and jointed lumber manufacturing and biomass electrical generation. One commenter suggested we look at Vermejo Park Ranch as a model, where timber contractors removed desirable product but also thinned material they did not necessarily want. There are also suggestions that grazing permittees be allowed to thin their allotments and woodcutters could be given 10- or 20-acre parcels to thin. Another suggestion is to allow emergency mechanical thinning of dead, burned trees near trails in the wilderness to open them up, speed maintenance and reduce danger.

A few commenters would like to see grazing with goats or cattle emphasized as a restoration tool alongside fire and mechanical treatments, while others suggest the most effective restoration tool is to eliminate grazing. Those who suggest goats should be used state it is more economical than fire or mechanical methods, they prefer shrubs and annuals forbs to grass so they keep the brush from coming back, and they fertilize the land as they go.

Some would like to see herbicide added to the objectives because it is more sustainable than mechanical treatments, especially when alligator juniper is a component of the vegetation community. Others do not want objectives to include herbicide use because of human health concerns and residence time in the soil. One commenter would like to see a combination of fire, timber harvest and other mechanical thinning treatments, grazing, fishing, hunting, recreation, and mining all included as restoration tools. Others want to see procedures for soil health emphasized and old growth protection, regardless of which tools are used. A few commenters stated they would support the use of both fire and mechanical methods of restoration if only the plan wasn't so vague on protections for soil and vegetation if thinning is done on steep slopes or in wet conditions, or in areas otherwise sensitive to truck traffic and if thinning was only done for fire mitigation or for other ecological reasons. One commenter states that thinning should not be done to benefit loggers or their subsidies, and the reasons for thinning should be represented accurately.

Others would prefer that the plan emphasize one tool and limit or prohibit the others. Those that would like to see mechanical treatments emphasized are concerned about getting the wood products because it is a waste to burn them. Those that would like to see fire limited or prohibited as a restoration tool state several different

reasons for their preference. Some do not think we should "play God" with prescribed fire or are afraid it will get out of control. Others point to the fact that it is not a precise tool, making it difficult to protect old trees. Some state that mechanical treatments are better because they control erosion rather than causing it.

Those that would like to see fire emphasized and mechanical treatments limited, or prohibited, point to the relative cost of each or would like the plan to demonstrate a "minimum intervention philosophy." Additional rationale to support emphasizing fire and limiting mechanical treatments includes: lower greenhouse gas emissions; less noise and related impacts to wildlife; fewer impacts to wildlife, plants and recreation overall; lower cost so money can be spent on treating all the urban interface areas, hiking trail maintenance or other things; fewer roads; less damage to soil, including biological crusts; less resource exploitation; less risk of corruption; improved aesthetics; restoration of natural processes; and support of the nature and purposes of the Continental Divide National Scenic Trail. Some suggest that protecting urban interface values from wildfire should be the responsibility of the property owner, not the Forest Service, which should be focusing on managing for ecological integrity in the face of climate change.

One commenter expresses support for plan objectives related to restoration of vegetation communities as they exist in alternatives 2 or 5, but not 3, because they are more realistic about fire. This commenter states that since restoration activity will likely result in more grasses and forbs and climate change will ultimately trump everything, the emphasis on improving rangelands in alternative 3 is lopsided. Others expressed concern about alternative 5's restrictions on mechanical treatment, suggesting that mechanical treatments be included in the final plan and that there be a management approach explicitly stating that future mechanical treatments be prioritized by how or whether they protect highly valued assets and maintain or facilitate the return of natural processes, including fire, to the landscape. They state that the restrictions in alternative 5 will reduce management's ability to strategically use mechanical treatments outside the wildland-urban interface in support of restoring the natural role of fire and watershed restoration goals.

Others specify concern about alternative 2's objectives for Upland Ecological Response Units, how they were developed, the emphasis on fire and the following language: "mechanical treatments may mimic some of the ecological outcomes of fire and may facilitate the restoration of fire to the landscape, but they cannot replace an ecological process." Commenters suggest this language indicates that feelings and political correctness are more important than the condition of the forest. There is a request to reconsider making everything pertaining to the future management of the forest politically correct and allow the use of mechanical treatments even if they are not considered an ecological process or politically correct. These commenters assert the draft plan goes so far as to set very narrow and limiting restriction on the use of mechanical treatment methods, which are necessary if you are going to harvest forest products. National "Forest plans from other national forests in the Region at least state that the harvesting of resources for public consumption will, where appropriate, be used as landscape treatments."

These commenters continue stating: "We not saying fire cannot be a treatment tool, but it is obvious on multiple occasions on the GNF in the recent past that this management direction resulted in thousands of acres of very unique and irreplaceable climax conifer forest have been destroyed under this use of fire direction. We also know that up to a thousand acres of prime forage-producing rangelands have been burned on the GNF because burning these grassland ecosystems is easy and cheap. (Example of this is the photo on the cover of the Draft Revised Forest Plan.) Also, burning grassland ecosystems is a quick way for fuel and watershed treatment targets to get accomplished. In reality, burning grassland ecosystems does very little towards reducing fuels and improving watershed conditions."

Another commenter states that tree density makes using prescribed fire as the primary tool impractical and that cost is an excuse being used to have a large fire organization instead of a properly staffed timber shop. This commenter suggests employees are looking to pad their paychecks instead of getting meaningful work done. Some commenters would prefer a return to the fire-suppression era where fire was not considered a restoration tool and all fires were put out. **Associated Letters: 11, 24, 27, 100, 164, 180, 201, 207, 233, 561, 617, 631, 647, 672, 675, 680, 728.294, and OWS-1 through OWS-144**

Response: We acknowledge the diversity of perspectives on the various tools that can be used to accomplish restoration objectives and recognize there are benefits, costs, risks, and tradeoffs associated with each in any given situation. There is no scientific basis to exclude fire from the ecosystems that occur within the Gila National Forest. Fire exclusion is one of the major contributing factors to departure from the natural range of variation and desired conditions. Excluding fire is also directly opposed to the regulations set forth in the 2012 Planning Rule (36 CFR 219.8) for sustainability and agency policy direction for implementing the rule (FSH 1909.12 Chapter 20 Section 23.11b). The range of alternatives does explore varying levels of emphasis on restoring fire to the landscape, ranging from relying only on fire to accomplish restoration objectives (alternative 5) to very limited use of prescribed fire (alternatives 3 and 4). The no-action and proposed action alternatives rely on fire as the primary restoration tool, but integrate mechanical treatments facilitate restoration of fire to the landscape. While herbicide and some kinds of biological vegetation management tools could be used under any of the draft alternatives, they were not included as tools in the objectives associated with any alternative. This is because they are not appropriate in as many situations as fire and mechanical treatments.

The objectives in alternative 2 (proposed action) specifically include the use of mechanical treatments. Estimated vegetation practices and projected harvest volumes, included in chapter 4 of the plan, demonstrate alternative 2's intent to use timber harvest as a restoration tool to accomplish plan objectives. However, the proposed action does promote fire as the primary restoration tool for ecologic and economic reasons. Fire does indeed play ecological roles that mechanical treatments cannot mimic. For example, smoke is a germination cue for many species (Abedi et al. 2018, Brown and van Staden 1997, Collette and Ooi 2017, and Rodriguez-Trejo and Fulé among others). The objectives associated with the proposed action include a broad range of acres to be treated with one or more tools including naturally ignited wildfire, prescribed fire, and mechanical treatments (see DEIS Comparison of Alternatives table at the end of chapter 2). It does not specify how many acres may be treated with which tool or tools, providing the flexibility to determine treatment methods at the project level based on site conditions and circumstances.

The proposed action includes all constraints on timber harvest imposed on every national forest by the National Forest Management Act, the 2012 Planning Rule (CFR 219.11), and agency directives (FSH 1909.12 Chapter 20 Section 23.23e, FSH 1909.12 Chapter 60). It includes identification of 354,426 acres suitable for timber production, which is a less than 1 percent difference between the acres found suitable for timber production in alternative 1-no action, or alternatives 3 and 4, which emphasize mechanical treatment and restrict the use of prescribed fire. Alternative 5 does restrict mechanical treatments, imposes the additional restriction that those treatments will only occur within the urban interface or strategic locations identified by scientific analysis, and identifies 29,998 acres as suitable for timber production (see DEIS Comparison of Alternatives table at the end of chapter 2). Beyond satisfying the constraints imposed by law, regulation, and policy, all alternatives include desired conditions to contribute to the wood product industry and provide products to people (Timber, Forest, and Botanical Products DC2a-f), and a supporting guideline (Timber, Forest, and Botanical Products G2). All alternatives also include additional limitations on mechanical treatments based on the safe operational slope gradient of conventional harvesting equipment and soil properties. Alternatives 2, 3, 4, and 5 include these limitations as plan standards (All Upland Ecological Response Units Ss2-4) including exceptions for specific circumstances under which mechanical harvest could occur.

The management of any one wildfire is specific to location and environmental conditions. The fires referenced by some of the commenters did not happen under favorable weather conditions and suppression activities were limited by steep, rugged terrain and concerns for firefighter safety. Management decisions on these fires were not made for restoration purposes, they were made to protect human life and safety—in that terrain and under those weather conditions. Furthermore, patches of stand-replacement fire are part of the natural fire regime in some high-elevation conifer types such as Spruce-Fir Forest and Mixed Conifer with Aspen. Depending on the terrain, patches as large as 1,000 acres could still be within the natural range of variability and desired conditions.

Grasslands, woodlands, and warm, dry forest types are all forage producing rangelands on the Gila National Forest. In all these systems, fire plays an important role in woody species dynamics that affects the status of key ecosystem characteristics, including fuel and watershed conditions. The effects of fire are complex and depend on fire weather and site conditions such as total fuel load, fuel types and fuel continuity, among other factors. This is discussed in the draft and final EIS in the Upland Vegetation, Fire Ecology and Fuels, and Soil and Watershed Resources sections of the analysis.

Literature Cited in Response:

Abedi, M., E. Zaki, R. Erfanzadeh, and A. Naquinezhad. 2017. Germination patterns of the scrublands in response to smoke: The role of functional groups and the effect of smoke treatment method. South African Journal of Botany 115 (2018):231–236.

Brown, N.A.C. and J. van Staden. 1997. Smoke as a germination cue: a review. Plant Growth Regulation 22:115–124.

Collette, J.C. and M.K.J. Ooi. 2017. Germination ecology of the endangered species *Asterolaisa buxifolia* (Rutaceae): smoke response depends on season and light.

Rodriguez-Trejo, D.A. and P.Z. Fulé. 2003. Fire ecology of Mexican pines and a fire management proposal. International Journal of Wildland Fire 12:23–37.

Comment 16: Commenters are concerned about the use of large chain-dragged anchors to remove trees and other vegetation because it is an outdated technique that destroys the landscape and benefits only the beef industry. Commenters state that the assessment report described it as a legacy action that is no longer practiced, but the chaining guidelines in the 1986 forest plan have been wrongfully stripped from the revised plan. Commenters point to All Upland Ecological Response Unit standards 2 through 4 and state that the remaining limitation constrains chaining on a tiny subset of soil types, which means it could be used across half of the entire forest. Commenters also note that chaining is included in the forestwide Management Approach to Restoration and state their preference that chaining is not characterized as restoration and be prohibited outright. Commenters state that failure to do so violates requirements to use the best available science because there is not a single published scientific article that describes chaining as a tool for restoring any attribute of a degraded ecosystem. Commenters discuss studies of chained sites and the detrimental ecological and hydrologic effects and assert that no slope restriction can mitigate those effects. **Associated Letters: 142, 162, 216, 712, 718.1 through 718.3873, 718.14, 718.18, 718.3864 and 718.3855, 725.1 through 725.7**

Response: Thank you for bringing this oversight to our attention. Standard 4 should have contained the same slope limitation for chaining as Standard 3, limiting that activity to slopes under 15 percent, upholding the guidelines in the 1986 forest plan and specifying a preference for mastication or plucking over pushing or chaining. Standard 2 prohibits pushing and chaining on the forest's most erodible soils regardless of slope. These standards were developed to adhere to the forest supervisor's intent to keep all tools in the toolbox, whether we are likely to use them or not, and mitigate the effects of said tools. Regardless of which tools a particular project-level proposal considers, a separate National Environmental Policy Act process with public engagement will be required to authorize that use.

The final alternatives address our oversight and the other option identified by the forest supervisor. Alternatives 2 and 5 now contain the slope limitation. Standards 2 through 4 are removed in alternatives 3 and 4, leaving those decisions entirely to the project level.

Further, we recognize we did not provide the same treatment for pushing and chaining in the EIS as we did for the other types of mechanical treatments. We corrected this in the final analysis. The best available science is just one of the considerations the forest supervisor will weigh in making the decision about which of these options to incorporate into the final plan.

Comment 17: Commenter points to the discussion around mastication in the Soil and Watershed Resources Effects Common to All Alternatives around and suggests the plan should prohibit mastication. **Associated Letter: 233**

Response: There are tradeoffs associated with every management activity that vary with site characteristics and conditions. Under any alternative, mastication would be used on sites where best management practices to mitigate impacts to soil and water could be implemented. The standard requiring consideration of the Terrestrial Ecological Unit Inventory information, which contains a mastication limitation interpretation, will aid in identifying these sites and best management practices.

Comment 18: Commenters state that the draft documents do not adequately analyze or come to the proper conclusions regarding the conflict between herbaceous fine fuels needed to carry low-intensity fire within its natural range of variability and forage for livestock. Commenters state the draft plan contains contradictory language and direction, pointing to the grassland desired condition that states: "Fire plays its natural role on the landscape, thereby limiting conifer encroachment. Vegetation height and density carry frequent, low-severity fire." Commenter finds this at odds with a statement in the Livestock Grazing section that says: "[t]he production of forage to support livestock grazing is a benefit human derive from many of the forest's ecosystems." Commenters say these desired conditions cannot coexist and that the draft documents occasionally acknowledge this with statements like "…livestock grazing can compete with fire restoration objectives because the fine fuels necessary to support fire occurrence, spread, and flame lengths sufficient to thin stands, is also the forage crop grazing permittees depend on. There are times and locations where a lack of adequate fuel loading is the challenge to restoring the natural role of fire."

Commenter states: "across all alternatives, livestock numbers remain the same as current AUMs or are slightly increased" and asserts that is in direct competition with the desired condition that livestock use provides for conditions that support movement toward natural fire regimes. Commenter quotes a statement in the draft documents about extreme fire weather conditions becoming the norm under future climate and asserts this makes the situation worse. Commenter states that many studies confirm that livestock grazing simply does not support movement toward natural fire regimes and the failure to consider one or more reasonable alternatives that reduces livestock grazing to achieve the desired condition violates the National Environmental Policy Act.

To address their concerns, commenters suggest the plan should maximize the resistance and resilience of the plan area by ensuring that primary ecological processes like fire are functioning properly within their natural range of variability. Commenters state: "In much the same way that economic considerations have had to take a back seat to public health concerns during the COVID-19 pandemic, traditional economic uses of the forest must now take a back seat to ecological integrity during the life of the new Forest Plan. In fire adapted landscapes, particularly grassland landscapes, that means the Forest Service must now prioritize fuel over forage. The Forest Service cannot have it both ways; fires burn - or not - depending on available fuel loads." Further, commenters recommend reasonable alternatives that reduce livestock grazing to achieve desired conditions regarding fine fuels be considered in the final EIS. **Associated Comments: 712 and 726**

Response: We acknowledge the opinion expressed by the commenters. The plan and environmental analysis disclose and discuss a challenge that can and has been met through adaptive management, and cooperation and coordination with permittees. The concern that the plan is to increase grazing appears to us to be founded in a misinterpretation of the analysis methods for evaluating the effects of the alternatives and the fact that the draft table summary of alternatives included differences between alternatives and differences in the potential effects of the alternatives. The final summary of alternatives only includes the differences between alternatives, with a separate section at the conclusion of the analysis with a summary of effects.

The projected change in animal unit months was used as an analysis indicator to evaluate the effects of the alternatives on forage production. There are no proposals to raise or lower cattle numbers or allowable use.

Those decision-making processes would be specific to each allotment and the conditions on the ground. Nevertheless, the estimated change in animal unit months is far from dramatic, ranging from a decline of 8 percent (alternative 1-no action) to a maximum increase of 4 percent (alternative 5).

Increases in forage for livestock or wildlife may or may not be a secondary benefit of plan objectives for vegetation communities for various reasons including climatic factors, as explained in the Analysis Methodology section of the Livestock Grazing analysis. The 2012 Planning Rule also requires plans provide for integrated resource management, which is defined as "Multiple use management that recognizes the interdependence of ecological resources and is based on the need for integrated consideration of ecological, social and economic factors" (36 CFR 219.19), without one being a priority over another" (Preamble to 36 CFR 219).

Comment 19: Commenter suggests the plan should not recommend or incentivize large-scale mechanical treatments, artificial fertilization, or plantation style management because watersheds, riparian areas, old growth forest and vulnerable habitats essential for biodiversity and ecological function will experience potentially dramatic and irreversible impacts. **Associated Comment: 162**

Response: There is nothing in the plan that incentivizes artificial fertilization. Plantation style management would not contribute toward achieving or maintaining desired conditions for vegetation and is not supported by the plan. Alternatives 1 through 4 contain objectives that include mechanical treatments, all of which could include large acreages. Alternative 2 emphasizes fire as the primary restoration tool. Alternatives 3 and 4 emphasize mechanical treatments and limit the use of prescribed fire. Alternative 5 limits mechanical treatments to the wildland-urban interface unless there is scientific evidence that mechanical treatment is necessary in a specific location to return fire to the landscape with effects we can accept. All alternatives contain desired conditions, standards, and guidelines to prevent irreversible damage to soil, slope, or other watershed condition as required by the National Forest Management Act and the 2012 Planning Rule (see Timber, Forest, and Botanical Products final plan direction). The effects of plan direction on watersheds, riparian areas, and vegetation communities, including old-growth attributes (old trees, standing dead trees, downed logs and structural diversity) are analyzed in the FEIS.

Comment 20: There is a concern that Gila National Forest staff and leadership do not understand where the mission of the Grant Soil and Water Conservation District is in line with the draft plan and where it is contrary. Commenters state that through times of alignment and times of differences, the two entities have always been able to respect each other and accomplish things. Commenters recognize forest management must follow the 2012 Planning Rule direction but are concerned about the radical shift from managing fire for resource protection to managing fire as a natural process and the primary restoration tool. Commenters are concerned that this is going to make it difficult for the relationship to continue to be productive without one entity or the other having to ignore their responsibilities and commitments to the local public. **Associated Letter: 24**

Response: The 2012 Planning Rule calls for a different approach of measuring the success or failure of national forest management with a shift from outputs to outcomes. The use of fire as a restoration tool and the restoration of natural fire regimes ecosystems has played a role in national forest management, specifically management of the Gila National Forest, for over 40 years. Incrementally over this time, scientific understanding of disturbance regimes and fire ecology has grown, fire management capacity and ability has grown, some of the technology that supports it has advanced, the pace and scale of the fire program has grown, and terminology has changed. Prevention and suppression remain important aspects of the fire management program as indicated with plan direction in the wildfire and fuels management section (DCs 1-4, Ss 1-4).

Figures 4 through 9 in volume 1 of the FEIS affected environment description for upland vegetation, fire ecology and fuels display data describing the changes in areas experiencing fire and severity since 1985.

Figure 4 displays the area experiencing wildfire and illustrates an upward trend from 1985 to approximately 2000 after which the trend leveled off. Figure 5 displays the area and percentage of wildfire acres managed for resource benefit and illustrates an upward trend from about 1987 until approximately 2009 after which the trend leveled off. Figure 6 displays the area experiencing prescribed fire and illustrates an upward trend until approximately 2004 after which the trend leveled off. Figures 7 through 9 display trends in severity, none of which show substantial change over time.

The draft and final revised plan have objectives with a broad range of acres to be treated with either mechanical treatment, prescribed fire or naturally ignited fire, or a combination of these tools. Alternative 2, the proposed action alternative, does not call for a specific number of acres to be treated with a specific tool. This will be determined at the project level after considering site-specific circumstances. The plan objectives provide for budget constraints at their lower limit. At their upper limit, they support the Forest Service initiative to increase the pace and scale of restoration and job creation (USDA FS 2012) and answer the call of the restoration science community to increase the pace and scale of our efforts (for example McCarthy 2012; McCauley et al. 2019). The development of these objectives is described in the draft and final plan in the background information section for Ecosystems and Watersheds under the heading Upland Ecological Response Unit Objectives.

The range of alternatives, which was developed based on public input, and the EIS explore ecological, cultural, and socioeconomic consequences of focusing on different vegetation type groupings (forest/timber types, historically open canopy woodlands and grasslands, or a combination) and emphasizing different tools (for example, mechanical treatments or fire or a combination). The forest supervisor will decide on the relative emphasis that the plan places on which vegetation types and which tools based on public input and the analysis in the FEIS.

Lastly, community relationships and collaboration are central themes that run throughout the plan. Collaboration is a process that seeks a win-win outcome, not a win-lose or lose-lose outcome as described in the last paragraph of the comment. We look forward to working with the conservation districts in a collaborative manner as we implement the plan.

Literature Cited in Response:

McCarthy, P.D. 2012. Climate Change Adaptation for People and Nature: A Case Study from the U.S. Southwest. Advances in Climate Change Research, 3(1):22-27. DOI: 10.3724/SP.J.1248.2012.00022.

McCauley, L.A., M.D. Robles, T. Woolley, R.M. Marshall, A. Kretchun, and D.F. Gori. 2019. Large-scale forest restoration stabilizes carbon under climate change in Southwest United States. Ecological Applications, 29(8), 2019, e01979.

USDA FS (United States Department of Agriculture - Forest Service). 2012. Increasing the Pace of Restoration and Job Creation on Our National Forests. National Headquarters, Washington D.C. pp. 8

Comment 21: There are differing perspectives on which vegetation types the plan should place restoration emphasis on. Some would like the plan to prioritize grasslands and historically open-canopy woodlands. Rationale presented by commenters that supports this option includes woody species encroachment is eliminating grasslands; there are benefits to wildlife habitat and food supplies; there is less erosion in intact grasslands and the soil is healthier; historically, these vegetation types covered more of the forest. One commenter associates the following with this preference: “management should continue to use fire as a cost-effective tool but catastrophic ‘let-burn’ fires add to global pollution and climate instability.”

Other commenters would prefer the emphasis be on timbered vegetation type because it would provide jobs, support a stable water table, and reduce fire risk. Still others would prefer the priority is placed on those vegetation types that were historically maintained by frequent, low severity fire because it would support the real natural, ecological balance. Some of those that prefer management focus on these vegetation types

suggest that areas that could be treated to limit large landscape-scale wildfires and provide opportunities to protect old-growth mixed conifer should be prioritized. A few of these commenters express concerns about how management has focused too much on endangered species and allowed juniper to take over, which reduces forage, increases water use, and is detrimental to riparian vegetation communities.

Some commenters would like to see priorities balanced across all vegetation types with the flexibility to shift priorities in response to changing conditions because all of them are important, it's hard to predict where the need will arise, and there are too many variables to limit management to one type of vegetation. A few of these commenters observe little difference between this option and providing no emphasis in the plan (see next paragraph). Rationale that supports this option includes: the ability to respond to future bark beetle infestations, fires, invasive species, climate change, budgets and staffing, and local community needs.

Others would like the plan to provide no emphasis and let work be guided by where a restoration need is identified and whatever opportunities present themselves. Additional rationale that supports this option includes: it is the least cost; it pleases the most people; it accommodates all industries; it requires investment in new equipment; it supports growing recreation interests; it would allow the removal of juniper and promote grasses and higher water yield.

Still others would like management to do nothing and let nature take care of itself because it is the least cost option or have other suggestions about how the plan should prioritize where restoration activities occur. These suggestions include: prioritizing migration corridors to ensure the persistence of wildlife species; prioritizing water quality, watershed improvements and riparian and aquatic ecosystems because they are the most important to protect biodiversity; organize by watershed for efficiency; focus on maintaining roads and trails; prioritize grazing and get rid of the wolves; restore burned areas because it's dangerous near trails and frequent trail maintenance is needed to respond to blow down events; or prioritize by highest biodiversity and presence of rare or federally listed species. **Associated Comments: OWS-1 through OWS-144**

Response: We acknowledge the diversity of perspectives on which ecosystems should receive the restoration emphasis and that there are advantages and disadvantages, risks and tradeoffs associated with prioritizing where the work gets done. The forest supervisor will consider public input and the analysis in the FEIS to determine the level of priority and the degree of flexibility to change priorities the final plan will provide.

Comment 22: Commenters express concern about targeting native alligator juniper, observing that they provide marvelous habitat, shade and refugia for wildlife and humans at lower elevations. Furthermore, they are obviously resilient to drought and higher temperatures, so why would they be removed when other tree species are at such high risk of succumbing to drought and climate change? **Associated Letters: 152, 167, 579, 653, and 684**

Response: All southwestern conifers have some degree of vulnerability to drought and climate change depending on site-specific climate and what that is in relation to the range of climate conditions a particular species is adapted to deal with. Any tree species that occurs at a density that was not supported historically and contributes to altered fire regimes at a given location could be the target of restoration activities, but the plan does not propose wiping out any native species. It proposes retaining the natural diversity of species and community composition (All Upland Ecological Response Units LC-DC3a). The plan promotes resistance and resilience to climate change by reducing tree densities to the extent that they support desirable fire behavior.

Comment 23: Commenter notes analysis methodology in the Soil and Water Resource section of the DEIS related to area designations and climate change impacts on page 135. Commenter then states: "Biological soil crusts react to compression and disturbances such as mechanical treatments – contributions to soil function are reduced." **Associated Letter: 233**

Response: All the effects related to mechanical treatments are discussed in the narrative the commenter points to. Those effects are referenced in the remainder of the analysis to eliminate repetition.

Comment 24: Commenter asks: "Is the cost of bringing trails and roads back to standard and the cost of restoration and closing timber access created roads included in the contractor bid for mechanical treatments?" **Associated Letter: 233**

Response: It depends on the type of contract or agreement and what is specified in contracting documents. Typically, contractors are responsible for restoring skid trails and decommissioning temporary roads constructed for the project and hiking trails that are damaged by contractor activities. They may or may not be responsible for maintenance or repair of National Forest System roads, again depending on the type of contract or agreement.

Comment 25: Commenter suggests restoration efforts should mirror the Cibola National Forest's collaboration with the Forest Stewards Guild and similar stakeholders with thinning and other forest management tools. **Associated Letter: 579**

Response: The plan supports such collaborative efforts, and we look forward to strengthening existing relationships and building new ones as we implement the final plan's restoration objectives.

State-and-Transition Modeling

Comment 26: Commenter asserts that state-and-transition modeling is an inappropriate tool for basing management decisions in a non-stationary climate and suggests an ecosystem modeling-based approach should be used to capture the emergent system properties. Commenter states: "State-and-transition modeling frameworks, such as VDDT, require that the model developer parameterize all of the possible vegetation states that can occur and the probability of transition between different vegetation states. Further, page 60 of the draft plan states that the model was refined using Forest Vegetation Simulator (FVS) modeling. There are multiple problems with this approach that can be addressed by using more current, scientifically informed simulation approaches. The first issue is that the states are constructed based on ERUs, which are derived from a model that has uncertainty associated with it. As noted above, a state-of-the-art approach, such as that developed by Ohmann and Gregory (2002), would more accurately characterize the initial vegetation conditions and provide for a way to estimate the uncertainty associated with the resultant vegetation map. As stated in appendix B of the DEIS, "transition pathways represent a disturbance or natural growth in the absence of disturbance." Since FVS was used to model growth, the transition probabilities for natural growth are going to be faulty because they do not account for the effects of climatic conditions on tree growth (Hurteau et al. 2014a). Further, the DEIS states that wind and weather stress "is an important and active process," but that it "could be ignored without significantly influencing outcomes."

Ignoring the effects of weather on transition probabilities is not supported by the robust body of scientific literature on this topic. Drought-related tree mortality is increasing globally and the in the southwest and is projected to continue increasing (Allen et al. 2015, Williams et al. 2013). There is no scientific basis for ignoring the potential for weather/climate to cause state transitions. In fact, there is overwhelming scientific evidence that increasing temperature and hotter droughts are causing state transitions and will continue to cause state transitions into the future. The DEIS (page 8) also provides a clear indication that this is an inadequate approach for modeling management planning because the model was incapable of capturing the effects of fire management on the transition probabilities. Simulations of the Santa Fe Fireshed demonstrate that widespread application of ecologically appropriate fire can decrease the probability of a fire-induced transition from forest to non-forest (Krofcheck et al. 2019). The DEIS does not provide any indication that the interaction of different disturbances were accounted for when parameterizing transition probabilities. Yet, interactions between different disturbances and management activities do occur and can influence the outcome in terms of both vegetation type and structure (Scheller et al. 2018). Addressing these limitations will

require the use of a modeling framework that can account for the effects of non-stationary climate, disturbance, management, and their interaction on vegetation condition. Process-based ecosystem models that can represent the influence of these factors on vegetation allow for emergent properties to occur within the system. This fact overcomes a major limitation of state-and-transition models, which is that the model user parameterizes all the states and transition probabilities, limiting the potential outcomes to only those that the model developer has envisioned.

> "Climate change impacts were not analyzed, but the robust scientific literature is clear that climate change impacts are already occurring and are likely to cause additional significant effects with additional warming. Climate change impacts need to be analyzed to create a robust management strategy that meets the requirements of the Forest Service Handbook 1909.12."

Associated Letter: 78

Response: Forests have generated ecosystem models for each ERU, not to forecast conditions, but for purposes of approximating trends in key ecological indicators such as seral state diversity, consistent with agency planning directives (FSH 1909.12 Ch. 10, 12.14c). For effects analysis (EIS), the forest provided additional modeling for purposes of contrasting management alternatives in their ability to achieve desired conditions, according to different levels of mechanical treatment, prescribed burning, managed fire, and other active and passive management. Ecosystem models were developed with variables configured (parameterized) based on quantitative inputs for succession and growth, disturbance frequency and severity (fire, insects, and disease), and for frequency and effect of local management activities including fire management (Weisz et al. 2009, Weisz et al. 2010, Weisz and Vandendriesche 2013). Forest Vegetation Simulator (FVS) models were developed to address all possible vegetation states that can occur along with the probability of transition among states, with FVS outputs resulting in multiple succession pathways in addition to classic succession sequences. Effects of stand-level disturbance and climate are inherent to FVS and the FIA sample data used to train FVS runs. Existing vegetation mapping was used to characterize the initial vegetation conditions for ecosystem modeling.

The individual ecosystem model states were based on (1) existing vegetation technical guide diameter and cover breaks (Brohman and Bryant 2005), (2) characteristic structure conditions (e.g., woodland models typically wouldn't require separate 20-inch and greater diameter states), and (3) on management conventions (e.g., the need for multi-aged states). As described in the Assessments, forested communities are assigned to states based on the size class of greatest abundance (basal area, canopy cover) regardless of overall size class diversity. As such, the density of smaller diameter trees in a given plant community is often greater than the indicated size class, particularly in fire-adapted forests and woodlands. Vegetation states for some forest models are necessarily stratified by one, two, and three-plus tree cohorts.

While the Vegetative Structural Stage (VSS) categories were considered for defining vegetation states within ecosystem models, VSS is not consistent with more recent technical guidance (Brohman and Bryant 2005), is calibrated only to forest life zones, and is tooled mostly for even-aged infrequent-fire forests.

Ecosystem models were also used to determine the natural range of variation for seral state diversity based on characteristic diameter growth, insect and disease occurrence, and the historic fire regime including human influence (LANDFIRE 2010, TNC 2006). Natural range of variation was used to inform desired conditions but is not a management target in and of itself. Also, we find no research to support using imputation mapping of current conditions to determine natural range of variation, let alone dismiss the wealth of research that was applied to characterize natural range of variation. Seral state percentages for the reference condition represent the approximate mid-point of the range of desired conditions described at the landscape scale, are used primarily to compute overall system departure, and are not intended as a target or prescription.

A stable geographic distribution of ERUs was assumed in the current suite of ecosystem models given the focus on restoration and other immediate management concerns of the recent planning cycle. Though site

potential patterns are still largely intact, the Forest Service is considering modifications for the next generation of ecosystem models to integrate climate forcing. The current generation of models facilitates some novel states including the transition of fire-adapted forests into long-term uncharacteristic grass/shrub conditions following high-severity fire (as with many post-fire plant communities of the Cerro Grande and Los Conches Fires). The current ecosystem models are appropriate for purposes of approximating trends in key ecological indicators consistent with agency directives for ecological assessment (FSH 1909.12 Ch. 10), and for contrasting management alternatives in an effects analysis.

Literature Cited in Response:

Brohman, R. and L. Bryant, eds. 2005. Existing Vegetation Classification and Mapping Technical Guide. Gen. Tech. Rep. WO–67. Washington, DC: U.S. Department of Agriculture Forest Service, Ecosystem Management Coordination Staff. 305 p.

LANDFIRE. 2010. LANDFIRE 1.1.0 vegetation dynamics models and Biophysical Setting descriptions. Model files and reports available online http://www.landfire.gov/index.php, October 2010. USDA Forest Service, US Department of the Interior.

TNC (The Nature Conservancy). 2006. Southwest Forest Assessment Project: Historical range of variation and state and transition modeling of historical and current landscape conditions for potential natural vegetation types of the southwestern U.S. The Nature Conservancy technical report available online http://azconservation.org/projects/southwest_forest_assessment, November 2013. TNC Arizona Chapter, Tucson, AZ.

Weisz, R., and D. Vandendriesche. 2013. Use of the Forest Vegetation Simulator to quantify disturbance activities in state and transition models. Pp. 143-166 in B.K. Kerns, A.J. Shlisky, and C.J. Daniel, eds. Proceedings of the First Landscape State-and-Transition Simulation Modeling Conference, 14-16 June 2011, Portland, OR. USDA Forest Service Gen. Tech. Rep. PNW-GTR-869. Pacific Northwest Research Station, Portland, OR.

Weisz, R., F.J. Triepke, and R. Truman. 2009. Evaluating the ecological sustainability of a ponderosa pine ecosystem on the Kaibab Plateau in Northern Arizona. Fire Ecology 5: 114–128.

Weisz, R., F.J. Triepke, D. Vandendriesche, M. Manthei, J. Youtz, J. Simon, and W. Robbie. 2010. Evaluating the ecological sustainability of a pinyon-juniper grassland ecosystem in northern Arizona. Pp. 321-336 in T. B. Jain, R. T. Graham, and J. Sandquist, eds., Proceedings of the 2009 National Silviculture Workshop, 15-19 June 2009, Boise ID. USDA Forest Service proceedings RMRS-P-61. Rocky Mountain Research Station, Fort Collins CO.

Comment 27: There is a concern that models have not yet been built for riparian Ecological Response Units and a suggestion that this needs to be done as soon as possible to support restoration efforts under the revised plan. **Associated Letter: 233**

Response: All models have strengths and weaknesses. State and transition models, such as those developed for the upland vegetation communities, may not offer the necessary functionality to be useful in many riparian restoration projects. Models that support riparian restoration may need to account for variable flow conditions to ensure proper design. Many models with that functionality currently exist and are ready for use.

Wildland Fire and Fuels

Comment 28: There is support for plan content related to fire management. **Associated Letter: 561**

Response: This content is retained in the final plan.

Comment 29: There is a suggestion that the plan should have a map showing burned areas and fire severity across the forest. **Associated Letter: 39**

Response: Fire history and severity data changes annually. This suggestion would require a commitment to do an administrative change every year to keep the map from becoming outdated. At the scale the map would need to be it would be difficult to interpret given the overlap between fires across the period of record. Fire history and severity information are presented in the FEIS. This can be found in the Upland Vegetation, Fire Ecology and Fuels Affected Environment section. Forest staff can provide the mapped data to the public by request.

Comment 30: There is a question about fire management policy in wilderness areas. Commenter is wondering why the plan does not mention the "let it burn" philosophy and is wondering if policy has changed. Commenter notes that if the 2012 Baldy Fire was "managed" it could have been put out when it was knocked down by a light snow, but instead it erupted and merged with the Whitewater Fire to become the largest wildfire in New Mexico history. **Associated Letter: 39**

Response: There has not been, nor is there, a "let it burn" philosophy or policy. All fires are managed whether they are in wilderness or not. Not all fires are staffed with firefighters on the ground. The fire management decision-making is a risk-based and dynamic process that considers human and environmental values in the context specific to each fire. Human life and safety are always the number one priority in fire management decision-making processes. The 2012 Baldy Fire was in very remote and difficult terrain. Based on the information available at the time, it was determined that the risk to firefighter safety was greater than the risk the fire posed if managed without firefighters on the ground. Conditions changed and so did the fire management strategy and action.

Comment 31: Commenter notes that if the 2012 Baldy Fire was "managed" it could have been put out when it was knocked down by a light snow, but instead it erupted and merged with the Whitewater Fire to become the largest wildfire in New Mexico history. Commenter was encouraged by plan direction and a discussion in the DEIS and pleased that fire management will work to actively suppress "uncharacteristic fire" and that there is more flexibility in how fire is managed in wilderness areas to protect old-growth forests, botanically sensitive or unique areas and an accompanying suggestion that the plan should say something about managers having more discretion for declaring emergencies so aerial and mechanical fire suppression tactics can be utilized in wilderness, as well as slurry. **Associated Letter: 39**

Response: Please refer to response to comment 30 above regarding how fire is managed. There is very little indication at the time fire management decisions are being made whether the effects of any given fire will be uncharacteristic or not. All plan direction related to fire management, regardless of whether it is in designated wilderness or not, is consistent with national interagency policy, agency handbook and manual direction. Plan direction is consistent with this direction. It cannot increase discretion or override the direction provided by law, regulation or interagency and agency policy as is suggested. This discussion has been refined to better reflect both the ecological and management context.

Comment 32: There is a question about why fire managers on the Gila National Forest conduct prescribed fire in the spring when it's typically dry and windy and the rainy season is a long ways off because this is not the historical period for lightning-caused fires and there is too much potential for fires to get out of control. **Associated Letter: 39**

Response: We acknowledge there is always some level of risk associated with using fire as a management tool (EIS Upland Vegetation, Fire Ecology and Fuels Effects Common to All Vegetation Types and Alternatives, Soil and Watershed Resources Effects Common to All Alternatives, Riparian and Aquatic Ecosystems Effects Common to All Alternatives for examples).

Each prescribed fire has a burn plan, which specifies the range of weather conditions needed to accomplish management objectives and move toward desired conditions for vegetation and natural fire regimes (Wildland Fire and Fuels Management DC 5a-c; Upland Ecological Response Units DC 1; individual Ecological Response Units DC numbers vary; Watersheds WS-DC 1c). Weather conditions are repeatedly measured over the duration of the prescribed fire to make sure they are within that range of conditions specified in the burn plan. We must also comply with the New Mexico Environment Department's Smoke Management Program weather requirements for ventilation conditions. Additional measures to prevent prescribed fires from escaping control have been identified and are being implemented because of the lessons learned from the 2022 Hermit's Peak/Calf Canyon Fire.

Comment 33: There is a suggestion that the plan should provide direction for fire management under circumstances where natural fires or other unforeseen issues arise that cannot be controlled. This direction would be an emergency plan of action and include the analysis of air quality, watershed, and vegetation effects, species diversity, and overall health of the ecosystem. **Associated Letter: 42**

Response: The fire management decision-making process is dynamic and specific to each fire and its circumstances. It is not feasible to provide plan direction for all the combinations of variables or possible variables that could arise. National, interagency policy direction provides strategic direction for fire management. Plan direction is consistent with national interagency policy direction. The decision-making process utilizes decision support applications such as the Wildland Fire Decision Support System. These types of tools are risk-informed and include environmental analysis as explained in the background information for Wildland Fire and Fuels Management in the plan. Additional measures to prevent prescribed fires from escaping control been identified and are being implemented because of the lessons learned from the 2022 Hermit's Peak/Calf Canyon Fire.

Comment 34: Commenters are concerned about the use of fire suppression chemicals containing perfluoroalkyl substances, which have been linked to cancer, and the fact that it is not discussed in the forest plan. Commenters point to an article in the *New York Times* and state these chemicals have been destructive to groundwater resources, destroyed entire lakes (Lake Holloman) and riparian areas, and endanger firefighters. **Associated Letters: 10, 567-9, and 663-9**

Response: While beyond the scope of the forest plan, the commenter's concern is a valid one that we share. That is why there are retardant avoidance zones (Wildland Fire and Fuels Management S5). Fire management decisions are made on a risk-management basis and there are always tradeoffs. Retardant is used when the risk of not using it is higher. Researchers have investigated alternative fire suppressant chemicals (for example Tapscott et al. 2001). Hopefully, substances with lower toxicities will be developed in the future.

Literature Cited in Response:

Tapscott, R.E., R.S. Sheinson, V. Babushok, M.R. Nyden, and R.G. Gann. 2001. Alternative Fire Suppressant Chemicals: A Research Review with Recommendations. National Institute of Standards and Technology Technical Note 1443. U.S. Department of Commerce Technology Division, Washington, D.C. pp. 79.

Wildland-Urban Interface

Comment 35: There is concern that the map displaying urban interface areas doesn't show the area around the Flying-A subdivision and other private land on the Redrock Road, which have even been treated but does show areas outside the forest's administrative boundary. In fact, there is no urban interface area in the Burro Mountains displayed on the map. **Associated Letters: 39 and 233**

Response: The data used to make the map is generated from community wildfire protection plans that were reported upward for aggregation at the national level. Clearly, there was an oversight, or an error made

somewhere in the reporting or aggregation process. The map can be updated with an administrative change when the data are corrected. Areas outside the forest's administrative boundary are displayed because it provides context in terms of the broader landscape.

Comment 36: There is support for efforts being made to treat wildland-urban interface areas and a concern that minimum yearly monitoring of conditions in the urban interface are not aggressive enough. There is concern with figure 5 as the commenters noted a reservation located on wildland-urban interface and suggestion that the minimum monitoring should be higher on tribal lands since they do not have the infrastructure to manage them on their own. **Associated Letter: 44**

Response: There are no reservation lands depicted in figure 5. The closest tribal lands are located farther away than the scale of the figure includes. We agree that conditions in and adjacent to the wildland-urban interface are very important. The management approach Fuel Reduction and Relationships in the management area Wildland-Urban Interface section of the plan says: "At least 10 percent of the WUI is monitored and evaluated annually." Management approaches describe the principal strategies and program priorities intended to carry out projects and activities developed under the plan. They may discuss potential processes such as analysis, assessment, inventory, project planning or monitoring, but they shouldn't create unrealistic expectations regarding the delivery of programs (FSH 1909.12 Chapter 20 Section 22.4). The intent of using the "at least" language is to maintain realistic expectations of program delivery. It is based on what we've been able to accomplish in the recent past. More could be done if there are resources to accomplish it and the need is there.

Comment 37: There is a request that the plan quantify the geographic extent of the wildland-urban interface and the distribution of these areas among the vegetation types. The commenter is concerned about how movement toward desired conditions for the wildland urban interface might impact movement toward desired conditions vegetation and other resources at the forest scale. Specifically, there is a concern that the cumulative effects of wildland-urban interface projects have a great potential for creating conflict with other desired resource conditions. Quantifying how many acres of urban interface exist in the different vegetation types would allow for a more effective analysis of this concern, which the draft EIS fails to do.

Additionally, the plan should provide more tangible operational guidance for wildland-urban interface delineation and quantify the proportion of area within each vegetation community where ecological resource conditions could be superseded by fuel reductions or other resource concerns. While understandable, quantification and analysis of these things is still needed to determine what proportion of the forest may be expected to represent sub-optimal conditions for wildlife habitat and to provide baseline data to measure future change and effective habitat loss on the forest. **Associated Letter: 151**

Response: The quantification and analysis requested has been added to the final EIS in the Upland Vegetation, Fire Ecology and Fuels section.

Comment 38: Commenters ask how wide the urban interface area is, if mine property is considered to be urban interface, and if property owners are keeping their property thinned to the forest boundary. **Associated Letters: 232, 232, and 233**

Response: The urban interface area varies and is identified by each county's community wildfire protection plan. The agency has no jurisdiction on private property, but the forest's fire prevention program engages with community members to provide information about the importance of creating and maintaining defensible space and the resources available to assist private property owners in doing so. Desired condition 4 in the Wildland Fire and Fuels Management section of the plan in chapter 1 provides direction that continues support of information and collaborative education programs related to defensible space and fire prevention.

Comment 39: Commenter states that protecting private property owners from wildfire by heavily subsidizing the thinning of surrounding woodlands is in effect a subsidy of those property owners and should not be considered a high priority for funding. Commenter states they own property within the forest's administrative boundary and asserts personal responsibility for maintaining a fire-wise environment. Commenter suggests there are many other needs identified in this draft plan that should be considered higher priority uses of limited funding. **Associated Letter: 601**

Response: We acknowledge the opinion of the commenter.

Comment 40: Commenter is concerned because they were unable to find any specific mention of the Forest Service's relationship, much less any intended cooperative action, with county wildfire protection plans or groups in the first two volumes of the EIS despite numerous references in the Grant County Wildfire Protection Plan to partnering with the Forest Service. Commenter notes the discussion of the county wildfire protection plan in appendix E of the environmental analysis under the heading Coordination with Other Plans including the following statement: "Either way, management approaches promoting closer collaboration and coordination with the CWPP and its parties are included in the plan.V.3, p. 54." However, commenter states it is a serious omission that there is no evidence of this in the first two volumes of the environmental analysis. **Associated Comments: 696**

Response: Commenter is correct that the community wildfire protection plans and our relationship with those groups is not specifically mentioned in volumes 1 and 2 of the DEIS. The reference in volume 3 was to the draft plan, which does specifically identify these plans and groups as partners in the Annual Pre-Season Landscape Risk Assessment and Fire, Fuels and Relationships management approaches in the Wildland Fire and Fuels Management section of the plan and in the Fuel Reduction and Relationships management approach in the Wildland-Urban Interface section of the plan.

All Upland Ecological Response Units

Desired Condition 2

"The adaptive capacity of the native vegetation communities to disturbances of varying frequency, extent and severity, including long-term drought and climatic variability is high, with adaptive capacity measured by the area where structure, composition, process, function and connectivity are restored and maintained."

Desired Condition 7

"Ecological conditions support habitat quality, distribution, abundance, and connectivity to self-sustaining populations of all native and desirable non-native plant and animal species that are healthy, well distributed, and genetically diverse, including federally listed species, species of conservation concern, and rare and endemic species. Conditions provide for life history requirements, predator-prey interactions, and natural population fluctuations of all species within the capability of the landscape."

Desired Condition 8

"Habitat availability, configuration, and connectivity allows wildlife populations to adjust their movements (seasonal migration, foraging, etc.) in response to long-term trends in climate. Populations of rare and endemic species that rely wholly on ERUs with high or very high vulnerabilities are known and conservation measures are in place."

Comment 41: There is support for these desired conditions because they support habitat connectivity. **Associated Letter: 652**

Response: Thank you for your comment.

Comment 42: Commenter suggests adding human land use to the end of the first sentence in DC8. **Associated Letter: 151**

Response: This suggestion has been incorporated into the final plan.

Standard 4

"On soil types not addressed by previous standards, ground-based mechanical restoration treatments will be limited to 40 percent rise. Timber harvest on steeper slopes are restricted to aerial technologies and appropriate cable systems unless site-specific analysis determines that fire behavior poses a greater risk to watershed or urban interface values and the technology is available to do so safely."

Comment 43: Commenter supports the old growth desired conditions for spruce-fir and mixed conifer forests but is concerned about the old growth desired conditions for ponderosa pine forest. Commenter states they commented on this previously and remain concerned because spruce-fir and mixed conifer forests largely occur where logging is prohibited or operationally limited, but ponderosa pine forests are typically found in more "manageable" areas. Commenter points to All Upland Ecological Response Units standard 4 as evidence that the plan is setting a lower bar for old growth retention in ponderosa pine forests that are not protected by steep slopes that limit logging operations. As such, plan components like the one highlighted here establish a lower bar for old growth retention in ponderosa pine forest, where forests are more accessible to logging equipment. Commenter suggests this standard is virtually meaningless because of the caveat for watershed and urban interface values. **Associated Letter: 712**

Response: Please refer to response to comment 12 under the Old Growth heading in this section of the appendix. The caveat to the standard was included to provide for thinning treatments in high value areas where tree density does not support desired fire behavior or post-fire effects. The recent cost of these treatments (approximately $3,000 per acre (pers comm Micah Kiesow, Soil Scientist, Kaibab National Forest, May 2019)) effectively prohibits widespread use. If such a high value area is identified in the future, a project-level proposal would be developed subject to its own National Environmental Policy Act process, including public engagement.

Suggested Plan Components

Comment 44: Commenter suggests a plan component in the All Upland Ecological Response Units section of the plan that encourages pairing upland vegetation projects with stream and riparian habitat projects. Commenter states there are significant opportunities to achieve restoration objectives for streams and riparian habitat when vegetation treatments are occurring in the surrounding uplands, including project efficiencies and monitoring opportunities. Commenter also suggests this section include the following management approach: "Consider pairing vegetation management projects with activities to restore or enhance stream and riparian habitat, improve floodplain connectivity, and improve habitat conditions for aquatic and riparian-dependent species." **Associated Letter: 672**

Response: There is a standard in the Watersheds section of the plan (S2) that requires landscape-scale restoration activities to incorporate projects identified in watershed restoration action plans, or other watershed-based plans that was intended to function similar to the commenter's suggestion.

Suggested Standards

Comment 45: There is a suggestion that the plan include a standard prohibiting tree removal for the express purpose of creating more forage for cattle. **Associated Letters: 130, 255, 361, and 542**

Response: Under all alternatives, thinning treatments will be used to move vegetation communities toward the science-based desired conditions for those specific vegetation communities, watersheds, soils, wildlife habitat, fire management, and other resources and uses.

Comment 46: Commenter suggests that the All Upland Ecological Response Unit section should contain a standard that states timber harvest will only occur where it can include necessary protections for streams, streambanks, shorelines, lakes, other bodies of water, and wetlands. **Associated Letter: 151**

Response: The Timber, Forest, and Botanical Products section of the plan includes a desired condition that treatments promote movement toward, achievement and maintenance of ecosystem and watershed desired conditions. This is supported by a standard requiring project-specific best management practices be followed to protect, maintain, or enhance soil, water, riparian, aquatic, and air resources. This standard assures that necessary protections will be incorporated into all projects involving the harvest of wood products. Also, the plan standard in the Riparian and Aquatic Ecosystems requires preferential consideration to be given to riparian and aquatic resources through incorporation of best management practices. Further, such protections are required to comply with the Clean Water Act.

Suggested Guidelines

Comment 47: Commenter is concerned that the plan relies too heavily on the coarse filter concept to ensure species persistence, while at the same time recognizes the likely need for individualized conservation plans in the plan-wide Management Approach to Change and Uncertainty: "given that responses to temperature and precipitation patterns are species-specific, individualistic adaptation approaches may be necessary for some." Commenter notes this management approach identifies monitoring, research, and seed collection as possible future mechanisms for species persistence strategies but does not include any specific standards or guidelines for these activities. Further, the management approach clearly states, "This draft plan contains standards requiring implementation of approved recovery plans, guidelines supporting recovery and conservation plans, plan content providing for rare and endemic species, and species-specific content where the need was identified," but no guidelines are specifically written in for species persistence unless they are federally listed.

Commenter states: "As the plan currently stands, the persistence of these at-risk species in each Ecological Response Unit (ERU), is relegated to the last paragraph in each unit, as "related plan content." This is not in keeping with the obligation of the 2012 Planning Rule that requires the Forest Service to actively manage for the persistence of these species. To remedy this, the Forest Service should include in each Ecological Response Unit (ERU), a specific guideline, or fine scale desired condition, that includes clear direction to: Guideline: Actively monitor, and determine the population density, viability, and health of each At-Risk species, within that ERU." **Associated Letter: 137**

Response: This list of at-risk species the commenter refers to was only intended to be a list for staff reference. It is not the plan content that provides for species persistence. These lists have been incorporated directly into the background sections of the final plan. Draft appendix D (final appendix G) of the EIS contains a crosswalk (a table) with each at-risk species, its habitat requirements, threats to the species or habitat and plan components addressing those threats. Language that directs or compels analysis, assessment, inventory, or monitoring is not appropriate material for a guideline (FSH 1909.12 Chapter 20 section 22.14). Similarly, desired conditions must not direct action or prohibit an action (FSH 1909.12 Chapter 20 section 22.11). Further, there is no monitoring requirement for at-risk species beyond those contained within U.S. Fish and Wildlife Service approved recovery plans, which are incorporated into the plan by reference (Wildlife, Fish, and Plants final S4).

Guideline 1

"Vegetation treatments should be designed to recruit under-represented seral states and thereby promote continuous recruitment of old-growth characteristics across the landscape over time."

Comment 48: Commenters are concerned that the way this guideline is written creates space for management to determine that there might be too many old or large trees in some areas. Commenter provides this example: "if the Forest Service determines that there is a dearth of trees under 150 years old, it could justify cutting

those over 150 years old to make space for younger trees." Commenter suggests this guideline represents an ecologically unsustainable production forestry approach to a complex ecological problem and does not support restoration objectives. **Associated Letter: 712**

Response: A management approach titled Old Trees and Seral State Diversity has been added to the final plan to promote shared understanding and transparency about desired conditions and this guideline. Please see response to comment 11 under the Old Growth heading in this section of the appendix for a more in-depth response to old growth concerns expressed by stakeholders.

Restoration and Relationships Management Approach

"The forest strives to align restoration objectives with supporting local economics, cultures and long-standing traditions, providing products to people whenever possible and encouraging industry innovations."

Comment 49: Commenter suggests this management approach should clarify the need for "sustainable" harvest of products that balances providing products with maintenance and restoration of ecological function and wildlife habitat. **Associated Letter: 151**

Response: The sustainability element is addressed by plan components for Timber, Forest, and Botanical Products. Desired conditions 1 and 2 capture this balance. Desired conditions are supported by National Forest Management Act requirements reiterated by the 2012 Planning Rule and contained in the plan as standards and guidelines. Clarifying language has been added to the final version of this management approach, which is titled Adaptation, Restoration and Relationships.

Spruce-Fir Forest

Landscape-Scale Desired Condition 3

"Old growth occurs over large, continuous areas. Old growth components include old trees, standing dead trees (snags), downed wood (coarse woody debris), and structural diversity. The location of old growth shifts on the landscape over time because of natural growth, death, and disturbance.

Comment 50: Commenter suggests this desired condition should include an intent that each forest patch of 1,000 acres or larger contains old-growth attributes. **Associated Letter: 151**

Response: This suggestion is consistent with LS-DC1 which states: "The Spruce-Fir Forest vegetation community is a mosaic of structural and seral states ranging from young trees through old and is composed of multiple species. The landscape arrangement is an assemblage of variably sized and aged groups and patches of trees and other vegetation. Patch sizes vary but are mostly in the hundreds of acres with very infrequent disturbances creating patch sizes in the thousands of acres."

Mid-Scale Desired Condition

"The understory consists of native shrubs, perennial grasses and sedges, forbs, mosses and other non-vascular plants with basal area ranging from less than one percent to 20 percent or more, depending on soil properties (see TEU), seral state, and degree of canopy closure."

Comment 51: Commenter suggests a need for clarification on the desired range for understory basal area values. This concern also applies to the mid-scale desired conditions for Mixed Conifer with Aspen. **Associated Letter: 151**

Response: The range of understory basal values in the Spruce-Fir Mid-Scale Desired Conditions was based on region-wide data, with the low end being adapted based on raw data from the draft Gila National Forest Terrestrial Ecological Unit Inventory. This range has been updated in the final version to reflect statistical summary of final Gila National Forest Terrestrial Ecological Unit Inventory data on the low end of the range. These data represent the low end of the range that would be typical in late successional stages under closed

overstory canopy conditions. The high end of the range remains based on regional data and has been clarified with the removal of the words "or more."

Mixed Conifer with Aspen

Suggested Desired Conditions

Comment 52: Commenter recommends additional desired conditions that include old-growth attributes.
Associated Letter: 151

Response: Old-growth attributes are old trees, standing dead trees (snags), downed logs (coarse woody debris) and structural diversity. There are desired conditions for old growth attributes. Old trees and structural diversity are covered in desired conditions that include and depend on seral state diversity (All Upland Ecological Response Units LS-DC3 and Mixed Conifer with Aspen LS-DC1-5). Snags and downed logs are also covered in desired conditions (Mixed Conifer with Aspen LS-DC5 and 4, respectively).

Ponderosa Pine Forest

Suggested Guidelines

Comment 53: Commenter recommends that the plan provide more specific and prescriptive direction for Gambel oak in the guidelines for all vegetation communities in which Gambel oak is a component. Commenters note that in the southwestern U.S., Gambel oak is an important component of productive wildlife habitat. It provides browse and acorn mast crops for deer, turkey, and many other game and non-game mammals and birds, as well as cover and nesting structure for wildlife (Reynolds et al. 1970). In New Mexico and Arizona, ponderosa pine forests with Gambel oak have been documented to support higher bird diversity and abundance than ponderosa pine forests without Gambel oak (Jentsch et al. 2008). Therefore, the following guidelines are recommended for creating and maintaining Gambel oak patches in vegetation communities where it is a component:

1) Retain a mosaic of all sizes and age classes of Gambel oak across treated areas.
2) Retain tree-form Gambel oak in the 12-14'' diameter range to maximize acorn production for game and non-game species (Clary and Tiedemann 1992), and larger diameter Gambel oak to provide nesting and roosting habitat for turkey and other bird species.
3) Retain patches of pole-sized Gambel oak in the 3-6" diameter range to increase migratory bird diversity (Jentsch et al. 2008).

Associated Letter: 151

Response: The plan contains a desired condition in Mixed Conifer-Frequent Fire and Ponderosa Pine Forest that provides for "all structural and ages of oak are present" (cite plan components), which is comparable to the first suggested guideline. Suggestions to include guidelines with diameter class targets do not consider site-specific circumstances that may influence the outcome of management, nor do they necessarily provide for long-term sustainability of habitat values Gambel oak provides. There is science that suggests removing flexibility related to management of Gambel oak could adversely affect the ability to restore wildlife habitat (Abella 2008). Establishing diameter class targets could be incorporated at the project level, since it may be appropriate on some sites. Providing broad, overarching desired conditions in the plan allows for flexibility in future management that can consider site-specific circumstances, adaptive approaches, new science, and technology.

Literature Cited in Response:

Abella, S.R. 2008. Managing Gambel Oak in Southwestern Pine Forests: The Status of Our Knowledge. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station General Technical Report RMRS-GTR-218. 27 pp.

PJ Woodland (Persistent Woodland)

Suggested Standards and Guidelines

Comment 54: Commenters generally do not support treatments within this vegetation type except in wildland-urban interface situations. These woodlands supply abundant mast crops for food, nesting habitat and cover for numerous wildlife species including deer, black bears, and migratory birds. Commenters strongly recommend that a standard or guideline be included in the plan stating that treatments will be avoided in this woodland type except in wildland-urban interface situations. **Associated Letter: 151**

Response: Treatment objectives were specifically not included for PJ Woodland for the reasons mentioned and considering its current departure from desired conditions being due to over-representation of open-canopy conditions. The desired conditions for seral state proportion indicates that approximately 60 percent of this woodland type should be in late successional, closed-canopy states dominated by larger trees (PR R3 Seral State Proportion Supplement). However, this may change as mapping errors have been identified for correction. If mapping errors reveal more than 60 percent of this woodland type is in closed canopy states, or if other information comes to light or unforeseen event were to happen, the plan currently contains the flexibility to move toward desired conditions. If we included a standard or guideline as suggested, we would have to amend or revise the plan to move toward or maintain desired conditions.

Utilities Management Area

Suggested Guidelines

Comment 1: Commenter suggests the plan include an additional guideline to incorporate transmission line and substation construction practices in conformance with the Avian Power Line Interaction Committee's "Suggested Practices for Avian Protection on Power Lines," and "Reducing Avian Collisions with Power Lines" **Associated Letter: 151**

Response: A guideline has been added to the Utilities Management Area direction.

Watershed and Water Resources

General

Comment 1: Commenter states watershed protection is a particularly important part of the Forest Service's responsibility and supports Gila National Forest's staff efforts to do that. **Associated Letter: 188**

Responses: We agree that watershed management is a very important part of our responsibility and one of the foundational reasons our agency exists. We appreciate your support of those efforts.

Comment 2: Commenter points to page 127 of the draft EIS and the watershed condition information presented in Table 18. Commenter states 60% of sub-watersheds are not functioning properly in the Mimbres, Upper Gila, and Upper Gila-Mangas basins, 75% San Francisco. Commenter asks what the cause is and if it is because of the mine or if it is because of cows. **Associated Letter: 233**

Response: Table 19 on page 127 of the draft EIS displays the percentage of subwatershed area in each basin in each condition class. Table 20 on page 128 contains the "why" in the display of watershed condition

indicator status, followed by a discussion of common management factors contributing to altered conditions on page 129. This was previously discussed at length in chapter 6 of the assessment report. Causal factors, or the rationale behind the indicator ratings and overall watershed condition score depend on which subwatershed is of interest. This information is publicly available at Watershed Condition Framework Webmap.

Comment 3: There is a question about what a watershed structure is after fire. **Associated Letter: 233**

Response: Watershed structures are things like debris racks or sediment traps designed to reduce the amount of sediment and debris moving downstream in post-fire flows. A debris rack or cage is a metal structure usually supported by masonry. A sediment trap is essentially like a stock pond with a drain so that it doesn't hold water for an extended period. There are risks and benefits associated with watershed structures, and they are not appropriate in all cases.

Groundwater

Comment 4: There is a concern that the draft EIS does not adequately address the issue of climate change and its effect on groundwater. Commenter provides published literature to support their concern. **Associated Letter: 88**

Response: This literature has been reviewed and incorporated into the cumulative effects discussion for Soil and Watershed Resources.

Comment 5: Commenter suggests the plan needs to protect the forest and the water it contains because New Mexico relies on groundwater for drinking water, all sources of which are growing more valuable every year. **Associated Letter: 728.305**

Response: The plan and its alternatives provide the direction to manage toward and maintain properly functioning watersheds, which helps sustain ecosystem service delivery such as the supply of clean water. This direction includes the desired conditions, objectives, standards and guidelines found in the Watersheds, Water Quality, and Riparian and Aquatic Ecosystems sections of the plan, with supporting plan standards requiring the use of best management practices found in many other sections such as Roads and Timber, Forest, and Botanical Products.

Watershed Condition

Comment 6: Commenters are concerned that the plan does not adequately address the issue of road maintenance given the analysis acknowledges the detrimental effects of roads on watershed condition and only 12 percent of subwatersheds are considered functioning properly with respect to road maintenance. Commenter asserts that instead of suggesting that downward trends in budgets will cause similar trends in watershed conditions, the forest plan should adopt plan components that address the issue. Commenter states that the draft plan's components for roads provide little assurance that the road network management dilemma or the ecological impacts it causes are being taken seriously. **Associated Letter: 672**

Response: The minimum required road system and its maintenance were considered within the 2014 travel management environmental impact statement and record of decision (USDA FS 2014a and 2014b). Commenter is referred to Roads and Motorized Use comment 8 and its response for more information on travel management planning. Plan components including desired conditions, objectives, standards, and guidelines for Watersheds, Riparian and Aquatic Ecosystems and Roads address concerns about ecological impacts. For example, the Roads objective for decommissioning unneeded roads and supporting management approach discussing prioritization criteria would reduce watershed impacts. Roads S1 requires road construction and maintenance to incorporate best management practices, and all the guidelines would support movement toward desired conditions for soils, watersheds, riparian and aquatic ecosystems, and other

ecological resources. The Soil and Watershed Resources analysis acknowledges the constraints of budget and concludes that plan direction under all alternatives will reduce detrimental impacts to soil and watershed conditions to the degree that funding allows. The plan cannot address the budget issue but must be responsive to it as the planning rule and final directives require plans be within reasonably foreseeable budgets.

Water Quality

Comment 7: Commenters advise that there should be biannual water quality testing due to increasing visitors and more recreation. They suggest there should be more testing on pH and electrical conductivity to make sure the habitat water supply is great for wildlife and well as human uses. They request to see restoration plans for water quality because water is essential and to restore the water would be a great management move. **Associated Letter: 51**

Response: The New Mexico Environment Department's Surface Water Quality Bureau conducts biannual water quality testing, including pH and electrical conductivity (see background information in the water quality section of the plan). The forest plan supports working with the Bureau and other partners and stakeholders in development of watershed-based plans under the state's framework (Restoration and Relationships management approach in the Water Quality section of the plan) and the Forest Service's Watershed Condition Framework (background information section, O1 and Restoration and Relationships management approach in the Watersheds section of the plan).

Comment 8: The commenter notes that best management practices are referenced or mentioned throughout the document yet rarely indicates the source or provides citations for specific best management practices. There is a suggestion that a reference is provided for each best management practice or a section added to describe what they are, their role in forest management and sources for each best management practice. **Associated Letter: 151**

Response: In the plan, best management practices are first mentioned in the Soils section. In the Soils section glossary, best management practices are defined as "site- and project-specific methods or measures to prevent or mitigate potential adverse impacts to environmental quality, especially water quality. They include protection measures to address potential detrimental changes in water temperatures, blockages of water courses, deposits of sediment in streams, streambanks, shorelines, lakes, wetlands, and other bodies of water that are likely to affect water conditions or fish habitat seriously and adversely." The Soils section also includes a sampling of resources available to facilitate best management practices development. It is not and was not intended to be an exhaustive list. References can be updated, added, or removed from this list with an administrative change if needed. Best management practices need to be tailored to site- and activity-specific circumstances and can evolve over time due to lessons learned through monitoring, new science, or technology.

In subsequent sections of the plan, when best management practices are mentioned, there is a reference to previous sections, a glossary entry for that section, or both. There were a few exceptions to this at draft that have been corrected in the final.

Comment 9: Commenter points to page 131 of the DEIS and says: "Wide shallow streams absorb more heat than narrow channels" which is another reason to keep vehicles out of washes! "Most temperature impairments occur in Wilderness." I disagree – prove it. I think this happens more where vehicles or roads go through washes. This is where [wilderness] human influences are least prevalent. Water quality issues – excessive nutrients – bond to soil – leading to algae bloom that depletes oxygen – killing aquatic organisms. Excessive nutrient come from cows peeing and pooping in and around water sources." **Associated Letter: 233**

Response: Motorized vehicles are only allowed on the designated road system, the effects of which were analyzed as part of the travel management process (USDA FS 2014b). Some of those designated roads occur

in naturally wide sandy washes that only flow in response to precipitation and do not have water quality standards for temperature. Most temperature impairments do occur in the wilderness as documented by the data collected by the New Mexico Environment Department Surface Water Quality Bureau and discussed in the assessment report. The Surface Water Quality Bureau has and will continue to conduct Use Attainability Studies to determine if designated uses and associated standards are appropriate. Nutrients can certainly enter waterways from animals relieving themselves in and around water sources (see also response to comment 9). Nutrients can also enter waterways in the form of plant materials and post-fire erosion and sedimentation.

Literature Cited in Response:

USDA FS (United States Department of Agriculture – Forest Service). 2014b. Travel Management Final Environmental Impact Statement. Gila National Forest. MB-R3-06-07.

Comment 10: Commenters are concerned about the effects of cattle grazing on water quality, quantity, and riparian and aquatic ecosystem conditions. Commenters provide publications that support their concerns. One commenter states: "it is clear that livestock use is likely to be the main culprit behind *E. coli* contamination in the San Francisco [River] region, yet the draft plan fails to discuss the cause." **Associated Comments: 89, 153, and 713**

Response: Fecal matter is the likely culprit of *E. coli* contamination in many rivers and streams. However, DNA testing would be required to definitively determine the relative contribution of cattle, wildlife, and humans and that has not been done for any streams in the forest. For example, recent testing in California revealed birds and other wildlife were the primary sources of contamination in the Lower American River (https://www.waterboards.ca.gov/press_room/press_releases/2021/pr11162021-dna-testing-ecoli.pdf).

Regardless, cattle can certainly contribute to water quality issues, and it isn't just a forest management issue. There are private property inholdings along many of the streams in the San Francisco River basin, over which the agency has no jurisdiction. Nevertheless, the purpose of the plan is to provide direction, not discuss probable causes of water quality impairment. The purpose of the environmental analysis is to evaluate the effects of plan direction. The effects of livestock grazing depend on how it is managed. Under all alternatives, livestock grazing would be managed to maintain or move toward desired conditions for water resources and riparian and aquatic ecosystems.

Comment 11: Commenter identifies several public-regulated water systems with watershed area inside the forest's administrative boundary. Commenter states support of the proposed action because it would lessen the risk of large, contiguous extents of high-severity wildfire, which is a benefit to public drinking water quality because it reduces the risk of damaging debris flows. There is also support for the proposed action because it contains provisions to correct and maintain water systems that are not currently rated as "good." **Associated Letter: 242**

Response: This content has been retained in the final plan.

Comment 12: Commenter notes that activities likely to occur under the proposed action and its alternatives may involve the use of heavy equipment, which is associated with a possibility of contaminant releases should that equipment malfunction. Commenters provide examples of fuel and hydrologic fluid as potential contaminant releases. Commenter advises that all parties involved in such activities be aware of the New Mexico Environment Department Ground Water Quality Bureau's notification requirements for accidental discharges. **Associated Letter: 242**

Response: Thank you. We recognize these fluids as potential contaminants routinely include project-level requirements related to their storage and use to prevent spills. We are aware of the notification requirements, which are typically communicated to contractors and permittees through contracts and permits for relevant projects and activities.

Comment 13: Commenter identifies active Petroleum Storage Tank Bureau facilities and release sites near the forest and provides a map of these locations and several online resources. Commenter states that facilities for which the Petroleum Storage Tank Bureau show records that there are no longer petroleum storage tanks that the bureau regulates and where there has not been a release are not included in their comments and there may be tanks present or a release that the bureau doesn't have a record of. **Associated Letter: 242**

Response: Thank you for this information. The affected environment in the Soil and Watershed Resources section of the EIS discusses storage tanks as potential sources of contaminants in the Groundwater Quantity and Quality subsection. We refined this narrative and added similar language to the Surface Water Quantity and Quality subsection.

Comment 14: Commenter expresses shared interest in improving watershed conditions in the forest and appreciates the strong and growing partnership between state and federal agencies. Commenter identifies the non-degradation of impaired waters and Outstanding National Resource Waters as a principal concern and recommends that all projects implemented under the revised forest plan should have appropriate analysis of water quality impacts in the planning stage. Furthermore, they recommend that plan direction include a requirement to verify compliance of projects with the antidegradation provisions in the State Water Quality Standards (NMAC 20.6.4.8). They suggest that the Surface Water Quality Bureau's Mapper, an interactive web tool, should be used to identify up-to-date information on impaired waters and locate Outstanding National Resource Waters that may occur in the project area. **Associated Letter: 242**

Response: Thank you for your interest in improving watershed conditions and water quality on the forest, as well as the helpful resources available online. Compliance with state regulations will be validated at the project-level based on current, site- and activity-specific circumstances.

Comment 15: Commenter states that the development of best management practices is everchanging and should be researched continually for awareness. Commenter provides an example, page 158 of the DEIS in the Riparian and Aquatic Ecosystems Effects Common to All Alternatives section where it talks about the use of heavy mechanical equipment for restoration purposes and tradeoffs between short- and long-term impacts. Commenter points to the use of construction mats that can protect against the stated short-term impacts, alleviate project delays, protect construction equipment, and are reusable. Commenter also provides the U.S. Army Corps of Engineers website where more information about construction mats can be found. **Associated Letter: 242**

Response: We agree that best management practices should be continually researched for awareness and application. Science and technology are always advancing. That is why the plan only contains a list of sources to get staff started looking for practices that could help mitigate the effects of specific projects that may occur under the revised plan (draft plan Soils Related Plan Content). It was never meant to be a comprehensive list. We think the construction mat example is helpful and have included it in the Riparian and Aquatic Ecosystems Effects Common to All Alternatives section in the final EIS.

Comment 16: Commenter points to the following statement in the draft EIS: "Federal Clean Water Act is administered by the EPA, although the EPA delegates many functions to the Army Corps of Engineers and state governments." Commenter recommends the statement be reworded to clarify that the Army Corps of Engineers administers the Dredge or Fill Discharge Permit Program and in the case of National Pollutant Discharge Effluent System Program under Section 402 of the Clean Water Act, the state may be delegated permitting authority. **Associated Letter: 251**

Response: This suggestion has been incorporated into the final analysis as a footnote.

Comment 17: Commenter requests the addition of specific plan components for reversing water quality impairments in the forest, including those for temperature and turbidity, especially for Outstanding National Resource Waters. **Associated Letter: 672**

Response: Projects that improve water quality will be implemented as part of watershed-based plans, which the plan requires be incorporated into landscape-scale restoration projects (Watersheds S2) or in fulfilling objectives for Riparian and Aquatic Ecosystems (O1) and Wildlife, Fish, and Plants (O4). Additional specificity is reserved for the project level where site-specific circumstances and management factors can inform the process.

Comment 18: Commenter requests the final plan include components specific to protecting and restoring wetlands across the forest. **Associated Letters: 672 and 724.1 through 724.11**

Response: The plan contains plan components specific to the ecological integrity and sustainability of wetlands in both the Watersheds and Riparian and Aquatic Ecosystems sections. Both sections contain revisions from the draft based on stakeholder input and the Southwestern Region's Riparian and Aquatic Ecosystem Strategy.

Comment 19: Commenter is concerned that the draft plan mentions New Mexico's water quality assessments but fails to describe the current rate and extent of water quality impairments or the causes. Commenter suggests this baseline information is critical to informing how management will correct and prevent future impairments and recommends a more detailed assessment should be included in the final forest plan. **Associated Letter: 672**

Response: This information is more relevant to the affected environment of the EIS than it is the background information of the plan. The assessment explored this topic in detail, a summary of which is included in the affected environment section of the analysis.

Outstanding National Resource Waters

Comment 20: Commenter notes that all perennial streams and associated wetlands located within wilderness areas are Outstanding National Resource Waters and are supposed to receive a higher degree of protection against water quality impairments. Commenter cites the environmental analysis and is concerned that almost half have impairments related to temperature, nutrients, and sediment. Commenter recommends the final plan should include specific direction for preventing future impairments and remedying existing impairments. Some commenters would like to see the plan include an objective for reversing water quality impairments on the forest with an emphasis on these waters. **Associated Letters: 672 and 724.1 through 724.11**

Response: The Gila National Forest has a memorandum of understanding with the New Mexico Environment Department to work with them to better manage water resources. This collaboration is supported by the Restoration and Relationships management approach in the Water Quality section of the plan and multiple laws the Forest Service must follow. The 2012 Planning Rule requires that forest plans follow existing law and policy but does not require plans to restate law and policy. All Outstanding National Resource Waters are in designated wilderness areas, so their management must be consistent with the provisions of wilderness management policy and plan direction. Additionally, plan direction under Watersheds, Riparian and Aquatic Ecosystems, Livestock Grazing, Sustainable Recreation, Fire and Fuels Management have numerous plan components promoting water quality in general**.** In terms of objectives, please refer to response to comment 16 above.

Desired Condition 1

"Water quality meets or exceeds State water quality standards. Water quality is sustained at a level that retains the biological, physical, and chemical integrity of aquatic systems, and benefits the survival, growth,

reproduction, and migration of native aquatic and riparian species (see also Soils, Watersheds, Riparian and Aquatic Ecosystems plan components and related content)."

Comment 21: Commenter suggests adding the following phrase: "and provides for the attainment of designated uses" **Associated Letter: 672**

Response: Thank you for the suggestion. The phrase has been incorporated.

Suggested Guidelines

Comment 22: Commenter is concerned that there is only one forestwide component for water quality in the draft plan. Commenter suggests that because of the importance of clean water to downstream communities, ecosystem services, and outdoor recreation, the final plan should include additional plan components to help forest managers meet water quality standards and reverse impairments. Commenter suggests the following from the Santa Fe National Forest's draft plan: "New and reauthorized management activities should not negatively impact groundwater quality or quantity to the extent that ecosystems are adversely affected." **Associated Letter: 672**

Response: There isn't a lot of plan direction for water quality because its management is already decided by the Clean Water Act and the regulations that implement the Act. The Adaptation, Restoration and Relationships management approach discusses how we would continue to work the New Mexico Environment Department's Surface Water Quality Bureau to maintain and attain shared water quality goals. Desired conditions in the Watersheds section also pertain to surface and groundwater quality and quantity. Watersheds DCs 2 and 3 are relevant to the commenter's suggestion, and we have incorporated the guideline in response to comment.

Suggested Management Approaches

Comment 22: Commenter requests that the following be included as management approaches or other forest plan components:

1) Work closely with New Mexico Environment Department on water quality management in the forest (e.g., maintaining Memorandum of Understanding, development of Total Maximum Daily Load (TMDL) determinations, developing watershed-based plans, designing and implementing 319 grants).

2) Consider developing watershed-specific plans that prioritize specific roads for decommissioning to result in improved water quality and a smaller road system.

Associated Letter: 672

Response: The Forest Service Southwestern Region maintains a memorandum of understanding with the New Mexico Environment Department (NMED and USDA FS 2023) and routinely collaborates with state staff on development of watershed-based plans and 319 grants. The first suggestion has been used to expand the management approach draft Restoration and Relationships (final Adaptation, Restoration and Relationships) in the Water Quality section of the plan. The second suggestion has been worked into the management approach Road Decommissioning in the Roads section.

Literature Cited in Response:

NMED (New Mexico Environment Department) and USDA FS (United States Department of Agriculture-Forest Service). 2023. Memorandum of Understanding between the New Mexico Environment Department and USDA Forest Service, Southwestern Region. 12 pp.

Comment 23: Commenter is concerned that the plan fails to fulfill the 2012 Planning Rule requirements for water quality because there is only one desired condition and no standards or guidelines. Commenter suggests the draft plan is wrong to claim that best management practices are the primary mechanism to protect water quality because they fail to address chronic, root causes of continued impairment. Commenter summarizes existing water quality impairments on the Gila National Forest and states that the undisclosed impacts of livestock grazing on water quality is of primary concern. Commenter suggests the following should be incorporated as standards and guidelines:

1) Avoiding manure accumulation on steep sloping areas.
2) Avoiding grazing areas near water bodies and vulnerable areas.
3) Avoiding grazing in areas prone to flooding.
4) Adding buffer strips or grassed waterways.
5) Fencing off stream access.
6) Utilizing riparian areas and constructed or restored wetlands as vegetated filters between grazed areas and open or running water.

Associated Letter: 712

Response: Law, regulation, and policy provide the essential management direction for water quality. Plan direction is supplemental to those requirements. Best management practices are the primary mechanism for compliance with the Clean Water Act and state regulations. About the commenter's first suggestion, livestock do not tend to congregate on steep sloping areas for periods of time sufficient for manure to accumulate. They prefer gently sloping or flat ground. Suggestions 2 and 3 are covered by best management practices that are routinely recommended and so were incorporated into plan direction (Livestock Grazing S2, S4, G1, and Gs 2-4 and Riparian and Aquatic Ecosystems S1). Suggestions 4, 5, and 6 could be considered at the project level as best management practices if they were appropriate for the site-specific circumstances.

Desired Conditions

Comment 24: Trout Unlimited supports the desired conditions for 4th, 5th, and 6th level watersheds proposed in the draft plan and requests they be included in the final plan, with a greater emphasis on the need to manage for watershed resilience at this scale. **Associated Letter: 672**

Response: These desired conditions have been retained with some refinement in the final plan.

Objective 1

"Improve condition class in at least five 6th level watersheds within the planning period."

Comment 25: Commenter expresses appreciation for the plan's watershed objectives but asserts they lack specificity and fail to acknowledge the full range of causes of watershed impairment. Because the life of the forest plan is not certain, commenter suggests O1 should be reworded as: "Improve condition class in at least two 6th level watersheds every ten years using forestwide plan objectives for Vegetation ERUs, Riparian and Aquatic Ecosystems, Soils, Livestock Grazing, etc." **Associated Letter: 672**

Response: The suggestion to change the timeframe and minimum number of watersheds to be improved is a valid suggestion, but it does not necessarily set the plan up for more aggressive progress toward desired conditions. The life of the plan is 10 to 15 years, the draft objective is far more aggressive. The life of the plan would have to be 30 years for the suggestion to improve progress. Admittedly, the lifespan of the 1986 forest plan was more than 30 years, but the "at least" language provides the impetus to do more if the resources are

available to do so. Watershed-based plans, specific to each watershed, is the appropriate place to identify the types of essential projects needed improve watershed condition. It is likely that essential projects will include activities that could fulfill objectives for other resources or activities and help generate movement toward desired conditions as the commenter suggests.

Water Uses

Comment 1: There is a suggestion to add fire suppression to the list of uses included in the lease agreements with Freeport-McMoRan Inc. in the background information plan direction on water uses. **Associated Letter: 39**

Response: There is a current order from the Office of the State Engineer that grants the forest use of Freeport-McMoRan Inc. water from Bill Evan's Reservoir for the purpose of fire suppression. A lease is not required. This information has been added as a footnote to the description of the lease we have with Freeport-McMoRan Inc. for water to be used for livestock and wildlife purposes.

Comment 2: Commenter points to the description of the lease agreement the Gila National Forest has in place with Freeport McMoRan Inc., a neighboring mining company, wonders what the start date is and what happens after the 10-year lease period expires. **Associated Letter: 233**

Response: The lease was renewed in January 2020, and is valid through December 2029. Once a lease expires, all temporary changes of point of diversion, place of use, and purpose of use automatically revert to their original point of diversion, place of use, and purpose of use. Forest staff and leadership may choose to negotiate another lease agreement or not depending on the needs and priorities at that time. Freeport McMoRan Inc. may choose to enter into another lease agreement with us or not, depending on what fits their needs and priorities at that time.

Comment 3: The plan states a concern that New Mexico does not recognize instream-flow as a beneficial use, and water rights cannot be used for this purpose. The commenter states surprise that forest staff haven't looked at the 14,000 acre-feet of AWSA water as a potential resource (EIS p. 165). There is a suggestion that it might be possible to partner with a downstream user to store water upstream and release it at times when instream flows are desired. **Associated Letter: 39**

Response: The water uses background information section of the plan states "All natural waters flowing in streams and water courses and found underground in New Mexico are declared to be public and subject to appropriation for beneficial use." In New Mexico, beneficial use includes the following: domestic use, livestock and wildlife watering, irrigation, prospecting and mining, and construction of public works, highways, and roads. Water for fish culture is not, nor are instream flows considered a beneficial use by the state. The cumulative effects analysis for Riparian and Aquatic Ecosystems in the FEIS states "With current and predicted future trends in climate, riparian and aquatic ecosystems are highly vulnerable. Given no instream water rights are recognized in New Mexico, that vulnerability is higher than it is in Arizona." This statement is a professional judgment drawn from the best available scientific information in the context of state law. The suggestion that there is a way to work around state law would be illegal.

Comment 4: The plan mentions federal reserved water rights for protection of river values (p. 139). But the Gila-San Francisco stream system is totally adjudicated. For clarification, please explain how the forest can claim reserved water rights that weren't included in this adjudication, and how they are quantified. **Associated Letter: 39**

Response: The plan does not assert that reserved water rights may be exercised for the protection of river values. Federal reserved water rights are discussed in terms of what they are for in the water uses background information section. On page 139, the draft plan states "Reserved rights are water rights that accompany land

that was reserved or withdrawn from the public domain under the authority of the Organic Administrative Act of 1897, to establish a national forest. Sufficient water to fulfill the purposes of the reservation was also withdrawn through implication. The principle also holds that the priority date for the withdrawn water is the date of the land withdrawal, even though the water may not be put to beneficial use for years. The Gila NF has exercised reserved water rights for (1) continuous supply of timber, including water for such things as administrative sites, road construction for timber, forest fires, etc., and (2) favorable conditions of water flow, which includes water impounded by earthen dams to stabilize gullies and retain sediment. The intent of these is not to impound water, but to minimize the quick blast of water and sediment that the gully system may produce."

Federal reserved water rights can be senior in priority to water rights established under state law as the priority date is the reservation date of the national forest. A specific quantity is not stipulated under the "Reservation Principle." They are exercised based on necessity, such as fire suppression, road building and other activities requiring water that support the reasons for the reservation of the forest. These amounts are reported to the Office of the State Engineer.

Comment 5: Commenter points to a discussion of water conservation in the Water Uses section of the draft plan and suggests there is a conflict between efforts to conserve water and the "use it or lose it" principle that governs New Mexico water law. **Associated Letter: 233**

Response: New Mexico water law, water conservation plans, and possible conflicts between them are beyond the scope of the forest plan. Plan direction is consistent with and supports both the water law and water conservation efforts. The Gila is a co-sponsor of the 10-year Mimbres River Conservation Program with The Nature Conservancy. This was approved by New Mexico Office of the State Engineer in 2020 as part of the forest's water conservation efforts for existing water rights.

Comment 6: There is a concern that the documents don't give sufficient information on how Wild and Scenic River designation could affect future water right transfers and a suggestion to add examples. If the Middle Box of the Gila were so designated, would it affect transfers of water rights from downstream of that river reach up to the Gila valley? How would it affect acquisition of Gila Basin water rights by Silver City? **Associated Letter: 39**

Response: Wild and Scenic River designation is beyond the scope of the plan and its analysis. We conducted an eligibility study as required by the 2012 Planning Rule. The eligibility study answers the question "do we think this river segment could be Wild and Scenic?" We did not complete a suitability study, which would have answered the question "do we think this river segment should be Wild and Scenic?" Only Congress can designate, and Congress is not required to accept the Forest Service determinations of eligibility or suitability The forest plan directs the forest to maintain the outstanding remarkable values for which it was determined eligible; it does not affect water rights or any other valid existing rights.

Comment 7: Commenters suggest there should be no diversion of the Gila and San Francisco Rivers or their tributaries. **Associated Letters: 729.6, 729.7, and 730.39**

Response: We assume that the commenters are referring to diversion proposals associated with the Arizona Water Settlements Act and the New Mexico Central Arizona Project entity, which is beyond the scope of the forest plan.

Wild and Scenic Rivers

Plan Direction for Eligible Wild and Scenic Rivers

General

Comment 1: There is support for plan direction related to eligible Wild and Scenic river segments. **Associated Letter: 561**

Response: Final plan direction has been streamlined to reduce redundancy and maintain alignment with the laws, regulations, and policies dictating how eligible wild and scenic river segments must be managed.

Comment 2: Commenter states timber production does not protect outstandingly remarkable values of Scenic and Recreational river segments. There is a suggestion that the only timber harvest to occur along these river segments should be resource benefit. **Associated Letter: 73**

Response: All riparian corridors, including those found eligible for wild and scenic status with preliminary classifications of scenic and recreational, were identified as not suited for timber production under the technical criterion "Lands that are not Forest Lands" (DEIS appendix C). The only timber harvest that will occur in any riparian area will be for the primary purposes of protecting users or protecting, restoring, or enhancing the river environment.

Standard 7

"No temporary or permanent facilities shall be constructed within river corridors of river segments with an initial classification of "wild." Facilities constructed within eligible "scenic" or "recreational" segments must be located and designed to protect river values, be screened from view to the extent possible, and compliment scenic values."

Comment 3: There is support for the continued restoration and recovery of the Gila trout and other federally listed fish species and a concern that the plan doesn't clearly allow for the construction and placement of fish habitat structures. Commenters point to the Federal Interagency Wild & Scenic Rivers Coordinating Council guidance on the construction and placement of fish habitat structures on Wild and Scenic Rivers. Generally, structures to enhance fish and wildlife habitat are allowed if they meet specific criteria. Suggested remedy is to make this clearer in plan direction. One commenter is specifically concerned that this standard may conflict with the need to construct fish migration barriers where native fish populations are Outstandingly Remarkable Values. **Associated Comments: 94, 151, 173, 233, 261, 672, 685, and 724.1 through 724.11**

Response: This draft standard is final standard 5. Fish barriers are not considered facilities and are not subject to this direction. Fish barriers are considered water resources projects and subject to final standard 3, which is aligned with the Interagency Wild & Scenic Rivers Coordinating Council's guidance. Further clarification is provided in the final management approach Restoration of Native Fishes. Commenter is correct that fish barriers would be allowable provided they meet specific criteria.

Guideline 7

"Domestic livestock grazing within eligible wild and scenic river segments should be managed to protect outstandingly remarkable values."

Comment 4: Commenter is concerned that this guideline and the discussion in the environmental analysis is not consistent with provisions in currently proposed Federal legislation (the M.H. Dutch Salmon Greater Gila Wild and Scenic River Act) that provide designation for many miles of forest streams under the Wild and Scenic Rivers Act. The draft legislation provides for continued traditional uses such as grazing and irrigation and includes language to ensure that such designation would not affect grazing permits or leases. Another

commenter would support this guideline if it were modified to prohibit grazing because it is incompatible with management for Outstandingly Remarkable Values. **Associated Letters: 38-12 and 712-11**

Response: The guideline does not conflict with proposed legislation. Whether the legislation is passed or not, domestic livestock grazing would still be allowed to continue in eligible or designated segments and would be managed to protect outstandingly remarkable values.

Wild and Scenic Rivers Eligibility Study

General

Comment 5: Commenter points to page 564 of the EIS and asks if the Upper San Francisco River is not a Wild and Scenic river segment. Commenter also points to the sentence on this page that states the New Mexico Central Arizona Project is responsible for the planning, design, construction, and operation of New Mexico unit of the project. Commenter asks if this discussion is still relevant since the New Mexico Central Arizona Project entity is no longer funded and does not have a valid project. **Associated Letter: 233**

Response: The segments of the San Francisco River that were found eligible for Wild and Scenic River status are documented on page 562 of the DEIS, including the Upper Box. It is correct that the CAP entity no longer has any funding, but it has not disbanded. If there ever will be another New Mexico Unit of the CAP, that organizational framework is still the placeholder for managing future endeavors to access the water entitled to New Mexico and would be responsible for planning, design, and construction. The cumulative effects discussion containing the statement about the New Mexico Central Arizona Project entity has been updated to reflect changes that have occurred since the draft was approved for publication.

Comment 6: There are differing perspectives on Wild and Scenic Rivers. Those that generally support additional wild and scenic eligibility and eventual designation state that they are against plans to dam the Gila River and other waterways or that more protections are needed in our changing environment to address the biodiversity crisis. Others support because these resources are a national treasure and designations convey benefits for future generations and the rural economy.

Commenters that do not support eligibility or designation of any river segments cite restrictions or prohibitions on uses and negative impacts to agriculture and ranching, or are concerned about associated taking, condemnation or infringement on private property rights. Other commenters oppose wild and scenic rivers because the restrictions on management contributes to loss of watershed function and endangerment of communities, fish, and wildlife. **Associated Letters: 8, 96, 188, 204, 273, 415, 532, 561, 564, 601, 634, 646, 672-20, 698, 718.3844, 726.0 through 726.12547, 728.244, 728.264, 728.267, 728.311, 728.373, 729.10, 730.31**

Response: The purpose of the Wild and Scenic Rivers Act is to recognize free-flowing river segments with outstandingly remarkable scenic, recreational, geological, fish and wildlife, historic, cultural, or other similar values and to protect those values and the river's free-flowing nature. While management under the Wild and Scenic Rivers Act protections may contribute to biodiversity and sustainability, wild and scenic status is not the only mechanism by which biodiversity and sustainability goals may be achieved. The management requirements under the Multiple-Use Sustained-Yield Act, National Environmental Policy Act, National Forest Management Act, the Clean Water Act, and the Endangered Species Act are among the other congressional mandates that support management for biodiversity and sustainability.

The Wild and Scenic Rivers Act only applies to federal public lands and does not contain a mechanism to take, condemn, or infringe upon private land. Nothing in the act affects or alters existing water rights issued by the states or the existing infrastructure that supports those rights. On the contrary, those existing rights and infrastructure inform eligibility studies. Water rights and uses that alter the free-flowing nature of the river segment result in a determination of ineligible. Water rights and uses that do not substantially affect the free-flowing nature of a river segment found eligible for Wild and Scenic status inform the classification level.

Wild and scenic status does not prohibit or restrict ranching pursuits on federal public lands. It requires that those activities be conducted in a manner that preserves the free-flowing nature of that river segment and its associated outstandingly remarkable values until such time that a suitability study determines that the river segment is not suitable, or Congress decides to designate.

Comment 7: Commenters are concerned that the eligibility study documentation does not provide sufficiently detailed information about sources consulted for expertise and data regarding streams evaluated for eligibility. Commenters suggest specific data sources be considered and discuss the merits of those data sources. Commenters are concerned that the eligibility determinations were based on insufficient data and were not sufficiently explained or justified. Commenter notes misleading information in Tables 79 and 80 in the DEIS, which are meant to provide documentation on the findings of the 2002 study. Commenters point out that the only justification for ineligible river segments in Table 79 is "no change in circumstances from 2002 study" and in Table 80 "no outstandingly remarkable values identified." Commenter states it is also confusing that the same segments are listed in each table, sometimes twice, with no clarification as to their location. Commenters suggest agency handbook direction requires separate narratives for each segment including a description of "free-flowing characteristics, water quality, and presence or absence and a description of outstandingly remarkable values."

Commenters are concerned that the eligibility study fails to disclose that numerous river segments that were found ineligible are free-flowing and have at least one outstandingly remarkable value. A commenter recommends that to meet process requirements, the final documentation needs to demonstrate a thorough analysis including a description of all possible outstandingly remarkable values, which of these values were considered in the eligibility study and details on why the threshold for determining the presence or absence of each value. Commenters would also like to see the documentation include a detailed geographic map. Commenters assert that to comply with the National Environmental Policy Act and the Administrative Procedures Act, these evaluations must then be presented for public review and comment**. Associated Letters: 94, 180, 233, 361, 685, 712, 723.1 through 723.6, and 732.1 through 732.7**

Response: The documentation of the eligibility study (final appendix I) has been revised in response to comments. It includes editorial changes for clarity and additional detail regarding the expertise and data relevant to the eligibility determinations. The determination that a river area does or does not contain one or more outstandingly remarkable values is a professional judgment on the part of the forest supervisor, informed by the interdisciplinary team, best available science, and public participation (FSH 1909.12 chapter 80 section 82.73). Detailed narratives for rivers determined to be eligible for wild and scenic status are provided in final appendix I. Evaluated rivers deemed ineligible by this study are listed, but do not warrant the same detailed narrative in the documentation. They are all free-flowing, but the values present were not deemed outstandingly remarkable. Additional detail may also be found in response to comments on individual river segments found ineligible later in this section of this appendix. Individual maps of each eligible river segment are not included in the plan or appendix I, in part because of scale. The study used the 1:24,000 scale (the USGS quadrangle map scale); to show the entire forest at that scale in the documents is not practicable. However, StoryMaps gave the public an opportunity to comment on the eligibility study, there is map of eligible segments in appendix B of the final plan.

Comment 8: Commenter supports protection of wild and scenic rivers and prefers the wild and scenic classifications over the recreational classification. Commenter is concerned the plan seems vague because they didn't notice anything in the plan to protect them if they harbor endangered species. Commenter asks what will be done to protect these species from recreation impacts. **Associated Letter: 44**

Response: We acknowledge the commenter's preferences. The Wild and Scenic Rivers Act and Forest Service policy direction dictates how eligible, suitable, and designated segments are to be managed. Plan direction is supplemental to law regulation and policy. The interdisciplinary team established preliminary classifications for those river segments found eligible based on the Wild and Scenic Rivers Act and the

direction found in Forest Service Handbook 1909.12 chapter 80 section 82.8. If Congress decides to designate any river segment, that legislation will establish the final classification. Protections for endangered species are provided by the Endangered Species Act and U.S. Fish and Wildlife Service approved recovery plans, which is supported by plan direction. The plan's provisions for these species, including those that protect them from recreation impacts, is documented in detail in appendix I of the FEIS.

Comment 9: Some commenters disagree with the assertion in the DEIS that all eligible wild and scenic river segments will be managed as such until a suitability study is completed, and then if river segments are not found to be suitable that they would no longer be managed under the provisions in the Wild and Scenic Rivers Act. Commenters assert that if a suitability study determined a river segment was not suitable, that segment would continue to be managed as eligible under the act as the 2012 Planning Rule requires it. Commenters request this error is corrected or the discussion removed entirely from the documents. Commenters support the forest supervisor's decision not to conduct a suitability study because those should only be done when directed by Congress. One commenter supports the interpretation put forth by the planning team, asserts that a suitability study does not have to be directed by Congress, and requests that the forest supervisor has the authority to undertake a suitability study. Commenter requests the forest supervisor do just that. **Associated Letters: 94, 180, 233, 361, 675, 685, 712**

Response: Forest Service Handbook direction specifically states that "A river determined through a suitability study to be not suitable shall no longer be considered eligible and interim protection measures no longer need to be applied to those rivers" (FSH 1909.12 84.3). Unless directed to do so by Congress, the discretion to conduct a suitability study belongs to the forest supervisor.

Comment 10: Commenter submitted a copy of the American Rivers comment letter and discussed their trip to Big Bend and how the values on the Gila National Forest are truly outstandingly remarkable compared to the Big Bend Area. **Associated Letter: 233**

Response: We acknowledge the commenter's opinion. We have associated the commenter's letter number with the comments submitted by American Rivers.

Comment 11: Commenter states that New Mexico law requiring free-flowing rivers to remain open to fishing and boating needs to be enforced. **Associated Letter: 209**

Response: Fishing and boating are activities that are not affected by wild and scenic status but are subject to site-specific restrictions that may be implemented for the purposes of public safety or resource protection. Enforcement of state law is beyond the scope of the forest plan.

Comment 12: Commenter is concerned that when river management plans are written, federal agencies can put whatever they want in the documents and create restrictions and requirements above and beyond what the Wild and Scenic Rivers Act contains. Commenter is further concerned about what happens if federal agency staff decide something on private property is affecting or may affect these river segments. Commenter asks who will determine the high-water mark and which the quarter mile corridor that determines where these restrictions and requirements will apply. Commenter states that depending on who does this and how it is determined, it could be the entire river valley and tributaries above and below the wild and scenic segment, which would give the federal agency the power to restrict commerce along the entire valley, including activities on private land, which would put farmers and ranchers out of business. Commenter states that the draft documents indicate only recreation will be encouraged. Commenter notes passages in the DEIS that discuss conflicts between recreational uses and livestock grazing and states this shows blatant bias against ranchers. **Associated Letter: 647**

Response: Agencies may not implement any regulations they wish through river management plans. River management plans are irrelevant to non-federal lands because the Wild and Scenic River Act does not apply

to lands under other ownership or jurisdiction. The draft analysis discloses all possible effects to visitor experiences and some visitors do not enjoy the presence of cattle where they recreate. On the other hand, the eligibility study determined that outstandingly remarkable values of recreation existed along river segments within the forest that are currently being grazed by livestock. If grazing or other existing uses substantially interfered or detracted from recreational values, the eligibility study would not have identified a recreational value.

Alternatives

Comment 13: There is a concern that the range of alternatives for the wild and scenic eligibility study is not reasonable. **Associated Letter: 60**

Response: The eligibility study is a separate but concurrent process with plan revision and is not subject to the National Environmental Policy Act requirements about alternatives. River segments are either found eligible or not, and this determination does not vary by alternative.

Citizen's Proposal

Concern 14: There is a desire for the Gila National Forest's Wild and Scenic Rivers eligibility study to mirror the citizen's proposal that is before Congress as the M.H. Dutch Salmon Greater Gila Wild and Scenic River Act. Some commenters suggest that Gila National Forest staff do not have the resources to properly evaluate eligibility and that it would be better if the study relied on the work done by others to support the citizen's proposal. Other commenters suggest even the citizen's proposal does not go far enough and suggest there should be more like 900 miles of river corridor found eligible for wild and scenic designation. Those that support the proposed Dutch Salmon Act state that it is the best option for protecting species and other river-related values. Some of these commenters state the Gila National Forest's eligibility process did not consider the citizen's proposal and eligibility study appropriately, which is a violation of the National Environmental Policy Act. The requested remedy is that the interdisciplinary team should take another look and find them eligible in the final documentation.

Other commenters express opposition to the Dutch Salmon Act and request that the Gila National Forest's eligibility study find no river segments eligible. Some of these commenters point to the 2002 eligibility study and the finding that 18 miles of river below Mule Creek might meet Wild and Scenic River Act requirements and state that this conclusion is ultimately in question, and nothing has changed since 2002 except the political climate. These commenters state that the Dutch Salmon Act proposal is very threatening to their way of life and that they were not consulted during planning nor were their concerns addressed in any appropriate or meaningful way since. Commenters state: "This particular act would only benefit professional litigants representing largely out-of-state environmental organizations, who are biased and threatening in their opinions of traditional use landowners. The passage of this act, and the Forest Service's promotion of it, only undermines cooperation and respect for the peoples along these rivers who have for generations worked, lived, and been the watchmen over this area. It is imperative that their opinions and input be valued and considered."

Another commenter opposed to Wild and Scenic River processes and the Dutch Salmon Act questions who found the 224.11 miles of river corridor eligible. This commenter states that staffers affiliated with congressional proponents of the Dutch Salmon Act indicated the eligibility studies were conducted by a liberal volunteer group. Commenter goes on to question the expertise of these volunteers and why the Gila National Forest worked in secret with the bill's proponents for over a year to identify eligible segments. **Associated Letters: 18, 19, 23, 32, 43, 60, 64, 65, 66, 71, 76, 79, 82, 85, 87, 94, 99, 101, 104, 107, 112, 118, 120, 125, 126, 130, 131, 135, 141, 142, 147, 152, 165, 167, 171, 180, 192, 209, 233, 240, 249, 361, 415, 474, 475, 479, 482, 514, 542, 567, 579, 580, 582, 608, 619, 634, 647, 648, 653, 656, 663, 672, 680, 685, 694, 708, 712, 721.1 through 721.3, 722.1 through 722-5, 723.1 through 723.6, 724.1 through 724.11, 725.1 through 725.7, 727.4328, 728.1 through 728.433, 728.245, 728.251, 728.254, 728.256, 728.259, 728.270,**

728.277, 728.282, 728.291, 728.302, 728.310, 728.312, 728.319, 728.324, 728.326, 728.337, 728.354, 728.383, 728.384,728.385, 728.386, 728.388, 728.391, 728.392, 728.406, 728.409, 728.411, 728.429, 729.1 through 729.15, 730.1 through 730.124, 730.8, 730.46, 730.55, 730.56, 730.58, 730.61, 730.68, 730.71, 731, 732.1 through 732.7

Response: There are recommendations for wild and scenic river status associated with the forest plan. The 2012 Planning Rule requires that an eligibility study be conducted during the revision process. A suitability study would be the mechanism to make a recommendation, but it is not required by the planning rule and the forest supervisor used the legal discretion not to conduct one.

The eligibility study was conducted by a team selected by the forest supervisor for their subject matter expertise. For the most part, this team consisted of Forest Service employees that work for the Gila National Forest. Many of these employees have lived in the area and worked for the Gila National Forest for more than 20 years. The only exception was a retired geologist who was contracted for their expertise and familiarity with the Gila National Forest. The citizen's proposal and statements of support for the proposal were accepted as comments and given the same consideration as all other public comments. About Mule Creek, the change in circumstances was a change in the status of our knowledge with a publication documenting a world class exposure of a geologic structure (Ratte 2004).

Literature Cited in Response:

Ratte, J.C. 2004. A guide to the Mule Creek volcanic vent, the rhyolite of Potholes Country, and obsidian ledges, Gila National Forest, southwestern New Mexico: *New Mexico Geology*, 26(4): 111–122. https://pubs.er.usgs.gov/publication/70026484

Comment 15: There is a concern that the 2002 and current wild and scenic eligibility studies are founded on inadequate identification and validation of outstandingly remarkable values. Commenter points to Spruce Creek as an example, suggesting the condition of the trail indicates no one from the Forest Service has been in there since the 2012 Whitewater Baldy Complex fire to verify a native fish outstandingly remarkable value is still there. Commenter points to a statement in the documents that input for the eligibility study should also come from the public and that the extensive work that went into developing the citizen's proposal should be considered as public input. **Associated Letter: 25**

Response: The 2002 eligibility study concluded that Spruce Creek possessed a single outstandingly remarkable value. This was a fisheries value associated with the presence of a lone relic population of a genetically distinct lineage of Gila trout. This population has only been successfully replicated nearby in the headwaters of Big Dry Creek. The interdisciplinary team considered changing the status of Spruce Creek to ineligible because the fishery was eliminated following the Whitewater Baldy Complex. However, the population in Big Dry Creek survived in good numbers and the intent remains to restore trout to Spruce Creek from Big Dry Creek. Fish from the Big Dry population were reintroduced into Spruce Creek in May 2018, and again in August 2020. We cannot know if we were successful in re-establishing the population until the fish reach reproductive maturity, which takes about three years. If re-establishment was not successful, we anticipate continued efforts. Additional detail has been added to the narrative for Spruce Creek in appendix I of the FEIS.

Process

Comment 16: Commenters support some aspects of the eligibility study process but suggest the process could be improved in the following ways:

1) Provide additional consideration to headwaters and other higher-elevation portions of streams to anticipate and accommodate species elevational shifts in response to climate change.

2) Provide additional consideration to key headwaters and other intact stream segments to minimize and manage climate change impacts to water availability

3) Identify ecosystem services, climate adaptation, and similar river-related values beyond the standard outstanding remarkable values described in the Wild and Scenic Rivers Act and agency handbook direction. Commenter asserts these potential values should be defined and criteria established for locating and protecting these values given the importance of river resources in a changing climate.

4) Regions of comparison for wildlife and recreation should be reconsidered and possibly adjusted to err on the side of finding streams eligible. Commenters point to handbook direction requiring information from other sources such as other agencies, non-governmental organizations, and universities to establish regions of comparison. Additional information on biological details and ecological functions should be employed in the eligibility evaluation.

5) Climate adaptation is an important function of healthy, connected rivers, particularly headwaters areas, and should be considered in evaluating eligibility.

6) Water supply volume and quality are important functions of healthy rivers, and these ecosystem services should be considered in evaluating eligibility.

7) Determinations of whether river-related values are "outstandingly remarkable," whether in a forest, regional, state, or national context, should be based on the importance of streams, stream corridors, and their related values to the ecological and hydrological health of the Gila National Forest and the surrounding area bordering the Forest.

8) The 16 streams proposed for eligibility in the draft study should be carried forward and determined eligible. Fourteen additional streams should be reevaluated, carefully re-considered, and determined eligible for the reasons provided in these comments.

Associated Letters: 85, 94, 152, 192, 233, 361, 672, 685, 712, 724.1 through 724.11, 732.1 through 732.7

Response: In response to the suggestions centered on climate change (1, 2, 3, and 5), climate change adaptation is not a consideration for eligibility as lined out in the Wild and Scenic Rivers Act or agency policy direction, nor is it the intended purpose of the act. We acknowledge that managing for the free-flowing nature of a river segment may provide a secondary benefit to riparian and aquatic ecosystem connectivity, but those protections will not prevent fragmentation caused by increasing aridity. Further, there is no current evidence indicating any river is unique among similar rivers to warrant recognition for that purpose.

In response to the suggestions centered on ecosystem services (3 and 6), a supply of high-quality water is an ecosystem service provided by watersheds, not just the river corridor, which is the delivery vehicle. While we agree this is ecosystem service is critically important, it cannot be managed in the context of the Wild and Scenic Rivers Act. There is no current evidence indicating any river is unique among similar rivers to warrant recognition for that or any other ecosystem service.

In response to suggestions centered on regions of comparison (4), it would not be compliant with the act or agency policy direction to reverse engineer a process to generate the outcomes that a subset of commenters would prefer. The regions of comparison documented in appendix I of the FEIS meet the requirements in Forest Service Handbook 1909.12 Chapter 80.

The suggestion about setting the threshold for outstandingly remarkable based on the ecological and hydrological importance to the forest and surrounding area (7) is inconsistent with the act and agency policy direction. Values must be determined to be outstandingly remarkable based on their uniqueness, rarity, or exemplary nature. The 16 streams determined eligible in the draft study remain eligible in the final. See response to comments later in this section related to the outstandingly remarkable values and eligibility status of all river segments included in the citizen's proposal.

Comment 17: There is support for the stream segments found eligible but a concern that the list of values is incomplete and should be expanded to more fully recognize the values that contribute to eligibility and ensure all are addressed in subsequent management. **Associated Letters: 87, 94, 152, 233, 361, 680, 685, 712**

Response: We acknowledge the commenters' opinion. The determination that a river area does or does not contain one or more outstandingly remarkable values is a professional judgment on the part of the forest supervisor, informed by the interdisciplinary team, best available science, and public participation (FSH 1909.12 chapter 80 section 82.73).

River Segments

Apache Creek

Comment 18: Commenters suggest Apache Creek should be found eligible for wildlife, fish, recreation, botany, climate adaptation, and ecosystem services outstandingly remarkable values. Commenters suggest the wildlife value is outstandingly remarkable based on the presence of special status species populations, habitat, or both. These species include Chiricahua leopard frog, northern leopard frog, lowland leopard frog, American bittern, common black-hawk, Aplomado falcon, peregrine falcon, elf owl, Mexican spotted owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, Arizona gray squirrel, jaguar, Sonoran mud turtle, and Mexican garter snake, as well as black bear, cougar, elk, mule deer, and pronghorn. The area includes proposed critical habitat for narrow-headed garter snake.

Similarly, commenters suggest the fisheries value is outstandingly remarkable based the presence of special status species populations, habitat, or both, including Gila trout, longfin dace, desert sucker, and Sonora sucker. Commenters note opportunities for hiking and backpacking as support for an outstandingly remarkable recreation value. Commenters recommend adding climate adaptation and ecosystem services as outstandingly remarkable values based on the unique land protection afforded by Gila Wilderness for the upper portion and the stream's critical headwaters location, which is important to climate adaptation and to downstream water supplies. **Associated Letters: 25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Apache Creek is a free-flowing waterway; however, there were no outstandingly remarkable values identified for the river segment in the 2002 study, or changes in circumstances justifying reconsideration by the current study (see appendix I of the FEIS). Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. Apache Creek does not provide uniquely diverse or uniquely high-quality habitat for the species listed by the commenters and doesn't contain nationally or regionally important metapopulations of these species. We do not deny that Apache Creek may provide habitat for the species listed, but this specific waterway is not unique in this regard within the region of comparison. Opportunities for hiking and backpacking are common across the region of comparison. The location of Apache Creek relative to designated wilderness has nothing to do with its eligibility status under the Wild and Scenic Rivers Act. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 19: Apache Creek should be classified as wild because it's in wilderness. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study determined Apache Creek is not eligible for Wild and Scenic River status. Therefore, no preliminary classification will be assigned.

Black Canyon Creek

Comment 20: Commenters suggest Black Canyon Creek should be found eligible for scenery, geology, wildlife, fish, recreation, botany, solitude, climate adaptation, and ecosystem services outstandingly remarkable values. Commenters suggest the scenic and geologic values are outstandingly remarkable because it is wild, remote, and steep terrain with large drop-offs, pinnacles and balanced rocks among turret formations, which is similar to Holden Prong but more spectacular. Some commenters note the large waterfall in lower Black Canyon where the trail ends. One commenter suggested the solitude provided this remoteness of the canyon and its location in wilderness justifies an outstandingly remarkable value. Commenters suggest the recreational value is outstandingly remarkable because of the fishing opportunities.

Commenters suggest the wildlife value is outstandingly remarkable based on the presence of special status species populations, habitat, or both. These species include Arizona toad, mountain treefrog, Chiricahua leopard frog, northern leopard frog, lowland leopard frog, American bittern, common black-hawk, Aplomado falcon, peregrine falcon, Montezuma quail, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, long-legged myotis, occult myotis, spotted bat, Gunnison's prairie dog, Arizona gray squirrel, jaguar, Sonoran mud turtle, Mexican garter snake, New Mexico hot springtail, and Gila springtail, as well as black bear, cougar, elk, mule deer, and pronghorn. Commenters note the area includes designated critical habitat for Mexican spotted owl and proposed critical habitat for narrow-headed garter snake. Similarly, commenters suggest the fisheries value is outstandingly remarkable based the presence of special status species populations, habitat, or both, including Gila trout, roundtail chub, headwater chub, speckled dace, longfin dace, desert sucker, Sonora sucker, channel catfish, flathead catfish, and black bullhead. Commenters note the area contains designated critical habitat for spikedace and loach minnow. In support of an outstandingly remarkable botanical value, commenters note Natural Heritage New Mexico data suggest the presence of special status plant species including Black Range groundsel, a milkvetch, and Organ Mountains giant hyssop.

Commenters recommend adding climate adaptation and ecosystem services as outstandingly remarkable values based on the unique land protection afforded by Gila Wilderness and Aldo Leopold Wilderness and the stream's critical headwaters location, which is important to climate adaptation and to downstream water supplies. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Black Canyon Creek is a free-flowing waterway; however, there were no outstandingly remarkable values identified for the river segment in the 2002 study, or changes in circumstances justifying reconsideration by the current study (see appendix I of the FEIS). Many rivers in the region of comparison provide similar scenic, geologic, and recreational values and habitat for a highly diverse array of wildlife, fish, and plant species. Black Canyon Creek does not provide uniquely diverse or uniquely high-quality habitat for the wildlife species listed by the commenters and doesn't contain nationally or regionally important metapopulations of these species. We do not deny that Black Canyon Creek may provide habitat for many of the species listed, but this specific waterway is not unique in this regard within the region of comparison. Channel, flathead, and black bullhead catfish are not native to the aquatic ecosystems on the Gila National Forest. Specific to the botanical value, the species identified may or may not be present in the canyon but do not have habitat requirements that are dependent on the river and are therefore not river-related values. The river segment's location relative to designated wilderness has nothing to do with its eligibility status under the Wild and Scenic Rivers Act. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 21: Commenters recommend 24 miles of Black Canyon Creek be classified as wild or recreational, with the segments located in designated wilderness being wild and the segment that crosses the road and runs

through the campground being recreational. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study determined Black Canyon Creek is not eligible for Wild and Scenic River status. Therefore, no preliminary classification will be assigned.

Diamond Creek

Comment 22: Commenters suggest Diamond Creek should be found eligible for recreation, cultural, historic, wildlife, fish, botany, climate adaptation, and ecosystem services outstandingly remarkable values. In support of the recreational value, commenters point to the Diamond Creek trail that extends into the Aldo Leopold Wilderness, links with the Continental Divide National Scenic Trail, and affords opportunities for extension hiking and backpacking. Commenters support the draft eligibility study's findings that the lower section of Diamond Creek contains an outstandingly remarkable historic and cultural value. Commenters also agree that the genetically distinct, relict population of Gila trout, which is the only known source population of the Main Diamond lineage, is an outstandingly remarkable fisheries value. Commenters add that Diamond Creek is essential habitat for Chihuahua chub, roundtail chub, headwater chub, speckled dace, longfin dace, desert sucker, Sonora sucker, channel and flathead catfish, and Rio Grande sucker, as well as designated critical habitat for spikedace and for loach minnow.

In support of an outstandingly remarkable wildlife value, commenters state that Natural Heritage New Mexico identifies the area near lower Diamond Creek supports special status animal species including: Arizona toad, mountain treefrog, Chiricahua leopard frog, northern leopard frog, American bittern, common black-hawk, Aplomado falcon, peregrine falcon, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, Arizona gray squirrel, black-footed ferret, jaguar, Sonoran mud turtle, Mexican garter snake, virile crayfish, as well as black bear, cougar, elk, mule deer, and pronghorn. Commenters also point to designated critical habitat for Mexican spotted owl and proposed critical habitat for narrow-headed garter snake and state that the area along upper portion of Diamond Creek also supports these animal species, along with flammulated owl.

Commenters support an outstandingly remarkable botanical value with information from Natural Heritage New Mexico that indicates the presence of special status plants such as Metcalfe's tick-trefoil, Organ Mountains giant hyssop, rock fleabane, Black Range groundsel, Mogollon whitlowgrass, Goodding's bladderpod, cliff bitterbrush, horned spurge, and Ehrenberg's adder's mouth.

Commenters recommend adding climate adaptation and ecosystem services as outstandingly remarkable values based on the unique land protection afforded by the Aldo Leopold Wilderness and the stream's critical headwaters location, which is important to climate adaptation and to downstream water supplies. **Associated Letters: 25, 85, 94, 151, 152, 173, 192, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Diamond Creek is a free-flowing waterway determined to be eligible for Wild and Scenic River status based on outstandingly remarkable fisheries and cultural heritage values. The interdisciplinary team did not find a change in circumstances; however, adjustments were made to update the section lengths based on updated location information of outstandingly remarkable values (see appendix I of the FEIS). Many rivers in the region of comparison provide similar recreational values and habitat for a highly diverse array of wildlife, fish, and plant species. Diamond Creek does not provide uniquely diverse or uniquely high-quality habitat for the wildlife species listed by the commenters and doesn't contain nationally or regionally important metapopulations of these species. We do not deny that Diamond Creek may provide habitat for many of the species listed, but this specific waterway is not unique in this regard within the region of comparison. Channel and flathead catfish are not native to the aquatic ecosystems in the Gila National Forest.

Specific to the botanical value, the species identified may or may not be present in the canyon, but do not have habitat requirements that are dependent on the river and are therefore not river-related values. Depending on the species of cliff bitterbrush, it may or may not be a special status species. Horned spurge is common throughout the western United States. Ehrenberg's adder's-mouth only occurs in Mexico. None of the other species of adder's-mouth orchid that do occur in New Mexico and Arizona have special status. The river segment's location relative to designated wilderness has nothing to do with its eligibility status under the Wild and Scenic Rivers Act. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 23: Commenters recommend Diamond Creek should receive a scenic or wild preliminary classification. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study determined that of the 23.80 miles of Diamond Creek that are eligible, 22.12 miles are an interim classification of Wild, and 1.68 miles are an interim classification of Scenic (see appendix I of the FEIS).

East Fork Gila River

Comment 24: Commenters suggest the East Fork Gila River should be found eligible for recreation, wildlife, fish, climate adaptation, and ecosystem services outstandingly remarkable values. In support of the suggestion for an outstandingly remarkable recreation value commenters note relatively easy access for recreation and nature study of an ecologically rich area. Commenters also note that the river's aquatic resources and location in the Gila Wilderness are both important to climate adaptation and ecosystem services and offer attractive opportunities for wild smallmouth bass and trout fishing, hiking, and wilderness exploration.

In support of an outstandingly remarkable fisheries value, commenters note special status species including Gila trout, Chihuahua chub, roundtail, chub, headwater chub, longfin dace, desert sucker, Sonora sucker, channel catfish, and flathead catfish. The East Fork Gila River also includes designated critical habitat for endangered loach minnow and spike dace. In support of an outstandingly remarkable wildlife value, commenters note special status species including Arizona toad, Chiricahua leopard frog, northern leopard frog, lowland leopard frog, American bittern, common black-hawk, Aplomado falcon, peregrine falcon, elf owl, Mexican spotted owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, Arizona gray squirrel, jaguar, Sonoran mud turtle, Mexican garter snake, virile crayfish, and Gila springsnail, as well as black bear, cougar, elk, and mule deer. The area includes designated proposed critical habitat for narrow-headed garter snake. **Associated Letters: 25, 85, 94, 151, 152, 173, 192, 233, 361, 672, 684, 685, 712, 724.1 through 724.11, 730.66**

Response: The East Fork Gila River is a free-flowing waterway; however, there were no outstandingly remarkable values identified for the river segment in the 2002 study, or changes in circumstances justifying reconsideration by the current study (see appendix I of the FEIS). Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. The East Fork Gila River does not provide uniquely diverse or uniquely high-quality habitat for the species listed by the commenters and doesn't contain nationally or regionally important metapopulations of these species. We do not deny that the East Fork Gila River may provide habitat for many of the species listed, but this specific waterway is not unique in this regard within the region of comparison. Channel catfish, flathead catfish and virile crayfish are not native to the Gila National Forest's aquatic ecosystems, and neither are smallmouth bass. Recreational access and opportunities for nature study are common across the region of comparison, and not necessarily river-related values. Fishing opportunities are river-related, but not outstandingly remarkable in the region of comparison. The location of the river segment relative to designated wilderness has nothing to do with its eligibility status under the Wild and Scenic Rivers Act. Ecosystem services and climate adaptation values are

not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 25: Commenters recommend the East Fork Gila River be assigned a preliminary classification of wild. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: The eligibility study determined the East Fork Gila River is not eligible for Wild and Scenic River status. Therefore, no preliminary classification will be assigned.

East Fork Mimbres River

Comment 26: Commenters suggest the East Fork Mimbres River should be found eligible for scenery, wildlife, fish, botany, climate adaptation, and ecosystem services outstandingly remarkable values. Commenters support an outstandingly remarkable scenic value by noting the depth of the canyon and steepness of its ridgelines, the presence of several small waterfalls and a diverse old-growth forest.

In support of an outstandingly remarkable wildlife value, commenters cite Natural Heritage New Mexico data that suggest the area near East Fork Mimbres Creek supports special status animal species such as northern leopard frog, American bittern, common black-hawk, Aplomado falcon, peregrine falcon, blue-throated hummingbird, Lewis's woodpecker, Williamson's sapsucker, bank swallow, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Sprague's pipit, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, Arizona gray squirrel, and jaguar, as well as black bear, cougar, elk, and mule deer. The area includes designated critical habitat for Mexican spotted owl. Special status fish species in East Fork Mimbres Creek include Gila trout and Chihuahua chub. Natural Heritage New Mexico has noted in the area near East Fork Mimbres River special status plant species Wright's dogweed, Pinos Altos flameflower, and yellow lady's-slipper. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 192, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: The East Fork Mimbres River is a free-flowing waterway; however, there were no outstandingly remarkable values identified for the river segment in the 2002 study, or changes in circumstances justifying reconsideration by the current study (see appendix I of the FEIS). Many rivers in the region of comparison provide high scenic character and provide habitat for a highly diverse array of wildlife, fish, and plant species. The East Fork Mimbres River does not provide outstandingly remarkable scenery as compared to similar rivers in the region of comparison, of uniquely diverse or uniquely high-quality habitat for the species listed by the commenters and doesn't contain nationally or regionally important metapopulations of these species. We do not deny that the East Fork Mimbres River may provide habitat for many of the species listed, but this specific waterway is not unique in this regard within the region of comparison. The botanical species listed may or may not occur in the drainage, but none of their habitat requirements are specifically river dependent. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 27: Commenters suggest a preliminary classification of wild should be assigned to the East Fork Mimbres River given it is in a roadless area and proximity to the Aldo Leopold Wilderness. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study determined the East Fork Mimbres River is not eligible for Wild and Scenic River status. Therefore, no preliminary classification will be assigned.

Gila River

Comment 28: Commenter suggests that because the Gila River is possibly the last free-flowing river in New Mexico it is important to safeguard it from climate change, human disturbance, and overgrazing. Commenter suggests properly monitored and managed grazing is acceptable to them, but that overgrazing is what should be specifically prohibited. **Associated Letter: 694**

Response: All authorized commercial grazing on the Gila National Forest is subject to law, policy, and regulations to protect resources. The wild and scenic rivers eligibility study is undertaken for the purpose of identifying rivers that are free-flowing and possess outstandingly remarkable values, and not for the purpose of establishing range management restrictions that are afforded elsewhere in law, policy, and regulation.

Livestock grazing is permitted within river corridors that have wild and scenic river status if it is managed so that it does not substantially interfere with public use or detract from the outstandingly remarkable values (Forest Service Manual 2354.42a). Where the eligibility study found outstandingly remarkable values in locations where grazing currently occurs, the conclusion to be drawn is that current grazing management is compatible with managing for those outstandingly remarkable values.

Gilita Creek

Comment 29: Commenters suggest that Gilita Creek should be found eligible for wildlife, fish, recreation, climate adaptation, and ecosystem services outstandingly remarkable values. In support of this suggestion, commenters note that it is a popular place for recreation, tributary to the West Fork Gila River, which the Forest Service did find eligible in the draft study, and almost entirely in the Gila Wilderness. In support of an outstandingly remarkable wildlife value, commenters state that the area near Gilita Creek supports special status animal species Arizona toad, Chiricahua leopard frog, northern leopard frog, eared grebe, American bittern, bald eagle, Aplomado falcon, peregrine falcon, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, southwestern myotis, fringed myotis, long-legged myotis, occult myotis, spotted bat, Allen's big-eared bat, Gunnison's prairie dog, jaguar, banded rock rattlesnake, and Arizona snaketail, as well as familiar black bear, cougar, elk, and mule deer. The area includes designated critical habitat for Mexican spotted owl and proposed critical habitat for narrow-headed garter snake. Commenters support a fisheries value by noting it is an active area for recovery of threatened Gila trout and supports other special status fish species including roundtail chub, headwater chub, speckled dace, longfin dace, desert sucker, and Sonora sucker. In support of an outstandingly remarkable botanical value, commenters state that Natural Heritage New Mexico has noted in the area near Gilita Creek special status plant species Gila thistle, Hart's groundsel, Copper Mine milkvetch, villous groundcover milkvetch, Mogollon clover, Chiricahua dock, Goodding's onion, and adder's mouth.

One commenter discusses their experiences in the Gilita Creek area and the current trail and stream conditions resulting from fire and post-fire flooding. This commenter states that Gilita Creek should be given Wild and Scenic River status because of the presence of designated wilderness and because it would then be "…one place for a cash-strapped GNF not to worry about when faced with decreasing funds and a reduced labor force." **Associated Letters: 25, 85, 94, 151, 152, 173, 233, 361, 632, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Gilita Creek is a free-flowing waterway; however, there were no outstandingly remarkable values identified for the river segment in the 2002 study, or changes in circumstances justifying reconsideration by the current study (see appendix I of the FEIS). Many rivers in the region of comparison provide similar recreational values and habitat for a highly diverse array of wildlife, fish, and plant species. Gilita Creek does not provide uniquely diverse or uniquely high-quality habitat for the wildlife species listed by the commenters and doesn't contain nationally or regionally important metapopulations of these species. We do not deny that Gilita Creek may provide habitat for many of the species listed, but this specific waterway is not unique in this regard within the region of comparison. Specific to the botanical value, the species identified may or may not be present in the river corridor, some, but not all, have special status, and not all of them possess habitat requirements that are river dependent. The river segment's location relative to designated wilderness has nothing to do with its eligibility status under the Wild and Scenic Rivers Act. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 30: Commenters suggest a preliminary classification of wild should be assigned to the Gilita Creek given it is tributary to the proposed eligible West Fork Gila River and flows almost entirely within the Gila Wilderness. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study determined the Gilita Creek is not eligible for Wild and Scenic River status. Therefore, no preliminary classification will be assigned.

Holden Prong

Comment 31: Commenters suggest Holden Prong should be found eligible for geology, wildlife, fish, botany, climate adaptation, and ecosystem services outstandingly remarkable values. They agree with the interdisciplinary team's findings of an outstandingly remarkable value and suggest that a geology value be given for its unusual northward flow path, narrow canyon, and distinctive river-formed turret formations. In support of an outstandingly remarkable wildlife value, commenters point to Natural Heritage New Mexico data documenting the special status species American bittern, Aplomado falcon, peregrine falcon, elf owl, Lewis's woodpecker, Williamson's sapsucker, bank swallow, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Sprague's pipit, loggerhead shrike, gray vireo, red-face warbler, painted redstart, spotted bat, Gunnison's prairie dog, and jaguar, as well as black bear, cougar, elk, and mule deer. The area includes designated critical habitat for Mexican spotted owl. Commenters support the botanical value with the same dataset noting special status Thurber campion and Pinos Altos flameflower in the area. Commenters recommend adding climate adaptation and ecosystem services as outstandingly remarkable values based on the unique land protection afforded by the Aldo Leopold Wilderness and the stream's critical headwaters location, which is important to adaptation and downstream water supplies. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Holden Prong is a free-flowing waterway determined to be eligible for Wild and Scenic River status in 2002 and now, based on outstandingly remarkable fisheries value. The interdisciplinary team did not find a change in circumstances; however, adjustments were made to update the section lengths based on more accurate spatial data since 2002 (see appendix I of the FEIS). Many rivers in the region of comparison provide similar geologic values and habitat for a highly diverse array of wildlife, fish, and plant species. Holden Prong does provide a unique and outstandingly remarkable fisheries value but does not provide uniquely diverse or uniquely high-quality habitat wildlife and does not contain nationally or regionally important metapopulations of the species identified by the commenters. We do not deny that Holden Prong may provide habitat for many of the species listed, but this specific waterway is not unique in this regard within the region of comparison.

Specific to the botanical value, the species identified may or may not be present in the canyon, do not have habitat requirements that are dependent on the river, and are therefore not river-related values. The river segment's location relative to designated wilderness has nothing to do with its eligibility status under the Wild and Scenic Rivers Act. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 32: Commenters recommend Holden Prong should receive a scenic or wild preliminary classification. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study determined that wild was the most appropriate preliminary classification (see appendix I in the FEIS).

Indian Creek

Comment 33: Commenters suggest Indian Creek should be found eligible for scenery, recreation, wildlife, and fish outstandingly remarkable values. Commenters suggest the old-growth forest in its headwaters, location in the Gila Wilderness, deeply incised canyon, and the fact that it is tributary to the West Fork Gila River which the Forest Service study found eligible supports a remarkably outstanding scenery value. In

support of an outstandingly remarkable wildlife value, commenters point to Natural Heritage New Mexico data which indicates the area near Indian Creek supports special status animal species mountain treefrog, Chiricahua leopard frog, northern leopard frog, lowland leopard frog, American bittern, Aplomado falcon, peregrine falcon, yellow-billed cuckoo, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, white-nosed coati, jaguar, Sonoran mud turtle, and Mexican garter snake, as well as black bear, cougar, elk, and mule deer. Commenters state that the presence of designated critical habitat for Mexican spotted owl and proposed critical habitat for narrow-headed garter snake demonstrate the area is vital to wildlife. In support of a fisheries value, commenters note special status fish species including roundtail chub, headwater chub, spikedace, speckled dace, loach minnow, longfin dace, desert sucker, and Sonora sucker. **Associated Letters: 24, 25, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Indian Creek is a free-flowing waterway; however, there were no outstandingly remarkable values identified for the river segment in the 2002 study, or changes in circumstances justifying reconsideration by the current study (see appendix I of the FEIS). Many rivers in the region of comparison provide recreational opportunities, high scenic character, and habitat for a highly diverse array of wildlife, fish, and plant species. Indian Creek does not provide uniquely diverse or uniquely high-quality habitat for the species listed by the commenters and doesn't contain nationally or regionally important metapopulations of these species. We do not deny that Indian Creek may provide habitat for many of the species listed, but this specific waterway is not unique in this regard within the region of comparison. The old-growth forest in the upper watershed is not a river-related value. The location of Indian Creek relative to designated wilderness, or river segments that are eligible, has nothing to do with its eligibility status under the Wild and Scenic Rivers Act. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 34: Indian Creek should be classified as wild because it's in wilderness. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study determined Indian Creek is not eligible for Wild and Scenic River status. Therefore, no preliminary classification will be assigned.

Iron Creek

Comment 35: Commenters suggest Iron Creek should be found eligible for fish, wildlife, botany, climate adaptation, and ecosystem services outstandingly remarkable values. Commenters support the outstandingly remarkable fisheries value identified in the draft study and points to Natural Heritage New Mexico information that suggests brown trout, headwater chub, spikedace, speckled dace, longfin dace, desert sucker and Sonora sucker are also present and should be part of that fisheries value. Commenters support a wildlife value with information from Natural Heritage New Mexico indicating that special status species are present in the area including Arizona toad, mountain treefrog, Chiricahua leopard frog, northern leopard frog, eared grebe, American bittern, bald eagle, Aplomado falcon, peregrine falcon, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, southwestern myotis, Allen's big-eared bat, Brazilian free-tailed bat, big free- tailed bat, southwestern myotis, fringed myotis, long-legged myotis, occult myotis, Gunnison's prairie dog, jaguar, banded rock rattlesnake, and Arizona snaketail, as well as black bear, cougar, elk, and mule deer. The area includes designated critical habitat for Mexican spotted owl and proposed critical habitat for narrow-headed garter snake. In support of an outstandingly remarkable botanical value, Natural Heritage New Mexico has noted special status plant species in the Iron Creek area including Gila thistle, Hess's fleabane, Mogollon hawkweed, Metcalfe's groundsel, Hart's groundsel, Copper Mine milkvetch, Mogollon clover, Chiricahua dock, Mogollon Mountain lousewort, Goodding's onion, and Mogollon death camas.

Commenters suggest the unique land protection afforded by Gila Wilderness and the stream's critical headwaters location warrant supplemental protection for the stream and riparian corridor, by identifying climate adaptation and ecosystem services as outstandingly remarkable values. **Associated Letters:25, 85, 94, 151, 152, 173, 192, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Iron Creek is a free-flowing waterway determined to be eligible for Wild and Scenic River status based on outstandingly remarkable fisheries value. The interdisciplinary team identified a change in circumstances based on a genetics study that contradicted previous findings and determined that the Iron Creek population of Gila trout is a pure and unique lineage (see appendix I of the FEIS). Brown trout are not native to the aquatic ecosystems on the Gila National Forest. Many rivers in the region of comparison provide similar habitat for a highly diverse array of wildlife, fish, and plant species. Iron Creek does not provide uniquely diverse or uniquely high-quality habitat for the wildlife species listed by the commenters and does not contain nationally or regionally important metapopulations of these species. We do not deny that Diamond Creek may provide habitat for many of the species listed, but this specific waterway is not unique in this regard within the region of comparison.

Specific to the botanical value, the species identified may or may not be present in the canyon, but most do not have habitat requirements that are dependent on the river and are therefore not river-related values. The river segment's location relative to designated wilderness has nothing to do with its eligibility status under the Wild and Scenic Rivers Act. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 36: Commenters recommend Iron Creek should receive a scenic or wild preliminary classification. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The study determined wild to be the appropriate preliminary classification (see appendix I of the FEIS).

Las Animas Creek

Comment 37: Las Animas Creek should be found eligible for scenic, wildlife, fish, botany, cultural, historic, climate adaptation, and ecosystem services outstandingly remarkable values. Commenters agree with the draft findings that Las Animas Creek has outstandingly remarkable cultural and historical heritage and fisheries values. In support of a similarly remarkable wildlife value, commenters point to Natural Heritage New Mexico information about special status species in the Las Animas Creek area including northern leopard frog, eared grebe, neotropic cormorant, American bittern, Aplomado falcon, peregrine falcon, band-tailed pigeon, flammulated owl, elf owl, Lewis's woodpecker, Williamson's sapsucker, bank swallow, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Yuma myotis, fringed myotis, long-legged myotis, pale Townsend's big-eared bat, Allen's big-eared bat, Gunnison's prairie dog, and Big Bend slider, as well as familiar black bear, cougar, elk, and mule deer. The area includes designated critical habitat for Mexican spotted owl. Commenters also suggest that the Natural Heritage New Mexico information that indicates the special status plant species Metcalfe's tick-trefoil is present and that should be recognized as an outstandingly remarkable botanical value. Commenters suggest the unique land protection afforded by Aldo Leopold Wilderness and the stream's critical headwaters location warrant supplemental protection for the stream and riparian corridor, by identifying climate adaptation and ecosystem services as outstandingly remarkable values. **Associated Letters:25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Las Animas Creek is a free-flowing waterway determined to be eligible for Wild and Scenic River status based on outstandingly remarkable fisheries and heritage values. The interdisciplinary team did not find a change in circumstances; however, adjustments were made to update the section lengths based on more

accurate spatial data (see appendix I of the FEIS). Many rivers in the region of comparison provide similar recreational values and habitat for a highly diverse array of wildlife, fish, and plant species. Las Animas Creek does not provide uniquely diverse or uniquely high-quality habitat for the wildlife species listed by the commenters and doesn't contain nationally or regionally important metapopulations of these species. We do not deny that Las Animas Creek may provide habitat for many of the species listed, but this specific waterway is not unique in this regard within the region of comparison.

Habitat for Metcalfe's tic-trefoil is not restricted to riparian corridors, and therefore, neither the habitat nor the species, which may or may not be present, is not a river-related value. The river segment's location relative to designated wilderness has nothing to do with its eligibility status under the Wild and Scenic Rivers Act. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 38: Commenters recommend Las Animas Creek should receive a scenic or wild preliminary classification. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The preliminary classification is wild for the 2.53 miles within the Aldo Leopold Wilderness and scenic for the 4.82 miles outside the wilderness boundary. This corrects the error in the 2002 study, which had the preliminary classifications backwards (see appendix I of the FEIS).

Little Creek

Comment 39: Commenters suggest Little Creek should be found eligible for recreation, wildlife, fish, botany, climate adaptation, and ecosystem services outstandingly remarkable values. In support of the recreational value, commenters state that Little Creek flows entirely within the Gila Wilderness and hosts multiple popular trailheads for backpacking, horse and mule packing and day hiking through outstanding scenic areas. For the wildlife value, commenter states Natural Heritage New Mexico indicates the area supports special status animal species Arizona toad, Chiricahua leopard frog, northern leopard frog, lowland leopard frog, American bittern, common black-hawk, Aplomado falcon, peregrine falcon, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, Arizona gray squirrel, Mexican gray wolf, white-nosed coati, jaguar, Sonoran mud turtle, Sonoran Mountain kingsnake, serpent ringtail, dashed ringtail, Arizona ringtail, flame skimmer, red rock skimmer, American rubyspot, canyon rubyspot, springwater dancer, sooty dancer, Aztec dancer, Mexican forktail, pale-faced clubskimmer, and painted damsel, as well as familiar black bear, cougar, elk, and mule deer. The area includes designated critical habitat for Mexican spotted owl and proposed critical habitat for narrow-headed garter snake and Mexican garter snake.

Citing the same data source, commenters support the fisheries value with the presence of special status species Gila trout, roundtail chub, Gila chub, headwater chub, speckled dace, longfin dace, desert sucker, Sonora sucker, channel catfish, flathead catfish, and black bullhead. Commenters also point to the presence of designated critical habitat for Mexican spotted owl, spikedace, and loach minnow, and proposed critical habitat for narrow-headed garter snake and Mexican garter snake. In support of an outstandingly remarkable botanical value, commenters state that the area supports special status species Mogollon wheatgrass, Goodding's bladderpod, threadleaf giant hyssop, Wooton's hawthorn, southwest Solomon's seal, and yellow lady's-slipper. Commenters suggest the unique land protection afforded by Gila Wilderness and the stream's critical headwaters location warrant supplemental protection for the stream and riparian corridor, by identifying climate adaptation and ecosystem services as outstandingly remarkable values. **Associated Letters: 25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Little Creek is a free-flowing waterway; however, there were no outstandingly remarkable values identified for the river segment in the 2002 study, or changes in circumstances justifying reconsideration by the current study (see appendix I of the FEIS). Many rivers in the region of comparison provide recreational

opportunities, high scenic character and habitat for a highly diverse array of wildlife, fish, and plant species. Little Creek does not provide uniquely diverse or uniquely high-quality habitat for the species listed by the commenters and does not contain nationally or regionally important metapopulations of these species. We do not deny that Little Creek may provide habitat for many of the species listed, but this specific waterway is not unique in this regard within the region of comparison. Channel, flathead, and black bullhead catfish are not native to the aquatic ecosystems in the Gila National Forest. With regard to the plant species listed, we believe commenters are referring to Mogollon whitlow grass as Mogollon wheatgrass is not a valid common name for any species in the Nature Serve or Natural Heritage New Mexico data. Not all the species listed by the commenter have habitat requirements that are river-dependent, and they may or may not be present in the river corridor. The location of Little Creek relative to designated wilderness, or river segments that are eligible, has nothing to do with its eligibility status under the Wild and Scenic Rivers Act. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 40: Little Creek should be classified as wild because it's in wilderness. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712, 724.1 through 724.11, 730.45**

Response: The eligibility study determined Little Creek is not eligible for wild and scenic river status. Therefore, no preliminary classification will be assigned.

Lower Box of the San Francisco River

Comment 41: Lower Box of the San Francisco River should be found eligible for scenery, geology, recreation, wildlife, fish, botany, climate adaptation, and ecosystem services outstandingly remarkable values. Commenters state that the scenery along this river segment is extraordinary, highly diverse and appealing to the eye, citing color contrast between the riparian vegetation and the sheer rock walls of the box canyon and the highly sinuous nature of the river. One commenter cites a description on a river guide's website about the scenery, geology, and cultural history of the river segment. Commenters assert the Lower Box is geologically significant both regionally and nationally citing descriptions by Ratte and Brooks (1989). In support of a recreational value, commenters point to day hiking, backpacking, horseback riding, pack mule trips and paddling opportunities, which are exhilarating and rare opportunities in southern New Mexico.

Some commenters assert that this and all river segments that provide habitat for Gila trout should qualify for an outstandingly remarkable fish value. Others more specifically point to special status species including Gila trout, roundtail chub, Gila chub, longfin dace, desert sucker, Sonora sucker, channel catfish, flathead catfish, black bullhead, and Gila topminnow, as well as designated critical habitat for the federally endangered loach minnow and spikedace. In support of a wildlife value, commenters state Natural Heritage New Mexico notes special status species in the area including Arizona toad, mountain treefrog, Chiricahua leopard frog, northern leopard frog, lowland leopard frog, common black-hawk, peregrine falcon, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, Bell's vireo, gray vireo, red-faced warbler, painted redstart, fringed myotis, occult myotis, spotted bat, Brazilian free-tailed bat, Gunnison's prairie dog, jaguar, Sonoran mud turtle, Sonoran Mountain kingsnake, Mexican garter snake, and Arizona coral snake, as well as familiar bighorn sheep, black bear, cougar, elk, and mule deer. The area includes designated critical habitat for southwestern willow flycatcher and proposed critical habitat for yellow-billed cuckoo, narrow-headed garter snake, and northern Mexican garter snake. For a botanical value, commenters state Natural Heritage New Mexico indicates the special status species Porter's globemallow is present in the area. **Associated Comments: 19, 24, 25, 85, 94, 151, 152, 173, 188, 233, 361, 672, 684, 685, 712, 724.1 through 724.11, 730.66**

Response: The Lower Box of the San Francisco River is a free-flowing waterway that was not included in the 2002 eligibility study. It was determined to be eligible for Wild and Scenic River status based on outstandingly remarkable scenic, recreation, and wildlife values (see appendix I of the FEIS). While scenic,

its geology is not rare, exemplary, or unique. Many rivers in the region of comparison provide similar recreational values and habitat for a highly diverse array of wildlife, fish, and plant species. We do not deny that the Lower Box may provide habitat for many of the species listed, but this specific waterway is not unique in this regard for all the species listed, within the region of comparison. Channel, flathead, and black bullhead catfish are not native to the aquatic ecosystems of the Gila National Forest. Porter's globemallow likely does not have habitat requirements that are river dependent. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 42: Commenters recommend the Lower Box of the San Francisco River should receive a scenic or wild preliminary classification. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The suggestion is consistent with the preliminary classifications assigned by the eligibility study (see appendix I of the FEIS).

Middle Box Gila River

Comment 43: Commenters expressed differing opinions about the Middle Box Gila River and the findings of the draft eligibility study. One commenter stated this river segment should not be found eligible for Wild and Scenic status because it would negatively impact the Tyrone Mine operations now and in the future. This commenter stated the river segment does not possess any outstandingly remarkable values. Other commenters suggest it should be found eligible for scenery, geology, wildlife, fish, recreation, botany, solitude, cultural/historic, climate adaptation, and ecosystem services outstandingly remarkable values.

Commenters support these assertions by describing the landscape setting, geologic characteristics, and history; the opportunities for solitude and exploration it provides; its location in an inventoried roadless area, inclusion of a research natural area; accessibility; and opportunities for kayaking, rafting, hiking, birdwatching and dispersed camping. In support of an outstandingly remarkable fisheries value, commenters point to the essential habitat it provides for special status species indicated present in the area by Natural Heritage New Mexico data including Chihuahua chub, roundtail chub, headwater chub, speckled dace, longfin dace, desert sucker, Sonora sucker, channel catfish, and flathead catfish, black bullhead, and largemouth bass. Commenters also point to the presence of designated critical habitat for federally endangered loach minnow, spikedace, and southwestern willow flycatcher, and proposed critical habitat for yellow-billed cuckoo, narrow-headed garter snake, and northern Mexican garter snake. Commenters support an outstandingly remarkable wildlife value with Natural Heritage New Mexico data that indicate the area supports special status animal species Arizona toad, Chiricahua leopard frog, eared grebe, lowland leopard frog, brown pelican, American bittern, bald eagle, common black-hawk, Aplomado falcon, peregrine falcon, elf owl, Lucifer hummingbird, elegant trogon, Lewis's woodpecker, Gila woodpecker, Williamson's sapsucker, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, Bell's vireo, gray vireo, red-faced warbler, painted redstart, Albert's towhee, cave myotis, occult myotis, western red bat, spotted bat, Bailey's pocket mouse, yellow-nosed cotton rat, Gunnison's prairie dog, Arizona gray squirrel, black-footed ferret, jaguar, red-eared slider, Sonoran mud turtle, Gila monster, southwestern fence lizard, white-belted ringtail, gray sanddragon, blue-eyed darner, checkered setwing, western pondhawk, widow skimmer, flame skimmer, blue dasher, eastern amberwing, black saddlebags, familiar bluet, arroyo bluet, Pacific forktail, pale-face clubskimmer, and desert firetail, as well as bighorn sheep, black bear, cougar, and mule deer. The area includes designated critical habitat for southwestern willow flycatcher, and proposed critical habitat for yellow-billed cuckoo, narrow-headed garter snake, and northern Mexican garter snake. Natural Heritage New Mexico also notes that the area contains special status plant species including desert honeysuckle, Davidson's cliff carrot, and green-flower nipple cactus. **Associated Comments: 24, 25, 85, 94, 151, 152, 173, 205, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: The Middle Box Gila River was not included in the Gila National Forest 2002 eligibility study. The river segment was found eligible by the current analysis for outstandingly remarkable scenery, recreation, heritage, and wildlife values (see appendix I of the FEIS). While scenic, its geology is not rare, exemplary, or unique. Many rivers in the region of comparison provide similar recreational values and habitat for a highly diverse array of fish and plant species. We do not deny that the Middle Box Gila River may provide habitat for many of the fish species listed, but this specific waterway is not unique in this regard for all the species listed, within the region of comparison. Channel, flathead, and black bullhead catfish are not native to the aquatic ecosystems of the Gila National Forest. The plant species provided by the commenter may or may not be present in the river corridor but do not have river-dependent habitat requirements and are therefore not river-related values. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options. Solitude is available within the Middle Box Gila River corridor; however, when compared to solitude opportunities that are available in similar river corridors in the region of comparison and within the Gila Wilderness, they are not outstandingly remarkable.

Comment 44: Commenters recommend the Middle Box Gila River should receive a scenic or wild preliminary classification. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study assigned preliminary classifications of wild and recreational based on the existing levels of development along this river segment (see appendix I of the FEIS).

Middle Fork Gila River

Comment 45: Commenters suggest the Middle Fork Gila River should be found eligible for scenery, geology, wildlife, fish, recreation, botany, solitude, cultural/historic, climate adaptation, and ecosystem services outstandingly remarkable values. In support of an outstandingly remarkable geologic value, commenters point to the rock spires, hoodoos, caves, goblins, beehive formations, and shear slabs of Gila conglomerate and rhyolite that extend for more than 1,000 feet above the river corridor. Commenters also note the whole Gila wilderness was formed by four major mega-calderas between 35 and 20 million years ago. Commenters point out that the stream corridor is popular for wilderness exploration, including extended backpacking, horseback riding, mule pack trips, pack rafting and day hiking and that it is used by many as an alternate route to the Continental Divide National Scenic Trail. In support of an outstandingly remarkable cultural heritage value, commenters point to several cliff dwellings, caves, pictographs, and other evidence of archaeological values.

In support of wildlife, fisheries and botanical values, commenters offer that the Natural Heritage New Mexico documents the following special status species in the area near Middle Fork Gila River: Arizona toad, mountain treefrog, Chiricahua leopard frog, northern leopard frog, lowland leopard frog, eared grebe, American bittern, bald eagle, common black-hawk, Aplomado falcon, peregrine falcon, elf owl, Mexican spotted owl, blue-throated hummingbird, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, southwestern myotis, fringed myotis, long-legged myotis, occult myotis, spotted bat, Gunnison's prairie dog, Arizona gray squirrel, white-nosed coati, jaguar, banded rock rattlesnake, Arizona snaketail, Sonoran mud turtle, Mexican garter snake, virile crayfish, as well as black bear, cougar, elk, and mule deer; Gila trout, roundtail chub, brown trout, Gila chub, headwater chub, speckled dace, longfin dace, desert sucker, Sonoran sucker, flathead catfish, and black bullhead, Mogollon whitlowgrass, Goodding's bladderpod, threadleaf giant hyssop, and southwest Solomon's seal. Commenters also point out the presence of designated critical habitat for Mexican spotted owl, loach minnow, and spikedace and proposed critical habitat for narrow-headed garter snake. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 205, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: The Middle Fork of the Gila River was found eligible based on an outstandingly remarkable scenic value in the 2002 eligibility study. There were no relevant changes in circumstances, but segment length was updated with more accurate spatial data. The Middle Fork of the Gila River outside of wilderness was not found to possess the same outstandingly remarkable values as those miles determined eligible (please see appendix I to the FEIS). While scenic, the geologic values are not rare, unique, or exemplary as compared to similar rivers in the region of comparison. Similarly, the heritage resources are important, but not outstandingly remarkable.

Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. The Middle Fork Gila River does not provide uniquely diverse or uniquely high-quality habitat for the species listed by the commenters and does not contain nationally or regionally important metapopulations of these species. We do not deny that the Middle Fork Gila River may provide habitat for many of the species listed, but this specific waterway is not unique in this regard within the region of comparison. Flathead and black bullhead catfish, brown trout, and virile catfish are not native to the Gila National Forest's aquatic ecosystems. None of the plant species have habitat requirements that are river-dependent and are therefore not river-related values. Recreational and opportunities for solitude are common across the region of comparison, and not necessarily river-related values. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 46: Commenters recommend the Middle Box Gila River should receive a scenic or wild preliminary classification. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study assigned preliminary classifications of wild and recreational based on the existing levels of development along this river segment (see appendix I of the FEIS).

Mineral Creek

Comment 47: There is support for inclusion of Mineral Creek as an eligible wild and scenic river with outstandingly remarkable values of fish and recreation. There are suggestions that Mineral Creek should be found eligible for scenery, geology, wildlife, botany climate adaptation and ecosystem services values, as well as expanding the fisheries value to include more than just the Whiskey Creek lineage of Gila trout. Commenters note habitat present for longfin dace, Sonora sucker, and riffle darter. In support of scenery and geology values, commenters describe three major geologic formations deposited by the Bursum caldera and point to the cave, high canyon walls, spire formations, waterfalls, sections in slot canyons, and the bedrock streambed.

In support of wildlife and botany values, commenters note the presence of designated critical habitat for Mexican spotted owl and reference Natural History New Mexico data that indicate the following special status species are present in the area: mountain treefrog, Chiricahua leopard frog, northern leopard frog, lowland leopard frog, common black-hawk, peregrine falcon, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Allen's big-eared bat, big free-tailed bat, Gunnison's prairie dog, Arizona gray squirrel, jaguar, Sonoran mud turtle, Mexican garter snake, narrow-headed garter snake, and Arizona snaketail, Davidson's cliff carrot, Gila thistle, rock fleabane, Mogollon hawkweed, heartleaf groundsel, Metcalfe's groundsel, Sacramento groundsel, Hart's groundsel, Mogollon whitlowgrass, Wright's campion, Pinos Altos flameflower, Mogollon Mountain lousewort, Goodding's onion, and Mogollon death camas, as well as black bear, cougar, elk, and mule deer. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 233, 361, 672, 680, 684, 685, 712, and 724.1 through 724.11**

Response: Mineral Creek was found not eligible by the results of the 2002 study, but circumstances changed as a result of the 2012 Whitewater Baldy Complex Fire as described in appendix I to the FEIS.

Many rivers in the region of comparison that are scenic and provide habitat for a highly diverse array of wildlife, fish, and plant species. While scenic, the geologic values are not outstandingly remarkable. Mineral Creek does not provide uniquely diverse or uniquely high-quality habitat for the species listed by the commenters and does not contain nationally or regionally important metapopulations of these species. We do not deny that Mineral Creek may provide habitat for many of the wildlife species listed, but this specific waterway is not unique in this regard within the region of comparison. The plant species listed by the commenter may or may not be present in the river corridor and not all of them have river-dependent habitat requirements. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 48: Commenters recommend Mineral Creek should receive a preliminary classification of wild. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: This suggestion is consistent with the assigned preliminary classification (see appendix I of the final EIS).

Mogollon Box of the Gila River

Comment 49: Commenters suggest the Mogollon Box segment of the Gila River should be found eligible for recreation, wildlife, and botany outstandingly remarkable values. In support of outstandingly remarkable recreation values, commenters describe its location relative to the communities of Gila and Cliff, Mogollon Box Recreation Area and The Nature Conservancy's Gila Riparian Reserve and opportunities for nature appreciation, hiking, picnicking, birdwatching, kayaking, canoeing and other primitive and general recreational activities. Commenters support a botany value with the presence of old cottonwood, sycamore and willow, the presence of honey mesquite and one-seed juniper and note that Natural Heritage New Mexico data identifies special status plant species Mule Mountain Brickell-bush and green-flower nipple cactus are in the area. Commenters also refer to Natural Heritage New Mexico data indicating special status wildlife species in the area include Arizona toad, mountain treefrog, Chiricahua leopard frog, northern leopard frog, neotropic cormorant, bald eagle, common black- hawk, ferruginous hawk, golden eagle, Aplomado falcon, peregrine falcon, Montezuma quail, long-bill curlew, band-tailed pigeon, common ground-dove, elf owl, mountain spotted owl, Lucifer hummingbird, elegant trogon, Lewis's woodpecker, Gila woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, marsh wren, western bluebird, sage thrasher, Bendire's thrasher, crissal thrasher, loggerhead shrike, Bell's vireo, Arizona Bell's vireo, gray vireo, red-faced warbler, painted redstart, Albert's towhee, black-chinned sparrow, Lincoln's sparrow, chestnut-collared longspur, evening grosbeak, cave myotis, southwestern myotis, occult myotis, eastern long-eared bat, spotted bat, black-tailed prairie dog, Gunnison's prairie dog, Arizona gray squirrel, Bailey's pocket mouse, northern pygmy mouse, hooded skunk, southwestern otter, jaguar, Sonoran mud turtle, Chihuahua nightsnake, Mexican garter snake, Arizona coral snake, white-belted ringtail, serpent ringtail, gray sanddragon, blue-eyed darner, western pondhawk, widow skimmer, flame skimmer, desert whitetail, variegated meadowhawk, American rubyspot, sooty dancer, arroyo bluet, plains forktail, Mexican forktail, black-fronted forktail, pale-faced clubskimmer, and desert firetail, as well as bighorn sheep, black bear, cougar, elk, mule deer and pronghorn. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 205, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: The Mogollon Box of the Gila River was not evaluated in the 2002 eligibility study. Mogollon Box of the Gila River is a free-flowing waterway; however, there were no outstandingly remarkable values identified for the river segment (see appendix I of the FEIS). Recreational values along this segment are like those found in other rivers in the region of comparison.

Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. The Mogollon Box of the Gila River does not provide uniquely diverse or uniquely high-quality habitat for the species listed; nor does it contain nationally or regionally important metapopulations of these species. Honey mesquite and one-seed juniper are common upland species and while both special status species identified by the commenter may or may not be present in the river corridor, neither have riparian-dependent habitat requirements and are therefore not river-related values. Therefore, Mogollon Box of the Gila River does not possess outstandingly remarkable values based on providing habitat for these species. Mogollon Box of the Gila River may provide habitat for the species listed, but this specific waterway is not unique in this regard within the region of comparison.

Comment 50: Commenters suggest a preliminary classification of scenic should be assigned to the Mogollon Box of the Gila River. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study determined the Mogollon Box of the Gila is not eligible for Wild and Scenic River status. Therefore, no preliminary classification will be assigned.

Mogollon Creek

Comment 51: Commenters suggest that Mogollon Creek should be found eligible for wildlife, fish, botany, climate adaptation, and ecosystem services outstandingly remarkable values. One commenter states that Mogollon Creek has similar outstandingly remarkable values as Mineral Creek, which was deemed eligible by the draft study. In support of fisheries value, commenters point out that it is an active recovery stream for threatened Gila trout, includes designated critical habitat for spikedace and for loach minnow, and that other special status fishes such as roundtail chub, Gila chub, speckled dace, longfin dace, desert sucker, Sonora sucker, and channel, flathead, and black bullhead catfish are present. Commenters also state Natural Heritage New Mexico documents the area near Mogollon Creek supports special status animal species including Arizona toad, mountain treefrog, Chiricahua leopard frog, northern leopard frog, American bittern, common black-hawk, golden eagle, Aplomado falcon, peregrine falcon, long-billed curlew, elf owl, Lucifer hummingbird, elegant trogon, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, Bell's vireo, gray vireo, red-faced warbler, painted redstart, southwestern myotis, occult myotis, eastern red bat, spotted bat, Gunnison's prairie dog, Arizona gray squirrel, Mexican wolf, Bailey's pocket mouse, northern pygmy mouse, jaguar, Sonoran mud turtle, Mexican garter snake, and Arizona coral snake, as well as familiar black bear, cougar, elk, mule deer, and pronghorn. The area includes designated critical habitat for Mexican spotted owl and for southwestern willow flycatcher and proposed critical habitat for narrow-headed garter snake, Mexican garter snake, and yellow-billed cuckoo.

In support of a botany value, commenters reference Natural Heritage New Mexico documents the area near Mogollon Creek supports special status plant species Mule Mountain brickell-bush, rock fleabane, Mogollon whitlowgrass, Wright's campion, Wooton's hawthorn and yellow lady's slipper. Commenters also state that the unique land protection afforded by the Gila Wilderness and the stream's critical headwaters location warrant supplemental protection for the stream and riparian corridor with corresponding outstandingly remarkable values of climate adaptation and ecosystem services. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 205, 233, 361, 474, 475, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Mogollon Creek is a free-flowing waterway; however, there were no outstandingly remarkable values identified for the river segment in the 2002 study, or changes in circumstances justifying reconsideration by the current study (see appendix I of the FEIS). Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. Mogollon Creek does not provide uniquely diverse or uniquely high-quality habitat for the species listed; nor does it contain nationally or regionally important metapopulations of these species. Channel, flathead, and black bullhead catfish are not native to the aquatic ecosystems of the Gila National Forest. The plants listed by the commenter may or may

not be present in the river corridor and not all have river-dependent habitat requirements and are not river-related values. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 52: Commenters recommend Mogollon Creek should receive a preliminary classification of wild. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712, 724.1 through 724.11, 730.45**

Response: The eligibility study determined Mogollon Creek is not eligible for Wild and Scenic River status. Therefore, no preliminary classification will be assigned.

Mule Creek

Comment 53: Commenters support the draft eligibility finding of an outstandingly remarkable geologic values along Mule Creek and suggest it should also be recognized for outstandingly remarkable wildlife, fish, climate adaptation, and ecosystem services values.

In support of an outstandingly remarkable fish value, commenters point to Natural Heritage New Mexico identifies habitat in Mule Creek for special status fish species Gila chub, longfin dace, desert sucker, Sonora sucker, channel catfish, and flathead catfish. The creek includes designated critical habitat for spikedace and loach minnow. In support of an outstandingly remarkable wildlife value, commenters point to Natural Heritage New Mexico data that indicates the area near Mule Creek supports special status animal species Arizona toad, mountain treefrog, northern leopard frog, lowland leopard frog, common black-hawk, peregrine falcon, yellow-billed cuckoo, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, jaguar, Sonoran mud turtle, Mexican garter snake, narrow-headed garter snake as well as familiar bighorn sheep, black bear, cougar, elk, mule deer, and pronghorn. The area includes proposed critical habitat for narrow-headed garter snake and northern Mexican garter snake. **Associated Comments: 25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, 724.1 through 724.11**

Response: Mule Creek is a free-flowing waterway that the 2002 eligibility study deemed ineligible for Wild and Scenic status; however, there are changed circumstances due a recent peer-reviewed publication that led to a determination that Mule Creek is eligible for wild and scenic status based on an outstandingly remarkable geology value (see appendix I of the FEIS).

Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife and fish species. Mogollon Creek does not provide uniquely diverse or uniquely high-quality habitat for the species listed; nor does it contain nationally or regionally important metapopulations of these species. Channel and flathead catfish are not native to the aquatic ecosystems of the Gila National Forest. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 54: There is a suggestion that Mule Creek be assigned a preliminary classification of scenic. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: This suggestion is consistent with the preliminary classification assigned by the interdisciplinary team (see appendix I of the FEIS).

San Francisco River-Devil's Creek

Comment 55: It is suggested that San Francisco River – Devil's Creek river segment should be found eligible for Wild and Scenic status based on outstandingly remarkable recreation, geologic, wildlife, fish, natural setting, wilderness character, ecosystem services and climate adaptation values. Commenters support an outstandingly remarkable recreation and geologic value by noting it is included in American Whitewater's

database and makes up the lower half of a unique multi-day, scenic, 40 miles whitewater floating experience and is described online as "…a geologic wonderland of igneous, sedimentary and metamorphic rock...."

As documented by Natural Heritage New Mexico, the area near San Francisco River/Devil's Creek supports special status animal species Arizona toad, Chiricahua leopard frog, northern leopard frog, lowland leopard frog, common black-hawk, peregrine falcon, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, jaguar, collared peccary, Sonoran mud turtle, Gila spotted whiptail, Mexican garter snake, sooty dancer, and Aztec dancer, as well as familiar black bear, cougar, elk, mule deer, and pronghorn. The area includes designated critical habitat for southwestern willow flycatcher and proposed critical habitat for yellow-billed cuckoo and narrow-headed garter snake. Special status fish species in the San Francisco River/Devil's Creek include roundtail chub, Gila chub, speckled dace, longfin dace, desert sucker, Sonora sucker, and Rio Grande sucker. The stream also includes designated critical habitat for spikedace and loach minnow. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, 724.1 through 724.11, 730.66**

Response: The San Francisco River-Devil's Creek segment is a free-flowing waterway; however, there were no outstandingly remarkable values identified in the 2002 study, or changes in circumstances justifying reconsideration by the current study (see appendix I of the FEIS). Many areas on the Gila National Forest possess wilderness character or characteristics or are in a natural setting. The geologic exposures along this river segment may be scenic, but neither value is outstandingly remarkable compared to similar rivers in the region of comparison. Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. San Francisco River-Devil's Creek contains habitat that could support the species identified by commenters, but it does not provide uniquely diverse or uniquely high-quality habitat for the species listed; nor does it contain nationally or regionally important metapopulations of these species. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 56: Commenters suggest this segment be assigned preliminary classifications of scenic and recreational. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study determined San Francisco River-Devil's Creek is not eligible for Wild and Scenic River status. Therefore, no preliminary classification will be assigned.

Sapillo Creek

Comment 57: Commenters suggest Sapillo Creek should be eligible for scenic, recreational, cultural, wildlife, fish, botanic, climate adaptation, and ecosystem services values. Commenters note the several archaeological sites in the canyon, scenic views available from forest trail 247, favorite fishing holes, and the fact the creek is tributary to the Wilderness Run of the Gila River, which was determined eligible for Wild and Scenic status. Commenters state that the canyon includes designated critical habitat for Mexican spotted owl, proposed critical habitat for narrow-headed and northern Mexican garter snakes, and the importance of the creek to Gila trout recovery. Citing Natural Heritage New Mexico data, commenters state the area also supports other special status species including green-flower nipple cactus, longfin minnow, desert sucker, Sonora sucker, Rio Grande sucker, channel catfish, black bullhead catfish, Arizona toad, Chiricahua leopard frog, northern leopard frog, American bittern, bald eagle, common black-hawk, Aplomado falcon, peregrine falcon, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, southwestern myotis, fringed myotis, spotted bat, pale Townsend's big-eared bat, Brazilian free-tail bat, Gunnison's prairie dog, jaguar, Sonoran mud turtle, Sonoran Mountain kingsnake, white-belted ringtail, serpent ringtail, dashed ringtail, arroyo darter flame skimmer, smoke rubyspot, Aztec dancer, Tonto dancer, northern bluet, and painted damsel, as well as black bear,

cougar, elk, mule deer, and pronghorn. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Sapillo Creek is a free-flowing waterway; however, there were no outstandingly remarkable values identified for the river segment in the 2002 study, or changes in circumstances justifying reconsideration by the current study (see appendix I of the FEIS). Many rivers in the region of comparison have similar cultural, scenic, and recreational values and provide habitat for a highly diverse array of wildlife, fish, and plant species. Sapillo Creek does not provide uniquely diverse or uniquely high-quality habitat for the species listed; nor does it contain nationally or regionally important metapopulations of these species. Green-flower nipple cactus may or may not be present in the river corridor, but it does not have river-dependent habitat requirements and is therefore not a river-related value. Channel and black bullhead catfish are not native to the Gila National Forest's aquatic ecosystems. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 58: Commenters suggest this segment be assigned a preliminary classification of wild. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study determined Sapillo Creek is not eligible for Wild and Scenic River status. Therefore, no preliminary classification will be assigned.

South Diamond Creek

Comment 59: There is a suggestion that South Diamond Creek should be found eligible for wildlife, fish, botany, climate adaptation, and ecosystem services outstandingly remarkable values. Commenters support the draft eligibility study conclusion about the outstandingly remarkable fisheries value and add that the creek also contains habitat for special status species such as spikedace, longfin dace, desert sucker, and Sonora sucker. Commenters point to the presence of designated critical habitat for Mexican spotted owl and reference Natural Heritage New Mexico data and state the area near South Diamond Creek supports special status animal species including Chiricahua leopard frog, northern leopard frog, American bittern, Aplomado falcon, peregrine falcon, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, and jaguar, as well as black bear, cougar, elk, mule deer, and pronghorn. In support of an outstandingly remarkable botany value, commenters reference Natural Heritage New Mexico data that indicates the area near South Diamond Creek contains Black Range groundsel, Hart's groundsel, and Organ Mountains giant hyssop, which are special status species. **Associated Letters: 24, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: South Diamond Creek was found eligible for wild and scenic river status by the 2002 eligibility study based on an outstandingly remarkable fish value. There was no relevant change in circumstances, so the 2002 determination was upheld by the interdisciplinary team. The segment length was updated based on more accurate spatial data. Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. With the exception of the being the only source population for a distinct genetic lineage of Gila trout, South Diamond Creek does not provide uniquely diverse or high-quality habitat for other special status fish species. The special status plants listed by the commenters may or may not be present in the river corridor, but none of them have habitat requirements that are river dependent and are therefore not river-related values.

Comment 60: Commenters suggest this segment be assigned preliminary classifications of scenic or wild. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: A preliminary classification of wild was assigned to South Diamond Creek.

Spruce Creek

Comment 61: There is a suggestion that Spruce Creek should be found eligible for wildlife, fish, botany, climate adaptation, and ecosystem services outstandingly remarkable values. Commenters support the eligibility finding an outstandingly remarkable fisheries value based on the relict population of a genetically distinct lineage of Gila trout. In support of an outstandingly remarkable wildlife value, commenters cite Natural Heritage New Mexico data indicating the area supports special status plant and animal species including Gila thistle, Mogollon hawkweed, Hart's groundsel, Mogollon death camas, American bittern, peregrine falcon, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, Arizona gray squirrel, black-footed ferret, jaguar, Sonoran mud turtle, northern Mexican garter snake, virile crayfish, as well as black bear, cougar, elk, and mule deer. The area includes designated critical habitat for Mexican spotted owl. Commenters state the headwater nature and location in the Gila Wilderness support outstandingly remarkable values for ecosystem services and climate adaptation. **Associated Letters: 24, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Spruce Creek was found eligible for Wild and Scenic River status by the 2002 eligibility study based on an outstandingly remarkable fisheries value. The interdisciplinary team considered changing the status of the stream to ineligible based on the 2012 Whitewater Baldy Complex Fire, which eliminated the relict population of the genetically distinct Spruce Creek lineage of Gila trout that was the basis for the outstandingly remarkable value. However, the replicated population in Big Dry Creek survived with good numbers. Fish from Big Dry Creek have been reintroduced twice, once in May of 2018, and again in August of 2020. While the success of the reintroduction cannot be fully evaluated until after the fish reach sexual maturity, efforts to establish a self-sustaining population will continue to be a priority. Based on this, the interdisciplinary team upheld the original eligibility finding and updated the segment length based on more accurate spatial data. Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. The special status plants listed by the commenters may or may not be present in the river corridor, but none of them have habitat requirements that are river dependent and are therefore not river-related values.

Comment 62: Commenters suggest this segment be assigned a preliminary classification of wild. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: A preliminary classification of wild was assigned to Spruce Creek.

Taylor Creek

Comment 63: Commenters suggest Taylor Creek should be found eligible for scenery, wildlife, fish, recreation, botany, cultural/historic, climate adaptation, and ecosystem services outstandingly remarkable values. In support of an outstandingly remarkable scenery value, commenters point to the mixture of old-growth Douglas-fir, ponderosa pine, southwestern white pine, narrowleaf cottonwood, box elder, Gambel's oak, and alligator juniper and the fact that it flows within wilderness and adjacent to inventoried roadless areas, which render the stream healthy and natural. Commenters also state that Taylor Creek contains cliff dwellings, caves, and petroglyphs that are comparable to the cultural resources along the West Fork Gila River, which was found eligible. Commenters note the creek supports special status fish species including Gila trout, roundtail chub, spikedace, speckled dace, loach minnow, longfin dace, desert sucker, Sonora sucker, channel catfish, and black bullhead catfish. In support of a outstandingly remarkable wildlife value, commenters cite Natural Heritage New Mexico data indicating the area supports special status species including Arizona toad, mountain treefrog, Chiricahua leopard frog, northern leopard frog, American bittern, common black-hawk, Aplomado falcon, peregrine falcon, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted

redstart, southwestern myotis, fringed myotis, long-legged myotis, spotted bat, Allen's big-eared bat, Gunnison's prairie dog, Arizona gray squirrel, black-footed ferret, jaguar, Sonoran mud turtle, narrow-headed garter snake, and Gila springtail, as well as familiar black bear, cougar, elk, mule deer, and pronghorn. The area includes designated critical habitat for Mexican spotted owl. In support of an outstandingly remarkable botany value, commenters reference the Natural Heritage New Mexico data that indicate the area supports rock fleabane, New Mexico gumweed, Black Range groundsel, Metcalfe's groundsel, Mogollon whitlowgrass, Goodding's bladderpod, and threadleaf giant hyssop, all of which have special status. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Taylor Creek is a free-flowing waterway; however, there were no outstandingly remarkable values identified for the river segment in the 2002 study, or changes in circumstances justifying reconsideration by the current study (see appendix I of the FEIS). While Taylor Creek does *not* flow within wilderness, location relative to wilderness or inventoried roadless areas is relevant to preliminary classification. It is *not* a consideration for eligibility.

Many rivers in the region of comparison have similar cultural, scenic, and recreational values and provide habitat for a highly diverse array of wildlife, fish, and plant species. Taylor Creek does not provide uniquely diverse or uniquely high-quality habitat for the species listed; nor does it contain nationally or regionally important metapopulations of these species. The plant species listed by the commenters may or may not be present in the river corridor but they do not have river-dependent habitat requirements and are therefore not river-related values. Channel and black bullhead catfish are not native to the Gila National Forest's aquatic ecosystems. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 64: Commenters suggest this segment be assigned a preliminary classification of wild. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study determined Taylor Creek is not eligible for wild and scenic river status. Therefore, no preliminary classification will be assigned.

Turkey Creek

Comment 65: Turkey Creek should be found eligible for scenic, cultural/historic, wildlife, fish, recreation, botany, climate adaptation, and ecosystem services outstandingly remarkable values. It is also suggested that a natural setting or high wilderness character, which should be considered an outstandingly remarkable value for Turkey Creek. Commenters state that Turkey Creek contains significant cultural sites with pottery, caves, pictographs, and other archaeological resources. Commenters support an outstandingly remarkable scenery value by stating its importance as a wilderness tributary to the Gila River and describing the narrow canyon walls, Arizona sycamore trees and presence of holes, waterfalls, and hot springs. Commenters note opportunities for extended backpacking, horseback riding and pack mule trips. In support of a fisheries value, commenters note special status species including Gila trout, roundtail chub, headwater chub, speckled dace, longfin dace, desert sucker, Sonora sucker, and flathead catfish. Turkey Creek includes designated critical habitat for Gila chub, spikedace, and loach minnow. Commenters also point out the area includes designated critical habitat for Mexican spotted owl, southwestern willow flycatcher, Gila chub, spikedace, and loach minnow, and proposed critical habitat for northern Mexican garter snake and for narrow-headed garter snake.

Commenters reference Natural Heritage New Mexico data in further support of a wildlife value, and for the botany value. The data indicate the area supports special status species including Mule Mountain brickell-bush and green-flower nipple-cactus, Arizona toad, Chiricahua leopard frog, northern leopard frog, lowland leopard frog, common black-hawk, golden eagle, Aplomado falcon, peregrine falcon, band-tailed pigeon, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, Arizona gray squirrel, black-

footed ferret, jaguar, Sonoran mud turtle, and Arizona coral snake, as well as black bear, cougar, elk, and mule deer. Commenters state that the headwater location and protection provided by the Gila Wilderness constitute an outstandingly remarkable value of ecosystem services and climate adaptation. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, 724.1 through 724.11, 730.45, 730.47, 730.48, 730.74**

Response: Turkey Creek is a free-flowing waterway; however, there were no outstandingly remarkable values identified for the river segment in the 2002 study, or changes in circumstances justifying reconsideration by the current study (see appendix I of the FEIS). Location relative to wilderness or inventoried roadless areas is relevant to preliminary classification. It is *not* a consideration for eligibility.

Many rivers in the region of comparison have similar cultural, scenic, and recreational values and provide habitat for a highly diverse array of wildlife, fish, and plant species. Turkey Creek does not provide uniquely diverse or uniquely high-quality habitat for the species listed; nor does it contain nationally or regionally important metapopulations of these species. The plant species listed by the commenters may or may not be present in the river corridor but do not have river-dependent habitat requirements and are therefore not a river-related value. Flathead catfish are not native to the Gila National Forest's aquatic ecosystems. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 66: Commenters suggest this segment be assigned a preliminary classification of wild and scenic. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: The eligibility study determined Turkey Creek is not eligible for wild and scenic river status. Therefore, no preliminary classification will be assigned.

Upper Box San Francisco River

Comment 67: Commenters recommend the Upper Box San Francisco River should be found eligible for scenery, recreation, wildlife, and fish outstandingly remarkable values. Commenters support the eligibility determinations for the scenery and recreation values. In support of an outstandingly remarkable wildlife value, commenters cite Natural Heritage New Mexico data indicating the area supports special status species including Arizona toad, Chiricahua leopard frog, northern leopard frog, common black-hawk, peregrine falcon, yellow-billed cuckoo, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, jaguar, Sonoran mud turtle, zebratail lizard, northern Mexican garter snake, virile crayfish, as well as familiar black bear, cougar, elk, and mule deer. The area includes designated critical habitat for Mexican spotted owl and for southwestern willow flycatcher and proposed critical habitat for narrow-headed garter snake. Commenters also note that the river through Upper Box provides exemplary habitat for special status fish species spikedace, speckled dace, longfin dace, desert sucker, and Sonora sucker. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, 724.1 through 724.11, 730.66**

Response: The Upper Box San Francisco River was found eligible for wild and scenic status based on its free-flowing nature and outstandingly remarkable scenery and recreational opportunities (see appendix I of the FEIS). Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. The Upper Box San Francisco River does not provide uniquely diverse or uniquely high-quality habitat for the species listed; nor does it contain nationally or regionally important metapopulations of these species.

Comment 68: Commenters suggest this segment be assigned a preliminary classification of wild and scenic.
Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11

Response: This is consistent with the preliminary classifications assigned by the interdisciplinary team.

West Fork Gila River

Comment 69: Commenters suggest the West Fork Gila River should be found eligible for scenery, wildlife, fish, botany, cultural/historic, climate adaptation, and ecosystem services outstandingly remarkable values and the eligible length extended to include what flows through the Gila Cliff Dwellings National Monument. Commenters support the interdisciplinary team's findings of outstandingly remarkable scenery and cultural/historic values and provide additional description and details related to those values. Commenters note designated critical habitat for federally endangered loach minnow, spike dace, Mexican spotted owl, and Chiricahua leopard frog, and proposed critical habitat for Gila trout and narrow-headed garter snake. In further support of fisheries, wildlife and botanical values, commenters cite Natural Heritage New Mexico data indicating the area supports special status species including rock fleabane, Mogollon whitlowgrass, Goodding's bladderpod, Gooding's onion, southwest Solomon's seal, Hart's groundsel, Hess's fleabane, Mogollon Mountain lousewort, Mogollon death camas, and parasite lady's-tresses, roundtail chub, headwater chub, speckled dace, longfin dace, desert sucker, Sonora sucker, flathead catfish, black bullhead catfish, Arizona toad, mountain treefrog, Chiricahua leopard frog, northern leopard frog, lowland leopard frog, American bittern, common black-hawk, Aplomado falcon, peregrine falcon, Montezuma quail, yellow-billed cuckoo, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, white-nosed coati, hooded skunk, jaguar, Sonoran mud turtle, northern Mexican garter snake, and desert ringtail, as well as black bear, cougar, elk, and mule deer. Commenters assert that the headwater location and protection provided by the Gila Wilderness justifies outstandingly remarkable ecosystem service and climate adaptation values.
Associated Letters: 24, 25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11

Response: The length of the West Fork Gila River that flows within National Forest System lands was determined to be eligible for wild and scenic status based on outstandingly remarkable scenery and cultural/historic values (see appendix I of the FEIS). It is outside agency authority and the scope of the eligibility study to evaluate lands under other jurisdiction, even if it is another Federal public land management agency. Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. The West Fork Gila River does not provide uniquely diverse or uniquely high-quality habitat for the species listed; nor does it contain nationally or regionally important metapopulations of these species. Further, flathead and black bullhead catfish are not native to the aquatic ecosystems of the Gila National Forest. The plant species listed by the commenter may or may not occur in the river corridor but do not have habitat requirements that are river-dependent, therefore they are not river-related values. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 70: Commenters suggest this segment be assigned a preliminary classification of wild and scenic.
Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11

Response: The eligible segment of the West Fork Gila River was assigned a preliminary classification of wild. The segment that could be appropriate for a scenic classification flows on lands that are not under the jurisdiction of the Forest Service and was not included in the eligibility study because that would be outside of our authority.

West Fork Mogollon Creek

Comment 71: West Fork Mogollon Creek should be found eligible for scenery, wildlife, fish, botany, climate adaptation, and ecosystem services outstandingly remarkable values. Commenters describe its wilderness location, caves, canyon width and depth, waterfalls and pools, distinct mountain views in all directions as reasons why the scenery is outstandingly remarkable. In support of botany, wildlife and fish values, commenters provide a list of special status species that Natural Heritage New Mexico data indicates are in the area including Hart's groundsel, Wright's campion, Wooton's hawthorn, Mogollon death camas, Gila trout, headwater chub, spikedace, longfin dace, desert sucker, Sonora sucker, Chiricahua leopard frog, northern leopard frog, American bittern, Aplomado falcon, peregrine falcon, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, spotted bat, Gunnison's prairie dog, jaguar, and Mexican garter snake, as well as black bear, cougar, elk, and mule deer. The area also includes designated critical habitat for Mexican spotted owl and proposed critical habitat for narrow-headed garter snake. Commenters assert that the headwater location in the Gila Wilderness supports outstandingly remarkable ecosystem services and climate adaptation values. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 205, 233, 361, 474, 475, 672, 684, 685, 712, and 724.1 through 724.11**

Response: West Fork Mogollon Creek is a free-flowing waterway; however, there were no outstandingly remarkable values identified for the river segment in the 2002 study, or changes in circumstances justifying reconsideration by the current study (see appendix I of the FEIS). Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. West Fork Mogollon Creek does not provide uniquely diverse or uniquely high-quality habitat for the species listed; nor does it contain nationally or regionally important metapopulations of these species. The plants listed by the commenter may or may not be present in the river corridor and most do not even have river-dependent habitat requirements and are not river-related values. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 72: Commenters recommend West Fork Mogollon Creek should receive a preliminary classification of wild. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: The eligibility study determined West Fork Mogollon Creek is not eligible for Wild and Scenic River status. Therefore, no preliminary classification will be assigned.

Whitewater Creek

Comment 73: Whitewater Creek should be found eligible for recreation, cultural/historic, wildlife, fish, botany, climate adaptation, and ecosystem services outstandingly remarkable values. Commenters support the eligibility study's findings and descriptions of the outstandingly remarkable recreation and historic values. In support of botany, wildlife and fish values, commenters provide a list of special status species that Natural Heritage New Mexico data indicate are in the area including Davidson's cliff carrot, Gila thistle, Hess's fleabane, Heartleaf groundsel, Sacramento groundsel, Hart's groundsel, Mogollon whitlowgrass, Wright's campion, Chiricahua dock, Pinos Altos flameflower, Arizona alum-root, Mogollon Mountain lousewort, Mogollon death camas, Gila trout, spikedace, speckled dace, loach minnow, longfin dace, desert sucker, Sonora sucker, and riffle darter, Arizona toad, northern leopard frog, lowland leopard frog, American bittern, common black-hawk, peregrine falcon, elf owl, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, occult myotis, spotted bat, Allen's big-eared bat, Gunnison's prairie dog, Arizona gray squirrel, jaguar, Sonoran mud turtle, Sonoran Mountain kingsnake, northern Mexican garter snake, virile crayfish, as well as bighorn sheep, black bear,

cougar, elk, and mule deer. The area includes designated critical habitat for Mexican spotted owl and proposed critical habitat for narrow-headed garter snake. Commenters assert the headwater location and the protection provided to most of the segment by the Gila Wilderness support outstandingly remarkable values of ecosystem services and climate adaptation. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Whitewater Creek was determined to be eligible for wild and scenic status based on outstandingly remarkable recreation and historic values (see appendix I of the FEIS). Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. Whitewater Creek does not provide uniquely diverse or uniquely high-quality habitat for the species listed; nor does it contain nationally or regionally important metapopulations of these species. Further, virile crayfish are not native to the aquatic ecosystems of the Gila National Forest. The plant species listed by the commenter may or may not occur in the river corridor and most do not have habitat requirements that are river-dependent, therefore they are not river-related values. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 74: Commenters suggest this segment be assigned a preliminary classification of wild and recreational. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: This suggestion is consistent with the preliminary classifications assigned by the interdisciplinary team.

Willow Creek

Comment 75: Willow Creek should be found eligible for recreation, wildlife, fish, and botany outstandingly remarkable values. Commenters support the eligibility study's identification and description of the remarkably outstanding recreational value. In support of botany, wildlife, and fish values, commenters provide a list of special status species that Natural Heritage New Mexico data indicate are in the area including Gila thistle, Mogollon hawkweed, heartleaf groundsel, Metcalfe's groundsel, Sacramento groundsel, Hart's groundsel, Copper Mine milkvetch, villous groundcover milkvetch, Mogollon clover, Chiricahua dock, Pinos Altos flameflower, Mogollon Mountain lousewort, Gooding's onion, Mogollon death camas, adder's mouth, Gila trout, roundtail chub, spikedace, speckled dace, longfin dace, desert sucker, Sonora sucker, Arizona toad, mountain treefrog, Chiricahua leopard frog, northern leopard frog, bald eagle, peregrine falcon, blue-throated hummingbird, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, gray vireo, red-faced warbler, painted redstart, southwestern myotis, fringed myotis, long-legged myotis, occult myotis, spotted bat, Allen's big-eared bat, big free-tailed bat, Gunnison's prairie dog, Arizona gray squirrel, northern Mexican wolf, jaguar, and Arizona snaketail, as well as black bear, cougar, elk, and mule deer. The area includes designated critical habitat for Mexican spotted owl and proposed critical habitat for narrow-headed garter snake. **Associated Letters: 24, 25, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 712, and 724.1 through 724.11**

Response: Willow Creek was determined to be eligible for wild and scenic status based on outstandingly remarkable recreation value (see appendix I of the FEIS). Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. Willow Creek does not provide uniquely diverse or uniquely high-quality habitat for the species listed; nor does it contain nationally or regionally important metapopulations of these species. The plant species listed by the commenter may or may not occur in the river corridor and do not have habitat requirements that are river-dependent, therefore they are not river-related values.

Comment 76: Commenters suggest this segment be assigned a preliminary classification of recreational. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: This suggestion is consistent with the preliminary classification assigned by the interdisciplinary team.

Wilderness Run of the Gila River

Comment 77: Commenters suggest the Wilderness Run of the Gila River should be found eligible for recreation, scenery, cultural/historic, geology, wildlife, fish, botany, climate adaptation, and ecosystem services outstandingly remarkable values. Commenters generally support the eligibility study's identification and description of the recreation, scenery, cultural/historic, geology and wildlife values. Commenters provide additional description of the wildlife value and support fish and botany values by providing a list of special status species that Natural Heritage New Mexico data indicate are in the area including Mule Mountain brickell-bush, green-flower nipple-cactus, Mogollon whitlowgrass, Gila trout, roundtail chub, longfin dace, desert sucker, Rio Grande sucker, channel catfish, black bullhead catfish, Arizona toad, mountain treefrog, Chiricahua leopard frog, northern leopard frog, lowland leopard frog, American bittern, common black-hawk, golden eagle, Aplomado falcon, peregrine falcon, long-billed curlew, band-tailed pigeon, elf owl, Lucifer hummingbird, elegant trogon, Lewis's woodpecker, Williamson's sapsucker, olive-sided flycatcher, bank swallow, pinyon jay, Clark's nutcracker, juniper titmouse, pygmy nuthatch, western bluebird, Bendire's thrasher, loggerhead shrike, Bell's vireo, gray vireo, red-faced warbler, painted redstart, southwestern myotis, fringed myotis, spotted bat, pale Townsend's big-eared bat, Brazilian free-tailed bat, Gunnison's prairie dog, Arizona gray squirrel, black-footed ferret, jaguar, Sonoran mud turtle, Sonoran Mountain kingsnake, Mexican garter snake, Arizona coral snake, serpent ringtail, dashed ringtail, Arizona ringtail, flame skimmer, red rock skimmer, American rubyspot, canyon rubyspot, springwater dancer, sooty dancer, Aztec dancer, Mexican forktail, pale-face clubskimmer, painted damsel, New Mexico hot springsnail, and Gila springsnail, as well as black bear, cougar, elk, and mule deer. Commenters also note the river includes designated critical habitat for spikedace and loach minnow. Commenters assert the land protection provided by the Gila Wilderness and the headwaters location justify outstandingly remarkable ecosystem services and climate adaptation values.

A couple commenters outright requested the agency promote the designation of this river segment because is the last free-flowing river in New Mexico, contains the greatest biodiversity, is the most remote, unsettled, and highest integrity geographic location, and has exceptional geologic value because it flows out the largest volcanic caldera system in the United States. **Associated Letters: 24, 25, 58, 85, 94, 151, 152, 173, 233, 361, 672, 684, 685, 697, 712, and 724.1 through 724.11**

Response: It is illegal for a Federal agency, or any Federal agency employee to attempt, or appear to attempt to influence congressional action. Designation is a congressional action we cannot promote or oppose in any way. The Wilderness Run of the Gila River was determined to be eligible for wild and scenic status based on outstandingly remarkable recreation, scenery, cultural/historic, geology and wildlife values (see appendix I of the FEIS). Many rivers in the region of comparison provide habitat for a highly diverse array of wildlife, fish, and plant species. The Wilderness Run of the Gila River does not provide uniquely diverse or uniquely high-quality habitat for the fish and plant species listed; nor does it contain nationally or regionally important metapopulations of these species. The plant species listed by the commenter may or may not occur in the river corridor and do not have habitat requirements that are river-dependent, therefore they are not river-related values. Channel and flathead catfish are not native to the aquatic ecosystems of the Gila National Forest. Ecosystem services and climate adaptation values are not outstandingly remarkable. All rivers provide ecosystem services and present opportunities for a range of climate adaptation options.

Comment 78: Commenters suggest this segment be assigned a preliminary classification of wild and recreational based on whether the segment is located within the wilderness boundary or downstream of it. **Associated Letters: 85, 94, 152, 233, 361, 672, 684, 685, 712 and 724.1 through 724.11**

Response: This suggestion is consistent with the preliminary classification assigned by the interdisciplinary team.

Wilderness

General

Comment 1: Commenter points out an error in the designated wilderness acreage as described in the background information of the designated areas section of the draft plan. **Associated Letter: 233**

Response: Thank you for pointing out this error. It has been corrected in the final plan.

Comment 2: Commenter points to the Designated Areas background information section of the draft EIS, notes each designated area type and links with species. Commenter would like to see more Wild and Scenic eligible river segments and recommended wilderness in the vicinity of the Gila River Research Natural Area because it should be a wildlife corridor for the Burro Mountains. **Associated Letter: 233**

Response: We acknowledge the commenter's preference. Wilderness recommendation for the evaluated areas in the Burro Mountains along the Gila River will not change how wildlife already use the river corridor or enhance or protect habitat or species movements beyond what the terrain, national forest designation, inventoried roadless area status and Endangered Species Act provides. Neither is that the purpose of wilderness; the purpose of wilderness is the use and enjoyment of the American people. Wild and scenic eligibility could provide additional protection for aquatic habitat as eligible segments must legally be managed to maintain their free-flowing nature unless a future suitability analysis finds it not suitable for designation or Congress decides to designate. Please also refer to response to comment 43 under the Wild and Scenic Rivers heading in this appendix.

Comment 3: Commenter notes the determination that there will not be any grazing-related effects within designated areas where grazing is not permitted in the draft EIS on page 484 and suggests there could be grazing effects as the result of feral cattle. **Associated Letter: 233**

Response: Please refer to response to comment 3 under the Feral Cattle heading in this appendix.

Comment 4: There is a concern that policy and regulations regarding the designation and management of wild and scenic rivers, inventoried roadless areas, and wilderness have been disregarded in favor of more designations. **Associated Letter: 647**

Response: Please refer to appendices H and I of the FEIS for complete documentation of these processes and their compliance with the Wilderness Act of 1964, the Wild and Scenic Rivers Act of 1969, the 2012 Planning Rule, and FSH 1909.12 Chapters 70 and 80. Plan direction for these areas aligns with regulations and policy direction set forth by FSH 1909.12.84, FSM 2320, 36 CFR 294 Special Areas, and Roadless Area Conservation Final Rule (2001 Roadless Rule).

Group Size Limits – Designated Wilderness Standard 5 and Recommended Wilderness Standard 9

Comment 5: There are differing perspectives on the group size limits for special use permits in wilderness. Some like it the way things are (25 persons and or 35 head of pack and saddle stock) and say that if things aren't broken the plan shouldn't try to fix them. Many of these commenters are okay with allowing for necessary exceptions for teaching packing skills, trail work, engaging youth, or other valid reasons if group leaders ensure Leave No Trace principles are used and are held accountable. Commenters suggest group leaders should be required to be certified and pay a security bond to ensure against non-compliance. There is also a suggestion that the Forest Service could run Leave No Trace training programs in partnership with Western New Mexico University. Others think group size limits should be based on the type of facilities being provided and that if it's an outfitter that is digging toilet facilities and running a kitchen it should be flexible, but if it's just a group of backpackers the limit should be 15. One commenter is concerned that this standard

allows for exceptions because it could be viewed as a punishment for good outfitters and guides that abide by the rules. Commenter states that these rules are even more important now that wilderness visitation has sky-rocketed.

Other commenters prefer these limits are kept low to preserve opportunities for solitude stating, "Having 30 people or horses pretty much precludes that…" and suggesting these groups could find somewhere else to go outside wilderness. Another commenter suggests the limit be adjusted downward to 15 people and 25 animals. One commenter noted the amount of manure and trash along the trail from Snow Lake to Gila Hot Springs and suggested 12 people and 16 animals might be sufficient to reduce impacts. Another prefers the limit be reduced to 10 people and 15 animals because it is impossible for big groups to leave no trace. Others suggest the plan consider culturally relevant size limits and that 60 people may be too large, but 15 is way too small.

Some commenters suggest different group size limits for designated versus recommended wilderness is appropriate. Others think it should be the same for designated and recommended wilderness. One commenter states: "Since the size of recommended wilderness is variable, the use of a standard group size for all areas is arbitrary." Others prefer no additional areas are recommended as wilderness for various reasons, so there would be no need to consider that option. One commenter expressed concern over group size limits in wilderness study areas.

Some commenters prefer the plan is silent on this topic and that it is sufficient to address this as part of the permitting process because large groups touring the wilderness is rare and there isn't evidence that there is a current problem. Many of these commenters prefer fewer regulations rather than more and are concerned that group size limits could discourage family outings and negatively impact local outfitter and guiding businesses. One commenter states: "we are the reason there are allotments and wilderness in the first place we should have the right to access anytime." Another commenter states establishing group size limits is unnecessary overreach and asks "What is the difference in allowing four groups of 25 persons at one time and one group of 100 persons? If you limit the number of persons, you also have to limit the number of groups at any given time. Who are you going to restrict from entering the wilderness when there are already "too many" persons in that area?" Some commenters used this same line of reasoning to suggest the number of groups per area per time period need to be part of the limitation. One commenter wonders if a group size limit could be circumvented by breaking a larger group into smaller groups.

A few commenters suggest that the plan should first focus on establishing limits for uses that are causing problems, pointing out that there are currently zero limits for UTV off-roaders. There is also a suggestion that permits should designate camping areas to limit use, control impacts on riparian areas and prevent overuse of popular areas. One commenter is concerned that limitations are imposed as part of special use permits but there are no limits on people who don't get or need to get special use permits. Several commenters do not think there should be exceptions because if it's a rule worth having it should be worth having all the time and be applied to everyone. Some commenters think a reservation system is a better solution than establishing group size limits in the plan. **Associated Comments: 13, 93, 102, 561, 672, 724.1 through 724.11, and OWS-1 through 144**

Response: Plan direction places constraints on management actions, not on the actions of individual persons. Group size limits are constraints on special use authorizations, permits, and reservations. Some wilderness areas in the nation experience enough visitation to warrant a permit system requiring all prospective visitors to obtain a permit or make reservations. Permit or reservation systems such as these can help manage recreation impacts and preserve the character (or characteristics) of a wilderness area for the use and enjoyment of the American people. Wilderness visitation on the Gila National Forest has increased slightly, as discussed in the EIS, but it has not yet risen to the level that warrants such a permit or reservation system; therefore, this plan direction presently affects only those groups requiring special use permits, such as outfitters and guides. If or when a permit or reservation system is deemed necessary, this plan direction would then apply to those authorizations.

Group size limits in wilderness were identified as an issue based on public comment during scoping. The 1986 plan established group size limits of 25 persons and 35 head of pack and saddle stock to protect opportunities for solitude, which is an important consideration in the analysis of alternatives. Visitors wishing to gather in larger numbers have opportunities to do so outside of wilderness where there are not impacts to other visitors looking specifically for the wilderness experience and opportunities for solitude. This is consistent with agency manual direction, which requires preservation of the wilderness value over visitor activities when a choice must be made (FSM 2320.6).

As is outlined in the EIS's Designated Wilderness Analysis Methodology, we used guidelines developed by Shelby and Heberlein (1986) that are useful for informing the decision for appropriate group size limits in wilderness from a social (opportunities for solitude) rather than a physical condition perspective (naturalness, undeveloped, untrammeled). The range of alternatives explores several options, as described in chapter 2 of the FEIS.

The desired outcome of group size limits is not to limit the total number of persons in a wilderness at one time. The desired outcome is to enhance opportunities for solitude by limiting the number of people that could be encountered at one time. Although the terrain and forest cover of a given area could mitigate or amplify impacts to other visitors, it would be confusing and impractical to enforce group size limits by location within a wilderness. With respect to wilderness study areas, there is adequate decision authority available to the forest supervisor to address any issues with group size limits at the permit level. Should Congress designate these areas, plan direction for designated wilderness would apply.

Motorized vehicle use is limited to the designated road system as defined by travel management decisions, and off-road utility task vehicle use is illegal. Illegal actions are an implementation and enforcement issue, not a planning issue.

Comment 6: There is a concern about the clarity of language providing exemptions to the group size limits in designated and recommended wilderness. Commenter notes that exemptions can be made, but they are not required to be made, stating: "this could lead to inconsistency's in how the direction is applied when there is staff or leadership turnover that could impact certain groups." Specific suggestions regarding plan language include changing the group size limit from 15 persons and 25 head of pack and saddle stock to 20 persons and 20 head of pack and saddle stock, which is still less than what is allowed in the 1986 forest plan, or if that change was not found acceptable include more specificity in the exemption language to promote consistency in how the direction will be applied as follows: "Every effort shall be made to exempt groups from the default group size limit that routinely demonstrate a high proficiency for Leave No Trace ethics, teach wilderness values and skills to their clients, and outline in their operating plan an understanding of and intention to utilize strategies that minimize their impact on other users to maintain or enhance wilderness character and promote the solitude of other visitors."

Commenter also requests that the management approach for Recreation Special Uses is modified as follows: "The outfitter-guide shall work with forest supervisor or designated agent to determine appropriate and feasible mitigation strategies and stipulations, to be contained within the special use permit (SUP) and the outfitter's plan of operations, to minimize impacts to wilderness character and the experiences of other visitors." **Associated Letter: 21**

Response: The exemption language specifically provides for those groups that routinely demonstrate a high proficiency for Leave No Trace ethics, teach wilderness values and skills and include these elements in their operating plan. The outfitter-guide or other prospective permittee would work with the forest supervisor or designated agent through the permitting process to determine appropriate and feasible mitigation strategies and stipulations for the permit and operating plan.

Length of Stay Limits – Designated Wilderness Standard 6 and Recommended Wilderness Standard 10

Comment 7: There is support for a length of stay limit but there is a concern that there is a loss of opportunity for those that practice progressive, expedition-style trips. There is a preference not to rely on obtaining exemption language in the special use permitting process and a request that the plan provide the exemption as follows: "Users that practice progressive expedition style trips may exceed the 14-day limit, but not for more than 30-days, if they do not remain in any one camp for greater than three days nor revisit previously used campsites on the same trip." Another commenter is concerned that this standard allows for exceptions because it could be viewed as a punishment for good outfitters and guides that abide by the rules. Commenter states that these rules are even more important "now that wilderness visitation has sky-rocketed." **Associated Letters: 21 and 102**

Response: The length of stay standard provided for Gila National Forest wilderness is the forestwide stay limit. There was a logic flaw in the draft, as no additional restriction is established by repeating the forestwide length of stay limit. For example, one could not stay for 14 days in the Aldo Leopold Wilderness and then spend another 14 days in another wilderness area without violating the forestwide length of stay. These standards were removed from the final plan. For more information on plan direction for forestwide length of stay limits, please refer to comments on Sustainable Recreation Standard 3 in this appendix (Sustainable Recreation comment 17).

Designated Wilderness

General

Comment 8: There is a concern that the trail signs in the Gila Wilderness are in poor shape or are missing in some locations. Commenter suggests the plan should prioritize improvements. **Associated Letter: 728.411**

Response: There are trail signs in poor shape in many places across the Gila National Forest, and signs are absent in some locations where some visitors would like to see them. While the plan doesn't specifically prioritize trail signage in the Gila Wilderness, the plan does provide direction for signage in wilderness and there are technical guidelines for signs and sign plans (USDA FS 2013). Signage should be the minimum necessary to protect the wilderness resource and provide for visitor safety. Sign plans are part of Forest Service program delivery. They are living documents that are revised or updated on an ongoing basis based on current conditions and patterns of use. Sign maintenance and improvement is better prioritized in a sign plan than the forest plan.

Literature Cited in Response:

USDA FS (United States Department of Agriculture – Forest Service). 2013. Sign and Poster Guidelines for the Forest Service. EM7100-15. Washington, D.C.

Comment 9: There is a suggestion that the section of the plan providing direction for the management of wilderness should state up front what is and isn't allowed. For example, "grazing is allowed with the right to maintain range infrastructure with mechanized equipment. So is prescribed fire, mining, wheelchairs, historic structures and signs, stocking of native fish, et cetera. Mountain bikes, chain saws, drones, et cetera are not allowed. Helicopters are allowed in emergencies and bulldozers are ok for fighting fires." **Associated Letter: 39**

Response: A lengthy and nuanced discussion would be required to incorporate this suggestion as there may be many exceptions made based on a minimum requirements analysis. For example, grazing is a protected use of wilderness where it was an active use prior to designation, and the use of mechanized equipment to manage range infrastructure may be allowed provided certain conditions or criteria are met. Prescribed fire is allowable for fire management purposes, but not for resource benefit. Chainsaws,

helicopters, and drones may, or may not be allowable for fire management purposes and search and rescue efforts, et cetera. The Wilderness Act, agency policy for implementing wilderness legislation, and plan direction provide the necessary direction for managers to determine what is and isn't allowable based on the circumstances at hand.

Comment 10: Commenter is concerned that agency documents such as the General Technical Reference "Keeping it Wild II" perpetuate the idea that there are situations where the five attributes, qualities, or elements defining wilderness character could conflict with one another. Commenter states this reading needs to be rejected "as the laws of statutory construction require that the law be read harmoniously." Commenter provides the example that natural conditions are not in conflict with untrammeled wilderness, rather natural conditions are what flow from untrammeled wilderness. Commenter is concerned that this interpretation of the Wilderness Act demonstrates a growing desire and tendency to justify trammeling actions to preserve other attributes of wilderness character. Commenter suggests wilderness character should not be referenced or trade-offs made and prefers plan direction align with idea expressed by Wilderness Act author Howard Zahniser, which is "the essential quality of wilderness is its wildness." **Associated Letter: 102**

Response: We acknowledge the commenter's opinion and preferences. "Wildness," which is also described by the Wilderness Act as "untrammeled," is unquestionably an essential quality of wilderness character. Avoidance of trammeling actions is key for wilderness character. However, the Wilderness Act clearly provides for allowing trammeling actions at agency discretion to address threats to wilderness resources within Section 4(d) which states: "In addition, measures may be taken as may be necessary in the control of fire, insects, and diseases, subject to such conditions as the Secretary deems desirable." This language clearly acknowledges that trammeling actions may be necessary to protect the other essential qualities of wilderness.

Natural conditions could not flow from inaction where impacts are human-caused, for example, the introduction of non-native invasive species. Natural conditions are degraded by the introduction of these species and will persist or worsen without intervention. It would not be consistent with the Act to ignore these longer-term impacts to naturalness when a temporary trammeling action could resolve the issue. However, that trammeling action must be the minimum required. Plan direction is consistent with all applicable law, regulation, and policy regarding wilderness management.

Comment 11: There is a concern that the Gila National Forest draft plan and EIS, and Forest Service policy in general, inappropriately interprets the Wilderness Act and places undue emphasis on maintaining wilderness in an unimpaired condition, rather than focusing on the purpose of wilderness, which is for the use and enjoyment of the people. Commenters state that both the Tonto and Santa Fe draft revised plans include language on the purpose of wilderness. **Associated Letters: 3, 39, 52, 56, 131, 474, and 475**

Response: We acknowledge the commenters' opinion and have adjusted some of the language in the plan and the FEIS to include the purpose of wilderness more explicitly. The Act, agency policy, and the final plan provide direction to maintain wilderness in an unimpaired condition, so that the American people can continue to use and enjoy it as wilderness in perpetuity.

Comment 12: Commenters prefer that trails in designated wilderness areas established prior to designation and historic features like signs, cabins, and lookouts should be "permitted to continue" as previously established historic uses. **Associated Letters: 3, 39, 131, 474, and 475**

Response: The forest plan does not propose closing or removing any specific existing developments within wilderness such as those cited in the comment, but we see how this concern could arise when looking at Wilderness S13. This draft standard stated that historic structures could not be repaired or maintained. This standard has been removed as the necessary direction is provided by agency policy direction. Historic signs, cabins and lookouts are permitted to continue under agency policy direction and are not being targeted for decommissioning or removal by the forest plan.

Comment 13: There is a concern that the environmental analysis refers to wilderness trails as "low development" trails instead of referring to them with the proper technical language which would be "Class 1" and "Class 2." Furthermore, the trails analysis needs to consider the effects to the purpose of wilderness in addition to wilderness character. **Associated Letters: 52, 131, 474, and 475**

Response: Class 1 and 2 trails are the two lowest development trail classifications. In the interest of plain language, it is appropriate to refer to them together as low development trails. If forest staff need clarification, they can find it in agency directives (FSH 2309.18 chapter 14.2). Extensive revisions to the recreation and trails sections of the draft EIS have been made to address this and other comments, as indicated by response to comment 11 above.

Comment 14: There is a concern that the draft documents contain discussions that imply increase reliance on volunteers and partnerships for wilderness administration. Commenter points to General Accounting Office reports that have shown agency funds appropriated by Congress for specific things is being spent elsewhere. Commenter states the Forest Service budget process is difficult to understand and viewed as unaccountable to the public, so it is simplistic to blame a lack of appropriated funds without knowing how those funds are actually spent or if they're even being requested. Commenter acknowledges volunteers may be important, but they are not accountable to the public and don't build a professional agency program, which is sorely needed. Commenter states the agency needs to prioritize funding for wilderness management and top treating it like the stepchild of programs. Commenter states it speaks volumes that the agency suggests volunteers can do the wilderness job, but it doesn't use volunteers for forestry, engineering, range, or other professional positions. **Associated Letter: 102**

Response: The budget and budget process are beyond the scope of the forest plan. The importance of volunteers and partnerships to wilderness management, and Gila National Forest management in general, goes far beyond serving as a substitution for paid staff. These relationships contribute significantly to the well-being of the forest and its resources, including congressionally designated wilderness. Partner and volunteer relationships contribute to forest stewardship goals and objectives and connect people to their wilderness. Outdoor recreation activities, partnerships, and volunteerism are how most visitors interact with and experience wilderness values. Participation and taking ownership of wilderness management fosters concern for protection of wilderness for public benefit. Volunteerism is limited by the interest and skills of the volunteer relative to the tasks to be accomplished. Volunteers and partnerships are emphasized throughout the plan.

Comment 15: Commenter suggests the impacts of climate change on wilderness needs to be considered. **Associated Comment: 171**

Response: The FEIS includes additional discussion about the impacts of climate change on wilderness in the relevant cumulative effects sections.

Comment 16: There is a suggestion that the plan should protect and enhance wilderness areas to support recreation and local economies because of the long-term ecological changes that will likely result from climate change over the life of the plan. **Associated Letter: 728.408**

Response: The plan provides direction to protect and enhance wilderness areas under all climate scenarios, and wilderness recreation opportunities will continue to contribute to local economies.

Comment 17: Commenter suggests designated wilderness generally provides the highest possible protection for the desired values and experiences of the Continental Divide National Scenic Trail. Commenter quotes statements in the draft plan's background section for Trails: "according to the 2011 National Visitor Use Monitoring survey, hiking/walking is the most popular primary recreation activity of forest visitors. Equestrian use (horseback riding and backcountry stock-packing) is also a popular form of non-motorized recreation that occurs primarily within wilderness and less-developed forest areas adjacent to communities." Commenter suggests that the plan should provide acknowledgement or direction that it is appropriate for the trail to be in wilderness to meet the need for these popular activities and the goal for the trail to be in primitive recreation opportunity spectrum settings. **Associated Letter: 180**

Response: Congressionally designated wilderness and national scenic trails are statutorily designated through separate and unrelated legislative actions. Although the management mandates of each designation are generally not in conflict, they have separate and independent purposes and needs. They may coincide without being contradictory to each other's mandates and purposes but are not dependent upon overlapping designations. Wilderness designation of the surrounding area is not necessary to realize desired conditions for the Continental Divide Trail because there are specific plan components, laws, policy, and regulations that provide for those mandates regardless of land status. Similarly, although presence of a national scenic trail is not necessarily detrimental to wilderness characteristics and depending upon specific context may enhance opportunities for a primitive and unconfined type of recreation, they are not necessary to be present to manage the area for the purposes of the Wilderness Act or to achieve wilderness desired conditions.

Comment 18: Wilderness: Don't be afraid to require entry permits if there are problems with too much use on certain trails. **Associated Letter: 561**

Response: There was no need for change identified through the assessment phase of the forest plan revision process about wilderness entry permits. If this were to become an issue in the future, plan direction and the Wilderness Character and Relationships and Outreach and Education management approaches would guide the analysis process that would be needed to enact a permit system.

Comment 19: Commenter observes the air quality and visibility goals in areas of high scenic value, and notes that Class I areas like the Gila Wilderness are subject to the highest visibility requirements. Commenter asks how military training flights over the wilderness impact solitude. **Associated Letter: 608**

Response: This issue was overlooked in the draft analysis. It is now analyzed in the Wilderness cumulative effects section. Thank you for bringing this to our attention.

Comment 20: There is a concern that the plan proposes to reduce the size of designated wilderness areas and the protections afforded wilderness areas in favor of commercial enterprises. There is a concern that the wilderness used to be larger. Some want to know where the original wilderness boundary was and how, when and where it was reduced in size. Others are concerned that the recommendations to Congress that are associated with the proposed action are not enough or are shrinking the wilderness area or diminishing its importance. **Associated Letters: 23, 32, 199, 233, 718.15, 718.3854, 728.393, 728.398, 728.400, 728.428, 729.15**

Response: Prior to the passage of the Wilderness Act and the construction of National Forest System Road 150 (the North Star road), the areas that are now the Gila and Aldo Leopold wildernesses were one contiguous administratively designated area approximately 755,000 acres. After the road was constructed, they were managed as two separate administratively designated areas (Gila Wilderness and Black Range Primitive Area). The Wilderness Act was passed and the Gila Wilderness became one of the first congressionally designated wildernesses. The Aldo Leopold Wilderness was designated by Congress in 1980. Presently, the Gila Wilderness is 559,311 acres and the Aldo Leopold is 203,548 acres. This totals 762,859 acres. Improvement in survey and mapping technology are responsible for the increase in acreage as only Congress has the authority to make boundary adjustments.

The plan does not and cannot reduce the size of congressionally designated wilderness areas. Only Congress can add or remove area from the wilderness preservation system. There is a range of alternatives for additional areas within the forest to be recommended to Congress for wilderness designation. Similarly, plan direction must be, and is, compliant with the laws and regulations establishing management direction for managing wilderness areas, and therefore, cannot be more permissive than those laws and regulations.

Comment 21: Commenter asks if it is true that an outfitter used several different permits to get 75 people gathered into one place in the Gila Wilderness? **Associated Letter: 233**

Response: We are not aware of something like this occurring in any wilderness area in the forest.

Congressional Grazing Guidelines

Comment 22: There is concern that Gila National Forest has a history of removing permittees from range allotments, including an instance of a conflict over maintaining water sources that could have been prevented if the congressional grazing guidelines were followed. Commenter states that was a negative outcome for the permittee and the wildlife that benefit from stock waters.

Another commenter identifies this same conflict and the fact that the District Ranger's original decision was in the permittee's favor, but that decision was overturned by the Chief of the Forest Service because it was based on an incorrect interpretation of the congressional grazing guidelines. This commenter suggests the plan should include Former Chief Jack Ward Thomas' clarifications on grazing in wilderness and range developments. There are also suggestions that it would be much better if grazing were no longer permitted in what is designated a wilderness area. Once commenter states that livestock grazing is an ongoing defilement of precious forest lands. The revised plan mentions frequently that grazing is authorized under multiple-use principles and the Wilderness Act of 1964. However, p. 493 of the Draft EIS, Vol 2, states that the agency is legally mandated to protect wilderness areas and preserve their "qualities of wilderness character": untrammeled, natural, undeveloped, outstanding opportunities for solitude or primitive and unconfined recreation, and other features of value (ecological, geological, etc.). Livestock grazing is in direct violation of this mandate. Cattle, along with their attendant infrastructure and trashing of the land, present undeniable evidence of human intervention in the wilderness. Cows do not allow for "retaining primeval character" or for "outstanding opportunities for solitude," especially in one's campsite or favorite riparian area. **Associated Letters: 647, 673, 709, and 720.15-4**

Response: The legislative history is very clear demonstrating Congress' intent that livestock grazing activities and the infrastructure and facilities to support those activities will be permitted to continue in wilderness when such grazing was established prior to designation. The Congressional Grazing Guidelines reiterated and clarified provisions for livestock grazing in the Wilderness Act. The Guidelines state the activities or facilities established prior to the date of an area's designation as wilderness should be allowed to remain in place and may be replaced when necessary. The Guidelines allow for limited motorized use where there are no other resource concerns, subject to case-by-case preapproval and reasonable limits. Motorized use is also allowed for emergencies such as transportation of a sick animal or emergency feed in true emergency situations. Wilderness permits may not be suspended or terminated solely because the allotment is within wilderness when grazing was not discontinued prior to wilderness designation.

In the case of the referenced conflict, it was not maintenance of an existing stock tank that resulted in the District Ranger's decision being overturned by the Chief. It was the construction of 15 new tanks that were proposed as part of a solution to address resource concerns, which is not supported by the Congressional grazing guidelines. However, the Chief's decision was not to blame for what ultimately happened. Non-compliance was the reason the individuals that had the permit lost it.

Desired Condition 4

"Wilderness areas have no occurrences of non-native invasive species, native species that are indigenous to the wilderness area are present and supported by properly functioning habitat conditions in keeping with the natural quality of wilderness character."

Comment 23: There is a concern that this desired condition is neither reasonable nor attainable within the time frame of this forest plan. A significant portion of aquatic habitats within wilderness areas support non-native sportfish species, such as wild brown and rainbow trout, channel and flathead catfish, and smallmouth bass. These sportfish populations provide opportunities that are culturally and economically important and contribute to the identified needs for recreation, traditional and cultural ways of life, and connecting people to the land and heritage. **Associated Letter: 151**

Response: There is no requirement that desired conditions are attained within the life of the plan. They must be achievable, but it may require timeframes that exceed the life of the plan (FSH 1909.12 chapter 20 section 22.11). We recognize the cultural and economic benefits that recreational or sport fisheries provide and there will continue to be fishing opportunities both within and outside the Gila National Forest's wilderness areas. For the most part, the Gila National Forest's plan direction related to fisheries is consistent with the New Mexico Department of Game and Fish's Statewide Fisheries Management Plan, which seeks to balance conservation of native fisheries and providing diverse opportunities for anglers. Please refer to appendix D of the FEIS for more information on how the revised forest plan and Statewide Fisheries Management Plan align.

Suggested Desired Conditions

Comment 24: Trails should be talked about more specifically in desired conditions for designated wilderness. Commenters suggest including a statement of the historic value of the trails in the wilderness areas as well as the importance of a well-distributed trails system to help protect wilderness character. Another suggestion is for a desired condition regarding the important role volunteers can play in helping to monitor wilderness characteristics and maintenance of wilderness trails and how Gila National Forest staff are organized to work effectively to train and coordinate volunteers. **Associated Comments: 52, 131, 474, and 475**

Response: We acknowledge that for many wilderness visitors the availability of forest system trails is important to their recreation experiences. We also agree that a wilderness trail system can provide some benefits to wilderness character. Forestwide plan content in the Sustainable Recreation section of the final plan applies to wilderness and non-wilderness trails and contains extensive changes from the draft in response to comments and further review by leadership and planning staff. Final plan direction and related management approaches better reflect the importance the public places on the trail system. The plan-wide management approach Relationships, now weaves the relationship theme into plan from the beginning. The final management approach in the Sustainable Recreation Section of the plan titled Collaborative Sustainable Recreation Strategy and Relationships discusses how important volunteers and partners are to revising the forest's sustainable recreation action plan and developing a trails strategy that meets both administrative and user needs. The management approaches Wilderness Character and Relationships and Trails in the Designated Wilderness section of the final plan are additive to the plan content in the Sustainable Recreation section, as are the desired conditions for Community and Tribal Relationships (DCs1, 4, and 5) and the guideline for engaging the public early and frequently.

Objective 1

"Annually rehabilitate at least five wilderness trail segments, campsites, or other areas that have been impacted by use fire or other management to restore wilderness character."

Comment 25: There is a concern that this objective is vague and unambitious for having a year-round trail crew and recreation staff. There is also a concern that wilderness character is mentioned without mentioning the purpose of wilderness – "Public use and enjoyment." Commenters suggest adding public use and enjoyment to the sentence before wilderness character **Associated Letters: 52, 131, 474, and 475**

Response: Please see response to comment 2 in this section regarding wilderness character and the purpose of wilderness. This objective calls for rehabilitation of *at least* five wilderness trail segments, which could vary in the number of miles based on staff capacity and funding. If there were capacity and resources to do more, then we could do more. This objective just represents the minimum amount of work that would be done. Further, standing up a year-round trail crew has proven to be more difficult than first thought. While it remains part of the plan's vision to have a year-round trail crew, there will continue to be times when we aren't able to fully staff a crew, or staff it at all. There are also plan objectives for trails outside of wilderness, which a trail crew, year-round or not, will also need to complete. Additional language has been added to include improving visitor experiences as part of the objective's purpose.

Suggested Objectives

Comment 26: There is a suggestion to include an objective that states: "Ensure public use and enjoyment of wilderness by use of the forestwide trail crew, partnerships and providing trail cleared maps. Over the next two years, barriers to partnerships will be removed from the forest service." **Associated Letter: 52**

Response: Objectives are concise, measurable, and time-specific statements of a desired rate of progress toward a desired condition or conditions and should be based on reasonably foreseeable budgets. We can see how it would tie to the desired condition proposed by the same commenter (see response to comment 24 above), but the measurable and time-specific part of this that is necessary for an objective involves agency processes and procedures that are set at the national level, and we are required to follow them. We acknowledge that all the red tape is a lot to navigate, and it can act as a barrier to some who would be partners and volunteers. Although we cannot include something like this as a plan objective, the plan does contain desired conditions for Community Relationships DCs 1, 4, and 5 to value the important relationships between forest employees and stakeholders and the critical role of partners and volunteers to accomplishing work both within and outside of wilderness.

Comment 27: Commenter points to the guideline in the Livestock Grazing section of the plan that talks about removing old wire and fences and suggests there should be an objective in the Designated Wilderness section of the plan to do just that. Moreover, it should include cleaning up other human debris that is deposited by flood flows because old wire, fences, and human debris significantly reduced the quality of the wilderness. **Associated Letters: 52, 131, 474, and 475**

Response: Designated Wilderness O1 would include removal of human debris if it is present.

Comment 28: There is a suggestion that there should be an objective related to eliminating the "wild cow" problem as it is having a significant effect on wilderness quality. **Associated Letters: 52, 131, 474, and 475**

Response: Unauthorized, unmanaged grazing is not compliant with plan direction under any alternative and is an implementation issue, not a planning issue. We acknowledge there are many resource impacts occurring due to this issue and efforts to remedy it are ongoing.

Comment 29: There is a suggestion that there should be an objective that aligns with the National Forest System Trails Stewardship Act's mandate to significantly increase the Forest Service volunteer program. **Associated Letters: 52, 131, 474, and 475**

Response: We want to have a robust and sustainable volunteer program and we value the contributions of partners and volunteers that we are fortunate to have. However, it is not reasonable to have objectives that are dependent on resources that are outside the agency's span of control or authority.

Standard 1

"Wilderness character, as identified within the Wilderness Act of 1964, shall be maintained or improved by all management decisions and actions in wilderness."

Comment 30: There is a concern that this standard does not specifically include the purpose of wilderness. **Associated Letters: 52, 131, 474, and 475**

Response: This draft standard was unnecessary and was removed because it was redundant with the act and the agency policy that implements wilderness legislation.

Standard 3

"Agency-ignited prescribed fire shall only be used as a management tool to reduce the risks and consequences of large, contiguous extents of high-severity wildfire within designated wilderness, and shall not be used to enhance wilderness character and values"

Comment 31: There is a concern that this standard doesn't comply with the Wilderness Act as written. Commenter suggests the descriptor "unnatural or uncharacteristic" should be added before large because if large contiguous extents of high-severity fire were a natural part of the wilderness ecosystems, the standard would be illegal. **Associated Comments: 131, 474 and 475**

Response: This draft standard was removed because the language was confusing, and the act and agency policy direction provides the necessary guidance related to prescribed fire. Final G1 provides constraints consistent with the act and agency policy direction for all management actions that might intervene with natural processes.

Standard 10

"Non-native, invasive species shall be treated using methods and in a manner consistent with wilderness character in order to allow natural processes to predominate."

Comment 32: Commenter asks what this means. "Does that mean extensive use of herbicides including aerial spraying or introduction of non-native weed predators? What about prevention, which has proven to be the most effective way to prevent weed spread?" **Associated Letter: 102**

Response: No, it does not mean extensive use of herbicide, aerial application of herbicide, or introduction of non-native predators. The plan prohibits aerial application of herbicide forestwide (Non-native Invasive Species S12). Each individual circumstance would be analyzed in a minimum requirements analysis to first determine if any management action is warranted, and if so, the minimum action that will accomplish non-native invasive species and wilderness management objectives. In wilderness, actions other than use of herbicides or non-native weed predators are always preferable if they are effective as that minimum tool. We agree that prevention is the preferred approach to non-native species management. The plan emphasizes prevention by requiring the use of decontamination procedure, integrated pest management, certified weed-free products in every case they are available, (Non-native Invasive Species Ss1, 3-6 and Gs6-8 and 11; Wildland Fire and Fuels Management S4). This is further supported by the Early Detection Rapid Response management approach and plan content for collaborative information and education (Non-native Invasive Species DCs2 and 3, and Information, Education and Research management approach).

Standard 11

"Where management conflicts occur, the protection of wilderness character and values shall take precedence over recreation uses."

Comment 33: There is a suggestion to modify this standard to better reflect the purpose of wilderness defined in the Wilderness Act. Some commenters suggest: "Where management conflicts occur, the protection of wilderness character and values should be weighed against impact on recreational use. Uses that negatively impact these attributes may be redirected or modified." Others suggest: "Where management conflict occurs, the protection of wilderness character and values will be balanced with the purpose of wilderness which is for the use and enjoyment of the American people in such as manner as to preserve wilderness character." **Associated Letters: 3, 52, 131, 474, and 475**

Response: This draft standard was removed because the act and agency policy direction provide the necessary guidance related to managing recreation. No further constraints are necessary.

Standard 12

"Modern non-conforming structures, improvements, and developments that do not meet requirements of the Wilderness Act or the Congressional Grazing Guidelines for Wilderness shall be removed from wilderness."

Comment 34: There is a request to clarify designated wilderness standard 12 to define what a modern non-conforming structure or improvement is so that it isn't misinterpreted by future managers and the public can understand what it means. Commenters are concerned that this might include historic stock ponds and spring boxes that now provide water for forest visitors, foundations of cabins, and old insulators that were once part of the forest's communication system. Commenters state that taken at face value this standard could create significant environmental effects and would not significantly improve the wilderness. **Associated Letters: 52, 131, 474, and 475**

Response: What does and doesn't constitute a modern, non-conforming structure is best determined at the project level when the site-specific circumstances are understood. The examples provided by the commenters are unlikely to meet the definition of modern, non-conforming structures or improvements. Anything built over 50 years ago is subject to the Antiquities Act and if in an area of the wilderness allotted for livestock grazing, the Congressional Grazing Guidelines may apply. Examples of modern, non-conforming structures or improvements would be things like a metallic weather station in a meadow or a large communication site on a mountain ridgeline. A good example of this guideline in action would be the modern weather station that was temporarily installed within the Gila Wilderness after the 2012 Whitewater Baldy Fire. That weather station was determined to be the minimum required action to help provide information for warning downstream communities of dangerous flash flooding potential. It was allowed to remain for a few years but was dismantled and removed when the unacceptable risk to human life and property downstream had lessened. See also response to comment 12 in this section of this appendix. This standard was also removed because it was not clear, and the act and agency policy direction provide the necessary constraints on non-conforming structures and improvements.

Standard 13

"Historic structures shall be allowed to remain but may not be repaired or maintained for administrative or visitor use, and must be allowed to gradually degrade over time. If historic structures pose a hazard to health and safety, they must be closed and/or removed rather than repaired and improved for continued administrative use. This standard does not apply to improvements used under a grazing permit."

Comment 35: Some commenters suggest that the plan should allow for the repair and maintenance of historic features including mines fitted with bat cages, old cabins, and abandoned fire towers as scenic resources even in wilderness areas. One commenter suggested historic buildings located in wilderness become part of a cabin rental program. Others ask for clarification noting the money and energy spent maintaining historic structures and protecting them from wildfire threats in the wilderness. Commenters point to the cabins at Mogollon Baldy, Hillsboro Peak, and White Creek. Commenters state that the way this reads sounds like these structures are going to be allowed to rot into the ground. Commenters request planning staff need to be up front and say what this standard really means and what the implications are so the public can respond accordingly. **Associated Letters: 39, 52, 56, 131, 474, and 475**

Response: This direction has been removed because the Antiquities Act and agency policy direction provide the necessary constraints on historic structures, which allows for repair and maintenance of existing administrative sites, such as those at Mogollon Baldy, Hillsboro Peak, White Creek, Miller Springs, and others that were not mentioned specifically by commenters. They may even be replaced by similar structures that maintain the same footprint, but not by more modern structures with a different footprint. However, these sites cannot become part of a cabin rental program because it wouldn't be compliant with the Wilderness Act requirements regarding human habitation and commercial enterprise. Neither would it support the wilderness characteristic of opportunities for primitive and unconfined recreation.

Suggested Standards

Comment 36: There were suggestions that trails should be talked about more specifically in wilderness standards. Commenters propose the following standard:

> "The existing, well dispersed, historic trail system in the wilderness areas shall be maintained because of the trail system's importance in (1) preserving wilderness character (trail keep the public in specific areas[trail tread] and reduce widespread damage from too many people traveling off trail and subsequently creating user-created trails, (2) providing an opportunity for will dispersed use which contributes to solitude, and (3) implementing the purpose of the Wilderness Act: 'for the use and enjoyment of the American people.'"

Associated Letters: 52, 131, 474, and 475

Response: Plan direction for forest system trails is found in the Sustainable Recreation section of the plan, which includes trails in wilderness. The suggested standard does not comply with Forest Service directives because it compels action. Standards are constraints on management actions. Please refer to response to comment 24 in this section regarding trails and wilderness and response to comment 11 on the purpose of wilderness.

Comment 36: Commenter states that if the agency were truly committed to ending weed spread, it would consider the following measures such as part of the revised plan:

1) Require pelletized feed. Commenter states: "It is extremely difficult if not impossible for rangers in the field to inspect hay and ensure that it is certified, "weed-free." Moreover, there is a great deal of doubt that all certified feed is in fact weed-free and pellets are a simple and proven-effective remedy. Even if horses are free of weeds when entering the Wilderness, they can still spread weeds if allowed to graze in areas that contain weeds. Spraying trail corridors does not resolve this concern as stock graze more than just trail corridors. Indeed, stock grazing in areas with few weeds or without weeds will make those areas more vulnerable through grazing itself (which weakens the forage plants) and the potential for dispersal of weed seeds in the digestive system of the stock.

2) Require that all assigned camp sites and administrative sites, will be made weed-free within 5 years, or those sites will be closed to public use until they are certified as weed-free. Failure to keep a weed-free site would result in an automatic permit revocation.

3) Implement Wilderness-wide campsite standards that will eliminate bare ground that serves as a ready site for weed invasion.

4) Quarantine all animals for at least 48 hours prior to entering the wilderness. Commenter states: "Having a quarantine corral established at all stock trailheads and have the trailheads staffed (especially during hunting season) and stocked with pelletized feed (weed-free hay isn't, people would be required to either bring in pelletized feed for the quarantine or purchase it from the campground host at the trailhead) is a start."

5) Require an inspection of all boats/rafts before entering the wilderness (Gila River). Commenter states: "All of this begs the question about domestic livestock grazing (not including packstock which are addressed above). How will invasive weeds be contained in light of grazing, which occurs in all three Wildernesses?"

6) Commenter states: "Regarding livestock grazing, the Forest Plan should adopt a standard that vacant allotments in Wilderness, unless waived back due to the sale of base property, be permanently closed. This would reduce conflict with this nonconforming use in Wilderness."

Associated Letter: 102

Response: Plan standards and guidelines place constraints on management actions, such as permit authorization or forest orders. They do not constrain actions by those visitors who do not require a special use or other permit. Forest Service Manual 2323.12 directs management to make every effort to limit imposition to visitor use of wilderness, apply controls only when they are essential for protecting the wilderness resource and after indirect measures have failed. Manual direction states that information, interpretation, and education are the primary tools for managing wilderness visitors. The management approach Outreach and Education in the Designated Wilderness section of the plan discusses this further. There is also a management approach in the Non-native Invasive Species section of the plan titled Information, Education and Research that supports this.

We acknowledge that the weed-free certification process is not foolproof. Pelletized feed and steam-rolled grains are safer in terms of preventing non-native species introductions. It is also far easier and economical to pack these feeds in, as opposed to hay. Most of those seeking wilderness opportunities that include pack and saddle stock opt for these types of feeds, whether those visitors require a special use authorization or not. It is also a mitigation measure that is often used by outfitter-guides. Feeding pack and saddle stock the same thing for one to two days before heading into the wilderness is also something that can be and frequently is communicated as part of agency education and outreach efforts. Providing visitors with this information ahead of time is far less burdensome on agency resources as visitors can to take this pre-trip step at their residence rather than planning for or encountering an unexpected two-day waiting period before being allowed to enter the wilderness. Incorporating Leave No Trace principles into education and outreach programs will also help, as more wilderness visitors apply these principles the less new bare ground will result.

Wilderness administrative and visitor camp sites are priority areas for noxious weed inventory and monitoring as part of the agency's Wilderness Stewardship Performance evaluation. To provide for clarity, wilderness has been added to the list of priority areas for noxious weed inventory and monitoring in the plan's Survey and Documentation Strategy management approach under the Non-native Invasive Species heading. In most cases, it would be impossible to determine the mechanism of introduction sufficient to justify any kind of permit action.

It would not be practicable to have personnel inspect boats launching on the Gila River, because this use tends to occur only intermittently, and in low water conditions not at all. It is also not reasonable to have personnel on hand to be able to perform inspections at trailheads because of the high number and broad distribution of access points to each wilderness. To enforce these requirements, forest staff would need to be on hand at entry points daily.

The plan includes standards in the Non-native Invasive Species requiring management activities and special use permits to use certified weed-free materials for all materials that have a certification process in place (Ss3-5). Decontamination procedures to prevent weed seeds and other reproductive plant parts are also required by Non-native Invasive Species S1 and Wildland Fire and Fuels Management S4. The Non-native Invasive Species Management Approach - Information, Education and Research prioritizes information sharing, education, and research related to non-native invasive and noxious species.

The suggestion to include a plan standard that would require grazing allotments that become vacant to be closed permanently, simply because they are in wilderness, is not consistent with the Wilderness Act. The act specifically states that where grazing was established as a use prior to an area being designated as wilderness, that use can continue.

Guideline 1

"Intervention in natural processes through management actions should only occur when shown by a minimum requirements analysis that the management action is necessary to preserve wilderness character, protect public health and safety, and manage the area for the purposes identified within the Wilderness Act."

Comment 38: Commenter states that this guideline and the minimum requirements analysis are fatally flawed and circumvent the National Environmental Policy Act process. Commenter states there is only one purpose of wilderness, not purposes, which is clearly for preservation of Wilderness as articulated in section 2(a) of the act. Commenter points to statements made on page 202 of the draft plan regarding authorization of mechanized uses for scientific study or maintenance of non-essential "user-created structures" that are "appropriately located and constructed campsites and user-created fire rings for wildfire prevention and in keeping with Leave No Trace Outdoor Ethics." Commenter states these are not in keeping with the Wilderness Act or outdoor ethics. **Associated Letter: 102**

Response: A minimum requirements analysis does not substitute for a National Environmental Policy Act process. Both are required when the legal mandates for each are present. The commenter is correct that the uses cited are only allowable when "necessary to meet minimum requirements for the administration of the area for the purpose of this Act." However, Section 4 (c) continues "Except as otherwise provided in this Act, wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use."

There are no such statements made on page 202 the of draft plan, which contains management approaches for designated wilderness. Although this guideline remains in the final plan, language has been adjusted. Much of the other plan direction and management approaches for designated wilderness have also been streamlined and reconfigured to address this and other public comments and reduce the potential for confusion or perceived conflict between what the act and policy direction say on these wilderness management issues.

Guideline 3

"To protect wilderness character, any use of signage in wilderness should be limited to those identified as essential for resource protection and user safety, and identified by location and content that is consistent forestwide within a wilderness sign plan and inventory document. All signage identified for installation by each wilderness sign plan and inventory should be limited to the minimum necessary for each unique circumstance to protect wilderness character and opportunities for self-reliance and challenge. Directional signs without distances should be placed only at major intersections. All other signs should be removed."

Comment 39: There is a suggestion to modify language in this guideline to better reflect consideration of the purpose of wilderness defined in the Wilderness Act. Commenters prefer: "Use of signage in wilderness should be limited to those identified as essential for effective use and enjoyment of the wilderness resource, user safety and resource protection or contribution to visitor use and enjoyment due to historical significance. Signs would be identified by location and content that is consistent forestwide within a wilderness sign plan and inventory document. Directional signs should be placed at major intersections."

Other commenters like the traditional signs with distances on them and suggest that directional signs without distances are worthless, even if the distances are off a little bit. Others still suggest that "self-reliance" is being misused in the forest plan's interpretation of how signage should be used and recommend that the public be involved in major signage decisions like this one. These commenters point to the Continental Divide National Scenic Trail, which is advertised as a trail for those who are self-reliant and the fact that it is well-signed and suggest that those that don't want to see a sign can go off-trail. **Associated Letters: 3, 39, 52, 131, 474, and 475**

Response: Much of the prescriptive language has been removed from this guideline in the final plan; however, the reference to wilderness character remains. The Wilderness Act, agency policy, and the final plan provide direction to maintain wilderness in an unimpaired condition, so that the American people can continue to use and enjoy it as wilderness in perpetuity. However, language changes have been made elsewhere in the plan and FEIS to include the purpose of wilderness more explicitly. Sign plans, including an inventory, are developed separately from the forest plan, as discussed in response to comment 8 at the beginning of this section of this appendix.

Guideline 4

"New trail construction or existing trail realignment should only be considered for health and safety concerns or for purposes of enhancement and protection of wilderness character, such as opportunities to improve solitude, primitive recreation or natural conditions in wilderness."

Comment 40: Commenter suggests this guideline be replaced with "A well distributed trail system should be maintained to protect the opportunities for solitude, to implement and maintain the purpose of wilderness. Which is public use and enjoyment while keeping wilderness character high." **Associated Comments: 56 and 131**

Response: Please refer to response to comment 24 in this section related to the wilderness trail system and response to comment 11 in this section on the purpose of wilderness.

Guideline 5

"Where trends in monitoring indicate that opportunities for solitude are being degraded, adaptive management actions such as promoting non-wilderness destinations, providing public information about periods of lower visitation, or evaluating the possible need for a permit system should be implemented to improve opportunities for solitude."

Comment 41: There is a suggestion that Designated Wilderness Guideline 5 should include providing education about other wilderness areas that are less used. Solitude is enhanced by keeping the well-distributed trail system in the Wilderness areas. This is essential to enhancing public use and enjoyment and protecting wilderness character. **Associated Comments: 52, 131, 474, and 475**

Response: Directing visitors to other wilderness areas may impact solitude in those wilderness areas, contributing to a widespread issue rather than a concentrated one. This guideline was removed from the final plan because it is unnecessarily prescriptive. If the solitude quality of wilderness character is being degraded, all options to address the issue and move toward desired conditions would be considered. The appropriate and minimum action is best determined when the issue is at hand and the contributing factors are understood.

Guideline 7

"Limited use of wilderness-appropriate trail markers, such as axe blazes or rock cairns may be used where it is difficult to navigate the trail. Trail markers should be widely spaced so that at maximum, only one additional marker is visible from the other, and all painted blazes should be removed."

Comment 42: Commenter states that this language is too specific for forest plan direction and does not consider the many variations of ecosystems and terrain. Commenter states there are no painted blazes in the Gila Wilderness, and this shows a misunderstanding of needs on the ground. Commenters suggest this guideline should read along the lines of "trail markers should be appropriately sized and spaced for the conditions to provide for user safety." Commenters recommend trail markers be viewed as minimum tools that can help in times of limited budgets to reduce trail maintenance needs, promote safety, and reduce impacts to natural resources and wilderness values. One commenter suggests trails with markers, but no tread, create a unique primitive experience. **Associated Letters: 52, 131, 474, and 475**

Response: This draft guideline was revised and combined with G3 in the final plan. However, the language about spacing was retained in partial response to other comments received by the public (see comment 53 numbered item 30). Excessive cairn building does occur along some system trails. If more frequent trail markers are appropriate in a particular setting to help visitors navigate the trail, the guideline would provide the flexibility to do so. See also response to comment 8 earlier in this section of this appendix regarding sign plans and the Forest Service Engineering Manual 7100-15, which provides more detailed technical guidance. Forest staff are aware that painted blazes are not a problem in the Gila Wilderness. However, this direction

also applies to the Blue Range and Aldo Leopold Wildernesses and any other areas Congress may or may not decide to designate as new wilderness over the life of the plan.

Guideline 11

"Commercial activity should not be permitted in wilderness areas, unless the activity is wilderness-dependent, and the activity cannot be conducted or replicated outside of wilderness. This would include activities by organizational groups and/or training classes."

Comment 43: Commenters suggest this guideline needs clarification because as written, it appears that outfitter guide activities would not be allowed. Commenters note there is a whole section of agency manual direction that deals with the content of this guideline and provides clarity. Commenter suggests that if the guideline is retained, it should be clarified that outfitter guide activities are allowed, and the manual should be referenced. Adding a standard or guideline on how permits will be managed in wilderness in the future might also be important. **Associated Letters: 131, 474 and 475**

Response: Commenter is correct that outfitter-guiding activities that help segments of the public use and enjoy wilderness areas for recreational or other wilderness purposes will continue under the plan as established by Forest Service Manual 2323.12. This guideline was removed because it created confusion. The necessary guidance is provided for in agency policy direction.

Guideline 14

"All wilderness boundaries should be clearly identified by markers and signage."

Comment 44: Commenters are concerned about the need to survey and post signage along wilderness boundaries to reduce encroachment. Some commenters recommend this guideline be supported by an objective, or the work will not get done. **Associated Letters: 131, 233, 474, and 475**

Response: Survey staff are no longer forest employees but are now a regional asset managed by the Southwestern Regional Office. The plan contains survey and boundary posting objectives in the Lands and Realty section of the final plan that were based on what regional office survey staff believe is reasonable to accomplish with the resources they have at their disposal. Wilderness boundary survey and marking is important, but there are other issues that may arise that require prioritization such as around private property prior to implementing a thinning project. Where survey has been completed, boundary signage would become part of a sign plan as described in response to comment 8 earlier in this section of this appendix.

Land surveys are important to understanding where there are encroachment issues, for example motorized encroachment into wilderness. They are also essential for enforcing applicable legal rights. However, they do not reduce encroachment. For example, a private landowner whose property abuts the forest may drive a vehicle into the wilderness. If they are doing this on accident, surveyed and posted boundaries could be the mechanism to resolve the encroachment issue. If they are doing it in disregard for the law, surveyed and posted boundaries will have no effect on the encroachment. These types of issues are matters for the courts and law enforcement to resolve and are outside the scope of the forest plan.

Suggested Guidelines

Comment 45: There is a suggestion to add a guideline that states: "A well distributed trail system should be maintained to protect the opportunities for solitude, to implement and maintain the purpose of wilderness (which is public use and enjoyment) while keeping wilderness character high." **Associated Letters: 52, 131, 474, and 475**

Response: Please refer to response to comment 40 in this section.

Outreach and Education Management Approach

Comment 46: There is a suggestion to expand the designated wilderness management approach "Outreach and Education" to include volunteers and partner groups, including pursuit of a national Friends of the Gila group. **Associated Letter: 3**

Response: Final plan management approaches Wilderness Character and Relationships, Outreach and Education, and Trails have been revised to provide more emphasis on volunteers and partner groups. We would welcome a Friends of the Gila group as a partner.

Relationships Management Approach

Comment 47: Commenter supports the intent of the vision around recreation but does not believe the wilderness and recreation management content of the draft plan and EIS adequately support it. There is a specific concern about the designated wilderness management approach "Relationships." While there is support of the collaborative philosophy espoused in this management approach, there is doubt of the sincerity based on the level of public collaboration related to the Sustainable Recreation Strategy. **Associated Letter: 3**

Response: We acknowledge the commenter's opinion. The forest's commitment to public collaboration is demonstrated by Community Relationships DCs1, 4, and 5 and G1 and respond to the needs for change identified as part of the assessment phase of revision. The Sustainable Recreation section contains a revised management approach titled Collaborative Sustainable Recreation Strategy that discusses possible contributing factors to this sentiment and how forest leadership and staff are likely to proceed in improving collaborative processes in the future. Language in the final Designated Wilderness section's Wilderness Character and Relationships management approach has been expanded to provide more emphasis on volunteers and partner groups dedicated to wilderness stewardship. The final plan's overarching management approach titled Relationships was also developed in response to this and other public comments.

Recreation Special Uses Management Approach

Comment 48: Commenter is concerned that most of this management approach is dedicated to allowing outfitters to evade the default group and stock size limits, recommends they be held to the same standards as everyone else, and suggests outfitting and guiding is a non-conforming commercial use. **Associated Letter: 102**

Response: Please see response to comment 43 in this section regarding outfitting and guiding as a commercial use of wilderness. We acknowledge the commenter's preference that group and stock size limits are provided no exceptions.

Comment 49: Commenter asks if outfitters and hunters pick up shell casings in keeping with Leave No Trace Outdoor Ethics principles. Commenter states: "Saddle Rock has a bazillion shell casings from target shooting." **Associated Letter: 233**

Response: This comment is outside of the scope of the forest plan and analysis. Any littering on federal public lands is a direct violation of federal law, and we encourage you to notify the nearest Forest Service office of any occurrences of littering, dumping, or vandalism that you witness in the Gila National Forest. Terms and conditions of recreation special use permits require outfitter guides to follow all laws and regulations.

Trails Management Approach

Comment 50: Commenter supports the intent of the vision around recreation but does not believe the wilderness and recreation management content of the draft plan and EIS adequately support it. There is a specific concern about this management approach and an imbalance between consideration provided for

wilderness character and the purpose of wilderness defined in the Wilderness Act of public use and enjoyment. **Associated Letter: 3**

Response: Please refer to response to comment 46 in this section regarding relationships. Please refer to response to comment 11 in this section on the purpose of wilderness. The Trails management approach has been revised in the final plan in response to this and other public comment.

Comment 51: There is a concern that the language in this management approach again inappropriately emphasizes wilderness character over the purpose of wilderness, which is the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness. The purpose of wilderness should be considered when decommissioning trails.

A second concern involves the reference to "unused trails." Commenters state that a trail can be unused for a variety of reasons that do not necessitate decommissioning such as lack of maintenance or availability of information about trail conditions. Furthermore, the commenter states that with climate change and increased fire activity, the trail system is at risk of being shut down. Commenters suggest an unused trail may become a major trail due to previously great trails becoming unusable for a decade or two after a major event. Commenter recommends not decommissioning trails and using maps to inform trail users of maintenance status as a better way to adapt to climate change and increased fires. Commenter states this will leave a trail system for future generations even with the high likelihood of more catastrophic events.

The last concern has to do with "trails that receive the greatest use." A dispersed use of trails significantly lessens the likelihood of overuse. There is a suggestion that the focus should instead be on providing the minimal amount of maintenance on all trails and providing more information on all trails will be a better way to protect against overuse. Improving the quality of information provided doesn't require extra funds, just better and more information that front desk staff can distribute. **Associated Letters: 52, 131, 474, and 475**

Response: Please refer to response to comment 50 in this section. The Trails management approach has been revised in the final plan in response to this and other public comment. We agree that climate driven changes in natural disturbance regimes will impact trails and that there are many reasons why trails see differences in use. Patterns of use also change over time. Plan direction preserves the flexibility to respond to those and other changes over the life of the plan. Related to climate change, the plan-wide management approach Change and Uncertainty has been expanded to discuss adaption strategies for recreation.

Comment 52: There is a suggestion that more needs to be added to this management approach about protecting existing trails and their historic use and value, which is consistent with the Wilderness Act. Commenters state that the Gila Wilderness was created because Aldo Leopold, Theodore Roosevelt, and others rode horses on Class I and II trails. Commenter states that without these trails the wilderness may not have been created because in seeing it, people saw a need to protect it. A well dispersed trail system is an important way to protect the resource, is often the minimum required tool and should be a management priority. Commenter points to the fact that the Wilderness Act does not mention the word "trails" at all, but they existed when the act was created so if they were considered something negative, they would have been listed as prohibited or non-conforming uses alongside mechanized uses. **Associated Letters: 52, 131, 474, and 475**

Response: This management approach has been revised and includes a reference to the Collaborative Sustainable Recreation Plan management approach in the Sustainable Recreation section. That management approach discusses development of a trails strategy, which would include the wilderness trail system. The plan does not portray wilderness trails as something negative, but as something to be managed to provide for the purpose and administration of wilderness as an enduring resource.

Recommended Wilderness

General

Comment 53: There are many diverse reasons offered by commenters to support their preferences for more area to be recommended to Congress for wilderness designation. There are also those who want to limit or eliminate these recommendations.

Specific preferences and supporting rationale offered by commenters who prefer more area be recommended to Congress for wilderness designation include:

1) Support for the proposed action areas recommended because the inventoried and evaluated areas are remote, roadless, adjacent to or near existing wilderness areas and would not drastically change management or opportunities available to forest visitors who want other types of experiences. Some commenters would like to see some additional areas added to the proposed action.
2) Support for more recommended area, like alternative 5, because it honors the legacy of Aldo Leopold and contributes to the Gila National Forest's distinctive roles and contributions.
3) Support for more recommended area, like alternative 5, because it restricts roads and mechanized uses including mechanical vegetation treatments. This would also reduce the cost of road maintenance and could support travel management implementation in some areas like the Lower San Francisco River.
4) Support for more recommended area, like alternative 5, because it provides economic benefits to local communities including jobs, income and revenue, and higher property values. The top four outdoor recreation activities state-wide can occur in wilderness and 12 of the 17 most popular can occur in wilderness. This would be particularly good for outfitter-guides.
5) Support for more recommended area, like alternative 5, because it would preserve biodiversity, create climate refugia, and protect against climate change and devastating fires. Some commenters refer to the rewilding concept advanced by scientist and climate activist E.O. Wilson.
6) Support for more recommended area, like alternative 5, because it would protect wildlife and fish habitat, riparian areas, and water quality and provide for habitat connectivity. Some commenters express concern for specific species, such as the yellow-billed cuckoo and assert more wilderness will help. The adoption of recommended wilderness areas included in alternative 5 would benefit bighorn sheep, which inhabit the Lower San Francisco, Park Mountain, and Mogollon Box/Tadpole Ridge areas.
7) Support for more recommended area, like alternative 5, because it would better distribute increased use and protect scenic character and resources, as well as wilderness character and characteristics.
8) Support for more recommended area, like alternative 5, because it would better protect cultural heritage resources.
9) Support for more recommended area, like alternative 5, because it would preclude energy development.
10) Support for more recommended area, like alternative 5, because it would prevent the spread of weeds and litter.
11) Support for more recommended area, like alternative 5, because it benefits dark skies.
12) Support for more recommended area, like alternative 5, because it supports the nature and purposes of the Continental Divide National Scenic Trail without negatively impacting mountain biking opportunities. One commenter pointed out that mountain biking can also occur on other federal public lands, not just the Gila National Forest.

13) Support for more recommended area because of a preference for limiting or eliminating livestock grazing as a use of the forest to improve ecological conditions and help restore the natural role of fire on the landscape.
14) Some commenters stated a specific goal for 500,000 to 700,000 acres and listed specific polygons with acreages. Commenters state this would be aesthetically pleasing and assert there would be less non-compliance with laws than in the general forest.
15) Some commenters prefer to create buffers around wilderness for protection.

Specific preferences and supporting rationale offered by commenters who do not completely oppose recommendations but prefer to limit the area to be recommended to Congress for wilderness designation include:

16) Recommendations should be limited to areas adjacent existing designated wilderness and in no case should recommendations be located near population areas.
17) Support for alternatives 1 or 2 but would not support alternative 5 because it would reduce mountain bike access and the wilderness is already very large.
18) Prefers no recommendations but could accept alternative 2 because it does not include commenter's allotments. Alternatives that do include them would cause serious negative consequences by hindering maintenance of improvements and trails with mechanized equipment, restricting access, and even possibly infringing on water rights.
19) Preference not to recommend areas that would limit ability to manage vegetation or fight fire.
20) More wilderness acreage is only better if it can be managed as needed. Given the budget constraints of the Forest Service that seems unlikely at this point.
21) Do not oppose the draft recommendations in the proposed action if livestock producers are already accessing areas by horseback.

Specific preferences and supporting rationale offered by commenters who oppose all recommendations include:

22) There is already enough wilderness on the forest.
23) The areas being considered for recommendation have been looked at many times in the past and were not recommended for good reasons.
24) Little parcels of wilderness do not honor Aldo Leopold's history because he envisioned being able to ride around for two weeks without seeing anyone.
25) Access restrictions for mountain bikers, the elderly, and those with physical impairments. Restricts access to only those citizens who are athletic enough to hike or well-off enough to own horses. Making it harder to access our wilderness and forest is not good for fire and emergency crews. Woodcutting is also an important factor because many of us need access to forest.
26) Wilderness comes with restrictions and limitations. Commenters prefer fewer or no restrictions or limitations on their use of the land. The agency has fallen under dangerous influence because designations are not about science or heart-felt good deeds, they are about control.
27) Does not comply with the Healthy Forests Initiative promoted by Region 3 and nationwide by the U.S. Forest Service.
28) Wilderness precludes mechanical thinning treatments needed to reduce drought stress and fire risk. The assessment report pointed out that a significant percentage of the lands are not in proper functioning condition. These conditions will require significant management actions to bring these areas into properly functioning condition. Wilderness designation restricts the management tools

required to accomplish restoration. This will mean these areas will be condemned to remain in degraded condition or more likely decline in ecosystem health.

29) The Forest Service is financially handicapped to manage wilderness due to lack of funding. Any additional wilderness lands will not have ear-tagged funding that is required for management of those lands. Additional wilderness will only compound Forest Service budget issues. Due to financial constraints, any implemented, on ground, personnel support for existing wilderness is thin at best. Forest Service feasibility to generate and support management plans for additional wilderness are not funded and do not exist. Designating additional wilderness lands will only compound the current financial issues with management of the Gila Forest and associated wilderness. It is important we professionally manage and fund our current wilderness before adding additional burdens.

30) Commenters state the agency can't even take care of the wilderness they already have so more doesn't make sense. Commenters provide examples of this noting that hiking trails are no longer maintained and are difficult to find in some cases. Excessive rock cairns are being used to mark trails and forest staff don't even know about it.

31) It would increase costs and burdens associated with permitted livestock grazing operations and reduce the value of associated private property. Allotment holders support sophisticated infrastructure requiring year-round vehicle and fuel-operated equipment for maintenance. Eliminating these maintenance abilities will negatively affect allotment holders' rights to manage herds and ultimately damage existing wildlife habitat. Eliminating range and access infrastructure will affect pasture rotation affected increasing fire fuel hazards, encouraging woody species growth, reducing water supply and habitat for wildlife. Takes land out of production and effectively eliminates multiple use. Costs of running cattle in wilderness is prohibitive. It removes ranching from the landscape, one permittee at a time. Wildlife follows cows. Cows eat brush down to where deer and elk will graze. The best hunting is in White Mountain Reservation where they had better negotiators with the Federal Government and did not have to follow the Endangered Species Act and Wilderness Act. Man's footprint is helpful.

32) Changes resource management from conservation to preservation, which is not scientifically sustainable.

33) Will negatively affect our watersheds. Lack of thinning, logging, and grazing will encourage wildfire, causing more sedimentation in our streams and rivers. More sedimentation will harm aquatic life

34) Will negatively affect vegetative resources. Fuel and duff buildup ensure natural and man-caused fires will bum more intensely, sterilizing the soil to the detriment of grass, brush, and tree regeneration. Resulting catastrophic wildfire endangers wildlife and people living in proximity to the area. Unmanaged timber growth will increase density far beyond the normal several dozen stems per acre to 400 to 800 stems per acre, which dries up springs and lowers groundwater levels. Large wildfires will increase in unmanaged wilderness and will invite increases in weedy species including juniper. Super-heated soils will become sterile, increasing run-off and sedimentation.

35) More acreage designated as Wilderness or Wilderness Study Area will negatively affect range permittees and will shut down logging and mining. It will put more traditional families out of business and take away their traditional income. It would reduce the amount of firewood that could be harvested by local poor families, who use wood to heat their homes. It will cause more catastrophic fires, because the land has not been and is not being managed wisely.

36) Wilderness recommendations cater to special interest groups that have ruined the Gila National Forest such that no one wants to visit anymore. Commenters use the Gila trout recovery program as an example stating that fishing used to be great in the wilderness but now there are only tiny Gila trout that aren't big enough to eat. Commenters prefer that local input be given more consideration than special interest groups that don't live here.

37) Preference to look at adding areas other than wilderness, like off-road areas or motorized trail loops without width restrictions that families can ride together. All existing roads and 2-track trails are

currently used by off-road vehicles and passenger automobiles for hunting, limited hiking, handicapped and aged public access to overnight camping and site seeing. All of which have a positive financial footprint on the local economy. Eliminating those visiting public opportunities by restricting vehicle access will have an overall negative impact on local business and tax base.

Associated Letters: 8, 9, 16, 18, 19, 20, 23, 32, 33, 35, 39, 40, 49, 50, 58, 59, 60, 64, 65, 66, 68, 72, 76, 83, 84, 86, 87, 93, 96, 99, 101, 104, 105, 107, 113, 115, 118, 119, 122, 123, 124, 125, 126, 129, 130, 131, 135, 141, 142, 144, 147, 152, 161, 162, 164, 166, 167, 168, 169, 171, 180, 181, 182, 184, 185, 188, 191, 192, 199, 204, 206, 213, 231, 233, 249, 273, 361, 362, 415, 451, 474, 475, 479, 482, 532, 534, 542, 543, 544, 561, 564, 565, 567, 579, 580, 582, 601, 603, 605, 611, 616, 619, 621, 627, 628, 629, 631, 634, 638, 646, 647, 648, 653, 656, 663, 666, 672, 673, 675, 676, 680, 684, 685, 694, 696, 698, 707, 708, 712, 713, 721.1 through 721.3-1, 722.1 through 722.5-1, 723.1 through 723.6, 724.1 through 724.11, 725.1 through 725.7, 726.1 through 726.12547, 726.12442, 726.12542, 726.12547, 726.12515, 727.0 through 727.4389, 727.4238, 727.4239, 727.4244, 727.4246, 727.4250, 727.4251, 727.4257, 727.4258, 727.4261, 727.4262, 727.4263, 727.4264, 727.4267, 727.4268, 727.4269, 727.4273, 727.4275, 727.4282, 727.4284, 727.4285, 727.4286, 727.4287, 727.4289, 727.4291, 727.4292, 727.4293, 727.4294, 727.4295, 727.4299, 727.4302, 727.4304, 727.4306, 727.4311, 727.4314, 727.4320, 727.4327, 727.4330, 727.4333, 727.4335, 727.4336, 727.4339, 727.4340, 727.4342, 727.4345, 727.4349, 727.4350, 727.4353, 727.4359, 727.4365, 727.4366, 727.4374, 727.4378, 727.4382, 727.4383, 727.4387, 728.1 through 728.433, 728.242, 728.244, 728.247, 728.251, 728.282, 728.302, 728.310, 728.311, 728.324, 728.326, 728.334, 728.337, 728.353, 728.383, 728.384, 728.385, 728.386, 728.388, 728.409, 728.413, 728.422, 728.429, 729.1 through 729.15, 729.7, 729.11, 730.1 through 730.124, 730.2, 730.3, 730.4, 730.5, 730.7, 730.8, 730.9, 730.11, 730.12, 730.14, 730.15, 730.16, 730.17, 730.18, 730.19, 730.21, 730.24, 730.25, 730.26, 730.28, 730.29, 730.30, 730.33, 730.38, 730.39, 730.40, 730.42, 730.43, 730.53, 730.54, 730.66, 730.70, 730.73, 730.75, 732.1 through 732.7, OWS-1 through 144

Response: The range of alternatives was developed in compliance with Forest Service Handbook direction for the wilderness recommendation process (FSH 1909.12 Chapter 70) (see also appendix H to the FEIS). The alternatives recommend a range of areas and acreages from zero recommendations (alternative 1) to 58 areas totaling 745,286 acres (alternative 5). The forest supervisor will consider public input and the analysis in the FEIS before selecting which areas and acreages will be recommended to Congress for wilderness designation.

1) The recommendations associated with the draft proposed action were based on analysis criteria specifically intended to avoid drastic changes in management and the variety of opportunities available to visitors. The forest supervisor has the authority to consider public input and select any number of areas and acreages that fall within the range of what is analyzed in the EIS. This decision and supporting rationale are documented in the draft Record of Decision.

2) We acknowledge the commenter's opinion. Aldo Leopold's legacy is recognized in the Gila National Forest's wilderness niche of large, mostly contiguous areas of wilderness. The criteria used to develop the draft proposed action were intended to honor that niche.

3) Recommended wilderness must be managed to maintain the wilderness characteristics that are present at the time of recommendation until Congress decides to designate or release it back to other uses. Recommending areas for wilderness designation will not reduce the cost of road maintenance because open system roads were excluded from the inventory. Travel management implementation is an ongoing issue that will not be solved by recommending areas for wilderness designation. It will just add wilderness intrusion to the citable offenses.

4) Although the economic benefits of wilderness have been quantified and are discussed in the EIS, these data are not specific to the locale of the Gila National Forest, which already has over 700,000 acres of designated wilderness. We agree that many of the popular outdoor recreation activities are compatible with recommended wilderness. Outfitter-guides can be and are already permitted to operate in these areas.

5) Climate change adaptation and mitigation is not the purpose of wilderness, nor is it necessarily a secondary benefit. Maximizing recommended wilderness could have a negative impact on management's ability to implement necessary adaptation actions as it restricts the use of mechanized equipment. The effects of recommended wilderness on climate adaptation are analyzed in the EIS.

   Adding to the "protected" area network is often promoted as a proactive measure to climate adaptation. However, there is not agreement on what makes an area "protected," "conserved," or "secured." We are aware that there are individuals and groups that argue that wilderness, national monument, and National Park Service lands are the only designations that constitute protection. However, the International Union for Conservation of Nature (IUCN), a global environmental union cited by the Intergovernmental Panel on Climate Change (in Settele et al. 2014) recognizes lands managed under multiple-use and sustained-yield principles, such as national forests, as part of the protected area network (https://www.iucn.org/theme/protected-areas/about/protected-areas-categories/category-vi-protected-area-sustainable-use-natural-resources). The Nature Conservancy also recognizes National Forest System lands that have no other designation as "secured" (Anderson et al. 2019).

6) Recommended wilderness requires management be directed toward preserving or enhancing the wilderness characteristics that were present at the time of recommendation until such time as Congress decides to designate or release the area back to other uses. National Forest System lands, whether they are part of the Wilderness Preservation System or not, are managed to maintain or improve habitat, habitat connectivity, and water quality and provide for species and biodiversity (36 CFR 219). There are also other laws providing for these values including the Endangered Species Act and Clean Water Act.

7) Although it is not a certainty, recommending additional areas could distribute use of the wilderness resources in the Gila National Forest. Depending upon many site- and circumstance-specific factors, increasing acres of designated wilderness in a general geographic location could possibly disperse visitor impacts across all wilderness areas within that same general area. However, it may not. A particular wilderness area may offer unique attractions and experiences. Additional, nearby wilderness areas without those attractions or experiences may not have the same draw for visitors and would not disperse visitor impacts. Wilderness areas located within the boundaries of the Gila National Forest do not currently experience heavy visitor use to the point that it creates resource and visitor experience impacts. Scenic character, scenic resources, and visual quality would be maintained, and in some cases enhanced by the management associated with wilderness areas as discussed in the EIS.

8) While not the express intent of the Wilderness Act, there may be a secondary benefit to cultural resources in that the potential for disturbance caused by mechanical vegetation treatments is eliminated. However, those disturbances are typically mitigated in general forest areas where mechanical vegetation treatments can be used. Road construction is highly unlikely to occur in any of the areas recommended in alternatives 2, 3, and 4 because of their location and terrain, whether they are ultimately designated by Congress or released to other uses. Alternative 5 includes these same areas and others that may not be as remote or rugged in terrain. In these less rugged areas, road construction remains highly unlikely under because mechanical vegetation treatments are restricted to the wildland-urban interface or areas that are scientifically demonstrated as needing treatment to restore the natural role of fire to the landscape with effects that are consistent with movement toward desired conditions. There are also tradeoffs in the sense that if a mechanical treatment is necessary to reduce fire behavior and it can't be done, fire-sensitive cultural resources have a higher potential to be damaged or destroyed.

9) Recommending an area would preclude energy development, but it would not align with agency policy direction to include areas in the recommendation for the express purpose of doing so.

10) Recommendations are unlikely to reduce the spread of weeds or litter because the primary existing vectors in these areas are non-mechanized in nature and would likely see very little or no change. These include hikers and backpackers, recreational livestock, permitted livestock, flowing water, and wind. Open roads are not included in any of the areas in any of the alternatives, so increased exposure associated with proximity to roads is also unchanged regardless of what is ultimately recommended.

11) There is very little likelihood of development that would impact dark skies on the National Forest System lands administrated by the Gila National Forest whether more area is recommended. Development that would threaten dark skies could occur on surrounding lands under other jurisdictions.

12) The effects of recommended wilderness on the Continental Divide National Scenic Trail and mountain biking opportunities are analyzed in the FEIS under the National Scenic and Recreation Trails and Sustainable Recreation headings respectively.

13) The Wilderness Act clearly states that commercial livestock grazing and the activities and facilities necessary to support it must be allowed to continue where such use was established prior to designation. Commenters may also refer to response to comment 22 in this section of this appendix.

14) The range of alternatives were developed in compliance with Forest Service Handbook direction for the wilderness recommendation process (FSH 1909.12 Chapter 70) (see also appendix H to the final EIS). The alternatives recommend a range of areas and acreages from zero (alternative 1) to 58 areas totaling 745,286 acres (alternative 5). The forest supervisor will consider public input and the analysis in the FEIS before selecting which areas and acreages will be recommended to Congress for wilderness designation. On aesthetics see 7. It is possible there is less non-compliance in designated or recommended wilderness, but there is also less of an enforcement presence so we may just be less likely to know about it.

15) Recommended areas may not be used to create buffers around designated wilderness per the 1980 New Mexico Wilderness Act and agency policy direction (FSM 2320.3(5)).

16) Proximity to wildland-urban interface were analysis considerations or criteria in the development of one or more alternatives (appendix H of the FEIS).

17) See 12. The effects of the recommended wilderness alternatives on mountain biking are discussed in the Sustainable Recreation section of the FEIS.

18) See 13 and 12. Plan direction for recommended wilderness areas specifically allows for mechanized uses for the purposes of accessing and maintaining or replacing range infrastructure that existed prior to recommendation and for trail maintenance (see final plan Recommended Wilderness S2). The congressional grazing guidelines include provisions for mechanized uses for these purposes in designated wilderness should Congress ultimately decide to designate (see Livestock Grazing S6). Legally recognized private property rights, like water rights, are protected by law.

19) The need to manage vegetation to support desired fire behavior is addressed in the analysis criteria used to develop alternatives 2, 3, and 4. The effects of recommended wilderness alternatives on vegetation communities is analyzed in the EIS in the Upland Vegetation, Fire Ecology and Fuels section.

20) See 14.

21) Range infrastructure and current modes of access to that infrastructure were addressed in the analysis criteria used to develop alternatives 2, 3, and 4. The effects of recommended wilderness alternatives on livestock grazing as a use of the forest, including access, is analyzed in the FEIS under the Livestock Grazing heading.

22) See 14.

23) See 14.

24) See 2.

25) See 13. The effects of the recommended wilderness alternatives on access for various uses and activities is analyzed in the FEIS. Wheelchairs are allowed in recommended and designated wilderness. See 19 regarding vegetation management and fire. Mechanized modes of access are allowed when emergency situations require them. Designated woodcutting areas were removed from consideration during the inventory process, as was the 300-foot corridor along all open roads.

26) See 13.

27) There is no compliance issue between the Healthy Forests Initiative and recommendations to Congress for wilderness designations. See 19.

28) See 19.

29) All the Gila National Forest's wilderness areas have been managed to standard for several years now, as indicated by our Wilderness Stewardship Performance scores. This involves congressionally allocated dollars, some grant funding, and the dedicated work of volunteers, partners, and forest staff.

30) See 14 and 29. Forestwide trail maintenance has been limited by funding and staffing, and over the last decade maintenance needs have increased due to large wildfires. The plan addresses this with objectives for trail work and by emphasizing relationships and collaboration and cooperation with partners and volunteers. About trail markers in existing designated wilderness, including cairns, please refer to response to comment 42 in this section of this appendix.

31) See 13 and 14. The analysis criteria used to develop the range of alternatives included criteria to exclude as much range infrastructure as possible from alternatives 2, 3, and 4 (appendix H to the FEIS), especially if it is currently being accessed or maintained by mechanized means. However, it could increase future costs associated with fence construction or reconstruction as disclosed in the Livestock Grazing section of the FEIS. There is no evidence to suggest private property values decrease because of proximity to recommended or designated wilderness. The only multiple use that is eliminated from recommended or designated wilderness is the harvest of wood products. The Multiple-Use Sustained-Yield Act affirms that "the establishment and maintenance of areas of wilderness are consistent with the purposes and provisions of this Act."

32) We acknowledge the commenter's opinion.

33) See 14. About grazing in wilderness, see 13 and 21. About vegetation management and fire, see 19. The effects of recommended wilderness alternatives on watersheds, aquatic ecosystems and species are analyzed in the FEIS in the Soil and Watershed Resources, Riparian and Aquatic Ecosystems and Wildlife, Fish, and Plants sections.

34) See 32.

35) See 32. The socioeconomic impacts of the alternatives are analyzed in the FEIS under the heading Social and Economic Conditions Effects Common to All Alternatives. The table summaries in this section show a 2.9 to 4.3 percent increase in number of jobs contributed by various forest management activities from current and an increase of 0.8 to 5.2 percent in labor income. There would also continue to be enough firewood available for harvest to meet demand under all alternatives (EIS Timber, Forest, and Botanical Products Effects Common to All Alternatives).

36) We acknowledge the commenter's opinion. All input is provided equal consideration based on its merits.

37) The current road system and the uses it supports are not included in or affected by the recommended wilderness alternatives. Roads were removed from consideration in the first step of the recommended wilderness process. Opportunities to review and refine the 2014 travel management decision at the project level would continue. This has already been done in the 2019 Luna Restoration Project, which made some changes to motorized trails based on public comment. Nothing in the plan would restrict

these types of project-level considerations as discussed in the final Collaborative Sustainable Recreation Strategy management approach in the Sustainable Recreation section of the plan.

Comment 54: Commenter states appreciation for the Continental Divide National Scenic Trail through the Gila National Forest. Commenter states that without access to the sections of the Trail that currently allow mountain biking, there wouldn't be enough mountain biking to keep a community, or a bike shop. Commenter states that mountain biking brings people to our area, contributing money to our local economy, and helps to keep the bike shop in business. Commenter requests keeping mountain bike access to the Trail the way it is, wherever possible by not including these areas as recommended wilderness. **Associated Letter: 136**

Response: We agree that the Gila National Forest makes socioeconomic contributions to local communities and businesses by providing mountain biking opportunities. Current or potential wilderness non-conforming uses such as mountain biking were one of the considerations in developing the range of alternatives.

Comment 55: The commenter disagrees that people will disperse to recreate in recommended wilderness areas as is stated in the draft EIS, as people are free to use them now and recommending them for wilderness doesn't change that. **Associated Letter: 39**

Response: We acknowledge the commenter's opinion.

Comment 56: Commenter points to a statement on page 537 of the DEIS and says it is not clear as to whether motorized equipment is allowed for trail/infrastructure maintenance in recommended wilderness. **Associated Letter: 39**

Response: Plan direction for recommended wilderness areas has been revised to improve clarity that mechanized equipment for the purposes of trail maintenance can be authorized on a case-by-case basis. The analysis in the FEIS has also been clarified.

Comment 57: Commenter suggests the recommended wilderness process documentation and the environmental analysis should describe positive effects on the Continental Divide National Scenic Trail if roadless areas along the trail corridor are recommended for wilderness designation. **Associated Letter: 73**

Response: The process documentation is not the appropriate place to describe the effects. The environmental analysis is the appropriate place. The effects of wilderness recommendations on the Continental Divide National Scenic Trail are discussed in the National Recreation and Scenic Trail section of the FEIS.

Comment 58: Protecting wilderness values would include establishing plan components that identify recommended wilderness as not being suitable for motor vehicle use and mechanized transport. **Associated Letter: 73**

Response: Plan direction has been clarified to reflect mechanized recreation, timber harvest or other mechanized thinning treatments and roads will not be authorized in recommended wilderness. Plan direction does allow the forest supervisor or authorized agent to make exceptions for fire management, and trail and range infrastructure a case-by-case basis, and for emergencies. By approving on a case-by-case basis, consideration will be made to not impair the wilderness characteristics that made the area suitable for recommendation and the area can be managed as wilderness if designated by Congress.

Comment 59: There is a request for those analysis areas not recommended to Congress for wilderness designation in the final plan to be given special consideration because some may be managed to improve wilderness characteristics for future designation. Examples of this type of management might include removal from timber suitability or decommissioning roads. **Associated Letter: 144**

Response: Only areas recommended to Congress for wilderness designation may be managed to maintain or improve wilderness characteristics**.** Areas that are not recommended will be managed for other uses, consistent with any other applicable laws, regulations, and policies.

Comment 60: Commenter notes that the draft EIS observes that "very little management activity has occurred within the Black Canyon area, mostly due to the precipitous terrain," and that "other features of value are present within the area, including a great deal of visible mining history, outstanding geologic features, exceptional scenery, and (these features) provides (sic) quality representation of a lot of plant communities." DEIS, Volume 3, Appendix F. Commenter takes issue with the use of the words "a lot." Commenter states: "That is not definitive. We congratulate you on this recognition, but we do not think it says enough about the outstanding magnificence of the plant communities. Vital species of conservation concern are neglected in the draft plan and no connection has been made between interacting species." **Associated Letter: 152 and 684**

Response: A control-find keyboard command in volumes 2 and 3 of the draft EIS does not find the first statement quoted by commenter in specific reference to Black Canyon. It is used in the description of most of the areas recommended in one or more alternatives. The statement in the draft EIS, volume 3, appendix F referenced by the commenter is about G1-Mineral Creek. We acknowledge the commenter's opinion on word choice. This appendix is now final appendix H and contains extensive changes for clarity and brevity. The final plan provides for species of conservation concern as documented in the Wildlife, Fish, and Plants analysis and supporting appendix documenting the analysis of at-risk species (appendix G to the FEIS).

Comment 61: Commenter asks what expertise was included in the wilderness interdisciplinary team and if they looked at the photos, location information or data collected by the survey team that helped develop the citizen's proposal over a four-year period. **Associated Letter: 233**

Response: The forest supervisor interdisciplinary team was appointed by the and consisted of Gila National Forest employees with diverse professional experience and extensive on-the-ground familiarity with the inventoried and evaluated areas. The information provided by the citizen's proposal was accepted, incorporated into the project record, and given equal consideration based upon its merits along with all other public comments.

Comment 62: There is a concern that the documentation supporting the wilderness recommendations contains several sentences stating there was no public comment. Commenter says this is incorrect and that the proposal submitted by New Mexico Wild was public comment that should have been considered. **Associated Letter: 233**

Response: We reviewed the documentation and found no such statements. The documentation emphasizes the opportunities for public comment that were provided at every step of the process (see appendices C and G to the final EIS). See also response to comment 61 above.

Comment 63: Commenter suggests that with more recommended wilderness and wilderness rangers, manageability will benefit. Commenter provides specific example of illegal motorized intrusions into wilderness where rangers could help Forest Service staff enforce the travel management. **Associated Letter: 233**

Response: We agree that wilderness rangers would create additional capacity and benefit management. Motorized intrusions are difficult to address because even with increased wilderness ranger staffing, there are over 700,000 acres of wilderness with many miles of wilderness boundaries, some in very remote locations. Site-specific management actions will consider a range of possible strategies to address motorized intrusions, that may include but are not limited to, increased boundary markers and information signage, installation of access barriers, and increased staffing and enforcement presence.

Comment 64: Commenter asks if the Bureau of Land Management Continental Divide Wilderness Study Area of 68,671 acres, which includes Pelona Mountain and part of the Continental Divide National Scenic Trail and adjoins non-wilderness lands managed by the Gila National Forest, would be included in the recommendation. A**ssociated Letter: 233**

Response: No. That is outside Forest Service jurisdiction and authority.

Comment 65: Commenter states that public comment will be an important consideration for the recommendation decision and a request that the EIS provide justification for areas not included. **Associated Letter: 233**

Response: We agree that public comment will be an important factor in the forest supervisor's decision-making process. That decision and its supporting rationale is contained in the draft Record of Decision.

Comment 66: There is a suggestion that the area maps include the Continental Divide National Scenic Trail. **Associated Letter: 233**

Response: The Continental Divide National Scenic Trail has been added to the recommended wilderness map in the final plan (appendix C to the final plan) and on the alternative maps in appendix H to the FEIS.

Comment 67: Commenter points to a statement on page 493 for the draft EIS which reads "The agency is also legally mandated to protect such recommended areas to preserve their wilderness characteristics" and recommends adding the phrase "in such a way that promotes the purpose of wilderness—the public use and enjoyment." **Associated Letters: 52, 131, 474, and 475**

Response: Until recommended areas are designated by Congress or released for other uses, the only legal requirement is to maintain the wilderness characteristics that were present at the time of recommendation.

Comment 68: Commenter disagrees with statements made in the draft EIS on page 540 and 541 that connectivity for native species and wilderness characteristics would be substantially enhanced by more recommended wilderness. **Associated Letter: 647**

Response: We acknowledge the disagreement and admit that the effects of recommended wilderness are likely more nuanced than this statement portrays. This comment brought to light conflicting analysis conclusions and organizational issues within the DEIS to our attention. This has been resolved in the FEIS. The effects of recommended wilderness on connectivity are analyzed in the Wildlife, Fish, and Plants section of the FEIS. The effects of recommended wilderness on wilderness are analyzed in the Wilderness section of the FEIS.

Comment 69: Commenter states that recommending more area to Congress for wilderness designation is likely to reduce visitation from those accessing areas by trail because it excludes mountain bikes and two-wheeled motorized bikes. Commenter recounts their observations of lack of trail maintenance and acknowledges insufficient budget allocations, lack of volunteers, and fire damage. Commenter states that some trails used to be maintained by motorcyclists until travel management planning and that keeping trails maintained and open to such use could be a source of revenue to local communities. Commenter is further concerned by recommendations because it means deadfall cannot be cleared with chainsaws and suggests that there is an increasing trend in fire-related deadfall and eliminating chainsaw use just exacerbates the problems. **Associated Letter: 132**

Response: The forest supervisor will consider a wide range of factors and effects, as well as public and stakeholder input when making the final recommendation. Step 4 of the analysis criteria for alternative 2 includes removing areas from recommendation that have been identified as having current or potential for

wilderness nonconforming traditional or recreational uses, including (but not limited to) mountain biking, motorized access, and fuelwood harvest.

Range of Alternatives

Comment 70: There is concern that the range of alternatives is inadequate. Some specifically state the range of alternatives is inadequate because the citizen's proposal for recommended wilderness was not analyzed as its own alternative. A suggested remedy is to respect the work that went into developing the proposal and analyze it as its own alternative. Some suggest the release of a supplemental draft EIS, prior to the release of a final EIS is necessary to accommodate this. One commenter suggests a failure to consider ambitious amounts of acreage violates the National Environmental Policy Act. **Associated Letters: 32, 58, 64, 65, 66, 87, 96, 99, 101, 102, 124, 125, 130, 141, 152, 167, 171, 180, 197, 270, 361, 579, 582, 634, 653, 680, 684, 685, 708, 712, 725.1 through 725.7, 728.291, 728.392, 729.1 through 729.15, 730.10 through 730.124, 730.27, 730.52**

Response: The process outlined in Forest Service Handbook 1909.12 chapter 70 does not dictate a quota, formula, or ratio for numbers of acres upon which to build a range of alternatives. Recommendations are based upon identified criteria and issues, including those identified by the public. The National Environmental Policy Act requirement has been fulfilled through the five alternatives described and analyzed in the environmental impact statement.

The citizen's proposal was accepted as public comment and given the same weight as other public comment based on the merits of its process and rationale. Suggestions to analyze the citizen's proposal was an alternative considered but not analyzed in detail because the areas and the boundaries recommended by the citizen's proposal are in very close alignment with those areas as they all occur in alternative 5. Alternative 5 includes additional acreage beyond what the citizen's proposal contains.

Analysis Criteria

Comment 71: There are concerns about the forest supervisor's criteria for selecting areas to recommend to Congress for wilderness designation under alternative 2-proposed action. Some question who developed the recommendations and state that it is entirely unclear how the recommendations were developed and that it appears to be totally arbitrary. Others critique the forest supervisor's criteria for alternative 2 and recommend others as described below.

Comments on forest supervisor's criteria

1) The likelihood of large extents of high severity fire and proximity to the urban interface should not be considerations because natural ignitions are natural, people living near the forest and insurance companies know the risk and people need to take responsibility for their own property and safety, and property values will go up if it is close to wilderness. Further, commenters state that using a 10 percent threshold is very arbitrary and using extreme conditions that have only been observed in the data 5 percent of the time seems overly cautious. Commenters prefer to be hopeful that 95 percent of the time wilderness will be ok.

2) Being contiguous to existing designated wilderness should not be a criterion for these reasons: (1) areas only need to help accommodate wildlife and migration, nesting, food, and propagation of a species to maintain the overall health of the forest; (2) outstanding wilderness characteristics and the associated water resource protections should be more important; (3) areas that are adjacent recommended areas, not just designated wilderness, would make contiguous parcels. Others argue that there is nothing that says wilderness must be one area and that contiguous just means nearby not necessarily immediately adjacent the boundary and that standalone areas somewhat remote from existing wilderness complexes can be considered.

3) Areas that may be suitable for timber production should not be a consideration because the climate doesn't really support economically viable opportunities for commercial lumber. Furthermore, the 10 percent threshold is a very conservative basis on which to remove area from consideration.

4) Firewood areas should not be used as a criterion for removing area from consideration because these areas will move over time.

5) Tribal indications that roaded access is important for their elders to visit certain locations should not be a consideration. Commenters state: "To exclude an area from wilderness recommendation because an elder cannot get there is a reason that is beyond me. Of course, they can get there, they used to live there! Where there is a will there is a way. We need more wilderness"

6) Motorized access, including for livestock grazing permittees for the purposes of range management should not be a criterion because there may be other ways like using horses to complete necessary work.

7) Range infrastructure such as waters and fences should not be reasons to exclude or significantly change boundaries. Wilderness rangers will help with manageability. Other commenters question the basis for establishing the 10 percent threshold for water sources and ask how that matches up with the need to restore springs, wetlands, and other riparian areas in the plan. One commenter requests reconsideration of the range infrastructure criteria based on the congressional grazing guidelines stating it would be their preference that the fence was moved to provide for more recommended area.

Suggested criteria for the final recommendation

8) Trail condition, maintenance, building or re-routing needs should be factors considered in the responsible official's recommended wilderness process because if Congress were to designate them it's fewer miles that would be able to be taken care of with mechanized equipment.

9) The presence of National Scenic or Historic Trails, wilderness study areas, inventoried roadless areas, or river segments with Wild and Scenic status should be recommended because overlapping designations are the strongest conservation protection.

10) Areas containing the Continental Divide National Scenic Trail and its alternate routes should be recommended, with careful, minor, boundary adjustments from the areas as they exist in alternative 5. These adjustments could be designed to limit the number of miles where mountain biking would not be allowed, and forest staff could find additional alternative routes and trails to replace the miles lost for that use. Mountain bikers would still have plenty of non-motorized trail miles available and recommended wilderness status provides the trail with the greatest protections from timber harvest and other vegetation management activities, utilities and communication sites, and military overflights. This would also provide for wildlife corridors and because trail maintenance would be taken care of by trained volunteers, there would be more capacity and less need for mechanized equipment for maintenance. It is also consistent with the purposes for which the Trail was established.

11) Concentrations of Native American cultural sites because desecration has happened, and a wilderness designation would protect them.

12) A three-tier process should be used based on overall ranking and location. First, all six areas ranked as "outstanding" should be recommended regardless of whether they are contiguous to existing designated wilderness. Second, areas ranked as "high" and adjoining existing designated wilderness or adjacent an area ranked as "outstanding" should be recommended along with QR1-Upper Frisco Box because of its spectacular slot canyon which is unique. Third, areas with rankings below "high"

that adjoin existing wilderness should be recommended. All areas should be the largest size practical, but at least large enough to include areas currently managed as inventoried roadless areas.

13) All areas ranked as outstanding, high, or moderate/high should be recommended because they clearly merit wilderness protection to safeguard the vital ecological, geologic, cultural, historic, and recreational values these areas contain.

14) All areas identified in the NM Wild/citizen's proposal should be recommended because it was developed from years of work and adherence to agency direction and would best support the distinctive roles and contributions the Gila National Forest provides. It also helps protect watersheds. The working circles and overlap would help the different forest districts work and communicate better together for the overall health of the forest and an economic boost to the surrounding communities of Pines Altos, Kingston, Winston, Luna, Reserve, and Silver City among others.

15) Areas with moderate or higher rankings that are adjacent areas recommended in alternative 2 should be revisited and included because there is public comment and data to support their inclusion. Commenter does not believe that a moderately ranked area would give a visitor a degraded experience, especially if they have never been in wilderness and have nothing to compare it to.

16) Areas containing vegetation communities that are underrepresented within other designated areas should be recommended.

17) Areas containing the Desert Willow riparian Ecological Response Unit should be recommended.

18) Areas with designated critical habitat for fish should be recommended.

19) Commenter asks if the plan components that meet at-risk species habitat needs and provide for persistence have been overlayed with recommended wilderness. Commenter suggests that this would be a good basis upon which to base recommendations.

20) Areas that provide opportunities for whitewater boating should be recommended.

21) Areas that are not near population centers should be recommended, with areas in proximity to population centers providing for other recreation uses such as mountain biking and motorized travel to support Grant County's goal to diversify the economy.

22) Large, remote, and solitary areas that could be prime wolf habitat and wildlife movement corridors should be recommended, including RG4-North Mogollon Mountains

Associated Letters: 20, 23, 35, 58, 59, 65, 69, 73, 79, 82, 83, 84, 85, 87, 105, 107, 122, 135, 141, 144, 145, 152, 167, 170, 180, 184, 192, 231, 233, 234, 482, 542, 567, 579, 582, 601, 627, 638, 653, 656, 663, 672, 680, 684, 708, 712, 720.5, 724.1 through 724.11, 727.1 through 727.4389, 728.259, 728.312, 728.354, 730.19, 730.20, 730.22, 730.23, 730.25, 730.32, 730.34, 730.35, 730.36, 730.37, 730.41, 730.42, 730.43, 730.44, 730.49, 730.64, 732.1 through 732.7, OWS121

Response: The criteria used to arrive at recommended wilderness alternatives were developed collaboratively by the forest supervisor and the interdisciplinary team to address concerns raised by the public. These criteria are included in appendix F to the FEIS.

1) The agency has an obligation to consider the likelihood and effects of wildfire on forest resources and adjacent private property. Many stakeholders have expressed concern regarding recommending additional acres to Congress and management's ability to put mechanical thinning treatments on the ground. Alternatives 2, 3, and 4 address this concern using predictive science products from the Rocky Mountain Research Station and consistently applying a numeric threshold. The extreme scenario was chosen because as our climate continues to change and fire season weather is predicted to increase in severity. What is considered extreme now, could become a much more frequent

occurrence. The concerns of those opposed to this criterion are addressed by alternative 5, which does not consider the likelihood of undesirable fire behavior, extent, or effects in any way.

2) The Gila National Forest fills a distinctive wilderness niche within the Southwest region, with large, mostly contiguous wilderness areas reflective of Aldo Leopold's original vision when he first recommended the Gila Wilderness to the agency. Including suitable areas adjacent to designated wilderness honors this niche and Aldo Leopold's legacy. The concerns of those opposed to this criterion are addressed by alternative 5, which does not use the criteria and includes areas that are not adjacent to designated wilderness.

3) Timber harvest is one method by which thinning can be accomplished. Thinning can help move toward desired conditions for climate resilient ecosystems and watersheds by restoring the forest structure that supports desired fire behavior and fire effects. It also contributes socioeconomic and cultural benefits to local communities, consistent with the Multiple-Use Sustained-Yield Act. The 2012 Planning Rule and agency directives outline the timber suitability process, which no longer includes economic viability as a consideration (FSH 1909.12 Chapter 70). We acknowledge the commenter's opinion about the numeric threshold. The forest supervisor selected this threshold, and it was consistently applied to each area. Alternatives 3 and 5 address the concerns of those who are opposed to this criterion as it is not used.

4) Many residents of the communities that surround the Gila National Forest rely on firewood to heat their homes. Existing designated cutting areas were removed in the first step of the wilderness process because they do not possess the wilderness characteristic of apparent naturalness (see appendix H to the FEIS). Commenter is correct that other areas will need to be opened to firewood harvest over time. Areas that are recommended to Congress are not available for that use until such time Congress decides to designate or to release the area for other uses such as firewood harvest.

5) This criterion is responsive to tribal consultation and aligns with the plan's desired conditions for tribal relations and traditional uses. It is not applied in alternative 5.

6) This criterion is responsive to stakeholder concerns about the ability of grazing permittees continuing to access and travel their allotment(s) in the ways they are currently doing so. It is not applied in alternative 5.

7) This criterion is responsive to stakeholder concerns about maintenance needs and the increased costs that can be incurred because of not being able to use mechanized means. It is not applied in alternative 5.

8) Trail work is routinely accomplished using non-mechanized means on 31,163 miles of trails within congressionally designated wilderness areas nation-wide, and non-mechanized tools can be used at very high levels of efficiency. However, there may be instances where trail condition, maintenance, building, or re-routing needs exceed the threshold of "exceptions" that can be made under revised plan direction for recommended wilderness. These are all things the forest supervisor may consider in determining which areas will be recommended to Congress.

9) We acknowledge the commenters' opinions. These designations are statutory in nature and accomplished through separate and unrelated legislative actions. Overlapping designations and more restrictive management does not necessarily serve to strengthen conservation or protection, it can hinder or preclude management actions aimed at conservation. Flexibility is needed in our climate change reality.

10) See 9. Although the management mandates for wilderness and national scenic trails are generally not in conflict, they have separate and independent purposes and needs and are not dependent upon overlap. Wilderness designation of the surrounding area is not necessary to realize the Continental Divide National Scenic Trail's desired conditions because there are specific laws, regulations, policies, and plan components that provide for those desired conditions regardless of land status. On wilderness and wildlife corridors, please refer to response to comment 43 in the Climate, Carbon and Adaptation section of this appendix which covers this topic in depth. We acknowledge the

commenter's opinion that volunteer capacity for trail maintenance would increase because of wilderness recommendation.

11) Wilderness designation does not provide any additional legal protections to Native American or other cultural and heritage sites beyond those already provided on all Federal public lands. However, there may be secondary benefits as well as tradeoffs. Please refer to response to comment 53 item 8 near the beginning of this Wilderness subsection on recommended wilderness.

12) The areas that would be identified through this process are included in alternative 5.

13) See 12.

14) The areas included in the citizen's proposal are included in alternative 5 with some very minor differences in boundaries.

15) See 12.

16) The presence of vegetation communities that are underrepresented in designated areas is not a wilderness characteristic. Areas are suitable for recommendation based on their wilderness characteristics.

17) The presence of the Ecological Response Unit Desert Willow is not a wilderness characteristic. Areas are suitable for recommendation based on their wilderness characteristics.

18) The presence of designated critical habitat is not a wilderness characteristic. Areas are suitable for recommendation based on their wilderness characteristics.

19) The presence of at-risk species habitat is not a wilderness characteristic. Areas are suitable for recommendation based on their wilderness characteristics. Further, recommending habitat for wilderness designation may actually preclude management activities, such as mechanical treatments, that may be necessary to preserve that habitat in a condition that it continues to provide for species persistence over the long term.

20) Opportunities for whitewater rafting would be an opportunity for primitive and unconfined recreation which is considered in the context of the wilderness evaluation (see appendix H to the FEIS).

21) Proximity to roads and wildland-urban interface values, and mountain biking opportunities were considerations in the process of developing the recommended wilderness alternatives. Please see appendix H to the FEIS for details.

22) There may be overlap between areas having wilderness characteristics and areas that could be prime wolf habitat or movement corridors. However, wolf habitat or movement corridors may also occur in areas that do not possess wilderness characteristics and corridors are not static on the landscape. This may be especially true given our climate change reality. Please see R4-North Mogollon Mountains under the Specific Analysis areas for more detail.

Comment 72: Commenter states: "It is my understanding that the most current data is to be used in the New FS Plan. The Wilderness Survey Team that went out, boots on the ground, for thousands of hours covering hundreds of thousands of acres and surveyed using GPS points of reference and taking photos at each location has provided the FS with the most current accurate and consistent data by working in the same groups of people, places are being evaluated consistently using the same criteria. If a single FS person goes out to look at an area, what is Low to one person may be high to another person. Is it Low because a person does not know an endangered plant and High to a Botanist that recognizes an endangered or rare plant? How can a person say "Other Features of Value" are Not Applicable - when a point score is being used? List of Alt 2 areas included. Which played into the ranking (by people not trained on how to rank) should have been 1 person or same group of people for all the polygons." **Associated Letter: 233**

Response: The interdisciplinary team appointed by the forest supervisor have diverse expertise and extensive familiarity with the Gila National Forest. The work done by the team supporting the citizen's proposal was

received as public comment and considered based on its merits. The process and criteria used to develop the range of alternatives for recommended wilderness is described in appendix H of the FEIS.

Comment 73: Commenter points to page 363 of the draft EIS to a discussion about the recreation opportunity spectrum and how there is no map data for alternative 1 – no action to quantitatively compare to the action alternatives. Commenter asks why this has not been completed and states that there is no justification for not including areas in wilderness recommendations without this map data because it might be said there is a road in an area when in fact trees have grown in on it and it is no longer drivable, or it is a closed road showing on an outdated map. **Associated Letter: 233**

Response: There is no information to display on a recreation opportunity spectrum map for alternative 1-no action (1986 forest plan) because data was not being kept in a spatial database at the time. Even if it was available, the different methodology used at that time would not provide a useful comparison. The recommended wilderness process used current map data with current road status and is not dependent on the existing recreation opportunity spectrum; the desired recreation opportunity spectrum is adjusted for the wilderness recommendations.

Comment 74: Commenter points to a statement in the draft EIS describing how the recommendations developed for alternative 2-proposed action were developed which reads: "The criteria for recommended wilderness in alternative 2 strive to inform the forest supervisor's decision of which inventoried and evaluated areas to recommend by balancing consideration of all relevant issues. These include, but are not limited to, stakeholder concerns, and the forest's resource management niches of dispersed recreation, traditional uses, and ecological restoration." Commenter asks why stakeholder concerns would be a consideration. **Associated Letter: 233**

Response: Public input, including concerns, preferences, suggestions and supporting rationale are important to any decision made regarding public land management. However, they do not dictate decisions as in a vote. There are many sources of information that decision makers must consider, including the best available science. It is the merit of the reasoning that supports stakeholder preferences and suggestions that influence decisions.

Comment 75: Commenter suggests that it looks like the planner grouped some and divided other areas and asks if they were separated because of different characteristics. Commenter states this should not prevent areas from being included in wilderness recommendations especially because working circles for overlapping forest districts will help with oversight. Commenter asks if the interdisciplinary team came from different ranger districts having public review and feedback. **Associated Letter: 233**

Response: The interdisciplinary team appointed by the forest supervisor routinely involved district staff, who were provided multiple opportunities to share their on-the-ground knowledge and review and discuss the process and outcomes. The process by which areas were established and revised is documented in appendix G to the FEIS and in the Inventory and Evaluation process documentation available on the forest's webpage.

Comment 76: Commenters agree that the areas recommended as part of the proposed action merit recommendation. However, commenters are concerned that the areas have been diminished in size, which diminishes the wilderness values. **Associated Letter: 712**

Response: The presence of wilderness characteristics was one of many considerations that contributed to the development of the proposed action. The analysis criteria also consider where each area's boundaries may be adjusted to address other management concerns. Alternative 5 retains the full size of these areas as they were in the evaluation step of the wilderness process.

Inventory

Comment 78: Commenter points to the draft EIS volume 2 page 552 figure 50 and suggests that if there are closed or decommissioned roads those areas should be moved forward from inventory to evaluation. Commenter is concerned that planning staff did not do the data analysis to factor in travel management decisions. **Associated Letter: 233**

Response: The most up-to-date travel management information was used.

Evaluation

Comment 79: Commenter questions the conclusion that not all lands in the wilderness inventory have wilderness characteristics. **Associated Letter: 233**

Response: We acknowledge the commenter's opinion.

Comment 80: Commenter questions the validity of the evaluation of Other Features of Value because it is totally arbitrary and in the eyes of the beholder. Commenter suggests that unless there are photographs of every acre no one can say if such features exist. Commenter requests this part of the evaluation be removed from the rating process because it more appropriately comes into play after an area is designated as wilderness and should not be part of determining what is suitable as wilderness. **Associated Letter: 233**

Response: We acknowledge the commenter's opinion. Other features of value were not ranked on the same point system as wilderness characteristics because they are not required for the area to be suitable for inclusion. Other features of value were only ranked where the interdisciplinary team determined they existed, and those points were added to the overall ranking score. This process is explained in more detail in appendix H to the FEIS, which contains extensive revisions for clarity and brevity.

Comment 81: Commenter points to the background information for cultural resources plan direction noting that only 12 percent of the forest has been inventoried to standard and 59 percent of the sites have not been evaluated in terms of eligibility for the National Historical Register and asks how sites can be used for other features of value when the New Mexico Wild survey team documented and photographed sites that are not being recognized as other features of value. Commenter states this is very arbitrary. **Associated Letter: 233**

Response: Forest Service policy direction for the wilderness process requires the interdisciplinary team appointed by the forest supervisor, which included staff with cultural and heritage resource expertise, to evaluate other features of value (FSH 1909.12 Chapter 72.1.4).

Comment 82: Commenter questions the criteria for developing the recommendations for alternative 2 – proposed action. Commenter questions who and how determined criteria 1 and 2 could or couldn't be met and suggests that determination is completely arbitrary. Commenter states that just because an area is not manageable as wilderness in the eye of the beholder does not mean it does not have wilderness characteristics. **Associated Letter: 233**

Response: The forest supervisor and the interdisciplinary team established criteria for developing the range of recommended wilderness alternatives. For alternative 2, the first criterion or step is to identify areas that were ranked moderate/high, high, or outstanding by the interdisciplinary team's evaluation. The second criterion or step was to identify which areas that had the requisite evaluation rankings contained more than 10 percent of their area that may be suitable for timber production. Areas that may be suitable for timber production are identified as a step in the timber suitability process that is strictly outlined by the National Forest Management Act, the 2012 Planning Rule, and regional guidance. We agree that it is possible for an area to have wilderness characteristics but not be manageable for them, and that bears out in the wilderness process documented in appendix H to the FEIS.

Comment 83: Commenter states that the overall ranking for apparent naturalness is totally arbitrary if not done for all areas by the same person or group of people who share a common understanding. **Associated Letter: 233**

Response: The same interdisciplinary team appointed by the forest supervisor completed the ranking for apparent naturalness based on criteria compliant with Forest Service Handbook direction (FSH 1909.12 Chapter 70 section 72.1) as described in appendix H to the FEIS. The entire team was involved in each step of the inventory and evaluation.

Comment 84: Commenter asks what modifications could be made to areas that might raise the evaluation ranking. **Associated Letter: 233**

Response: Nothing in existing law, regulation, policy, or code of professional ethics supports reverse engineering a process to improve or create wilderness characteristics, raise an evaluation ranking, or arrive at a pre-determined outcome. This was not something considered by the interdisciplinary team or the forest supervisor. However, the forest supervisor has the authority to consider and recommend any area with any evaluation ranking for recommendation based on a variety of other factors. It is possible to improve wilderness character and manageability through restoration projects such as removing infrastructure, closing and naturalizing roads, and treating invasive species, but these types of projects can be more effectively implemented when motorized and mechanized can be used.

Comment 85: Commenter suggests that cliff and rocky habitats that offer roosting sites and escape terrain increase scenic, geologic, climatic, and biological diversity and should be considered other features of value. **Associated Letter: 233**

Response: Depending on the area and site-specific factors, these features could be considered as other features of value. Please refer to appendix H to the FEIS for more detail on the evaluation process.

Non-Conforming Uses

Comment 86: Commenter states that the responsible official has the flexibility to allow non-conforming uses in any recommended wilderness areas and suggests the plan more specifically discusses and leverages this flexibility to support trail maintenance. Another commenter questions the environmental analysis determination that recommended wilderness does not affect trails because the difference in maintenance with mechanized equipment versus manual tools is huge in terms of output and labor. **Associated Letters: 20 and 247**

Response: The responsible official (forest supervisor) has the flexibility to allow non-conforming uses in recommended wilderness provided that the wilderness characteristics that are present at the time of recommendation are preserved. The extent to which the forest supervisor intends to use this flexibility is outlined by the standards and guidelines for recommended wilderness areas in the revised plan. This includes the flexibility to authorize the use of chainsaws for trail maintenance on a case-by-case basis (Recommended Wilderness S2). We acknowledge the commenter's opinions on the conclusions drawn in the analysis related to recommended wilderness and trails.

Wilderness Study Areas

Comment 87: Commenter states that the New Mexico Wilderness Act of 1980 designated Hell Hole and Lower San Francisco River as wilderness study areas. They were reviewed in the 1986 Gila Forest Plan and were not recommended. Commenter suggests that since nothing has changed over the last 60 years in terms of major development and no new data has been collected, they should not be recommended for designation now. Commenter suggests Congress should complete the task of making the call. **Associated Letter: 93**

Response: The Hell Hole and Lower San Francisco Wilderness Study Areas were included in the wilderness inventory, evaluation, and analysis process because they met the criteria for lands that should be included in these steps. They do not meet the analysis criteria and are not recommended to Congress under alternatives 2, 3, or 4. They do meet the analysis criteria and are recommended under alternative 5. Whether or not they are ultimately part of the final recommendation, Congress is the only authority that can designate these areas as wilderness or release them from their wilderness study area or recommended status.

Analysis Areas

Multiple Analysis Areas

Comment 88: Commenter supports wilderness protection for G6, G5, RG2, S2, and S1 because they have floated these in an inflatable kayak, and they deserve protection for outstanding wild river-trip opportunity. Commenters support wilderness status for QR1, Q11, G9, G10, RG1, RG2, QG1, QG2, and Q11 because they enhance the Blue Range Wilderness and they have backpacked, and day hiked many times in these areas. Commenter supports wilderness status for G1, G12, and RG4 because Mineral Creek from Sandy Point downstream is part of the Grand Enchantment Trail. Commenter states they have backpacked this section of the trail. Commenters request consideration of creating more connection between the Gila and Blue Range Wildernesses because it would benefit habitat connectivity by serving as a corridor. One commenter would also like consideration to be given to bridging the gap between the Gila and Aldo Leopold Wildernesses with recommendations for R6, R8, RWB1, and WB1 as they exist in alternative 5. This commenter also requests Meadow Creek should be recommended because it expands the Gila Wilderness to the south a little bit. Finally, this commenter suggests areas that expand the Aldo Leopold Wilderness to the north should be recommended, including B5, B4, B3, B13, G11, and B2 as they exist in alternative 5. **Associated Comment: 233 and OWS-83**

Response: All these areas are included in alternative 5 except B4, B2, B3, and Meadow Creek. Meadow Creek is not a standalone area but is part of the larger SW2 polygon. B4, B2, B3, and SW2 were determined not to be manageable as wilderness (see appendix F to the FEIS under the Evaluation heading) and are not included in any alternative. The remaining areas listed by the commenters were found suitable for recommendation through the agency's evaluation and were considered in the analysis of alternatives. They are included in alternative 5. The forest supervisor will consider public input and the analysis in the FEIS before making the final recommendation.

Comment 89: Commenters suggest that managing both the Mother Hubbard Canyon (Q11) and the Nolan Canyon units (QG1 and QG2) in concert to protect their wilderness values would enhance their overall ecological value. Commenters identify the potential for wilderness units that straddle the state line citing the Apache-Sitgreaves National Forests' evaluation report that deferred recommendation until the Gila National Forest completed their wilderness recommendation process. Commenters note that the different evaluation criteria still produced a rating of high. Commenters discuss the wilderness characteristics of each area in-depth and the presence of special features that should have easily elevated the evaluation ranking to outstanding. Also, commenters state that apparent naturalness should have been rated higher because the presence of the motorized trail on the east side doesn't take away from naturalness. Commenters assert that all wilderness and inventoried roadless areas tend to be bounded by unnatural features because that's what identifies them. Commenters state that the short, motorized trail intrusion from Dry Blue into Pace Creek could easily be restorable or cherry stemmed and should not detract from the entire area's value.

Commenter observes the Mother Hubbard area does not contribute to the suitable timber base of either national forest and the New Mexico side has been in non-use (livestock grazing) since 1995. Commenters understand why the Nolan Canyon units are two units; they are only connected by roadless lands in Arizona. However, commenter would prefer that if they remain separate, the north unit be renamed Frieborn Canyon and the southern unit Nolan Canyon. Commenters would also prefer these be recommended selecting the

alternative versions of these areas that represent the maximum acreage. **Associated Letters: 146, 149, 187 191, 637, 639, 683, and 712**

Response: While Mother Hubbard and Nolan South are not included in the proposed action because they did not meet the criteria, they did meet the criteria for alternative 5 and are included in that alternative. Gila National Forest leadership and planning staff coordinated with counterparts on the Apache-Sitgreaves National Forests during comment analysis. The forest supervisor will decide whether these areas are included in the final recommendation based on public input, the coordination effort with the Apache-Sitgreaves National Forests, and the analysis in the FEIS.

B1a-c-Aldo Leopold Seco Addition

Comment 90: A commenter is concerned that if B1a-Aldo Leopold Seco Addition is recommended to Congress for wilderness designation that would result in the loss of potential mountain biking opportunity on the Hermosa Trail 307. Other commenters review language in the draft evaluation documentation related to apparent naturalness and express a concern about the presence of significantly noticeable human activities including a road, mining activity, and range improvements in the area that are contrary to the Wilderness Act. Commenter specifically states that motorized vehicles have the capability to use this road and that the area should be removed from the proposed action. These commenters go on to state that the proposed eastern boundary of the recommended area does not follow natural topography and creates an unnatural transition from the adjacent private and state land.

Commenter is concerned that this recommended area includes most of the Animas allotment. Commenter notes that the current permittee would not be affected as they have a non-use agreement, but future permittees could be hindered in their management of the allotment. **Associated Letter: 20 and 247**

Response: Current or potential wilderness non-conforming uses such as mountain biking were one of the considerations in developing the range of alternatives (see appendix H to the FEIS). The effects of existing range infrastructure and evidence of historic mining activity on wilderness characteristics, including apparent naturalness was evaluated and analyzed (see appendix H to the FEIS). The road in B1c is not an open road and could be decommissioned, obliterated prior to designation, or allowed to deteriorate such that it will not facilitate continued motorized use. It is recommended, but not required that boundaries follow natural contours. There are numerous examples within the congressionally designated Wilderness Preservation System where boundaries do not follow natural contours. Livestock grazing and the infrastructure that supports it is compatible with recommended and designated wilderness where it was an established use prior to designation and where infrastructure is not substantially noticeable. The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include B1a-c.

B10-Aldo Leopold Addition Northeast

Comment 91: There is a concern that if B10 -Aldo Leopold Addition Northeast is recommended to Congress for wilderness designation that would result in the loss of potential mountain biking opportunity on forest trail 816 and portions of forest trails 74 and 42. Commenters point out that these trails are situated so that they can be ridden in a loop between two open roads (forest roads 500 and 226). Commenters state that recommending an area between two roads that remain open seems strange and removes a potential future use for people living in the Rio Grande valley. There are few mountain biking opportunities in the vicinity and the section of the Continental Divide National Scenic Trail that is in the vicinity outside of wilderness is maintained largely by the mountain bikers, including the commenter. Commenter states closing part of this section to mountain bikers sets a precedent that their access can be taken away even if they participate in its upkeep. Commenter would like the boundary moved east of the Trail.

Commenter states the road through Turkey Run sees high usage, separates existing designated wilderness and the recommended area, and reduces opportunities for solitude. Commenter notes several other roads in the area.

Commenter states they have a contract in place with the Natural Resources Conservation Service and states there is a plan to install water infrastructure in several locations across this polygon and funding has already been approved to install a fence using white top tee posts that are highly reflective and not of natural coloration through Tl IS R9W section 32 to a natural boundary. Commenter notes there are several springs through the area, specifically noting the one in section 19 that has a road that goes to it and others that require chainsaws to access. Recommending this area for wilderness would hamper the permittee's ability to manage the allotment, access many springs, and complete infrastructure projects like this in the future.

Commenter disagrees with the evaluation findings that Mexican spotted owl protected activity centers and the evidence of fire in the ecosystem are features of value. Commenters state that the protected activity centers can be managed without wilderness recommendation. **Associated Letters: 104, 132, 136, 247, and OWS105**

Response: See response to comment 90 in this section of the appendix on analysis considerations for mountain biking opportunities. The range infrastructure concerns were brought forward previously and considered in the evaluation and analysis (see appendix H to the FEIS), including adjustments to the boundary based on the alternative-specific criteria. We acknowledge the commenter's opinion regarding other features of value, which was ranked low in the evaluation. Commenter is correct that wilderness status is not necessary to manage Mexican spotted owl habitat. The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include B10.

B11-Aldo Leopold Addition Southeast

Comment 92: Commenter identifies a road that travels north through the polygon to trailhead and a road that runs through Cave Creek, adjacent to the polygon. Commenter states the road in Cave Creek sees high traffic by the permittee and during hunting season, which decreases the opportunity for solitude. Commenter states the distance between this road and the B11 is insufficient to mitigate or eliminate noise disturbance from the road. Further, there is a concern that the B11-Aldo Leopold Addition Southeast evaluated area and alternative 2 recommended wilderness includes human-made, significantly noticeable improvements such as steel drinkers. Commenters state the permittee intends to utilize Natural Resource Conservation Service funding in add additional water-related infrastructure. Existing and proposed water sources will require future maintenance and the use of chainsaw to access the infrastructure will be necessary. Commenters state that if this area is recommended it will put a strain on the permittee. Commenters note the proposed eastern boundary of the area does not follow natural topography and creates an unnatural transition from private and state land. **Associated Letters: 227 and 247**

Response: The road accessing the trailhead was cherry-stemmed out of the polygon. All these factors had been brought forward and were included in the recommended wilderness evaluation and analysis (see appendix H to the FEIS). The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include B10.

B14-Aldo Leopold Addition Carbonate Creek

Comment 93: There is a concern that the B14-Aldo Leopold Addition Carbonate Creek evaluated area and alternative 2 recommended wilderness includes human-made, significantly noticeable range infrastructure, wildlife drinkers, and evidence of mining and past industrial uses that will negatively affect the apparent naturalness within the area boundaries. Commenters state that the permittee intends to use Natural Resource Conservation Service funding to construct additional infrastructure and repair or replace what was damaged in the 2013 Silver Fire. Including this area in the recommendation will hinder the permittee's ability to do this work. Commenters are also concerned that the boundary does not follow natural topography. **Associated Letters: 227 and 247**

Response: All the existing infrastructure and evidence of past uses were considered in the recommended wilderness evaluation and analysis (see appendix H to the FEIS), including boundary adjustments based on alternative-specific criteria. Plan direction for recommended wilderness would allow the use of mechanized access and tools to complete the type of work described by the commenters on a case-by-case basis. If the area is recommended and if Congress were to designate, the congressional grazing guidelines would then apply, and mechanized access and tools could still be allowed and would be considered on a case-by-case basis. It is recommended, but not required that boundaries follow natural contours. There are numerous examples within the congressionally designated Wilderness Preservation System where boundaries do not follow natural contours. The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include B14.

G1-Mineral Creek

Comment 94: There are differing perspectives on whether this area should be included in the final recommendation. Those that support its inclusion remark that it is one of their favorite places to recreate, simultaneously remote and easy to access, scenic, and that it now contains Gila trout. Commenters also appreciate the cave. Others would prefer this area is not included in recommendations because it would eliminate multiple use and as such, is unnecessary and unlawful. These commenters state this area is not in good condition and requires proper stewardship and management, which the Forest Service does not have the funding to support. **Associated Comments: 173, 619, 684, and OWS83**

Response: Mineral Creek is included in the recommendations associated with alternatives 2, 3, and 5 with some boundary adjustments in alternatives 2 and 3 to accommodate analysis criteria. It is not included in alternatives 1 and 4. Wilderness recommendations, or designations for that matter, do not eliminate multiple uses. Wilderness is one of the multiple uses for which the Forest Service may manage national forests and grasslands; the Multiple-Use Sustained-Yield Act specifically states: "The establishment and maintenance of areas of wilderness are consistent with the purposes and provisions of this Act." Wilderness does restrict mechanized equipment and access and prohibits harvesting wood products. However, most of this area is within inventoried roadless areas and the terrain is such that it is not operationally available to local operators given their equipment (see appendix H to the FEIS for analysis process summary or Wilderness ID Team Alternatives Analysis Process on the forest's webpage for full details). The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include G1.

G6-Lower San Francisco Box

Comment 95: There are differing perspectives on whether this area should be included in any recommendation. Commenters that support its inclusion point to its wilderness characteristics, Wild and Scenic River status, and location relative to the Blue Range and Gila Wildernesses. One commenter states there is a need baseline monitoring for wilderness characteristics where there is critical habitat for loach minnow and spike dace. Commenter states that if they are there, these areas qualify by having endangered species. Some commenters state that it is clearly suitable for wilderness recommendation and question why it is not in the proposed action. Commenters state the closed roads present in the area will be rehabilitated to a natural state. One commenter states that detrimental recreational impact is happening because of the road and suggests the Forest Service put a stop to it.

Some commenters relay the importance of motorized access to the area to their families. Others would prefer this area is not included in recommendations because it would eliminate multiple use and as such, is unnecessary and unlawful. These commenters state this area is not in good condition and requires proper stewardship and management, which the Forest Service does not have the funding to support. Another commenter observes the area was not recommended as part of the 1986 forest plan and nothing has changed so it shouldn't be recommended now. This commenter states Congress should make the call. **Associated Letters: 39, 93, 173, 213, 233, 603, 619, 672, 712, OWS43, OWS47, and OWS 79**

Response: This area was not included in alternative 2-proposed action because it is not contiguous to existing designated wilderness and most of the wilderness characteristics that contribute to its evaluation rank of "outstanding" are associated with the river corridor. The upland areas were included by being roadless with minimal development. The presence of federally listed species is not a wilderness characteristic. Some may consider it a feature of value, which would be considered in the evaluation process, but it is not appropriate as a sole basis for making a recommendation. This area is recommended in alternatives 4 and 5.

Wilderness does not eliminate other multiple uses. It does restrict mechanized equipment and prohibit harvest of wood products. The Lower San Francisco River is already an inventoried roadless area, designated wilderness study area, and does not contain areas capable of producing timber (see appendix H to the FEIS for analysis process summary). Further, the Multiple-Use Sustained-Yield Act specifically states: "The establishment and maintenance of areas of wilderness are consistent with the purposes and provisions of this Act." With respect to the road, travel management implementation and enforcement is ongoing. The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include G6.

G7-Hell Hole

Comment 96: There are differing perspectives on whether this area should be included in any recommendation. Those that support it point to the Apache-Sitgreaves National Forests deferral of recommending any wilderness along the state-line, such as Hell Hole, until the Gila National Forest went through the wilderness recommendation process. Some disagree with the evaluation of wilderness characteristics, discuss those characteristics, and point to the Apache-Sitgreaves National Forests evaluation criteria and its conclusions of high capability and availability to provide wilderness values. If the Gila and Apache-Sitgreaves National Forests recommended their respective portions of the area commenters state there would be high wildland value added, especially with the adjacent Bureau of Land Management's wilderness study areas. Commenters request the two forests work together to get this done. Others state they would like to see it included in the proposed action, as it occurs in alternative 5, state it would help extend a wildlife corridor to the Lower San Francisco Box.

Another commenter observes the area was not recommended as part of the 1986 forest plan and nothing has changed so it shouldn't be recommended now. This commenter states Congress should make the call.
Associated Letters: 39, 93, 146, 149, 187, 233, 637, 639, 683, 712, and OWS43

Response: This area met the alternative criteria and is included in alternative 5. It did not meet the alternative criteria for alternative 2-proposed action. Gila National Forest leadership and planning staff coordinated with counterparts on the Apache-Sitgreaves National Forests during comment analysis. There is no immediate geographical connection to the Lower San Francisco Box area, and there is a paved highway that runs between Hell Hole and the Lower San Francisco Box areas. Wilderness recommendation will not change how wildlife already use the area or enhance or protect habitat or species movements beyond what the terrain, national forest designation, inventoried roadless area status, and Endangered Species Act provide. Neither is that the purpose of wilderness; the purpose of wilderness is the use and enjoyment of the American people. The forest supervisor will decide whether these areas are included in the final recommendation based on public input, the coordination effort with the Apache-Sitgreaves National Forest, and the analysis in the FEIS.

G12-Gila Whitewater Addition

Comment 97: There are differing perspectives on whether this area should be included in any recommendation. Those that support its inclusion in a recommendation state appreciation of the area and the Gila trout work that is being done. Some that support it prefer the boundary as it exists in alternative 5. Others prefer this area not be included in recommendations because it would eliminate multiple use and as such, is unnecessary and unlawful. These commenters state this area is not in good condition and requires proper

stewardship and management, which the Forest Service does not have the funding to support. **Associated Letters: 173, and 619**

Response: Alternative 5 includes a recommendation for this area at its full evaluated size. The boundary is adjusted in alternative 2 based on the forest supervisor's criteria for that alternative (see appendix H to the FEIS). Wilderness recommendations, or designations for that matter, do not eliminate multiple uses. Wilderness is one of the multiple uses for which the Forest Service may manage national forests and grasslands; the Multiple-Use Sustained-Yield Act specifically states: "The establishment and maintenance of areas of wilderness are consistent with the purposes and provisions of this Act." Wilderness does restrict mechanized equipment and access, and prohibits one of the other multiple uses—harvesting wood products. However, most of this area is within inventoried roadless areas and the terrain is such that it is not operationally available to local operators given their equipment (see appendix H to the FEIS for analysis process summary or Wilderness ID Team Alternatives Analysis Process for full details). The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include G12.

QR1-Upper Frisco Box

Comment 98: Some commenters assert the evaluation of apparent naturalness should have been scored higher and pushed the overall rating into the "outstanding" category and led to its inclusion in the proposed action. Commenter states decades old vegetation treatment and range infrastructure are substantially unnoticeable. Commenters prefer the boundary as it exists in alternative 5. Commenters note the San Francisco River's status of eligible for wild and scenic status, very little overlap with wildland-urban interface values, and no planned mechanical vegetation treatments. **Associated Comments: 85, 87, 231, and 712**

Response: The draft proposed action does not recommend this area because it does not fit the wilderness niche for contributing to a large, contiguous wilderness complex, not because of its evaluation ranking of High. Alternative 5 recommends the full evaluated area. River segments that are eligible for wild and scenic status may occur in areas suitable for wilderness recommendation, but areas that are not suitable for wilderness recommendation may also include eligible wild and scenic river segments. In other words, one does not necessarily lead to the other. The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include QR1.

R10c-Gila Additions North Reserve

Comment 99: Commenter states this area should be recommended for wilderness designation because it is adjacent to the Gila Wilderness, contains a stream (Gilita Creek) that is eligible for wild and scenic status, and the fact that you can't hike in there anymore because the trail washed out after the 2012 Whitewater Baldy Complex Fire. Commenter asserts this would be one area for a cash-strapped, understaffed Gila National Forest not to worry about. **Associated Letter: 632**

Response: Although this area is adjacent to existing designated wilderness, its size, shape, and orientation between open roads combine to make it unmanageable to protect wilderness characteristics (see Final Evaluation Report), and therefore, not suitable for recommendation. See also response to comment 98 regarding the presence of eligible wild and scenic river segments.

RG1-Aspen Mountain

Comment 100: There are differing perspectives on whether this area should be included in any recommendation. Commenters who oppose its inclusion in any recommendation state it isn't a good candidate because it is surrounded by roads, bisected by trails, has numerous range improvements, and the east side has Highway 180, from which traffic noise is often heard, and large power lines that are visible from within most of the area. Commenters note that there would be a road between this area and the Blue Range Wilderness and

that there is a need for chainsaws and other mechanical equipment to clear the fence and trail after the 2018 Owl Fire.

Those that support the inclusion of this area in wilderness recommendations prefer the larger size associated with alternative 5. These commenters review its wilderness characteristics, inventoried roadless area status, other features of value and proximity to the Blue Range Wilderness and other recommended areas. Commenters also point to the presence of underrepresented vegetation type within designated areas on the Gila National Forest. **Associated Comments: 206, 684, 712, and OWS88**

Response: The area's location relative to roads and powerlines, and the presence of range infrastructure were evaluated (see Final Evaluation Report or appendix H to the FEIS). Non-motorized trails are a common occurrence in the Wilderness Preservation System. Plan direction for recommended wilderness areas would allow the use of chainsaws and other mechanical equipment on a case-by-case basis for the purposes of managing range infrastructure and trail maintenance until such time that Congress decided to designate or release the area to other uses. If designated, the use of mechanized equipment for the purposes of allotment management would be evaluated and could be allowed under the congressional grazing guidelines. Alternative 5 recommends the full evaluated area. Alternative 2-proposed action recommends a slightly smaller area with boundary adjustments based on the forest supervisor's criteria for this alternative. Alternative 1 does not recommend this or any other area for wilderness designation. The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include RG1.

RG2-Devil's Creek

Comment 101: There is a concern that this area is suitable for wilderness designation but is not recommended in the proposed action. Commenter reviews its wilderness characteristics, proximity to the Cosmic Campground International Dark Sky Sanctuary and suggests it should be included in the final recommendation as it exists in alternative 5. **Associated Comments: 712 and OWS-83**

Response: This area is not recommended as part of the draft proposed action because it does not fit the niche of contributing to a large, contiguous wilderness complex, not because of its evaluation ranking or wilderness characteristics. It is recommended in alternative 5. The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include RG2.

RG4-North Mogollon Mountains

Comment 102: There is a concern that this area is suitable for wilderness designation but is not recommended in the proposed action. Commenter reviews its wilderness characteristics, overlap with inventoried roadless area, other recommended areas, and the Gila Wilderness. Another commenter states that it is a large, remote, and solitary area that could be prime wolf habitat and recommending it would provide for wildlife corridors and it should be recommended. **Associated Letters: 152 and 712**

Response: This area would otherwise meet the alternative criteria for the draft proposed action but was not included by discretion of the forest supervisor (see appendix H to the FEIS). It was not included because it supports approximately 2,000 acres of Spruce-Fir Forest, which has a very high vulnerability to climate change. It is the only place with the potential to support this vegetation type that is not located in congressionally designated wilderness. Under this alternative's criterion 2, the forest supervisor chose to exercise the discretion to exclude this area from recommendation to preserve options for adaptation actions that might require mechanized equipment. This information was not overlooked in the draft documents made available for public review. It is now discussed in the FEIS effects analysis under the Effects of Alternative 3 and Effects of Alternative 5 as RG4 is recommended as part of alternatives 3 and 5.

Wilderness recommendation will not change how wildlife already use the area or enhance or protect habitat or species movements beyond what the terrain, national forest designation, inventoried roadless area status, and Endangered Species Act provide. Neither is that the purpose of wilderness; the purpose of wilderness is the use and enjoyment of the American people. The forest supervisor will consider public input and the information in the final EIS before determining whether the final recommendations for wilderness will include RG4.

S1-Mogollon Box/Tadpole Ridge

Comment 103: Commenters are concerned because they cannot find a supporting rationale for this area not being included in the proposed action in appendix F to the DEIS. Rather, they state they only find reasons to include it. Commenters state this concern extends to the draft plan, which does not explain which step or steps of the alternative 2 selection process resulted in the removal of this area from the proposed action, which does not comply with FSH 1909.12 Chapter 70 Section 61. Commenter states that these deficiencies prevent the public from commenting on the application of the analysis criteria and selection process. The suggested remedy is to include this area in the final recommendation as it occurs in alternative 5. Some commenters state the wild and scenic status of waterways within this polygon justify wilderness recommendation. Others review the area's wilderness characteristics in the Forest Service evaluation and the citizen's proposal in detail to justify its inclusion in the final recommendation. One commenter noted the document stated the reasons why large sections of the area were removed were due to fencing, but which areas were unclear as no additional maps were provided. There are also arguments that this line of reasoning ignores the congressional grazing guidelines.

Others would prefer this area is not included in recommendations because it would eliminate multiple use and as such, is unnecessary and unlawful. These commenters state this area is not in good condition and requires proper stewardship and management, which the Forest Service does not have the funding to support. Some note the number of water developments and fencing related to livestock grazing and the need for access, inspection, maintenance, or repair by mechanized means. One commenter expressed specific concern related to accessing Turkey Creek. This concern is centered on difficulty of access due to lack of road and trail maintenance and that recommendation will make it harder, which isn't good for recreation, fire and emergency crews, or firewood cutting. **Associated Comments: 85, 173, 233, 619, 712, and OWS79**

Response: This area did not meet the criteria to be included in alternative 2-proposed action. During the analysis process, this area was substantially reduced in size by several of the forest supervisor's criteria for alternative 2. This triggered a re-evaluation of wilderness characteristics for the roughly 6,028 acres that did fit the alternative criteria. This re-evaluation found the smaller area had a low level of wilderness characteristics. Only areas evaluated as moderate/high, high, and outstanding are considered for recommendation in alternative 2. This information was not articulated in the draft documents. It is now included as a footnote to in the table summarizing the alternatives in appendix H to the FEIS. Alternative 5 recommends the original, full-sized evaluated area. Maps are only provided for individual areas as they emerged from the analysis process, not for each step of the process. River segments that are eligible for wild and scenic status may occur in areas suitable for wilderness recommendation, but areas that are not suitable for wilderness recommendation may also include eligible wild and scenic river segments. In other words, one does not necessarily lead to the other.

Wilderness is one of the multiple uses for which the Forest Service may manage national forests and grasslands; the Multiple-Use Sustained-Yield Act specifically states: "The establishment and maintenance of areas of wilderness are consistent with the purposes and provisions of this Act." Wilderness does restrict mechanized equipment and access and prohibits harvesting wood products. This area is not recommended in alternatives 1 and 2. The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include S1-Mogollon Box/Tadpole Ridge.

S2-Gila Middle Box

Comment 104: There are differing perspectives on whether this area should be included in any recommendation. Commenters that prefer it is included in the final recommendation review its wilderness characteristics in detail and the proposed action criteria that are met, note the wild and scenic status of river segments within the area, adjacency to Bureau of Land Management designated areas, and presence of the Continental Divide National Scenic Trail. Others would prefer this area is not included in recommendations because it would eliminate multiple use and as such, is unnecessary and unlawful. These commenters state this area is not in good condition and requires proper stewardship and management, which the Forest Service does not have the funding to support. **Associated Comments: 173, 233, 603, 619, 712**

Response: This area is not recommended in the draft proposed action because it does not fit the niche of contributing to a large, contiguous wilderness complex, not because of its evaluation ranking or wilderness characteristics. Wilderness is one of the multiple uses for which the Forest Service may manage national forests and grasslands; the Multiple-Use Sustained-Yield Act specifically states: "The establishment and maintenance of areas of wilderness are consistent with the purposes and provisions of this Act." Wilderness does restrict mechanized equipment and access and prohibits harvesting wood products. This area is recommended in alternative 5. It is not recommended in any of the other alternatives. The forest supervisor will consider public input and the information in the final EIS before determining whether the final recommendations for wilderness will include S2-Gila Middle Box.

SB1-Sawyer's Peak

Comment 105: Commenters are concerned about the possibility of losing mountain biking access to the non-motorized trail that goes from Emory Pass to Sawyers Peak should the final recommendation include this area. Commenter observes that this would not happen if the proposed action remains intact, but if this area is brought into the final recommendation from alternative 5 commenter requests the trail be "cherry-stemmed" out. Others argue that the geologic significance of the Emory Caldera justifies its inclusion in the final recommendation, or that it should be recommended to extend the Aldo Leopold Wilderness southward and let the area burned in the 2013 Silver Fire heal. **Associated Letter: 136, 233, 627, and OWS91**

Response: This area is not recommended in alternative 2 because it does not fit the wilderness niche of large, contiguous wilderness areas and because it is a popular mountain biking area. This area is separated from the Aldo Leopold Wilderness by several miles and a state highway. It is recommended in alternatives 3, 4, and 5 with boundary adjustments in alternatives 3 and 4 that are responsive to those analysis criteria. Post-fire recovery is ongoing. The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include SB1.

W3-Aldo Leopold Addition West

Comment 106: Commenters review the area's wilderness characteristics in detail as they are described in the agency's evaluation report and support including this area in the final recommendation as it exists in alternative 5 because it would contribute to the Gila National Forest's wilderness niche. **Associated Letter: 712**

Response: This area is reduced in size from the evaluation in alternatives 2 and 3 because of the forest supervisor's analysis criteria for those alternatives (see appendix H to the FEIS). It is retained at its fully evaluated size in alternative 5. The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include W3.

W4-McKnight Canyon

Comment 107: There are concerns about including this area in the proposed action. Commenters state evidence of past management and improvements within the area are substantially noticeable and not

characteristic of wilderness. There are also concerns that recommendation of this area will result in the loss of a potential mountain biking opportunity. Commenter states the use doesn't occur presently only because of trail maintenance issues and not because of lack of interest. **Associated Letter: 20**

Response: The evidence of past management and improvements within the area were known and considered as part of the evaluation and analysis steps of the process. The forest supervisor will consider public input and the information in the final EIS before determining whether the final recommendations for wilderness will include W4.

WSB1 – Rabb Park

Comment 108: There are differing perspectives on whether this area should be included in any recommendation. Those who oppose its inclusion state that recommending this area will have a detrimental effect on the trail miles that require post-fire reconstruction and maintenance because the use of mechanical equipment would be limited and that it would result in a loss of a potential mountain biking opportunity. One commenter states they would be happy to help with trail maintenance if they could use the trails in this area. This commenter requests this area be removed from recommendation entirely or modified to exclude trails 129 and 128 and the portion of 79 connecting them. Another commenter with a similar perspective suggests that this is the kind of loop opportunity that people are looking for and that Gila National Forest staff should be looking to specific groups that could help maintain these trails instead of giving up, recommending this area as wilderness, and taking the trails out of the system.

There is also a concern that livestock grazing infrastructure installed since the 2013 Silver Fire in WSB1-Rabb Park is modern and detract from wilderness values. Further, there are planned projects with Natural Resource Conservation Service funding and recommendation could hinder installation. These commenters state that chainsaws will be required to maintain fences in the future and recommendation will strain the permittee's ability to meet maintenance requirements. Some state the proximity to Highway 152 introduces noise disturbance that greatly reduces opportunities for solitude. One commenter is concerned about operations and maintenance at the Hillsboro Peak lookout if this area were to be recommended.

Commenters that support its inclusion suggest that a rationale based on allotment management flexibility or convenience is insufficient to adjust the boundaries of this area because of congressional grazing guidelines. These commenters prefer it is included in the final recommendation with unadjusted boundaries as it occurs in alternative 5. **Associated Letters: 20, 132, 136, 227, 247, 712**

Response: Plan direction for recommended wilderness would allow the use of chainsaws for trail and range infrastructure maintenance on a case-by-case basis provided that the wilderness characteristics that exist at the time of recommendation are preserved. Recreational non-conforming uses such as mountain biking would be prohibited. Existing administrative sites and range infrastructure, non-conforming uses, and proximity to Highway 152 were considered as part of the evaluation (see appendix H to the FEIS). Alternative 5 recommends the full evaluated area, while alternatives 2 and 3 recommend it with boundary adjustments for alternative-specific criteria. There is a mapping error that places the Hillsboro Peak lookout within the designated wilderness. It is located within the Rabb Park recommended area for alternatives 3 and 5 so the recommendations associated with these alternatives would impact how that administrative site was maintained in the future. Alternative 2 includes a boundary adjustment excluding a very small area around the Hillsboro Peak lookout to facilitate future management options. The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include a version of the Rabb Park area or not.

WB1-Taylor Creek

Comment 109: Commenters reviewed the area's wilderness characteristics as described in the evaluation report or the citizen's proposal and state that this area clearly deserves wilderness protection. Although, one commenter questions the shape of this area's boundaries. **Associated Letters: 59 and 231**

Response: This area is recommended as part of alternatives 2 and 5. Alternative 5 recommends its full evaluated size, with alternative 2 recommending it with boundary adjustments to address alternative-specific criteria. This area's shape is the result of the inventory, evaluation, and analysis steps of the recommendation process. The forest supervisor will consider public input and the information in the FEIS before determining whether the final recommendations for wilderness will include a version of the Rabb Park area.

Plan Content

Comment 110: Commenters are concerned that the draft plan lacks a plan component to prohibit mechanized transport in recommended wilderness, in violation of the 2012 Planning Rule and agency policy requirements to protect the wilderness characteristics that were the basis for their recommendation. Commenter notes there is a more discretionary guideline related to mechanized transport, but they find that insufficient to fulfill the protection requirements. **Associated Letter: 712**

Response: Plan components for recommended wilderness areas have been reworked in response to this and other comments, and to reduce redundancy with and confusion about what is and isn't permissible under relevant laws, regulations, and policies. Recommended wilderness areas must be managed to preserve or enhance the wilderness characteristics that made them suitable for recommendation. Policy direction allows the forest supervisor discretion to determine what plan direction is necessary to accomplish this (FSH 1909.12 Chapter 70 section 74.1).

Standard 12

"Where management conflicts occur, the legally mandated protection of the wilderness characteristics shall take precedence over recreation uses within recommended wilderness."

Comment 111: Commenters state that they understand this standard is intended to maintain the wilderness characteristics that exist at the time of recommendation but suggest this cannot override the purpose of wilderness, which is the use and enjoyment of the public. Wilderness characteristics and the purpose of wilderness should be given equal footing. Commenters suggest this standard be reworded to read something like "where management conflicts occur, the protection of wilderness character and values will be balanced with the purpose of wilderness which is for the use and enjoyment of the American people in such a manner as to preserve wilderness character." Commenter asserts that these are difficult decisions, but the Wilderness Act was compromise legislation and that if Congress intended wilderness to not be designated for use, they would have said that in the legislation. **Associated Letter: 131, 474, 475**

Response: Related to the purpose of wilderness, please refer to response to comment 11 in this section of this appendix. Recommended areas must be managed to protect the wilderness characteristics that made them suitable for recommendation until such time as Congress decides to designate or release to other uses. Policy direction allows the forest supervisor discretion to determine what plan direction is necessary to accomplish this (FSH 1909.12 Chapter 70 section 74.1). This standard was modeled on Forest Service Manual 2320.6 related to designated wilderness and primitive areas. This section of the manual states "Where a choice must be made between wilderness values and visitor or any other activity, preserving the wilderness resource is the overriding value." This plan standard for recommended wilderness was removed in favor of more specific direction prohibiting motorized and mechanized transportation for recreation purposes (excluding wheelchairs). This supports opportunities for primitive and unconfined recreation and avoids establishment of non-conforming recreational uses should Congress decide to designate. If additional or other controls and restrictions for recreation management become necessary in the future, the plan provides the management flexibility to develop those controls and restrictions when the issues and values at risk are known.

Guideline 2

"For commercial livestock grazing activities in recommended wilderness areas, annual operating instructions should encourage protection of wilderness characteristics, but still allow for motorized uses and maintenance or replacement of range management improvements that existed prior to recommendation."

Comment 112: Commenter suggests that to meet planning rule requirements this guideline needs to be rewritten as a standard with the existing caveat, not a guideline with a caveat. **Associated Letter: 85**

Response: Recommended areas must be managed to protect the wilderness characteristics that made them suitable for recommendation until such time as Congress decides to designate or release to other uses. Policy direction allows the forest supervisor discretion to determine what plan direction is necessary to accomplish this (FSH 1909.12 Chapter 70 section 74.1). There is no prohibition on mechanized or motorized uses to support range management, nor a requirement to establish such a prohibition. However, this guideline has been condensed into final standard 2, which allows the forest supervisor, or designated agent, to authorize the use of mechanized and motorized equipment for range infrastructure maintenance in recommended wilderness on a case-by-case basis. Should Congress decide to designate, such use may be authorized under the congressional grazing guidelines.

Guideline 5

"All trail maintenance within recommended wilderness should be conducted in a manner to protect and enhance wilderness characteristics and should be consistent with the recreation opportunity spectrum setting of the area."

Comment 113: Commenters would like to see this guideline reworded to read "All trail maintenance within recommended wilderness should be conducted in a manner to protect and enhance wilderness characteristics and provide for the use and enjoyment of the public and should be consistent with the recreation opportunity spectrum setting of the area." Commenters state this would balance the purpose of the wilderness guidelines. **Associated Letters: 56, 131, 474, and 475**

Response: Related to the purpose of wilderness, please refer to response to comment 11 in this section of this appendix. This guideline was removed in response to comment and after further review. All activities in recommended wilderness must maintain or enhance the wilderness characteristics that made the area suitable for recommendation. Final standard 2 allows the forest supervisor, or designated agent, to authorize the use of mechanized or motorized equipment for trail maintenance purposes in recommended wilderness on a case-by-case basis. Any such authorizations would also need to consider how the activity maintained or moved toward the desired recreation opportunity spectrum setting(s) as part of plan implementation.

Guideline 8

"To protect the wilderness characteristic of opportunities for solitude or primitive and unconfined recreation, use of motorized equipment and mechanized transportation should be avoided in recommended wilderness except for emergencies involving human health and safety, fire management, and prescribed fire for vegeation management purposes that has been determined not to permanently affect wilderness characteristics or Congress's ability to designate these lands, or by written permission of the forest supervisor or designated agent."

Comment 114: Commenters would prefer that this guideline specifically allow chainsaw use for trail maintenance because it will not affect wilderness characteristics. Commenters back up this assertion by noting that chainsaws have been used in these areas historically and they still have wilderness characteristics that make them suitable for recommendation and designation. One commenter suggests rewording that matches the policy direction this guideline repeats word for word. **Associated Letters: 52, 85, 131, 474, and 475**

Response: Recommended areas must be managed to protect the wilderness characteristics that made them suitable for recommendation until such time as Congress decides to designate or release to other uses. Policy direction allows the forest supervisor discretion to determine what plan direction is necessary to accomplish this (FSH 1909.12 Chapter 70 section 74.1). This guideline has been condensed into final standards 2 and 5 to respond to comments and improve clarity. Under final standard 2, chainsaw use may be authorized for trail maintenance in recommended wilderness on a case-by-case basis.

Guideline 10

"In recommended wilderness areas, new trails should only be constructed, and existing trails should only be realigned, for the purpose of protecting wilderness characteristics. Existing trails designed for wilderness non-conforming uses (such as mechanized or motorized vehicle use) should be rehabilitated and maintained to meet trail standards for non-motorized, non-mechanized travel."

Comment 115: Commenters suggest wording changes to balance the purpose of wilderness with the mandate to manage recommended areas to maintain their wilderness characteristics. **Associated Letters: 39, 131, 474, and 475**

Response: Related to the purpose of wilderness, please refer to response to comment 11 in this section of this appendix. This draft guideline was reworded in response to comment and further review to improve clarity. It is now final guideline 2.

Guideline 13

"Agency-ignited, prescribed fire should be used as a management tool to reduce the risks and consequences of uncharacteristic wildfire, and should not be used to enhance wilderness characteristics within recommended wilderness."

Comment 116: There is a suggestion to change Recommended Wilderness Guideline to better reflect policy by using the word "may" instead of "should." **Associated Letter: 85**

Response: This guideline has been removed from the final plan. The draft guideline was an interpretation of policy that applies to designated wilderness and primitive areas. Final G4 provides the necessary guidance for fire management in recommended wilderness.

Relationships Management Approach

Comment 117: Commenters would like to see more discussion of fostering relationships with groups and individuals who volunteer to do trail maintenance in these areas. **Associated Letters: 131, 474, and 475**

Response: This management approach is now titled Wilderness Characteristics and Relationships. The language has been expanded to include additional relationship principles and focus on relationships for this purpose, consistent with management approaches under the Designated Wilderness and Sustainable Recreation sections of the plan that emphasize the importance of relationships and collaboration.

Wilderness Study Areas

Comment 118: There is a concern that the draft plan doesn't clearly address the status of wilderness study areas. **Associated Letter: 69**

Response: This has been clarified in the background information section for wilderness study areas.

Comment 119: Designated wilderness study areas maintain their wilderness character and potential to be included in the National Wilderness Preservation System that existed at the time they were designated by Congress until such time as Congress either designates the area as wilderness or releases the areas to other management. **Associated Letter: 233**

Response: This is addressed by the desired condition for designated wilderness study areas.

Comment 120: Commenters reviewed the requirements of the New Mexico Wilderness Act of 1980 and suggest the draft plan lacks adequate direction for wilderness study areas. Commenters recommend that to meet requirements, the plan should define the maximum authorized levels of use that would prevent degradation of wilderness character from what existed at the time the area was established. Commenters note the document states there is no baseline monitoring and asserts this leaves no other option than that plan should prohibit non-conforming uses through a standard or suitability determination. **Associated Letter: 712**

Response: Wilderness Study Area standard 1 supports the requirements of the enacting legislation and policy direction. There is no basis upon which to prescribe maximum use levels. The plan provides the flexibility to address any need for limitations or restrictions on use(s) as issues arise, consistent with the enacting legislation and policy direction. These suitability studies were considered, but not undertaken at the discretion of the forest supervisor because suitability determinations in forest plans are a coarse analysis indicating a general compatibility with desired conditions. Because plans prepared under the 2012 Planning Rule have explicit desired conditions, a determination for whether an activity is suitable in a particular location is best conducted at the project level.

Comment 121: The map in the DEIS on page 519 is incorrect as it shows the Hell Hole Wilderness Study Area crossing Highway 78. **Associated Letter: 39**

Response: This map has been removed from the EIS. Thank you for pointing out the error.

Wildlife, Fish, and Plants

General

Comment 1: Commenter is concerned that the draft EIS section on Wildlife and Botanical Species focuses too much on endangered rather than game species. **Associated Letter: 39**

Response: The analysis focuses on at-risk species, which are those federally recognized under the Endangered Species Act and species of conservation concern, because the plan provides for ecosystem integrity and diversity, which provides for the ecological conditions common species require (coarse-filter). The at-risk species focus of the analysis is a determination of whether plan components are sufficient to provide for their persistence too. If the plan components are sufficient, then the diversity of plant and animal species requirement of the National Forest Management Act and 2012 Planning Rule are met. If they are not sufficient to provide for at-risk species persistence, additional, species-specific plan components (fine-filter) would need to be developed to comply with diversity requirements.

Comment 2: Commenter is concerned that the draft plan section Wildlife, Fish, and Plants pays little attention to native plants and focuses on wildlife and fish. **Associated Letter: 47**

Response: The draft Wildlife, Fish, and Plants DCs 1 through 6 and Gs 2 through 4 all include native plant species. The draft also had direction relevant to native plants in the Rare and Endemic Plant and Animal Species and Habitats, and Rare and Endemic Vegetation Management Areas sections. The final plan refines the draft content, adds specificity, and consolidates it into the Wildlife, Fish, and Plants section based on further review and response to comment. Native vegetation communities are also addressed in the Upland Ecological Response Units sections and Riparian and Aquatic Ecosystems.

Comment 3: There is a concern that the analysis does not consider the cumulative impacts of the border wall on transboundary wildlife such as the Mexican gray wolf**. Associated Letter: 713**

Response: The final analysis considers the cumulative effect of the border wall.

Comment 4: There is a suggestion that the plan should mention that funding for wildlife habitat improvements is supported by habitat stamps that are purchased with hunting and fishing licenses. **Associated Letter: 39**

Response: The Wildlife, Fish, and Plants management approach Relationships discusses ongoing coordination and collaboration with the New Mexico Department of Game and Fish. Habitat stamp projects are one of many ways our collaborative relationship with the Department can be demonstrated.

Comment 5: Commenter questions how hunting and fishing surveys were conducted, their representativeness, and whether the streams surveyed were managed by the New Mexico Department of Game and Fish or the Gila National Forest. Commenter asks if streams were stocked streams because the Department's stocking reports have shown very little stocking in the forest's streams. **Associated Letter: 39**

Response: Survey data are collected from harvest reports submitted by hunters and anglers. These reports are required every year, or the Department will not issue the individual another license. The Department's Statewide Fisheries Management Plan identifies Gila trout as the only species to be stocked in Gila National Forest streams. The only stocking of desirable non-native fish (triploid rainbow trout) occurs in the human-made lakes in the Gila National Forest. The Department manages fish within the forest's streams, they do not manage the streams themselves.

Comment 6: Commenter points to page 231 of the draft EIS as requests that plant communities be included in the first sentence which states: "Effects of probable management activities that could potentially affect wildlife communities…" **Associated Letter: 47**

Response: The Wildlife, Fish, and Plants section of the FEIS has been substantially reorganized to better align with the requirements of the 2012 Planning Rule and the analyses found in the habitat-oriented sections (such as Upland Vegetation, Fire Ecology and Fuels). It also contains revisions for brevity and clarity, including clarifications that the analysis includes plant species in response to this comment.

Comment 7: Commenter points to page 260 of the draft EIS and states that the amount of suitable habitat for all sensitive plants is grossly overestimated and not even close to real. Commenter goes on to state that sensitive plants are known to only occupy a fraction of the suitable habitat available anywhere and that the methodology used to quantify habitat may work for animals but not for plants. **Associated Letter: 47**

Response: We admit it is probably an overestimate and note we identified it as "suitable," not "occupied." The amount of habitat identified as suitable was based on the habitat description associated with each species and which ecological response units could contain that habitat. The entire ecological response unit acreage was used for the estimate because we don't have "wall-to-wall" survey coverage. We thought that erring on the side of overestimating suitable habitat would trigger more survey when projects are proposed, which would help narrow this down. This estimation has served its purpose, allowing each species to be associated with ERUs that could contain suitable habitat and this quantification has been removed from the FEIS.

Comment 8: Commenter points to page 270 of the draft EIS and states that impacts of mechanical vegetation treatments and wildfire on sensitive plant species haven't been studied. Commenter is concerned that mechanical treatments and fire can be detrimental to small endemic populations, even resulting in local extinctions, and ultimately federal listing. Commenter disagrees that there is sufficient information to support a statement of positive impact and that a positive impact to the ecosystem is not equivalent to positive impacts on dwindling populations of at-risk plant species. **Associated Letter: 47**

Response: Commenter is correct that the impacts of mechanical treatments and wildfire on rare plants have not been studied. Fire is part of the ecology of all species in the Southwest. Fire effects depend, at least, on species, severity, and patch size. At this point, the available information indicates that some of these species

are just as likely to benefit from fire disturbance as not. Mechanical treatments can help restore fuel conditions that support effects consistent with natural fire regimes. If populations of rare and endemic plants or at-risk plants are known or found at the project level, we develop measures to avoid or mitigate potential adverse impacts.

Comment 9: Commenter supports the inclusion of a monitoring plan question and indicator for native fish densities and the plan content that includes desirable non-native fish that support sport fisheries. **Associated Letters: 39**

Response: Thank you for your comment.

Comment 10: Commenters are concerned that mechanical treatments and fire used in areas inhabited by federally listed species is contrary to the idea of protecting them. Commenter states that the analysis shows the habitat moving toward desired conditions, which is expected to benefit populations, but is concerned that it doesn't go into detail about individuals within the population. Commenter requests a more detailed write-up that will clarify exactly what will happen to individuals. Commenter suggests clarifications should include vegetation rebound, species rebound, and possible spikes in disease(s) that may affect any federally listed species. **Associated Letters: 41 and 561**

Response: The depth of analysis provided for federally listed species is consistent with the programmatic nature of the forest plan. U.S. Fish and Wildlife Service recovery plans contain more information about federally listed species. When we do project-level environmental analyses, we include more detailed information about the effects to species and individuals if applicable.

Comment 11: Commenter says we need more consideration for wildfire and prescribed fire risk to aquatic environments and native fish populations due to changes in water quality, erosion, and debris and ash flows. Commenter suggests that it may require more intensive interventions such as translocation and restocking with hatchery fish. **Associated Letter: 41**

Response: We agree that these effects may occur to varying degrees with the implementation of any alternative. The Riparian and Aquatic Ecosystems Effects Common to All Alternatives discusses these effects. Specific interventions are determined when issues arise and are designed for the specific species impacted and the nature of those impacts. Translocation and subsequent restocking with hatchery fish are interventions often made during and after wildfire events.

Comment 12: Commenter requests an explanation regarding how wildlife and rare species will be protected from the harvesting of timber. **Associated Letter: 42**

Response: Timber harvest is a tool that can be used to move toward desired conditions for ecosystems, watersheds, and species habitat. The plan contains desired conditions, objectives, standards, and guidelines that serve to maximize the beneficial and minimize the detrimental effects of timber harvest when it is selected as the appropriate tool. For example, Timber, Forest, and Botanical Products DC1 states in part: "Treatments mimic the outcomes of natural ecological processes, integrating considerations for socioeconomic values, soil and water quality, wildlife habitat, recreation, and aesthetics" and "Treatments promote long-term sustainability of ecosystems by reducing the risk of undesirable effects from altered disturbance regimes, including fire, drought, wind, insect infestations, and disease epidemics." S1 in this section of the plan also requires a wildlife biologist to be part of the interdisciplinary team that helps develop the project design and build in measures to mitigate or eliminate negative effects to species. G3 in this section requires projects to promote movement toward desired conditions for habitat connectivity and other ecosystem characteristics that are important habitat components. Project-level consultation with the U.S. Fish and Wildlife Service may also identify mitigation measures that would be incorporated into project activities.

Comment 13: There is a concern that insects are completely ignored in the documents. Commenter states that it is estimated that insects represent 75 percent of animal species and approximately 10 percent of them are threatened. Commenter asks how can insects be ignored when they are food for birds and many other forest species? **Associated Letter: 70**

Response: Native insects add tremendous biodiversity value and are critical for ecosystem function. They are not ignored in the draft documents. There are insects identified as species of conservation concern, which are analyzed in the draft EIS (see Wildlife and Botanical Species; Species of Conservation Concern; Species Status; Key Ecological Conditions; and Threats; Invertebrates). Draft plan direction that provides for insects include those that apply to their habitats and Wildlife, Fish, and Plants DCs1-8, 10 and 12 and Gs3 and 6 all apply to insect species. Final plan direction, although updated based on further review and response to comments, maintains provisions for insects.

Comment 14: There is a concern that the plan doesn't provide wildlife protection from poaching or livestock grazing. **Associated Letter: 728.310**

Response: Poaching is prohibited by state law. Livestock grazing is a use of the forest that the agency is mandated to provide for. See also response to comment 1 in the Livestock Grazing section of this appendix.

Comment 15: Commenter suggests stronger language is needed on how disruptive noise will be mitigated and that the documents should investigate how noise can affect wildlife, such as breeding birds. **Associated Letter: 116**

Response: In response to comment, a discussion about noise mitigation has been added to the FEIS under the Wildlife, Fish, and Plants subheading "Effects Common to All Alternatives."

Comment 16: Commenter suggests that elk and elk habitat be considered a focus for management planning efforts, as elk and other big game serve "distinct roles and contributions" to multiple user types. **Associated Letter: 119**

Response: The plan contains restoration objectives for the vegetation communities that provide elk habitat. The final plan's Vision section identifies hunting opportunities, emphasizing elk, as a major draw to the area. The final plan's A Description of the Gila National Forest subsection Social, Cultural and Economic Context discusses opportunities for hunting, fishing, and wildlife viewing, which includes elk and other big game.

Comment 17: Commenter encourages the planning team to coordinate with the New Mexico Department of Game and Fish and incorporate the Department's goals for elk into the revised plan. Commenter encourages the planning team to utilize the State Comprehensive Wildlife Plan and supporting data in developing desired outcomes and monitoring plans related to the management of elk and other wildlife species. **Associated Letter: 119**

Response: The New Mexico Department of Game and Fish is a valued partner and a cooperating agency in the Gila National Forest's plan revision effort. Our review of the State Comprehensive Wildlife Plan is documented in appendix E to the DEIS under the heading Coordination with Other Plans, and in appendix D to the FEIS. We look forward to continuing our collaborative work and further strengthening our relationship with the Department during plan implementation.

Comment 18: Commenter cites the published literature on managing for healthy elk habitat, migration, nutrition, and security and recommends the research on the benefits of actively managed landscapes and relevant components of Executive Order 13855 be incorporated into the plan. Commenter supports the use of mechanical thinning, prescribed fire and the recruitment of early developmental forest stages which are important for elk and other wildlife. **Associated Letter: 119**

Response: The planning team has reviewed the literature provided by the commenter and Executive Order 13855 and determined that the plan is consistent with both. Mechanical thinning and prescribed fire are important tools for restoring habitat health and creating and maintaining a diversity of developmental stages across the forest over time.

Comment 19: Commenter references scientific publications and states that elk and many other wildlife species are sensitive to human travel patterns, especially motorized use. Commenter supports a balanced approach regarding the Recreation Opportunity Spectrum. Commenter recognizes multiple uses occur year-round. Commenter recommends forest management continues to provide access for those seeking experiences ranging from primitive to roaded and incorporate plan components that provide seasonal protection from recreation impacts during critical times for elk and other wildlife. **Associated Letter: 119**

Response: The plan identifies desired recreation opportunity spectrum settings, toward which management will be directed (see final plan Sustainable Recreation, final plan map appendix). The FEIS analysis contained under the Sustainable Recreation heading compares the differences between alternatives in terms of these desired conditions and the effects thereof. Seasonal restrictions for wildlife species during critical times would need to be coordinated with the New Mexico Department of Game and Fish. Restrictions on the public can only be implemented through a forest order following a site-specific National Environmental Policy Act process but is outside the scope of this plan decision.

Comment 20: "The Draft Plan fails to use best available science showing livestock grazing and logging as direct threats to wildlife." **Associated Letter: 142**

Response: The draft EIS recognizes livestock grazing and mechanical treatments as potential threats to some species and identifies the plan direction that addresses the potential threat (draft appendix D and final appendix G). The best available science was used to develop plan components that direct the management of livestock grazing and mechanical treatments, including timber harvest, in ways that avoid or mitigate potential threats to the extent practicable. The FEIS discusses the effects of plan direction on Wildlife, Fish and Plant species.

Comment 21: There is a suggestion that paragraph 2 on page 102 of the draft plan's Wildlife, Fish, and Plants section reference the New Mexico Department's 2016 Statewide Fisheries Management Plan. **Associated Letter: 151**

Response: The background information section to which this comment applies has been reworked. The Wildlife, Fish, and Plants final management approach Adaptation, Restoration and Relationships references the Statewide Fisheries Management Plan.

Comment 22: There is a suggestion that the first sentence of paragraph four on page 102 of the draft plan's Wildlife, Fish, and Plants section should state: "The needs of individual or groups of wildlife species include food, water, shelter, space, and connected habitats." **Associated Letter: 151**

Response: The background information section to which this comment applies has been reworked, with this suggestion now being incorporated as the first sentence of the first paragraph.

Comment 23: There is a suggestion that the background information section of the plan's Wildlife, Fish, and Plants section should provide a reference for the list of Species of Conservation Concern and the criteria used to develop the list. Furthermore, it should reference state-listed species and the Species of Greatest Conservation Need identified in the State Wildlife Action Plan. **Associated Letter: 151**

Response: The final background section incorporates a reference to the list as it is subject to change. The consolidated list will be maintained as a separate, stand-alone document available on the forest's planning webpage (https://www.fs.usda.gov/main/gila/landmanagement/planning). The process and criteria used to

develop the list are in Forest Service Handbook direction (FSH 1909.12 chapters 10 and 20). State-listed species and Species of Greatest Conservation Need were included in the process identifying species of conservation concern and will continue to be part of project-level considerations.

Comment 24: Commenter states that the sentence in the third paragraph on page 103 of the draft plan in the Wildlife, Fish, and Plants section contains incorrect information. The sentence states "…while the New Mexico Department of Game and Fish is responsible for managing all other wildlife species," it should state that the Department is responsible for managing all the state's protected vertebrates, mollusks, and crustaceans, as defined in Chapter 17, New Mexico Statutes Annotated. **Associated Letter: 151**

Response: This suggestion has been incorporated in the final plan.

Comment 25: Commenter states: **"**On p 265 there is a comment about desired conditions helping species by bringing habitat closer to the conditions under which they evolved. This concept should be the basis for everything the FS does in this Plan. This is one of my favorite parts of the Draft Plan." **Associated Letter: 184**

Response: This concept is one of the foundational concepts of the plan.

Comment 26: There is support for watershed restoration and native trout recovery programs. **Associated Letter: 248**

Response: The plan supports continued watershed restoration and native trout recovery.

Comment 27: Commenter points to page 98 of the draft plan and the statement regarding the number of bat species in New Mexico. Commenter then states that there is an abandoned mine near Blackhawk tank in the Burros that is a risk to Continental Divide National Scenic Trail users because the supporting arm fell and is now an open shaft. Commenter asks about bats at this site. **Associated Letter: 233**

Response: Specific mines and populations of bats are outside the scope of the forest plan. We acknowledge that abandoned mines, including the one identified by the commenter, can be a safety risk. Resources to address abandoned mine lands are controlled at regional and national levels based on national priorities.

Comment 28: Commenter references the map appendix in the draft plan and asks if there is map of critical habitat of rare, threatened, endangered and at-risk species. **Associated Letter: 233**

Response: There are spatial data for the critical habitat defined by the U.S. Fish and Wildlife Service for listed species. Maps are not included in the plan but are available from the U.S. Fish and Wildlife Service or the Gila National Forest by request. The State of New Mexico Forestry Division's Rare Plant Program has identified important plant areas. These are also associated with spatial data. Maps can be found in the New Mexico Rare Plant Conservation Strategy. There are also location data associated with other rare, threatened, endangered and at-risk species that can be accessed through Natural Heritage New Mexico or other online databases but access to that information is sometimes generalized, off-set, or restricted to protect the species.

Comment 29: Commenter points to page 267 in the draft EIS and the wildlife and botanical species effects analysis. Commenter states that the determination that coarse filter in alternatives 2 and 5 will move toward desired conditions is based on speculation and unknowns. **Associated Letter: 233**

Response: Analysis conclusions are based on the best available science and state and transition modeling done for vegetation communities as described in the Wildlife and Botanical Species methodology section. The model and modeling process is described in the Upland Vegetation, Fire Ecology and Fuels methodology section. Additional detail can be found in draft appendix B and appendix E to the FEIS. The final analysis includes substantial reorganization and revisions in response to comments, for clarity and to incorporate the

outcomes of consultation with the U.S. Fish and Wildlife Service and better connect the Wildlife, Fish, and Plants analysis with the Upland Vegetation, Fire Ecology and Fuels analysis.

Comment 30: Commenter suggests the plan include timing restrictions for any active management that can have a negative impact to fish habitat and behavior that coincide with spawning cycles of native fish.
Associated Letter: 672

Response: The need for timing restrictions is best evaluated at the project level when the activity, site characteristics, and species are known. If timing restrictions are outlined in a U.S. Fish and Wildlife Service approved recovery plan, those are incorporated by reference (Wildlife, Fish, and Plants draft G3 and final S4).

Connectivity

Comment 31: Commenters note the draft plan does provide some connectivity-related direction but suggest it does not meet planning rule requirements. Commenters would like to see more actionable connectivity-related plan components and designation of areas for connectivity conservation, linkage areas, or wildlife corridors. Commenters provide a definition of linkage areas from the Custer-Gallatin, examples from several national forests and several scientific publications with mapping tools to support identification of such areas. This commenter also indicated that the state of New Mexico is currently developing a Wildlife Corridors Action Plan that could help the plan address connectivity issues if it is available in time. Other commenters state that they previously provided scientific publications with mapping tools to support their suggestions to designate wildlife corridors and include more connectivity plan direction and that the planning team violated the National Environmental Policy Act by disregarding them and providing no justification for doing so.

Some commenters suggest there is no way to operationalize plan direction for connectivity without designating linkage areas or corridors. Others state that there is an urgent need to protect wildlife corridors due to climate change. Some are particularly concerned about migration corridors for birds. Others suggest that roads need to be decommissioned and any infrastructure that blocks migration corridors need to be removed, tunneled under, or bridges constructed to allow for animal movements. One commenter suggests management area boundaries including district boundaries must provide for population connectivity of the various species. A couple of commenters note the plan discusses utility, transportation, and trail corridors and suggest wildlife corridors should be similar planning and protection for wildlife corridors and the acreage of habitat loss to these other corridors should be quantified.

Some commenters suggest that wilderness, wild and scenic rivers, botanical areas, and research national areas should form the backbone of a connectivity network and that to meet planning rule and National Environmental Policy Act requirements, at least one alternative that adopts all the following must be evaluated:

1) Designate wildlife corridors so they contain sufficient ecologically effective habitat to facilitate wildlife movement for daily, seasonal, or long-term needs in a relatively safe manner.

2) Maintain functioning wildlife habitats and migration and dispersal corridors that allow free movement and use of habitats.

3) Manage areas to conserve crucial habitats and protect migration and movement routes for mule deer, bighorn sheep, elk, other big game, and other wildlife, such as carnivores.

4) Evaluate proposed activities, including recreational use, for their potential to adversely affect important and relevant wildlife values in the corridor. Do not permit any activities that interfere with protection of those values.

5) Activities currently authorized by the agency in this corridor shall coexist with wildlife movement, migration, and dispersal. Current activities and infrastructure may be required to change or be removed if found incompatible with the corridor's wildlife values.

6) Close to mineral or energy developments, including ostensibly renewable sorts.

7) Retain public land in federal ownership allowing for the protective management of crucial habitat and movement corridors for wildlife.

8) Allow for the acquisition of non-federal lands within the corridor through purchase from willing sellers, exchange, transfer, or donation. Acquired lands are to be managed consistent with the corridor's standards and guidelines.

9) Where possible, augment wildlife values through purchase from willing sellers, exchange, transfer, or donation of additional acreage of crucial wildlife habitat for their migration, movement, and dispersal.

10) Establish and implement in a timely manner mitigation measures for fencing and structures to allow the safe movement of wildlife.

11) For each wildlife corridor, establish an exclusion area where no large-scale utility transmission and energy development and exploration is allowed. Preclude the granting of new rights-of-way for energy development that would negatively impact wildlife, their habitat and its connectivity. Impacts to be avoided by new access roads include fragmentation of habitats and an increase potential for vehicle-related wildlife injuries and mortalities.

12) Close the corridor to fluid mineral leasing and to mineral materials sales.

13) Close the corridor to all locatable and leasable minerals exploration and development (including geothermal and sodium), and mineral material disposals.

14) Withdraw the corridor from location and entry under the Mining Law, subject to valid existing rights.

15) Close to recreational placer mining outside of active mining claims.

16) Prohibit surface occupancy and surface-disturbing activities.

17) Manage motorized vehicular use as limited to designated roads and trails

18) Establish road and motorized trail density standards within the management area to conform to the best scientific recommendations, generally less than 1 mile per square mile. Ensure that there will be no net increases in road densities above a scientific credible threshold to maintain the security of core habitat areas.

19) Existing and/or designated roads and/or trails will be subject to closures if conflicts with wildlife cannot be mitigated.

20) Establish and implement, in a timely manner, mitigation standards for existing roads crossing public land to facilitate movement of wildlife including a reduction in mortality of wildlife from vehicle collisions.

21) Road construction in areas of relatively high value for potential habitat linkage should be avoided if possible or planned to mitigate potential negative impacts on habitat connectivity, including the consideration of installing crossing structures.

22) Prohibit new permanent roads within the corridor to maintain unfragmented habitat for wildlife migration and dispersal.

23) Evaluate any proposed changes in grazing guidelines for wildlife, such as timing and intensity of use, for impacts on relevant wildlife values. Implement those changes that benefit wildlife.

24) Minimize fencing for livestock and make all fences wildlife friendly, as explained in Landowners Guide to Wildlife Friendly Fences.

25) Encourage retirement of grazing permits within wildlife core and corridor boundaries.

26) Prohibit grazing in riparian areas.

27) Only allow vegetation treatments determined beneficial by the best available science of the identified wildlife values.

28) Even-aged silvicultural management and timber harvesting should be prohibited within the special corridor management areas.

Other commenters assert wildlife corridors are not needed on the Gila National Forest as wild animals have no problems migrating as it is. These commenters are concerned that designating wildlife corridors is part of a larger plan to take away private property rights.

Associated Letters: 119, 209, 233, 561, 564, 567, 652, 663, 698, 712, 726.12370, 727.4318, 727.4372, 728.245, 728.251, 728.258, 728.267, 728.271, 728.273, 728.277, 728.276, 728.280, 728.302, 728.310, 728.321, 728.337, 728.375, 728.379, 728.384, 728.385, 728.386, 728.390, 728.403, 728.406, 728.412, 728.418, 728.420, 728.421, 728.429

Response: We acknowledge the opinion of some commenters that designating corridors is necessary, and we have reviewed the suggested publications. The action alternatives provide for connectivity with plan components that apply forestwide (for example Wildlife, Fish, and Plants DCs1, 2 and 5-7 and G5). Different species have different needs to facilitate their movement, migration corridors tend to shift over time. Almost all of the Gila National Forest provides high-quality connectivity under current management (Belote et al. 2016, which can be viewed on the Forest Service Climate Risk Viewer webpage). Different species have different needs to facilitate their movement, migration corridors tend to shift over time in response to things like climate change.

We did provide a rationale for why the suggestion to designate corridors in the plan was eliminated from detailed study in the draft EIS chapter 2 discussion of alternative development. The final discussion has been revised to include updated and additional information on why this suggestion was eliminated from detailed study.

The completed Wildlife Corridor Action Plan does identify an area around Silver City, New Mexico, as the second most problematic area in the state for wildlife-vehicle collisions. Most of the hot spot is bordered by private lands, but there are National Forest System lands present. The final plan contains a management approach about the Wildlife Corridor Action Plan and how we will work with the Departments of Game and Fish and Transportation and others such as the Federal Highway Administration to address this issue. The final plan also has a Cross-Jurisdictional management approach that discusses opportunities to collaborate across jurisdictional boundaries to improve connectivity across the broader landscape. The plan has an objective for decommissioning unneeded roads (Roads O1). The plan requires new and reconstructed fences to provide for wildlife passage (Wildlife, Fish, and Plants G5).

About the suggested alternative, we have thus far addressed item 1. Items 2 through 5 are addressed by law, regulation, and policy and supplemented by plan direction. Plan direction supporting items 2 and 3 include that found in the All Upland Ecological Response Unit section, all individual Ecological Response Unit, Watersheds, Riparian and Aquatic Ecosystems, and Wildlife Fish, and Plants sections of the draft and final plan. The final plan contains additions, removals, and modifications to plan components based on further review and response to comments. The direction applies to all species, unless is it clearly only applicable to a

subset of species (fine-filter). This includes mule deer, bighorn sheep, elk and other big game, and carnivores. There are specific provisions for bighorn sheep related to protecting them from disease transmission. The first part of item 4 is fulfilled through project-level National Environmental Policy Act procedures. When activities are proposed, they are evaluated in terms of their effects to wildlife values. This results in the identification of avoidance or mitigation measures to address any potential adverse effects. In cases where species listed under the Endangered Species Act are involved, consultation with the U.S. Fish and Wildlife Service is mandatory and may result in additional conservation measures. The second part of items 4 and item 5 would not be compliant with the planning rule in the sense that rule requires plans provide for integrated resource management, which is defined as "Multiple use management that recognizes the interdependence of ecological resources and is based on the need for integrated consideration of ecological, social and economic factors" (36 CFR 219.19), without one being a priority over another" (Preamble to 36 CFR 219).

Items 6, 12 through 15 related to mining and minerals, the commenter is referred to response to comment 1 under the Multiple Uses and response to comment 1 in the Minerals heading, all found in this appendix. The final plan contains direction pertinent to avoiding or mitigating the impacts of "ostensibly" renewable energy infrastructure, which may be found under the heading "Renewable Energy." Additionally, the plan does not affect valid existing rights, and mineral withdrawal is outside the scope of the plan decision.

Items 7 through 9, pertaining to land adjustments, is a matter addressed in the range of alternatives analyzed in detail to the extent the forest supervisor deemed practicable in the delivery of the Forest Service mission and the purpose and need to revise the forest plan. There are limited authorities that allow conveyance of public land to other ownerships. Alternatives 2 and 5 allow for land acquisitions from willing sellers. Acquired lands would be managed under forestwide plan direction providing for the diversity of plant and animal species and species persistence. The management approach Land Adjustments in the Lands and Realty section of the plan discuss the factors that would be considered.

Items 10 and 24, as it pertains to new or reconstructed fencing and structures, is addressed in all alternatives, either as standards or guidelines as mentioned previously in this response. This direction cannot be expanded to apply to existing infrastructure because that would compel agency action. Forest plans cannot compel action, only place constraints on future actions.

Item 11 related to utility transmission, energy development and exploration, the response to comment 1 under the Multiple Uses heading in this appendix is relevant. The plan constrains the permitting process with direction found in the Utilities Management Area, Renewable Energy, and Minerals section of the plan (as leasable minerals are energy-related).

Item 16 appears to relate to surface occupancy and surface-disturbing activities generally. A general prohibition would not meet the Forest Service mission, multiple-use mandate, the purpose and need to change the plan, planning rule requirements, or the ecological need for adaptation and restoration work, even if it only applied to a designated connectivity corridor or network. Additionally, this recommended standard could have the potential to limit the ability to suppress wildland fire, which is simply not an option.

Item 17 is addressed forestwide by the travel management decision signed in 2014. About item 18, this was an alternative element considered but eliminated from detailed study. The rationale supporting this in the FEIS has been revised in response to comment and to provide clarity. Even applied to an area less than the entire forest, road density makes a useful indicator, but a poor standard for the reasons described in the FEIS. About item 19, this would necessarily be addressed at a site-specific project level as there are too many potential combinations of factors that could be involved. Item 20 would compel action, which we've already addressed in this response to comment. About items 21 and 22, maintenance or reconstruction of existing roads is emphasized over new road construction in the revised plan and all its alternatives, forestwide. There is plan direction to provide for habitat connectivity in the Roads section of the plan, and the vehicle collision element was discussed previously in this response to comment.

Item 23, 25, and 26 related to grazing are addressed by allotment-specific National Environmental Policy Act procedures at the allotment level, and in consultation with the U.S. Fish and Wildlife Service when species listed under the Endangered Species Act are affected. These decisions would have to maintain or move toward the plan's desired conditions, or they would not be compliant with the plan. The plan's desired conditions provide for the ecological conditions that benefit wildlife. Specific to item 25, please also refer to response to comment 74 in the Livestock Grazing section of this appendix. Specific to item 26, please refer to chapter 2 of the FEIS as this was an alternative or alternative element considered but eliminated from detailed study. You may also refer to response to comment 1 under the Riparian and Aquatic Ecosystems heading in this appendix.

Items 27 and 28 related to vegetation treatments and timber management, would be redundant with item 16, but contains additional elements. Alternative 5 provides for item 27, forestwide. While uneven-aged management is the most appropriate management for most of the Gila National Forest's ecosystems and is emphasized in the plan, a prohibition on even-aged management would preclude management for forest health agents. Sometimes, an even-aged silvicultural prescription might be a critical intervention to address epidemic levels of insects or disease. Alternative 5 limits all mechanical treatments, including timber harvest whether it is for the purpose of climate change adaptation, restoration, or timber production, to the wildland-urban interface with limited exceptions. That exception being that the best available science indicates strategic placement outside the interface would allow fire to play its natural role in the ecosystem where it would not be able to do so otherwise.

While designating a wildlife corridor network is not something we considered in detail for the Gila National Forest plan, it may add value elsewhere in the Nation. Other national forests and grasslands are dealing with different sets of circumstances. We acknowledge the opinion that designating wildlife corridors is part of a larger plan to take away private property rights. However, the Forest Service does not have the authority or jurisdiction to do that.

Comment 31: Commenter suggests that our summary of the needs for change should include the following statement from the Carson National Forest's draft plan: "Management needs to protect important habitat features and maintain habitat by protecting, restoring, and maintaining ecosystem condition, function, and connectivity." **Associated Letter: 652**

Response: The needs for change document was finalized in 2017. Needs for change statements 11,18, and 21 cover ecosystem condition and function and needs for change statement 25 covers plan direction for connectivity.

Comment 32: Commenter recommends the documents need to formally define human-made infrastructure as a stressor and develop related mitigation measures to reduce the adverse impacts to wildlife habitat connectivity of roads and other linear features. Road density is one of several stressors modeled in the U.S. Forest Service National Terrestrial Condition Assessment (Cleland and others 2017). Figure 10 models habitat quality for wildlife based on road density across all national forests. Commenter states that this agency publication is at too coarse of a scale to be incorporated directly into the forest plan, but it demonstrates that roads are a stressor and serves as a rationale for developing more substantive direction related to transportation corridors. **Associated Letter: 652**

Response: Stressors, including human-made infrastructure such as roads and other linear features, are identified in the EIS and summarized specific to at-risk species in draft appendix and appendix G to the FEIS. The terms "manmade infrastructure," "roads," and "linear features" may or may not be specifically used but should reasonably be implied by terms including "other factors altering hydrologic function." Commenter is correct that the work of Cleland and others is too coarse to meaningfully inform forest-level planning. The strategic direction found in the Roads and Utilities Management Area are sufficient to complement the plan's direction for wildlife, fish, and plant species and the ecological conditions they require. If future project-level

work identifies a need for additional constraints or best practices, those would be incorporated at the project level.

Comment 33: Commenter requests that current connectivity conditions along all significant waterways be assessed, especially for Wild and Scenic Rivers. Commenter suggests designating these waterways as geographic areas and incorporating substantive direction for connectivity along these natural corridors is vital. **Associated Letter: 652**

Response: The Wild and Scenic River eligibility study evaluated all the waterways in the forest that are named on United States Geological Survey quadrangle maps, and all are currently free-flowing. Fragmentation, where it exists, is largely due to drought conditions and drying off streams. Establishing waterways as geographic areas would be redundant with forestwide direction applicable to riparian and aquatic ecosystems. The Riparian and Aquatic Ecosystems section of the plan contains plan components for connectivity, within agency authority, which is supported by plan direction in other sections of the plan for activities and uses that may impact these ecosystems. The New Mexico Office of the State Engineer administers the allocation and use of water. Habitat fragmentation due to water use, drought conditions, and drying of streams remain threats.

Comment 34: Commenter requests that the current conditions relevant to native pollinators need to be assessed and suggests the plan must establish standards and guidelines that promote connectivity for these species because they are in decline. Commenter discusses a scientific publication that suggests management should consider the spatial configuration of the landscape to improve outcomes. Commenter suggests that the plan should facilitate pollinators' ability to move through a diversity of habitats fragmented by road corridors, pointing to the latest Federal transportation act that includes direction for roadsides to provide pollinator habitat and function as movement corridors. Considering the extensive road network on the forest, commenter suggests a pollinator section be added to the plan and include standards and guidelines that provide for connected pollinator habitat along roadways and beyond. **Associated Letter: 652**

Response: There is a desired condition in the draft and final plan Wildlife, Fish, and Plants section specific to pollinators. This is supported by desired conditions and objectives for vegetation communities (Upland Vegetation, Fire Ecology and Fuels and Riparian and Aquatic Ecosystems). Movement toward and attainment of desired conditions for vegetation communities would provide plenty of well-connected pollinator habitat. There have been several acts of Congress that make funding available to willing states to promote pollinator-friendly practices, including roadside practices that are largely applicable to paved highways; however, there are tradeoffs. These are fairly high-risk areas to be attracting pollinators, depending on traffic volume and speed. We will continue to work with the Department of Transportation and the Federal Highway Administration on relevant projects in highway rights-of-way to encourage the use of appropriate practices.

Comment 35: Commenter is concerned about statements in the draft documents that assert the New Mexico Department of Game and Fish is responsible for managing wildlife species not federally listed under the Endangered Species Act. Commenter states that federal land management agencies have an obligation, and not just the discretion, to manage and conserve fish and wildlife species, not just habitats, on federal lands. Commenter asserts that the National Forest Management Act intended for forest managers to treat the wildlife resource as a controlling, co-equal factor in forest management and that if state wildlife management actions occur on national forest lands, they must be viewed within the statutory and regulatory context and subject to preemption based on the Forest Service's authority and obligations for wildlife diversity. Commenter suggests that the plan should make it clear that direction to protect at-risk species encompass both habitat and other ecological conditions. **Associated Letter: 712**

Response: This discussion in the background information section of the plan's Wildlife, Fish, and Plants section has been revised in response to comment and for clarity. Gila National Forest managers meet their obligation to manage and conserve fish and wildlife species through coordination and collaboration with both

the Department of Game and Fish and the U.S. Fish and Wildlife Service. The plan supports the persistence of at-risk species by providing the strategic framework to manage habitat and other ecological conditions toward those conditions known to support those species.

Suggested Desired Conditions

Comment 36: Commenter acknowledges multiple factors can affect distribution of elk and other big game across public and private lands and recommends the inclusion of desired conditions that emphasize coordination between the Gila National Forest, state wildlife agencies, private landowners, and others to provide habitat conditions that support year-round presence of elk and other big game on public land. Commenter points to the 2011 Federal Lands Hunting, Fishing & Shooting Sports Roundtable memorandum of understanding (MOU) between the U.S. Department of Agriculture, the U.S. Department of the Army, and the U.S. Department of the Interior, which develops and expands a framework of cooperation among the parties at all levels for planning and implementing mutually beneficial projects and activities related to hunting, fishing, trapping, and shooting sports conducted on federal land. **Associated Letter: 119**

Response: There is a desired condition in the Wildlife, Fish, and Plants section of the plan that states "Habitat fragmentation between National Forest System lands and other public and privately conserved lands is reduced and connectivity is enhanced." Also, in this section of the plan, the draft management approach has been separated into several that discuss coordination, cooperation and collaboration on mutually beneficial projects and activities. Plan direction supports the MOU the commenter discusses.

Comment 37: Commenter suggests the following forestwide watersheds and aquatics desired conditions: (1) "Riparian vegetation provides breeding, feeding and sheltering opportunities, as well as habitat connectivity and movement corridors for a wide range of terrestrial, semi-aquatic and avian wildlife species"; and (2) "Aquatic habitats are connected and free from alterations (e.g., temperature regime changes, lack of adequate streamflow, barriers to aquatic organism passage) to allow for species migration, connectivity of fragmented populations and genetic exchange. Barriers to movement are located where necessary to protect native fish from non-native species." **Associated Letter: 652**

Response: These suggestions are consistent with the final desired conditions for Watersheds, Riparian and Aquatic Ecosystems and Wildlife, Fish, and Plants. Riparian and Aquatic Ecosystem desired conditions have been revised in response to comment and to better align with those desired conditions associated with the Forest Service Southwestern Region's Riparian and Aquatic Ecosystem Strategy.

Comment 38: Commenter suggests the following forestwide forested vegetation desired condition: "Landscape-scale patch configuration and composition is conducive to ecological processes operating within their natural range of variation including the extent, intensity and frequency of disturbance events, to provide for habitat connectivity, wildlife movement and gene flow." **Associated Letter: 652**

Response: The suggested wording is consistent with the desired conditions for All Upland Ecological Response Units and individual ecological response unit desired conditions.

Comment 39: Commenter suggests the following forestwide wildlife desired condition as, "Landscape patterns throughout the forest provide habitat connectivity for wildlife, particularly wide-ranging species such as medium to large carnivores and wild ungulates. Resulting habitat connectivity facilitates daily and seasonal movement, as well as long-range dispersal of wildlife to support genetic diversity, allowing animals to adapt to changing conditions over time." **Associated Letter: 652**

Response: This suggestion is consistent with the final desired conditions in the Wildlife, Fish, and Plants section of the plan, which are applicable forestwide. These were revised from draft based on further review and response to comment.

Comment 40: Commenter suggests the following riparian management zone desired conditions for wildlife: (1)"If new openings are created in riparian management zones through even-aged regeneration harvest (see glossary) or fuel reduction activities, each created opening's distance to cover (see glossary) should not exceed 350 feet to provide wildlife habitat structural diversity, connectivity, and cover"; and (2) Commenter suggests the following riparian management zone desired condition: "Riparian ecosystems exhibit connectivity between and within aquatic, riparian, and upland components that reflect their natural linkages and range of variability. Stream courses and other links provide habitat and movement that maintain and disperse populations of riparian-dependent species, including beaver." **Associated Letter: 652**

Response: The first suggestion is worded as a guideline, not a desired condition. The distance to cover resulting from the described activities is best determined at the project level where existing conditions can be evaluated, and appropriate site- and species-specific design features can be identified. The second suggestion is addressed by draft Riparian and Aquatic Ecosystems DC2 and DC3a. Riparian and Aquatic Ecosystem desired conditions still address this suggestion but have been revised in response to comment and to better align with those desired conditions associated with the Forest Service Southwestern Region's Riparian and Aquatic Ecosystem Strategy. A specific mention of beaver has been added to final Riparian and Aquatic Ecosystems DCs3 and 4.

Comment 41: Commenter suggests the following forest, shrub, and scrub riparian (FSSR) desired condition: "Connectivity within FSSR should be maintained and enhanced by protecting ecological functions, tree density and growth, and native understory, to reduce the risk of predation and nest parasitism, and to provide habitat for at-risk and other wildlife species." **Associated Letter: 652**

Response: We think this suggestion has value for all riparian vegetation communities**.** Riparian and Aquatic Ecosystem desired conditions have been revised in response to the comment and to better align with those desired conditions associated with the Forest Service Southwestern Region's Riparian and Aquatic Ecosystem Strategy. Revisions cover the elements of the suggestion.

Comment 42: Commenter suggests the following wildlife habitat diversity desired condition: "Ecological conditions provide for wildlife diversity (including species of conservation concern) and wildlife habitat connectivity (including seasonal movements of animals within home ranges; the dispersal and genetic interchange between populations; and the long- distance range shifts of species." **Associated Letter: 652**

Response: This suggestion is addressed by All Upland Ecological Response Units LS-DCs7 and 8. It is also addressed by the final Wildlife, Fish, and Plants desired conditions, which have been revised based on further review and in response to comment.

Comment 43: Commenter provides the following example of a species-specific desired condition that could be used as a template for the Gila National Forest plan: "Areas in and within 300 feet of peatlands have low groundcover and downed woody material that contribute to northern bog lemming habitat and connectivity between clusters of individual sites." **Associated Letter: 652**

Response: Thank you for this example. Fine-filter components specific to the at-risk species on the Gila National Forest are identified in appendix G to the FEIS.

Comment 44: Commenter suggests the following lands and special uses desired condition: "Land ownership adjustments, through purchase, donation, exchange, or other authority, improve national forest management by consolidating ownership, reducing wildlife-human conflicts, providing for wildlife habitat connectivity, improving public access to public lands, and retaining or acquiring key lands for wildlife and fish and within wild and scenic river corridors." **Associated Letter: 652**

Response: Final Lands and Realty DC1 and the Land Adjustments management approach address these outcomes and the factors that would be considered in prioritizing future land adjustments.

Comment 45: Commenter suggests two partnerships and coordination desired conditions: (1) "The Forest works towards an all-lands approach to management, cooperating with other land managers; this includes efforts to mitigate threats or stressors, provide for wildlife and fish habitat connectivity, and provide social, economic, and ecological conditions that contribute to mutual objectives"; and (2) "The Forest works towards an all-lands approach to management of species of conservation concern, cooperating with other land managers across the range of a species and including efforts to provide for habitat connectivity, mitigate threats or stressors, and provide other ecological conditions that support the species." **Associated Letter: 652**

Response: These suggestions are addressed by the final Lands and Realty desired conditions and management approaches, as well as Wildlife, Fish, and Plants DCs 5 and 7 and management approaches.

Comment 46: Commenter provides the following example of a desired condition delineated connectivity areas: "The area (see figure [1]) provides habitat connectivity for a north-south movement corridor for wide-ranging species (e.g., grizzly bear, Canada lynx, wolverine) moving between the southern and northern watersheds on the Forest." **Associated Letter: 653**

Response: Please refer to response to comment 31.

Comment 47: Commenter suggests the following wildlife, fish, and plant desired conditions: (1) "Habitat connectivity and distribution provide for genetic exchange, daily and seasonal movements of animals, and predator-prey interactions across multiple spatial scales, consistent with existing landforms and topography"; and (2) "Range shifts of plant and wildlife populations, in response to changing environmental and climatic conditions. Barriers to movement may exist to protect native species and prevent movement of nonnative species (e.g., a fish structure to protect Rio Grande cutthroat trout from nonnative invasion). **Associated Letter: 652**

Response: This suggestion is addressed by All Upland Ecological Response Unit LS-DCs 7 and 8 and final Wildlife, Fish, and Plants DCs 5 and 6.

Comment 48: Commenter suggests the following transportation and forest access desired condition as "Unneeded roads, trails, and routes are closed to motor vehicle use and naturalized, to reduce impacts to ecological resources (i.e., watersheds, wildlife, and soil erosion) and improve habitat connectivity." **Associated Letter: 652**

Response: This is addressed in Roads DC5 and O1.

Suggested Goals

Comment 49: Commenter suggests the following be incorporated as forestwide goals: (1) "The Forest Service coordinates management actions with other federal, state and local agencies, Tribes, and adjacent landowners. Opportunities to manage wildlife habitat and provide for connectivity are expanded through coordination and collaboration along and across administrative boundaries"; (2) "Through cooperation with willing landowners and other entities, non-federal lands within the national forest boundary are acquired, or managed under conservation easements where needed to maintain or restore wildlife habitat structure, function, or connectivity"; and (3) "The Forest Service works with partners to develop and disseminate information designed to increase public awareness of the high value of wildlife resources such as biodiversity, habitat connectivity, recreation opportunities, cultural or spiritual connections, safety issues and co-existence."

Further, commenter recommends the following goals for designated connectivity areas: "When evaluating vacant livestock allotments, the Forest Service may emphasize allotment closure for accelerated ecological

enhancement in areas of greatest conservation concern. This includes, but not limited to proposed or established research natural areas or special areas, at-risk species habitat, under-represented reference areas, native species restoration areas, key linkage areas, conservation watershed networks, areas with opportunities for reduced risk of disease transmission between domestic and wild animals, or retention for forage reserves (grassbanks) or opportunities to enhance management or improve resources through combination with adjacent allotment(s). The Forest Service may de-emphasize use demand as a consideration in these types of conservation areas." **Associated Letter: 652**

Response: There are over 30 management approaches in the plan that discuss relationships, partnerships, conservation education, collaboration and how forest leadership and staff work with all interested parties. The Wildlife, Fish, and Plants section contains a desired condition relevant to now contains a management approach discussing cross-jurisdictional connectivity efforts. The Lands Adjustments management approach in the final Lands and Realty section of the plan discusses factors that will be considered, including benefits to wildlife and habitat connectivity. Regarding designated connectivity corridors, networks and linkage areas, see response to comment 31. Further, alternative 2 contains a guideline and supporting management approach that would establish forage reserves or grassbanks that are intended to serve multiple purposes.

Suggested Objectives

Comment 50: Commenter provides the following example of an objective for delineated connectivity areas that could be used as a template for the Gila National Forest plan: "Acquire one or more parcels and/or provide one or more easements for wildlife crossings along Highway 3 and the railway corridor in the A and B connectivity areas (see figure [1])" (id. at 124). **Associated Letter: 652**

Response: About connectivity areas, corridors, networks, and linkage areas, please refer to response to comment 31. Wildlife benefits, including connectivity, are factors that will be considered during any land adjustment process as described in the Lands Adjustments management approach in the final Lands and Realty section of the plan. More Gila National Forest specific plan content relevant to this example can be found in the Wildlife Corridor Action Plan management approach in the Wildlife, Fish, and Plants section of the plan.

Comment 51: Commenter suggests the following wildlife, fish, and plant objectives: (1) "Improve wildlife or aquatic habitat connectivity by removing unneeded structures (e.g., fences, roads, cattleguards, culverts, and spring developments) or completing improvement projects (e.g., removing barriers and connecting fragmented habitat) in at least 10 to 20 locations, during each 10-year period following plan approval"; and (2) "Complete at least 5 projects to improve habitat connectivity for aquatic and riparian species (e.g., remove barriers, restore dewatered stream segments, connect fragmented habitat, wildlife passage friendly fences, etc.), during the 10 years following plan approval." **Associated Letter: 652**

Response: Wildlife, Fish, and Plants Os 2-5 address these suggestions.

Suggested Standards

Comment 52: Commenter suggests the incorporating the following commitments to address connectivity issues:

1) Design and build linear infrastructure (e.g., fences, roads, and transmission lines) in a manner that does not create unreasonable or unnecessary movement barriers or hazards for terrestrial and aquatic wildlife.

2) Design new, replacement, and reconstructed stream crossing sites (i.e., bottomless culverts, bridges) to provide and maintain passage for fish and other aquatic species, as well as riparian-associated terrestrial species (although constructed barriers may need to be maintained in instances where native species benefit from physical isolation).

3) Implement a pilot project to develop a standardized methodology for reporting and collecting data on wildlife-vehicle collisions and wildlife carcasses along roads within forest boundaries. An application known as ROaDS has been developed by Western Transportation Institute, National Park Service, and U.S. Fish and Wildlife Service that could serve as a useful resource in meeting this commitment. This application serves as a wildlife-vehicle collision (WVC) data collection system for federal land management agencies and their partners. The app collects information on large animal-vehicle crashes to address motorist safety concerns on federally managed roads, as well as carcass data for medium and small fauna relevant to conservation missions.

4) Define minimum wildlife-vehicle collision (mortality) and traffic volume (connectivity) thresholds that determine when the Gila National Forest must consider wildlife mitigation measures.

5) Decommission or reduce access to Gila National Forest-managed roads that bisect seasonal migration corridors for big game species and/or see traffic densities that already or may in the future negatively affect wildlife movement.

6) Increase and formalize collaboration with New Mexico Department of Transportation, New Mexico Department of Fish and Game, U.S. Fish and Wildlife Service, Federal Highway Administration, regional tribes, and other relevant stakeholder groups where there is not already robust collaboration to take advantage of these entities' data and expertise as it relates to connectivity.

Associated Letter: 652

Response: Livestock Grazing DC2 and S2, Roads DCs4 and 5, G1, 2 and 5, and Utilities Management Area DC3, G1 and Minimizing the Footprint management approach address the first suggestion. Suggestion 2 is addressed by Roads Gs2 through 5. Development of a pilot project, as described in suggestion 3, would be an activity consistent with the plan and could be an extension of work with the New Mexico Departments of Game and Fish and Transportation as described in the Wildlife Corridor Action Plan management approach in the Wildlife, Fish, and Plants section of the plan. Incorporating suggestion 4 into the plan would compel action, which forest plans cannot do. In the Gila National Forest, big game species do not migrate seasonally as they do farther north. The factors management is likely to consider when prioritizing roads for decommissioning are described in the Road Decommissioning management approach in the Roads section of the plan. Wildlife movement and connectivity are now included in that list in response to comment. We have several MOUs in place and other partnership agreements with these entities to ensure data and expertise are shared between and amongst the stakeholders. Collaboration with the entities mentioned in suggestion 6, formal and informal, is critical to the success of forest management and will continue to be something forest leadership and staff invest in.

Comment 53: Commenter suggests there is a need for more species-specific, actionable plan components for Species of Conservation Concern and species identified by the New Mexico State Wildlife Action Plan or Regional Forester, especially species disproportionately negatively affected by roads. Commenter suggests incorporating thresholds to determine when mitigation measures are needed to maintain connectivity such as open road densities, traffic volumes, type of road or number of lanes. Commenter states that because wildlife movement is unique to each species, the needs of species of concern will require specific protocols.
Associated Letter: 652

Response: Final appendix G to the FEIS identifies the plan components that address ecological conditions and species-specific threats and life history requirements. Commenter is correct that species movements can be unique to the species, or to a guild of species. Knowledge is lacking about many species of conservation concern to determine specific protocols. In response to the threshold suggestion, please refer to response to comment 54.

Suggested Guidelines

Comment 54: Commenter suggests the following forestwide forested vegetation guidelines: (1)"To maintain habitat connectivity and minimize disturbance of old-growth associated wildlife, road construction (permanent or temporary) or other developments should be avoided in old growth unless access is needed to implement vegetation management activities and purposes as outlined in guideline X"; (2) "To maintain connectivity and avoid adverse impacts to old-growth forest, new road construction or reconstruction should not be located within old-growth forest. Exceptions may occur, such as when there are no feasible alternative road locations;" and (3) "To maintain or restore habitat connectivity for wildlife, management actions should not create movement barriers to wide-ranging species such as medium to large carnivores and wild ungulates, except where necessary to provide for human or wildlife safety." **Associated Letter: 652**

Response: The action alternatives provide for connectivity with plan components that apply forestwide (for example Wildlife, Fish, and Plants DCs1, 2 and 5-7 and G5). Different species have different needs to facilitate their movement, migration corridors tend to shift over time. Almost all of the Gila National Forest provides high-quality connectivity under current management (Belote et al. 2016, which can be viewed on the Forest Service Climate Risk Viewer webpage).

The plan also contains a guideline in the Roads section that establishes a preference for maintenance and reconstruction of existing roads over permanent new road construction (G6) and requires construction and maintenance to include provisions for habitat connectivity (Gs1 and 2). These guidelines apply forestwide. The plan also requires fences to incorporate wildlife-friendly design features to maintain or move toward the plan's desired conditions for connectivity (Wildlife, Fish, and Plants G5). For more on how the plan provides for old growth, please refer to response to comment 11 in the Upland Vegetation, Fire Ecology and Fuels section of this appendix.

Comment 55: Commenter suggests the following guidelines for delineated key linkage areas: (1)"Vegetation management activities in a key linkage area should include design features to restore, maintain or enhance habitat connectivity for long distance range shifts of wide ranging wildlife species"; (2) "New permanent facilities or structures for administrative or public use should not be constructed within key linkage areas unless needed to address on-going or imminent resource concerns within the key linkage area, including but not limited to, degradation of wildlife habitat connectivity. Any new permanent facilities or structures and relocation of existing facilities within key linkage areas should be designed and located so that wildlife movement patterns are not permanently disrupted"; (3) "New permanent facilities or structures for administrative or public use should not be constructed within key linkage areas unless needed to address on-going or imminent resource concerns within the key linkage area, including but not limited to, degradation of wildlife habitat connectivity. Any new permanent facilities or structures and relocation of existing facilities within key linkage areas should be designed and located so that wildlife movement patterns are not permanently disrupted"; and (4) "To maintain habitat quality and limit disturbance effects on wildlife movement patterns, a key linkage area should be free of sustained substantial disturbance for at least four years out of every 10-year period, including at least two consecutive years of no sustained substantial disturbance. Sustained substantial disturbance is the use of heavy equipment or low-level helicopter flights for vegetation management actions for a total of more than 30 days throughout an entire key linkage area in a calendar year." **Associated Letter: 652**

Response: Regarding designated connectivity corridors, networks, and linkage areas, please refer to response to comment 31. Vegetation treatments will include site- and activity-specific provisions to maintain connectivity to maintain or move toward desired conditions for vegetation communities and species in compliance with Timber, Forest, and Botanical Products DC1, provided for by S1 in the same section of the plan, which requires the interdisciplinary team to include wildlife resource specialists. Plan direction for facilities applies forestwide, which includes a desired condition for minimizing negative impacts to natural resources and supporting standards and guidelines. Project-level activities would include measures to mitigate

substantial disturbance, including measures identified during consultation with the U.S. Fish and Wildlife Service where federally listed species could be impacted. Suggested annual limitations could have unforeseeable and undesirable effects on both fire and non-fire vegetation management activities that could lead to detrimental effects on habitat quality because of large, contiguous extents of high-intensity wildfire that could otherwise have been prevented.

Comment 56: Commenter suggests the following infrastructure guideline: "Within areas specifically identified as being important for wildlife connectivity across highways, the Forest should cooperate with highway managers and other landowners to design approaches and crossings that contribute to wildlife and public safety." **Associated Letter: 652**

Response: Regarding designated connectivity corridors, networks, and linkage areas, please refer to response to comment 31. This concern is addressed by the suite of management approaches in the Wildlife, Fish, and Plants section of the plan, in particular the Wildlife Corridor Action Plan management approach.

Comment 57: Commenter suggests the following riparian management zone guideline: "The exact width of riparian management zones may vary based on ecological or geomorphic factors or water body type but includes those areas which provide riparian and aquatic ecosystem functions and connectivity." **Associated Letter: 652**

Response: This concern is addressed in the definition of riparian management zones and the description of how they will be delineated at the project level. This plan content is found under the heading Riparian Management Zones in the Riparian and Aquatic Ecosystems section of the plan.

Comment 58: Commenter suggests the following wildlife, fish, and plant guidelines: (1) "To conserve wildlife and fish habitat connectivity, constructed features (e.g., exclosures, wildlife drinkers, range improvements, fences, and culverts) should be maintained to support the purpose(s) for which they were built. Constructed features should be removed when no longer needed, to restore natural hydrologic function and maintain habitat connectivity"; and (2) "New infrastructure (e.g., fences, roads, facilities, drinkers) should be designed, to improve habitat connectivity" **Associated Letter: 652**

Response: The first suggestion is addressed by Livestock Grazing DC4, S3 and Roads DCs 4 and 5, O1 and Gs2-4. These plan components also help to address the second suggestion. The final Wildlife Corridor Action Plan management approach in the Wildlife, Fish, and Plants section of the plan provides further support.

Comment 59: Commenter suggests the following transportation and forest access guidelines: (1) "To improve habitat connectivity, methods that accommodate wildlife (e.g., fencing, underpasses, overpasses, larger culverts) should be used when constructing or reconstructing highways or high traffic volume forest roads"; and (2) "Road and trail networks should accommodate terrestrial and aquatic wildlife species movement and habitat connectivity." **Associated Comments: 652**

Response: The Wildlife Corridor Action Plan management approach describes how we would approach connectivity issues on the two-lane state highways where the State of New Mexico has identified priority work. Roads G2 requires the construction and maintenance of roads to accommodate wildlife and connectivity.

Suggested Management Approaches

Comment 60: Commenters suggest a management approach to work collaboratively with the New Mexico Department of Game and Fish and other relevant stakeholders to identify wildlife migration routes and important habitat and improve or maintain connectivity for terrestrial species and coordinate when proposing management that may impact habitat connectivity and discuss what mitigation may be needed. **Associated Letters: 652 and 672**

Response: The suite of management approaches in the Wildlife, Fish, and Plants section of the plan discuss our collaboration with others, including collaboration around connectivity issues.

Comment 61: Commenter suggests management approach for lands that encourages collaborative relationships with adjacent stakeholders and public land managers to develop contiguous habitat connectivity across multiple ownerships. **Associated Letter: 652**

Response: The Cross-Jurisdictional Connectivity management approach in the Wildlife, Fish, and Plants section of the plan has been added in response to comment.

Suggested Monitoring Questions

Comment 62: Commenter suggests the following monitoring question and indicators for delineated key linkage areas: "What management actions have contributed to changes in natural movement patterns in wildlife key linkage areas?" Indicators: number of management actions, types of actions, locations of new structures, sustained substantial disturbances. **Associated Letter: 652**

Response: Regarding connectivity corridors, networks, and linkage areas, please refer to response to comment 31 previously in this section of this appendix. For this question to be answered, indicators would need to include measures of movement patterns before and after the action or construction.

Comment 63: Commenter suggests the following monitoring question and indicators: "What is the status of forest conditions that support wildlife habitat connectivity? And indicators are defined as follows: (1) In riparian management zones: acres with trees with an average diameter at breast height of 5 inches or greater and canopy cover greater than 40 percent, (2) In riparian management zones: distribution of trees with an average tree diameter at breast height of 5 inches or greater and canopy cover greater than 40 percent, (3) In connectivity areas identified for the geographic areas: mapped distribution of forest cover with an average tree diameter at breast height of 5 inches or greater and canopy cover greater than 40 percent." **Associated Letter: 652**

Response: This suggested monitoring question and indicator from the Flathead National Forest are specific to fisher and other species with similar requirements. While there are no fisher on the Gila National Forest, nor a direct translation from the Flathead National Forest's monitoring plan to our monitoring plan, we do have similar questions that will generate information that could be useful in evaluating the habitat status of any particular species.

Hunting and Fishing

Comment 64: There are differing perspectives on hunting and trapping on public lands. Some commenters prefer the plan put an end to all hunting and trapping. One commenter states: **"**The forest plan shows a bias toward hunting and does not provide a balancing statement showing that educating children about nature and conservation of natural lands by means other than killing animals. Data shows that there are substantially more participants, greater expenditures and economic impact, jobs, salaries, and waters, state and local taxes generated by Wildlife Watching compared to Hunting. Also, hunting in NM has reduced from 15% to 10% participation." Commenter suggests the plan should recognize and quantify the positive economic impact of the non-hunting recreational users with respect to achieving restoration and protection of the forest.

Another commenter would like to see the plan recognize the quality of life and economic contribution these activities provide. This commenter would like the plan to align with the Federal Lands Hunting, Fishing and Shooting Sports Roundtable memorandum of understanding between the U.S. Department of Agriculture, the U.S. Department of the Army, and the U.S. Department of the Interior (2011) and promote hunting, fishing, trapping, and shooting sports.

A few commenters request that the plan reduce predators such as wolves, coyotes, and big cats to protect people, animals, forest recreational areas, and animal survival and abundance. **Associated Comments: 34, 119, 207, 480, 567, and 663**

Response: Hunting and trapping are both legal activities and traditional uses. These activities are regulated by the New Mexico Department of Game and Fish and undergo review every couple of years to incorporate population information, new science, and relevant concerns. For example, trapping regulations were recently revised to require license holders to take a class and test to demonstrate their understanding of best practices.

Except for wolves and coyotes, there are specific hunting seasons for predators that are managed by New Mexico Department of Game and Fish that allow for harvest of a certain number of animals to keep predator and prey populations in balance. Any conflict with people is taken seriously and addressed by either trapping and relocating or euthanizing the animal to keep people safe. Wolves and coyotes do not have hunting seasons to control their numbers. Coyotes can be hunted year around. Wolves are listed as an endangered non-essential experimental population and are protected from hunting.

Hunting has a strong cultural and traditional tie to public lands, particularly the Gila National Forest. It was identified as such very early on in the plan revision process. Hunting is discussed in this context as part of the social, cultural, and economic context in the description of the forest and in plan's vision. While hunting is mentioned in several background information sections, Wildlife, Fish, and Plants draft DC6 (final DC10) and Tribal Importance and Use DC2 are the only plan components related to hunting. Wildlife, Fish, and Plants DC6 states: "Habitat conditions contribute to multiple uses and are consistent with the recovery of federally listed, proposed, and candidate species and the persistence of species of conservation concern. Hunting, fishing, plant-gathering and other species-based recreation, and cultural opportunities exist but do not compromise species, populations, or habitat." Tribal Importance and Use DC2 states: "The long history of tribal communities and uses (for example, hunting, gathering plant and mineral materials, and use of sacred places) of NFS [National Forest System] lands and resources are understood and appreciated."

The plan also contains direction aimed directly at educating children about nature and conservation of natural lands (Community Relationships DC5). This is also discussed in detail in Community Relationships management approaches Outreach and Education and Relationships, Tribal Importance and Use management approach Relationships, and Sustainable Recreation management approach Outreach and Education.

Non-hunting recreational pursuits within the forest contribute socioeconomic benefits as well, but they are harder to quantify because they typically do not require people to purchase a license or permit. The socioeconomic contributions of non-hunting recreational pursuits are recognized in the plan and discussed in the FEIS.

Comment 65: Commenter states the largest barrier to ensuring our hunting heritage is access to public land and recommends the plan considers access needs and collaboration with state wildlife agencies to create or maintain access points that are important for managing wildlife. Commenter would also like to see the plan include relevant components of Executive Order 13443 on facilitation of hunting heritage and wildlife conservation (2007) and the John D. Dingell, Jr. Conservation, Management, and Recreation Act (2019). **Associated Letter: 119**

Response: We agree that access to public land is important to maintain all uses and management activities. The plan supports access with direction for roads and trails. Plan direction is in addition to law, regulation, and policy and must align with it.

Comment 66: Commenters appreciate that the documents recognize both the cultural and economic benefits of hunting and fishing and the importance of the economic contributions of the outfitter and guide industry. **Associated Letter: 160**

Response: Thank you for your comment.

Comment 67: One commenter cites data from recent studies conducted by the American Sportfishing Association and the Recreational Boating and Fishing Federation, that demonstrates new opportunities in recreational fishing to have the potential to attract tens, if not hundreds of millions of dollars in new tourism revenue for Southwest New Mexico. Commenter states the recovery of Gila trout in its native ranges and opportunities for catch and release is a valuable part of the equation. Commenter recommends the New Mexico Office of Outdoor Recreation should be given consideration on equal footing with that of other agencies and that elected officials are recognized as enthusiastic fly fisherpersons, so it is obvious that the values of New Mexico voters are in-line with this use.

Another commenter agrees that there is a great deal of alignment between the New Mexico Department of Game and Fish Statewide Fisheries Management Plan but suggests that both plans are missing needed regulations for catch and release fishing opportunities for Gila trout. Commenter acknowledges these regulations are the purview of the Department but states: "It is not equivalent to equate a stream that sustains wild reproducing populations of Gila trout with one in which hatchery-raised fish are dumped in periodically, only to be hauled out for consumption. The former represents a quality experience, commensurate with the status of the Gila National Forest, while the latter does not. The quality of the fish themselves, in terms of their size distribution and their ability to adapt to their local environments for successful spawning and survival, are negatively impacted by harvesting. The modern practice of catch and release angling has been widely adopted across the country and has been shown to be less impactful on fish populations, leading to increased numbers and greater size distribution of wild, reproducing populations." Commenter recommends the plan include content about advocating for these regulations to maintain wild, reproducing populations of Gila trout, especially in Willow Creek, Mineral Creek, and Whitewater Creek. **Associated Letters: 172, 173, and 724.4**

Response: We recognize the contributions that fishing opportunities have and can make toward quality of life and the socioeconomic well-being of local communities. We value our relationships with all state agencies and the future collaborations that plan implementation will bring. The New Mexico Department of Outdoor Recreation has been added to the Relationships management approach in the Wildlife, Fish, and Plants section of the plan. We will continue to coordinate with the Department of Game and Fish and U.S. Fish and Wildlife Service as needed to support appropriate fishing opportunities.

Comment 68: Commenter is concerned that the draft documents do not discuss or consider the importance of the apex predators, notably mountain lions, bears and wolves, in the context of their contribution to control of species that can overrun the forest and damage riparian areas. Commenter notes there are 25 references to hunting in the plan and only one mention of mountain lion and black bear with no details about their ecological importance or protection, as if their sole importance is to be gunned down. Commenter is also concerned that there is no inventory presented for these and other species. **Associated Letters: 567 and 663**

Response: All species are important, including apex predators. A healthy number of predators is vital to maintaining ecosystem function and sustainable populations of prey species. The plan provides direction to restore the healthy, resilient ecosystems that promote biodiversity, including apex predators. The New Mexico Department of Game and Fish conducts surveys and models populations of black bear and mountain lion. The

Mexican Wolf Interagency Field Team surveys, supplements, and intensively manages the Mexican Wolf populations to ensure their survival. The Forest Service works closely with both entities to identify issues and ensure proper management of these species.

Comment 69: Commenter recalls a recent incident involving a permitted lion hunter and his dogs on their private property 800 feet from the forest boundary. Commenter states that lion hunting with dogs is an archaic activity that serves no valid purpose and requests that the plan bans all sport lion hunting. **Associated Letter: 690**

Response: Hunting lions with dogs is a legal activity regulated by the New Mexico Department of Game and Fish. We acknowledge the commenter's opinion.

Comment 70: The Gila forest draft plans must provide for fishing upgrades. **Associated Letter: 698**

Response: The plan supports high-quality fishing opportunities with desired conditions and objectives for Riparian and Aquatic Ecosystems and Wildlife, Fish, and Plants.

Comment 71: Commenter is concerned that the issue of rangeland degradation is being shunted to other agencies and quotes from the draft EIS: "The state Department of Game and Fish manage large elk herds across the Gila NF and the surrounding landscape. Competition for forage between elk and livestock is having a detrimental effect on the soil and watershed condition in many locations across Arizona and New Mexico. As elk are an important game species that bring substantial revenue to state and local economies, current game management is unlikely to change. This means that even with adaptive livestock grazing management, soil and watershed condition will not improve substantially in these areas."

Commenter acknowledges that the New Mexico Department of Game and Fish has authority over the state's elk and other game populations but states the Forest Service remains responsible for wildlife habitat. Commenter states it is simply unacceptable for forest staff to wash their hands of any accountability for the condition of elk habitat, that the conclusion reached in the draft analysis is based on a misunderstanding of the law, and that planning staff are using this to limit the range of alternatives, in violation of NEPA. Commenter suggests forest staff must work more closely with the New Mexico Department of Game and Fish to address habitat degradation in elk habitat and if that doesn't work then livestock numbers must be reduced in these allotments. **Associated Letter: 712**

Response: We can understand how someone could reach these conclusions, although that wasn't the intent. This statement has been reworded for clarity and in response to comment.

Specific Species or Types of Species

Bats

Comment 72: Commenters recommend the following best management practices for bats as they relate to riparian and aquatic ecosystems:

1) All pooled water sources, both natural and constructed, regardless of size, as well as known bat roosts, should be identified and mapped at a watershed and landscape scale to assist with habitat quality assessments and the prioritization of sites for restoration.

2) Where possible, restore or repair damaged natural wetlands, constructed ponds, springs, cienegas, and create areas of open water to improve water and foraging resources for bats and other wildlife.

3) Irrigation ditches and moved streams are good indicators for where open-water wetlands may be restored to improve habitat for bats and a diversity of animal and plant species. Irrigation ditches

become drainage ditches when no longer being used to move water to fields. These old irrigation ditches divert runoff, eliminate standing water, and lower the elevation of groundwater.

4) Evaluate and minimize the impacts of activities such as roads, trails, off-highway vehicles, grazing, and water withdrawal on all springs, seeps, wetlands, and other natural water sources.

5) Existing infrastructure at spring sites that are developed should be improved and maintained to ensure water conservation and availability to wildlife, this includes fencing to manage access by livestock and ungulates, spring boxes, and drinkers.

6) The pooled water and snags created by beaver dams greatly benefit bat habitat. Consider the reintroduction of beaver, restoring willows in riparian areas, and the construction of beaver dam analogs for restoring and increasing the abundance of pooled water.

7) Use proven techniques to create naturally functioning wetlands and associated pooled water sources using either surface water (rain runoff, snow melt) or ground water.

8) The presence of road ruts and sedges provides strong indication where areas of open water may be established to improve habitat for bats.

Associated Letter: 678

Response: Suggestions 1 through 3 and 5 through 8 are project-level considerations that would be in-line with desired conditions and objectives for Riparian and Aquatic Ecosystems. Suggestion 4 would be part of the National Environmental Policy Act procedure for road and trail projects, but as plan direction, it compels action which plan components cannot do. The plan does have supporting plan components that address suggestion 5 in the Roads, Sustainable Recreation and Livestock Grazing sections. A discussion relevant to suggestion 5 has been added to the final Livestock and Wildlife management approach in the Livestock Grazing section of the plan. Beavers, their dams, and beaver dam analogs have their place in ecosystem restoration and adaptation. Tradeoffs are discussed in the final plan-wide management approach Change and Uncertainty as item 2 under the Adaptation, Natural Systems subheadings. Beavers are also discussed in the final plan-wide management approach Vegetation Management Tools. The plan provides for the ecological conditions beavers need in the Riparian and Aquatic Ecosystems desired conditions and beaver are specifically mentioned in 6th level watershed DCs3 and 4. Suggestion 7 would be part of the standard operating procedure in project-level planning and design, and suggestion 8 could be one of the factors informing site selection for projects.

Comment 73: Commenter supports the plan's approach to restoring natural fire regimes because bats may benefit from healthy ecosystems and fire helps provide for continuous recruitment of roosting sites. However, commenter is concerned about short-term detrimental effects because prescribed fire can eliminate some snags and stumps used as roosts and if this happens when bats are rearing young (April-July) or during deep hibernation (mid-winter). Commenter recommends that the plan require raked firebreaks around the largest snags or spraying the bases with retardant to protect them and survey the area for maternity roosts and hibernacula prior to initiating prescribed fire. Further, commenter requests that if roosts are present, that prescribed fire be postponed. **Associated Letter: 678**

Response: Prescribed fire often takes place while bats are rearing their young, which corresponds to the historic fire season under which these species evolved. Bats may also use several different maternity roosts over this period, making this suggestion difficult to implement. Wildlife surveys that take place prior to prescribed fires, may result in identification of maternity roots, which the biologist would then be able to make recommendations about site preparation as appropriate. Prescribed fire, other than pile burning, typically does not occur during mid-winter, when ambient air temperatures slow bats' ability to wake from torpor and move out of the way if threatened.

Comment 74: Commenter recommends that activities involving tree cutting consider roosting habitat requirements for bats because the most important thing to maintain bat populations is a continuous supply of potential roost trees. These include snags in various stages of deterioration (especially those in early stages of decay), hollow trees and the green and dying trees that can provide future snags. Commenter notes that needs vary by species, geographic area, and climate but that bats that roost under the bark or in crevices and cavities of dead trees frequently select the largest available snags and that this is especially true for maternity colonies since larger snags retain the sun's warmth better. Commenter states snag-roosting bats prefer trees in the earlier stages of decay with ample amounts of loose, peeling bark. Further, bats that roost under bark, in cavities or in lightning-strike crevices in dead trees also use these same features in healthy living trees or those that are damaged or dying.

Commenter states good roost habitat is often located along the edges of forests or in open forest stands where they generally receive greater solar heating and have a less-obstructed flight approach. In landscapes with steeper topography and cold air drainage, commenter reports that evidence suggests that upland and ridge-top trees may be used as roosts more frequently than those in valleys and canyon bottoms. **Associated Letter: 678**

Response: The plan's desired conditions for vegetation communities promotes structural diversity across the landscape and continuous recruitment of old-growth components such as large and old trees and snags. Site-specific topographic features will be considered at the project level.

Comment 75: Commenter requests that the needs of bats and other wildlife be considered when water sources for livestock grazing are developed or installed. Commenter states that most bat species need open water surfaces at least 10 feet long by no less than 2.5 feet wide. However, commenter notes that some species require tanks or rivers with stretches of open water at least 50 feet long, and a few need 100 feet. Cross-braces and fencing over troughs or other obstructions over the water may prevent even the most maneuverable species from drinking and commenter requests these be spaced such that most of the water surface is unobstructed still meeting livestock management objectives. **Associated Letter: 678**

Response: A discussion about bats and livestock watering infrastructure has been added to the final Livestock and Wildlife management approach.

Beaver

Comment 76: There is a concern that the draft documents contain almost no mention of beaver in any context, the planning team overlooked the tremendous importance of beaver in the ecosystem, and missed a great opportunity to further, achieve, or satisfy many of the desired conditions and objectives in the draft plan by using beaver as a primary restoration tool. Commenters provide a list of supporting reasons for developing plan content specific to beaver and make the following recommendations for additions or changes to the draft plan.

1) The Management Approach to Restoration should include restoration of keystone species to the landscape as a biological restoration tool.

2) The Water Quality section should

    a. Discuss the current water quality of our streams such as which streams are impaired according to the New Mexico Environment Department.

    b. Include objectives to improve water quality in impaired streams including the use of cottonwood and willow plantings to support habitat restoration for beaver.

    c. Include language for restoring beaver to near historic levels as the best tool to improve water quality in the Ecosystem Services management approach.

3) The Watersheds section should include a standard that emphasizes the restoration of beaver habitat as a primary goal in Riparian Management Zones to acknowledge the absence of beaver is one of the root causes of watershed degradation.

4) The Riparian and Aquatic Ecosystems section should:

    a. Add the loss of beaver in historic populations to the list of reasons riparian ecosystems are not in proper functioning condition

    b. Add an assessment of suitable beaver habitat to the list of items to be considered with developing the appropriate Riparian Management Zone at the project level.

    c. Add a desired condition stating, "Riparian areas contain historic or near-historic populations of beaver in most potential habitat."

    d. Add an objective stating "Develop an analysis method for ascertaining potential habitat for beaver along Riparian Management Zones." This methodology should consider stream gradient, presence or need for woody riparian obligate species, conflicting uses and other factors.

    e. Add a guideline that emphasizes the return of beaver through restoring beaver habitat as a prioritized management and project activity.

5) Appendix B should add "instream reaches assessed as potential beaver habitat will prioritize projects incorporating habitat improvement for beaver over those that do not" under the Riparian and Aquatic Ecosystem Restoration heading.

Another commenter would like to see a management approach that states "Work with New Mexico Department of Game and Fish and other organizations to increase beaver populations in areas of suitable habitat over the life of the plan." **Associated Letters: 612, 672, and 683**

Response: Beavers contribute to biodiversity. Beavers, their dams, and beaver dam analogs have their place in ecosystem restoration and adaptation. Tradeoffs are discussed in the final plan-wide management approach Change and Uncertainty as item 2 under the Adaptation, Natural Systems subheadings. Beavers are also discussed in the final plan-wide management approach Vegetation Management Tools (draft Management Approach to Restoration). The plan provides for the ecological conditions beavers need in the Riparian and Aquatic Ecosystems desired conditions and beaver are specifically mentioned in 6th level watershed DCs3 and 4.

Regarding the second suggestion, the current water quality status of the forest's streams is summarized in the Affected Environment of the FEIS, which has changed substantially since it was discussed in detail in the assessment report. These changes are due to the amount of inventory and monitoring work the New Mexico Environment Department's Surface Water Quality Bureau has completed since 2017. This information is likely to change over the life of the plan. Restoration objectives that will benefit water quality as described by the commenter are included in the Watersheds (O1), Riparian and Aquatic Ecosystems (O1) and Wildlife, Fish, and Plants (O3 and 4) sections of the plan. The most effective method to improve water quality depends on the impairment and its probable causes. Beaver reintroductions or beaver dam analogs are two tools that may help accomplish these improvements in some cases. The Ecosystem Services management approaches that were found in the Water Quality and other sections of the draft plan have been consolidated and the content revised in a plan-wide Ecosystem Services management approach. After further review, the draft management approaches did not accomplish the intent that inspired them.

Regarding the third suggestion, the absence of beaver in watersheds that once contained them would help those watersheds move toward desired conditions, but their absence is not necessarily the root cause of degradation. For example, large extents of high-severity fire in the upper watershed due to tree densities that

exceed what the watershed's component ecosystems can support is difficult to tie to the absence of beaver. Standards are mandatory constraints on projects and activities, they cannot be used to establish priorities or goals. Beaver habitat would be restored by projects fulfilling the objectives listed in the preceding paragraph.

Regarding the fourth suggestion, the way that the direction in the Riparian and Aquatic Ecosystems section of the final plan provides for beaver as previously identified in this response to comment. The criteria for delineating riparian management zones are taken directly from the final Forest Service directives implementing the 2012 Planning Rule (FSH 1909.12 chapter 20 section 23.11e). Riparian management zones containing, or with the potential to contain suitable beaver habitat would consider reintroduction, beaver dam analogs, or both at the project level. Habitat assessment methodology is beyond the scope of the forest plan and is not appropriate for a plan objective. However, the New Mexico Wetlands Program has a methodology and a product that may inform project-level ground truthing of suitable beaver habitat. While we recognize the ecological importance of beaver, there may be other factors that need to be considered when prioritizing restoration projects. Restricting management's ability to respond to funding and partnership opportunities with rigid priorities would be counterproductive to reaching the integrated desired conditions of the plan.

Lastly, the proposed and possible management actions appendix has been revised because the content was based on and thus redundant with the plan's management approaches. The suggestion provided by the commenter uses language that creates the appearance of a commitment. Proposed and possible management actions, and management approaches, are not commitments.

Bighorn Sheep

Comment 77: Commenter is concerned that their previously submitted comments about bighorn sheep and why they should be on the Species of Conservation Concern list have been summarily ignored. Commenter suggests the planning team must revisit the evaluation of bighorn sheep, include it as a Species of Conservation Concern, and amend the plan to include measures that increase the likelihood the bighorn sheep will persist on the forest over the long term.

Commenter asserts that the exclusion of population data prior to 2004 and after 2014 masks the true trends, and one good year does not support a determination of an upward trend. Commenter also asserts that just because the species occurs at numbers that provide hunting opportunities is not a justification to exclude it from the Species of Conservation Concern list because the same can be said in four other states where bighorn sheep have Species of Conservation Concern status.

Commenter is also concerned that domestic sheep and goats on adjacent lands under other jurisdictions were not evaluated as a threat because dozens of operations occur on private lands within distances they could travel. Commenter notes that connectivity between herds on the adjacent Apache-Sitgreaves National Forests in Arizona and the Gila National Forest has been demonstrated. Commenter asserts that domestic sheep that grazed at a ranch on the San Francisco River northeast of Clifton, Arizona, pose a high risk to the forest's herds and that a 2012 census report indicates there are dozens of farms with domestic sheep or goats in the New Mexico counties the forest is within.

Commenter discusses the requirements of the 2012 Planning Rule and agency directives related to Species of Conservation Concern, the history of bighorn sheep populations, and the issue of pneumonia. Commenter asserts disease-related declines have occurred within the herds that occupy the Gila National Forest and notes state wildlife agencies have become reluctant to establish new populations or augment existing ones because of what has been learned about pneumonia and its transmission. Commenter states: "Despite several augmentations, the Turkey Creek herd remained below 100 animals for more than a decade and is unlikely to persist without significant management intervention or additional augmentations. The San Francisco River population has been decimated by disease events in recent years, falling to approximately 25 animals in 2012, down from a high of 125 just 7 years before. Both herds are known to carry pathogens originating in domestic livestock, which can induce a die-off years after interspecies contact occurs." **Associated Letter: 713**

Response: We did not ignore the comments you submitted during scoping. They were reviewed and considered, based on their merits, along with all the other scoping comments. Scoping comments inform the development of alternatives and are typically not responded to in writing like those received during the comment period on the draft plan and EIS. Planning biologists reviewed your comments and re-evaluated bighorn sheep for inclusion as a species of conservation concern. The re-evaluation determined bighorn sheep do not meet the criteria for species of conservation concern on the Gila National Forest. Bighorn sheep populations on the Gila National Forest fluctuate and are managed at numbers that allow them to be a huntable species**.** However, disease remains a management challenge and the plan does contain plan components aimed at reducing disease transmission from domestic sheep and goats to bighorn sheep.

Comment 78: Commenter states that recreationists can alter the landscape use patterns and foraging efficiency of bighorn sheep populations, disturbing and displacing animals from optimal habitat areas but this was not considered as a threat in the Species of Conservation Concern evaluation or in the environmental analysis. Commenter asks: "How are existing trails impacting bighorn sheep lambing areas? Are popular river landings displacing wildlife in areas with limited water? Is increased motorized use likely to disturb bighorn sheep? Are additional standards necessary to prevent conflicts with recreational users?" **Associated Letter: 713**

Response: Recreationists can have impacts on wildlife, including bighorn sheep. Threats are considered during the process of identifying species of conservation concern. Where best available scientific information about a native species, including information about threats, is sufficient to indicate a substantial concern about the species capability to persist in the long term in the plan area, that species is identified as a species of conservation concern (FSH 1909.12 chapter 10 section 12.52c). Bighorn sheep were not identified as a species of conservation concern. The analysis is focused on the effects of plan direction on species recognized under the Endangered Species Act and species of conservation concern (at-risk species). At-risk species, the ecological conditions they require, threats to their persistence, and the plan direction that provides the ecological conditions and addresses threats can be found in appendix G to the FEIS (draft appendix D).

Comment 79: Commenter asserts cattle grazing has the potential to negatively impact bighorn populations because cattle are known to carry pathogens that can be transmitted to bighorn sheep; cattle may displace bighorn sheep from optimal habitats, reducing foraging efficiency; and cattle contribute to the spread of noxious weeds that outcompete native vegetation, degrade bighorn sheep habitat, and increase fire risk. Commenter reviewed the scientific documentation of disease transmission between cattle and bighorn sheep and states concern that cattle are authorized on the Gila National Forest in almost all areas occupied by bighorn sheep and on adjacent lands under other jurisdictions. **Associated Letter: 713**

Response: There is one published study from one event in Colorado that suggests cattle may transmit lethal pneumonia-causing pathogens to bighorn sheep (Wolfe et al. 2010); however, there were several contributing factors. According to the article, a local rancher had observed bighorn sheep coming onto his private land and into his cattle feed lines for about 15 years, presumably due to the limited winter range of the bighorn herd. The event happened after a record-breaking winter, during which the intensity and duration of interactions between the cattle and the bighorn sheep in the feed line both increased. We could find no other studies, and the commenter did not provide additional studies linking lethal disease transmission to bighorn sheep from cattle. This study is not conclusive evidence that this is a threat that deserves the same treatment as domestic sheep, and this situation is highly unlikely to play out in southwestern New Mexico. The two bighorn sheep herds in the Gila National Forest are located along the San Francisco and Gila Rivers and probably rely on those streams for most of their water needs (and potentially Turkey Creek). All these streams are either excluded from permitted livestock grazing or closed to livestock grazing. This diminishes the possibility that bighorn sheep and permitted livestock congregate at the waters used by the sheep. Wind, water, people, cattle and other domestic livestock, and wildlife can contribute to the spread of noxious weeds.

Without greater scientific evidence documenting a bona fide threat to bighorn sheep from cattle, the forest considered, but did not include plan components to restrict cattle in bighorn habitat. The plan does contain multiple plan components addressing the spread and treatment of noxious weeds and has the authority to manage grazing permits as needed to address any emerging threats to wildlife species.

Literature Cited in Response:

Wolfe, L.L., B. Diamond, T.R. Spraker, M.A. Sirochman, D.P. Walsh, C.M. Machin, D.J. Bade, and M.W. Miller. 2010. Bighorn Sheep Die-off in Southern Colorado Involving a *Pasteurellaceae* Strain that May Have Originated from Syntopic Cattle. *Journal of Wildlife Diseases* 46(4). pp. 1262-1268.

Suggested Standards

Comment 80: Commenter suggests the following be added as plan standards to support the persistence of bighorn sheep:

1) The use of pack goats within 10 miles of occupied or historic bighorn sheep habitat is prohibited.
2) The use of rented or leased pack goats is not permitted on the Gila National Forest.
3) The development of roads, recreational facilities, and trails shall occur with consideration of bighorn sheep habitat needs. Roads and trails will not be sited in bighorn sheep lambing areas, and existing developments in these areas shall be prioritized for removal.
4) Bighorn sheep water resources shall be mapped. Cattle use in areas of limited water availability will be prohibited to prevent the displacement of wildlife.
5) Areas of established invasive vegetation will be mapped. Those occurring in areas of critical bighorn sheep habitat shall be prioritized for removal.
6) Surface-disturbing activities in critical bighorn sheep habitat shall be prioritized for removal.
7) Full NEPA analysis will be conducted on all grazing allotments during permit renewals, or at least once every 10 years.

Associated Letter: 713

Response: Regarding suggestions 1 and 2, please refer to response to comment 4 under the Recreation Special Uses heading in this appendix. Regarding the first part of suggestion 3, the plan provides the necessary direction to address project-level wildlife issues that may arise, including any projects that may include bighorn sheep habitat (Roads DCs2 and 4, and G1, Facilities DC2 and G2, final Sustainable Recreation DC12 and G4). The last part of this suggested standard would compel action, which forest plan standards cannot do (FSH 1909.12 chapter 20 section 22.13). This also applies to the first part of suggestion 4. The second part of suggestion 4 could be an allotment-level consideration as needed, but it is not a foregone conclusion that cattle and livestock cannot coexist (see also response to comment 79 above). The two bighorn sheep herds in the Gila National Forest are located along the San Francisco and Gila Rivers and probably rely on those streams for most of their water needs (and potentially Turkey Creek). All these streams are either excluded from permitted livestock grazing or closed to livestock grazing. This diminishes the possibility that bighorn sheep and permitted livestock congregate at the waters used by the sheep.

If there are issues, the specific site and circumstances may provide several different management options that don't involve a decision to close a pasture or allotment. Invasive plant surveys are ongoing. The Survey and Documentation Strategy management approach in the Non-native Invasive Species section of the plan discusses priority areas for surveys not associated with project-level work. Suggestion 6 is not practicable, as it would preclude fire management activities. Constraining management in this way could have unanticipated adverse consequences. Finally, a sufficiency review to determine whether there is a need for change in current

management is often conducted prior to initiating a new National Environmental Policy Act decision-making process. If there is a need for change, then a full NEPA analysis would be conducted. Law, regulation, and policy provide for this, and the suggested plan standard could put an unnecessary burden on taxpayers and would reduce the resources available to get necessary work done.

At-Risk Species

General

Comment 81: Commenter states that they find the use of the terms "at-risk species," "rare and endemic species," "Forester's Sensitive Species," and "Species of Conservation Concern" very confusing as they appear to be used interchangeably yet have differing management directives. Commenter points to page 255 of the draft EIS and requests an explanation of the differences between the Regional Forester's Sensitive Species list and the Species of Conservation Concern list and how those lists were generated. Commenter suggests that if the basis for inclusion on the list is population trends, it will need to collect population trend data, which the Forest Service doesn't currently do for at-risk plants. **Associated Letter: 47**

Response: As described on page 171 of the draft EIS, at-risk species include those federally listed under the Endangered Species Act and species of conservation concern. Rare and endemic species may or may not be federally listed and may or may not be species of conservation concern. The Regional Forester's Sensitive Species was a previous planning tool replaced by species of conservation concern. Rare and endemic species, the Regional Forester's Sensitive Species, along with species lists from a variety of other agencies and organizations were evaluated through the process outlined in the Forest Service Handbook 1909.12 chapter 10 section 12.5 and chapter 20 section 21.22a, to determine if they should be on the species of conservation concern list. The discussion of Regional Foresters Sensitive Species has been removed from the FEIS because it was not necessary, and it contributed to confusion.

Comment 82: Commenters are concerned that the draft documents fail to use the best available science regarding vulnerability to climate change in evaluating species for inclusion on the species of conservation concern list, which violates the planning rule. Commenters suggest planning staff need to revisit the list and work with the Regional Forester to provide a comprehensive assessment of all habitat-restricted, specialist species that are threatened with extinction due to climate-driven habitat loss. Commenters state this information should then be used to inform the final plan. Commenters state they made these same recommendations on the preliminary draft plan and in spite of the agency's own climate change vulnerability analysis that predicts massive tree mortality and a high likelihood that some forest types will be completely lost, no changes to the list or the plan were made.

Some commenters state: "We are experiencing a mass extinction event. While the draft plan acknowledges the vulnerability of high-elevation spruce-fir forests, its list of Species of Conservation Concern fails to include plants and animals that live only in this ecosystem. The plan exhibits a disconnect between ecosystem vulnerability and the actions required to mitigate the resultant loss of biodiversity."

Commenters assert the vulnerability assessment is an excellent foundation upon which to base future management direction and priorities. Commenters note that it is impractical and prohibitively expensive to intensively monitor all the individual species now at risk due to climate change, but they propose landscape-scale studies that focus on ecological processes and track the impact of climate change to relevant habitat types. Commenter states studies being conducted in the Jemez Mountains of the Santa Fe National Forest and the Valles Caldera National Preserve are highly recommended as model projects for tracking climate change impacts and the effectiveness of adaptive management protocols.

Commenters suggest that to comply with the National Environmental Policy Act, National Forest Management Act, and the 2012 Planning Rule, the final documents must explain:

1) How the plan would conserve habitat-restricted species that are highly vulnerable to climate-driven extirpation in the plan area this century.
2) How the plan would conserve the avian species that are at a high risk of losing a significant portion, if not all, of their range in the plan area over the next 70 years.
3) How the plan would conserve the avian species which Audubon Society's analysis found to be highly vulnerable to climate change.

Associated Letters: 57, 87, 70, 107, 167, 201, 482, 550, 579, 582, 601, 712, 728.1 through 728.433, and 729.1 through 729.15

Response:

The species of conservation concern list for the Gila National Forest includes several species that use or depend entirely upon spruce-fir and other vulnerable habitats. The plan conserves habitat-restricted species and birds, whether they are on the species of conservation concern list or not, with detailed, science-based desired conditions for vegetation communities, watersheds, and the habitat elements within those communities and watersheds. The plan also includes species- or guild-specific plan components as determined necessary (see appendix G to the FEIS).

Climate change information is one type of information considered when evaluating species for inclusion on the species of conservation concern list. The Climate Change Vulnerability Analysis for the Gila National Forest was one of the information sources we considered, as was the Audubon Society's analysis. The commenter suggesting we consider studies in the Jemez Mountains and the Valles Caldera did not provide those studies. We conferred with our counterparts in the Southwestern Regional Office and on the Santa Fe National Forest about these studies and no one knew what studies the comment might refer to based on the information provided in the comment letter.

While the long-term climate projections do indicate increased climate vulnerability for many species over time, the list of species of conservation concern were selected based on current (10 to 15 years) risks and threats and their ability to persist in the plan area. By design, the list of species of conservation concern can be updated at any time in response to changing conditions and new information. We expect the species of conservation concern list and plan components needed to provide for them to change and adapt to emerging needs and new information.

Comment 83: Commenter states that species are considered safe within the forest plan discussion because there is a generalized belief that most occur in wilderness areas. Commenter states this is contrary to current data that demonstrates many populations of species of conservation concern are located outside wilderness and further, that wilderness is no hedge against habitat disruption. Commenter states that most of the rare plants are restricted to narrowly distributed habitats and that some have such small distributions that they can be vulnerable to single extinction events such as those caused by major flooding, mega fires, invasive species, or predation. Commenter also states that habitat alteration due to road maintenance, recreation activities, climate change, resource extraction, and overgrazing are threats to rare plants and without specific management plans to protect and maintain important plant habitats, many botanical species of concern are at risk.

Commenter supports a comprehensive approach to maintaining viable populations of species of concern and supports botanical areas or management areas as just one aspect of protection. Commenter suggests specific species management plans may need to be developed and the Forest Service should not overlook the species of conservation concern that do not fall within the three management areas in Alternative 2-Proposed Action which are: *Physaria goodingii*, *Hexalectris arizonica*, *Trifolium mogollon* (*Trifolium longipes* ssp. *neurophyllum*), *Cypridpedium parviflorum* var. *pubescens*, *Cympoterus davidsonii*, *Pedicularis angustifolia*, *Adenophyllum wrightii*, *Asclepias viridis* and *Apacheria chiricahuensis*.

Commenter appreciates that the Forest Service re-listed, *Silene wrightii* as a species of conservation concern and that several of species they suggested species were added to the list including: *Hexalectris arizonica*, *Limosella pubiflora*, and *Euphorbia rayturneri*. **Associated Letter: 137**

Response: We recognize that there are populations of rare and endemic plant species, some of which are species of conservation concern, outside of wilderness areas. We also agree that wilderness habitat is no less vulnerable to disruption, especially disruption due to climate change and climate-driven alterations in disturbance regimes. Please refer to response to comment 1 under the Botanical Area heading in this appendix regarding that designation. We have not overlooked rare and endemic plants, whether they are on the species of conservation concern list or not, or whether they occur within or outside proposed botanical areas. These species are important wherever they occur. The draft and final plan contain direction that pertains to all rare and endemic plants, whether they are on the species of conservation concern list or not, that applies forestwide. At draft, that content was found under the heading Rare and Endemic Plants and Animal Species and Habitats. At final, it is found under the Wildlife, Fish, and Plants heading and contains revised language and additional plan components based on further review and in response to comments.

Comment 84: Commenter is concerned about fire in at-risk species habitat and requests an evaluation of whether this action would threaten endangered species. Commenter suggests decisions about prescribed fire should be made based on effects to endangered species and not benefits to other species or the overall ecological health of the forest. **Associated Letter: 44**

Response: This type of analysis is conducted at the project level when the potentially affected species can be identified based on the project area and proposed activities. In conjunction with this project-level analysis, we also consult with the U.S. Fish and Wildlife Service and incorporate recommended mitigation measures into our activities. As the Gila National Forest is a frequent-fire landscape, all native species evolved with fire. Many respond positively or are dependent on fire.

Comment 85: Commenter states that with 13 federally listed species and some 50 other species of concern, there is a unique opportunity to favor all wildlife species in the alternatives. Commenter asserts the agency doesn't have much choice but to comply with the Endangered Species Act, favoring those species in the plan regarding habitat, isolation, and disturbance. Commenter states it must be clear in the plan that killing a Mexican gray wolf is unacceptable and will be prosecuted. **Associated Letter: 561**

Response: It is clear in the law that killing a Mexican gray wolf for any reason other than that the animal is in the act of killing, wounding, or biting your cattle, sheep, horses, mules, or burros on your private or tribal land or in the defense of human life is not just unacceptable, but illegal. It is not necessary to reiterate this, or any of our other obligations and requirements under the Endangered Species Act in the plan. The effects of the alternatives on wildlife species are discussed in the FEIS.

Comment 86: Commenter points to pages 192 and 199 of the DEIS and the description of key ecological conditions for Chihuahua chub, Gila chub, Gila trout, loach minnow, and spikedace and states that the description does not include "…any specific conditions for loach minnow or spikedace. Loach minnow and spikedace live in habitats that are very different than other listed species. Unembedded riffle habitat is important for loach minnow and run and shoal habitat is important for spikedace. Key Ecological Conditions for Gila Trout should also include cold water temperatures." **Associated Letter: 151**

Response: The draft EIS did not discuss the specific needs of these fish species and the differences between those needs. Ecological conditions specific to each species can be found in appendix D to the FEIS.

Comment 87: Commenter requests the plan incorporate conservation measures for other bird species of concern such as the gray vireo, black-chinned sparrow, Virginia's warbler, Grace's warbler, Woodhouse's scrub jay, and juniper titmouse. Please also find species accounts and incorporate management

recommendations for other bird species of concern in New Mexico at http://avianconservationpartners-nm.org/. **Associated Letter: 183**

Response: The plan provides for the ecological conditions these and other bird species require through detailed, science-based desired conditions for vegetation communities, watersheds, and the habitat elements within these communities and watersheds.

Comment 88: Commenter states: "I like the Partners in Flight bird list. This needs to be used like a SCC or MIS list at the project level." **Associated Letter: 184**

Response: The species included in the Partners in Flight birds list were evaluated for inclusion as species of conservation concern. Biologists frequently use this list at the project level.

Comment 89: Commenter suggests that improving wilderness characteristics by increasing acres of wilderness benefits species of conservation concern by relying on fire, minimizing disturbance, and providing habitat connectivity. **Associated Letter: 233**

Response: The purpose of wilderness is the use and enjoyment of the American people. While there may be some secondary benefits to some species, it depends on a variety of factors. Please refer to response to comment 53 in the Wilderness section of this appendix.

Comment 90: Commenter suggests the plan needs to include extensive study of threatened species and that ecological integrity should be more important than economic use. **Associated Letter: 239**

Response: Study in threatened species and ecological integrity is important, as is economic use. The Forest Service has a research branch, but the National Forest System is not a research entity, and the plan provides strategic guidance for the management of those Federal public lands. National forests and grasslands rely on research from Forest Service research stations, universities, or other researchers for this type of study. We did conduct a species-level assessment and evaluation to develop the species of conservation concern list, which included consideration of the best available scientific information on each species. The 2012 Planning Rule requires plans to provide integrated resource management for multiple use (36 CFR 219.10) The preamble to the final rule states: "Under this final rule, ecological, social, and economic systems are recognized as interdependent, without one being prioritized over the other" (Federal Register Vol. 77, No. 68/Monday, April 9, 2012/Rules and Regulations page 212111).

Comment 91: Commenters state the plan should be a presentation of commitment and management direction to not engage in any activity that further threatens endangered species. Commenters observe endangered and threatened species are listed at various points throughout the plan but find it unclear what the management plan is to protect these species from human activities. Commenters quote from the draft plan's summary of the needs for change, stating that it is unacceptable to mention endangered species as a management challenge and not provide the solutions. **Associated Letters: 567 and 663**

Response: The plan incorporates all approved recovery plans for federally listed species by reference (Wildlife, Fish, and Plants draft G3 and final S4). Project-level environmental analysis and consultation with the U.S. Fish and Wildlife Service will ensure projects minimize or eliminate effects of the project on these species.

Comment 92: Commenter requests the plan include background information on listed species and monitoring reports submitted to the U.S. Fish and Wildlife Service showing population information, change in occupied habitat, and habitat condition. Commenter states this information should be updated annually to track the effectiveness of the recovery plan and the Forest Service's commitment to the recovery plan. **Associated Letter: 612**

Response: Including this information in the background information of the plan and updating it annually would be unnecessary. The U.S. Fish and Wildlife Service maintains the data to track species recovery. The Endangered Species Act requires the agency's commitment to recovery plans, which is demonstrated by adherence to the processes dictated in the Act, as well as National Environmental Policy Act procedures.

Comment 93: Commenters are concerned that the draft plan fails to protect plant Species of Conservation Concern outside the proposed botanical areas referred to as Rare and Endemic Vegetation Management Areas in the draft. Further, commenters are concerned that the draft documents do not evaluate species-specific threats or provide specific plan components to protect their populations, some of which are just single known locations. Commenter states that more than half of the rare plants on the species of conservation concern list occur outside of the proposed botanical areas. Commenters suggest the final documents must incorporate the best available science provided by the Gila Native Plant Society and the New Mexico Rare Plant Program to provide accurate baseline conditions and plan components that will maintain viable populations of each of these species.

Commenters are concerned that the draft documents deny species of conservation concern status for rare plants that need protections and species-specific plan components. Commenters state there were seven rare plant species previously identified as species of conservation concern that should not have been removed from the list due to lack of data on their scarcity. Commenters assert the only valid reason to remove them from the list would be new data reflecting the population is more stable or widespread than previously believed. Commenters state that the initial species of conservation concern list developed as part of the assessment was based on data from the New Mexico Rare Plant Technical Council from 1999, which is more than 15 years old and no longer represents the best available scientific information. **Associated Letters: 712**

Response: Regarding provisions for rare and endemic plant species, whether they are considered species of conservation concern or not, please refer to response to comment 92 in this section of this appendix. Regarding botanical areas, please refer to response to comment 1 under the Botanical Area heading in this appendix. Appendix G to the FEIS identifies the species or guild-specific plan components that provide for species of conservation concern. The initial species of conservation concern list was developed based on that older data, because the newer data were not made available to us. Planning staff made repeated attempts to contact the State Botanist regarding newer data and information, but those attempts did not receive a positive response. When that report was made publicly available, it was reviewed for new information. We also received new information from other sources that prompted re-evaluation of several species and changes to the species of conservation concern list.

Comment 94: Commenters discuss the forest's biodiversity and state that the draft plan makes steps in the direction of sustaining that diversity but assert more must be done to satisfy National Forest Management Act and Endangered Species Act requirements. Further, commenters state that the plan must include plan components to help recover native species that used to be present on the Gila National Forest but aren't anymore, including: beautiful shiner (*Cyprinella formosa*, Threatened), Rio Grande cutthroat trout (*Oncorhynchus clarkii virginalis*), Gila topminnow (*Poeciliopsis occidentalis*, Endangered), river otter (*Lontra canadensis*), meadow vole (*Microtus pennsylvanicus modestus*), black-footed ferret (*Mustela nigripes*), and desert bighorn sheep (*Ovis canadensis mexicana*). Commenters recommend that as a start, critical habitat for federally listed aquatic at-risk species should be designated as management areas within the plan, as those areas should have unique plan direction with a standard mandating that primary constituent habitat elements be provided, special management considerations and protections be followed, and recovery plan activities be conducted. **Associated Letter: 712**

Response: Repatriation of extirpated species is an interagency effort that would be supported by plan direction under all alternatives. The Rio Grande cutthroat trout is considered an at-risk species for the Gila National Forest, and there is a plan to reintroduce them to their native streams on the Gila National Forest. Critical habitat is designated by the U.S. Fish and Wildlife Service. The plan incorporates approved U.S. Fish

and Wildlife Service recovery plans by reference (Wildlife, Fish, and Plants draft G3 and final S4). Those recovery plans provide direction about primary constituent habitat elements, special management considerations and protections.

Comment 95: Commenters state: "The Forest Service should make its Biological Evaluation and Biological Assessment available to the public and should also promptly post the Biological Opinion from USFWS on the Gila NF's plan revision website as soon as it is completed and received by the Forest. These documents should be made available to the public for comment before the release of the draft Record of Decision. Also, the effects of the plan on Regional Forest Sensitive Species must be assessed in the Biological Evaluation."
Associated Letter: 712

Response: Planning documents, including the Biological Opinion and draft Record of Decision, will be made available to the public at one time when agency and departmental administrative approval and clearance processes are completed.

Comment 96: Commenters assert the draft EIS fails to take a hard look at the draft plan's effects on at-risk species and that the determination of no adverse effect is arbitrary and capricious. Commenters state that to contribute to the recovery of federally listed, proposed, or candidate species and maintain the viability of species of conservation concern, the plan must have significant beneficial effects and minimize adverse effects to the greatest extent possible. Commenters suggest the effects analysis must be more than a subjective, qualitative, and comparative estimation and include in-depth analyses to demonstrate the plan components meet the planning rule's diversity requirements. Commenters state the analysis must properly characterize what the plan components direct management to do and how specific plan components affect each ecological condition needed by each at-risk species individually.

Commenters recommend that a supplemental or revised draft be prepared and released for public comment. Commenters recommend this document provide a logic trail for each species from its necessary ecological conditions to specific plan components to conditions that would result from the plan to the legal sufficiency of those conditions. Further, commenters assert that the environmental analysis must make a clear connection between National Environmental Policy Act procedures and National Forest Management Act requirements to satisfy the planning rule and support the eventual decision documentation, which must explain how the plan complies with the viability requirement.

Commenters are concerned that the documentation of the analysis process in appendix D of the DEIS does not achieve the intended task because it only provides examples and does not distinguish the plan components that are relevant to specific species, individually. Commenters assert it does not support the claim that the draft plan meets planning rule requirements. Commenters do not oppose grouping species by ecosystem characteristic and having plan components that apply to multiple species, but they request an independent analysis for each at-risk species that shows how all the applicable plan components affect a particular species and add up to contributing to recovery and maintaining viability. Commenters provide the following example:

"The Assessment and DEIS state that the Gila woodpecker is associated with the Cottonwood/Willow Riparian ERU. Yet, the species is lumped in with at least 10 other ERUs, such as Spruce-fir Forest and Grassland, in the at-risk species crosswalk. This lack of clarity makes it impossible to distinguish which plan components apply to the Gila woodpecker. In other cases, where the species has been lumped in with others, there are plan components within the grouping categories that obviously do not apply. For example, Wildlife, Fish, and Plants Desired Conditions 9 and 11 pertaining to fish and Wildlife, Fish, and Plants Guideline 1c pertaining to northern goshawks clearly do not apply to the Gila woodpecker. In other cases, it is not clear why some plan components that Table 3 does not list as being associated with the woodpecker are not associated; for example, Wildlife, Fish, and Plants Objective 4 and Wildlife, Fish, and Plants Guideline 11 seem like they might also apply to the species."

Commenters are concerned about the lack of consistency in identifying and describing key ecological conditions and threats associated with at-risk species between the assessment, the effects analysis in volume 1 and the supporting documentation in appendix D of the DEIS and provide an example. Commenters are also concerned that the crosswalk does not distinguish between coarse-filter versus fine-filter plan components but lumps them all together, so it is not clear how planning staff are interpreting the difference between coarse and fine filter. Moreover, the crosswalk indicates that the Forest Service may be confusing fine-scale habitat components with fine-filter/species-specific plan components. Commenters request clarification be provided in subsequent documents. **Associated Letter: 712**

Response: The level of analysis provided in the draft and FEIS is appropriate for the programmatic nature of the plan. The final analysis includes substantial reorganization and revisions in response to comments, for clarity, to incorporate the outcomes of consultation with the U.S. Fish and Wildlife Service and better connect the Wildlife, Fish, and Plants analysis with the Upland Vegetation, Fire Ecology and Fuels analysis. Appendix G to the FEIS has also been reorganized and revised in response to comments, for clarity, and to reflect changes in plan components made between draft and final. It now makes a distinction between coarse- and fine-filter components.

Comment 97: Commenters are concerned that the draft plan relies too heavily on desired conditions, which are aspirational, and suggest that to meet the planning rule requirements for at-risk species more enforceable standards and guidelines must be provided. Commenter states that while the planning rule discourages movement away from desired conditions and objectives, there is no requirement that they actually be achieved, which is not acknowledged in the environmental analysis and should be. Commenters note that the planning rule advises the use of standards and guidelines to meet applicable legal requirements like species persistence and it is arbitrary not to include them in such instances. Commenters recommend places where additional plan standards and guidelines are necessary and request that planning staff take another look at each at-risk species to ensure there are sufficient standards and guidelines to protect them from threats and promote recovery and persistence. **Associated Letter: 712**

Response: Chapter 1 of the plan describes each type of plan component and what they mean in terms of management. There is no requirement that desired conditions be achieved within the life of the plan, but management is directed toward those desired conditions. The plan contains many standards and guidelines to promote movement toward desired conditions, including the habitat conditions that promote the recovery and persistence of at-risk species as documented in appendix G to the FEIS. Changes to plan components after further review and in response to comment are summarized in appendix B to the FEIS.

Comment 98: Commenters are concerned that the draft plan lacks some essential species-specific (fine-filter) plan components for at-risk species to meet the requirements of the planning rule. Commenters discuss a summary literature review about the deficiencies of the 2012 Planning Rule's wildlife requirements and state: "The best available scientific information on the coarse-filter/fine-filter issue makes a compelling argument that management planning for at-risk species based primarily on coarse-filter provisions is not adequate." Commenters suggest that the best available science recommends several management provisions be included in plans, such as, species-level monitoring that includes "trigger points so that significant declines in either focal species or species of conservation concern would initiate reviews of management policies "and the development of enforceable standards for wildlife protection." Commenters assert that habitat-related direction may be insufficient for many reasons and recommend plan components that address threats like human persecution of Mexican gray wolf and Gunnison's prairie dog. Commenters provide additional examples but state that these are just representative of a systemic problem with the draft plan. **Associated Letter: 712**

Response: The plan includes species-level monitoring for focal species, and other species-level monitoring occurs independently of the plan as well. There is often insufficient scientific information upon which to create ecologically meaningful trigger points. However, the trigger point for plan monitoring is a trend toward

or away from desired conditions. A trend away from desired conditions indicates a need to review plan direction. The Forest Service is responsible for managing habitat to provide for the persistence of species on national forest system lands. The New Mexico Department of Game and Fish and the U.S. Fish and Wildlife Service are the lead agencies responsible for managing wildlife populations in New Mexico. Take or harm of federally listed species such as Mexican gray wolf is against federal law. Gunnison's prairie dog is a legally hunted non-game species and restricting its "persecution" is not within the authority of the Forest Service.' The additional examples discussed by the commenter are addressed under their respective species headings in the subsections that follow this General subsection.

Comment 99: Commenter points to plan components for Cave and Abandoned Mine Lands intended to protect roosts for the lesser long-nosed bat provide and states that it is helpful when the plan indicates which components are associated with specific species. Commenter would like to see more of this. **Associated Letter: 712**

Response: We acknowledge the commenter's preference. While there are additional plan components that reference specific species, it is not always necessary or efficient to do so.

Comment 100: Commenters are concerned that the draft documents fail to recognize the best available science identifying livestock grazing as a threat to at-risk species, particularly riparian and aquatic species. Commenters assert that instead of disclosing the harmful effects of livestock grazing, the draft analysis places them under the category of "unauthorized use" and dismisses these impacts as the result of illegal activities that are not subject to forest plan oversight. Commenters observe that the draft documents repeatedly blame undesirable ecological changes on "past overgrazing" but does not recognize current grazing is incompatible with the conservation of native species.

Commenters point to a 2017 report by the Center for Biological Diversity that documented widespread and ongoing destruction of riparian habitat by livestock, including permitted livestock with brands and ear-tags, and a subsequent lawsuit. Commenters suggest the plan should include components to address the impacts of livestock grazing on wildlife, including illegal activities. Commenters point to numerous scientific articles, conservation assessments, species recovery plans, listing petitions, agency documents, and other literature that have asserted unequivocally that livestock grazing is a threat to many aquatic and riparian-dependent species.

Commenters recommend that any subsequent versions of the documents must disclose baseline conditions of habitat degradation caused by any form of livestock grazing and must address the abundant best available science, which supports ending riparian grazing and reducing upland stocking levels. Commenters recommend the agency abandon the use of the term "unauthorized use" and take full responsibility for protecting habitat and conserving species of conservation concern under the Endangered Species Act's "duty to conserve" and planning rule requirements. **Associated Comments: 712**

Response: Illegal activity of any kind is an implementation, compliance, and enforcement issue, not a planning issue. The draft and final EIS both identify livestock grazing that is not compatible with plan direction as a threat to many at-risk species. The effects of livestock grazing depend on how it is managed. The purpose of the EIS is to disclose and analyze the effects of plan direction and compare differences between alternatives. Therefore, compliance with the plan is a necessary analysis assumption. Livestock grazing would be managed to move toward the plan's desired conditions, including those for riparian and aquatic ecosystems and their dependent species. The plan incorporates U.S. Fish and Wildlife Service recovery plans by reference (Wildlife, Fish, and Plants draft G3 and final S4). About livestock grazing and riparian areas, please see response to comment 1 under the Riparian and Aquatic Ecosystems heading in this appendix. Adjustments in stocking levels are a tool that would continue to be used at the allotment-level to maintain or achieve desired conditions.

Comment 101: Commenter notes the presence of unique endangered species within the forest and suggests the Forest Service should coordinate with the Department of Game and Fish and the Fish and Wildlife Service to assure their preservation is a top priority. **Associated Letter: 728.322**

Response: The Forest Service routinely coordinates with both agencies to conserve and recover endangered species and will continue to do so.

Comment 102: Commenter recommends adding threats for "Southwest willow flycatcher and Yellow-billed cuckoo should also include traffic noise, and loss of habitat due to drought, water diversion or groundwater pumping, invasive non-native plants, and grazing." **Associated Letter: 151**

Response: These threats are included in appendix G to the FEIS.

Wright's dogweed

Comment 103: Commenter states it is unclear why Wright's dogweed (*Adenophyllum wrightii* var. *wrightii*) is considered at-risk. NatureServe ranks this variety G4T3 with occurrences in NM and AZ, as well as Chihuahua, Mexico. It is not considered rare by the New Mexico Rare Plant Technical Council and is not a New Mexico Rare Plant Conservation Strategy species. Commenter requests that in the absence of botanical expertise on the forest staff, the New Mexico Rare Plant Conservation Strategy Scorecard should be the source for the most up-to-date information on species considered rare and at-risk in New Mexico. **Associated Letter: 47**

Response: Wright's dogweed has been removed from the species of conservation concern list based on new information.

Erigeron scopulinus

Comment 104: Commenters are concerned that the best available science was not used to develop the species on conservation concern list and disagree with the removal of *Erigeron scopulinus*. Commenters state the information used from the New Mexico Rare Plant Technical Council was not the most current information and is more than 15 years old. Commenters state that no current research or data is given that would warrant removing this species and the only justification given in the final assessment report is that "current land uses pose no threat to the species because habitat is relatively inaccessible." Commenters assert this broad assumption about population density or health of the species is not based on any observable data, which violates the agency's duty to take a hard look at impacts and use the best available science.

Commenters note that according to the Gila's own location records, there are only seven known populations on the forest, the species is considered rare by the New Mexico Rare Plant Technical Council, is a New Mexico Rare Plant Conservation Strategy Species, and is listed as vulnerable by NatureServe (G3). It is significantly rarer than *Adenophyllum wrightii* and *Pedicularis angustifolia*, both of which are listed as at-risk. Commenters request that in the absence of botanical expertise on the forest staff, the New Mexico Rare Plant Conservation Strategy Scorecard should be the source for the most up-to-date information on species considered rare and at-risk in New Mexico. Commenters are concerned that the conservation community's repeated attempts to present valuable, accurate data and information to the Forest Service have been ignored or underutilized. **Associated Letters: 137 and 712**

Response: *Erigeron scopulinus* was evaluated for inclusion on the initial species of conservation concern list but was not selected (see appendix G to the final assessment report). Planning staff made repeated attempts to contact the State Botanist regarding newer data and information, but those attempts did not receive a positive response. When that report was made publicly available, it was reviewed for new information. We also received new information from other sources that prompted re-evaluation of several species and changes to the species of conservation concern list. *Adenophyllum wrightii* was removed from the initial list based on new information. *Pedicularis angustifolia* remains on the list as NatureServe lists it as a G2 (imperiled)

species. *Erigeron scopulinus* was not added to the revised species of conservation concern list. Despite a NatureServe ranking of G3 (vulnerable), the threats identified to its persistence, and the nature and location of its habitat on the Gila National Forest (see appendix G to the final assessment report), its persistence is not considered at risk on the Gila National Forest.

Ipomoea giliana

Comment 105: Commenter states that the habitat of Gila morning glory (*Ipomoea gilana*) is not nearly as steep as described, is accessible to livestock (plenty of forage), and contains plenty of fine fuels to carry fire. Commenter states known sites are located immediately adjacent to a dirt road and are therefore susceptible to impacts from the construction of fire breaks. Further, commenter notes that NatureServe ranks this species critically imperiled (G1/S1), and it should be included as a species of conservation concern. **Associated Letter: 47**

Response: This species was not described in the literature until Keith and others reported it in 2017. We did not have access to that report until after the assessment report with the initial species of conservation concern list was published. The NatureServe ranking was established well after the initial list was submitted to the Regional Forester, and after the draft documents were released to the public. This species has been added to the species of conservation concern list. there are several plan components that contribute to the persistence of the species (see appendix G) including the Wildlife, Fish, and Plants desired condition 4 "The locations of rare and endemic plant and animal species, habitat requirements, abundance, threats, and responses to management are known."

Packera cardamine

Comment 106: Commenter suggests heartleaf groundsel (*Packera cardamine*) should be a species of conservation concern because it is documented in decline on the Gila National Forest. **Associated Letter: 47**

Response: This species was added to the species of conservation concern list based on information we did not have when the initial list was developed.

Pedicularis angustifolia

Comment 107: Commenter states that they don't understand why this species is at-risk. **Associated Letter: 47**

Response: This species is on the species of conservation concern list because of its NatureServe ranking (G2-Imperiled).

Rumex orthoneurus

Comment 108: Commenters assert that the decision to drop *Rumex orthoneurus* from the species of conservation concern list is based on speculative assumptions, rather than monitoring data. Commenters state that the data do not support the statement in the final assessment report that this plant is "relatively well distributed." Commenters also note that the assessment report lists the habitat as "riparian" with an associated low departure from historical conditions, but this species is actually found in high elevation wet meadows—a much more specific habitat that gives the plant a considerably narrower range. Commenters state that these meadows are highly vulnerable to climate change and grazing. The best available science on rare plant status in New Mexico comes from the New Mexico Rare Plant Council, which considered this species imperiled because of rarity and the forest's own data show only 12 populations of this plant. **Associated Letters: 137 and 712**

Response: *Rumex orthoneurus* was never on the species of conservation concern list. Despite its NatureServe ranking (G3-Vulnerable), its distribution, and habitat conditions on the Gila National Forest do not warrant its inclusion (see appendix G to the assessment report).

Corynorhinus townsendii, *Idionycteris phyllotis*, and *Myotis thysanodes*

Comment 109: Commenter requests the inclusion of its Pale Townsend's big-eared bat (*Corynorhinus tonwsendii*), Allen's big-eared bat (*Idionycteris phyllotis*), and the fringed myotis (*Myotis thysanodes*) on the species of conservation concern list. *M. thysanodes*, and *C. townsendii* have been found hibernating in New Mexico in microclimates suitable for white-nose syndrome and it is likely disease will soon impact these bat populations.

Commenter requests the following information be considered:

> "Allen's big-eared bat is uncommon on the Gila National Forest (Geluso 2006, Geluso 2016) and was previously listed as Imperiled and a Species of Greatest Conservation Need by the New Mexico Game and Fish Department (2006, 2015). Jones (2016) found them the second to least captured bat during surveys of the Greater Gila Region. Allen's lappet-browed is often found roosting on the forest in middle elevation pinyon-juniper forest and late seral stage ponderosa pine and are considered quite localized in their distribution. From a demographic standpoint, the species is classified as having low birth rates and/or high death rates combined with a small or declining population size (Hoffmeister 1986, O'Shea et al. 2018). Because of these factors, Allen's big-eared bat may be particularly vulnerable to catastrophic wildfire, which could disconnect essential habitat fragments and reduce overall habitat for the species. In addition, of 19 species of western U.S. bats, Blakey et al. (2020) found it to be one of the two most vulnerable to climate change; therefore, on a longer time scale, projections of hotter and drier conditions on the Gila National Forest are expected to further reduce habitat for the species.
>
> Like many bat species, the fringed myotis is sensitive to disturbance or modification of roosts, specifically maternity roosts and hibernacula (Keinath 2004). For this species, abandoned mines, caves, cliffs, and tree snags—large-diameter, cavity-forming trees suitable for roosting—represent the essential roosting habitats for the species. Like our concern for the other species we've discussed, we fear that important fringed myotis roosts may be lost if abandoned mine features are closed without consideration of species not "at-risk."
>
> Perhaps more importantly, fringed myotis has shown a susceptibility to climate change. Hayes and Adams (2017) project that over the coming decades, and under several climate change scenarios, fringed myotis populations may decrease by more than 90 percent range wide. Blakey et al. (2020) also determined fringed myotis to be one of the species most threatened by climate change out of 19 species analyzed for the western United States. As summers grow hotter and drier on the Gila National Forest, according to projections, research suggests reproductive outputs for the species will drop from losses of water availability and increased temperatures (Adams 2017)."

Commenter concludes that while the threats to the species on the Gila National Forest may not be imminent, they are certainly substantial. **Associated Letter: 686**

Response: These three bat species have NatureServe rankings of G4-Apparently Secure. These species can always be re-evaluated and added to the list if new information warrants it.

Western bumblebee

Comment 110: Commenter states this species is an example of one that requires specific plan components to contribute to their recovery or maintain their viability and provides the following recommendations:

1) When nesting sites are limited, consider providing artificial nest boxes.
2) Minimize exposure to pesticides.
3) Stagger the timing of prescribed burns to enable a continuous food supply.

Associated Letter: 712

Response: The ecological conditions and threats for the western bumblebee are similar the same as those identified for monarch butterfly (candidate for federal listing) and are provided for through a number of course and fine-filter plan components (see appendix G). Areas of limited nesting sites would be identified during project-level work, which would enable project managers to consider incorporating artificial nest boxes. The use of pesticides is highly regulated, and the plan provides additional baseline constraints to guide any future pesticide-use proposal. The use of pesticides would be proposed at a project level and include its own environmental analysis, which would assess best practices for pollinators including the western bumblebee. The timing of prescribed fires is already usually staggered due to site-specific fuel and weather conditions and the available resources to manage prescribed fire.

Pinyon jay

Comment 111: Commenter recommends adding pinyon jay to the at-risk species list for PJ Woodland and PJ Grass. **Associated Comments: 151**

Response: The NatureServe ranking for the pinyon jay changed from G4-Apparently Secure, to G3-Vulnerable. It has been added to the species of conservation concern list based on this and other new information like the conservation strategy for the pinyon jay that was released after the draft documents were published.

Comment 112: Commenter suggests the plan incorporate measures to conserve habitat for the pinyon jay because the Gila National Forest may be the most important region in the state for conservation of the species. Commenter asserts plan direction for this species is likely to benefit other woodland bird species even if their habitat requirements aren't the same. Commenter requests that planning staff review and incorporate conservation measures and recommendations for vegetation management suggested in the 2020 multi-state conservation strategy for the pinyon jay, which is available at https://partnersinflight.org/resources/pinyon-jay-working-group/. Commenter notes the Forest Service participated in the development of the strategy, along with other federal and state agencies. **Associated Letter: 183**

Response: The conservation strategy admits there is little information about how management may affect the pinyon jay and what is available is "not sufficient to support comprehensive recommendations." The considerations discussed in the strategy would be best provided at the project level where site-specific conditions can be used to inform project design and implementation.

Southwestern willow flycatcher

Comment 113: Commenter notes that the DEIS describes the habitat needs of the southwestern willow flycatcher and says certain riparian areas have been fenced off from cattle, but no mention is made of feral cattle. Commenter is concerned that insufficient attention is given to habitat protection for the flycatcher and other endangered species and provides a 1988 U.S. Department of Agriculture publication that documents the damage cattle do to southwestern willow flycatcher habitat. Commenter states that if forest staff and leadership are not taking action to remove feral cattle from riparian areas or enforcing riparian exclosures then how can they believe sufficient action is being taken to prevent habitat destruction for the flycatcher and other endangered species. **Associated Letter: 197**

Response: On the feral cattle issue, please refer to response to comment 1 under the Feral Cattle heading in this appendix. Efforts to remove these cattle remain ongoing at the time this response to comment was written. Where riparian exclosures are in place, enforcement efforts are ongoing. The Gila National Forest consults with the U.S. Fish and Wildlife Service on livestock grazing and the southwestern willow flycatcher and incorporates conservation measures identified through consultation into livestock grazing management. The forest plan incorporates all U.S. Fish and Wildlife Service-approved recovery plans by reference (Wildlife, Fish, and Plants draft G3 and final S4).

Comment 114: Commenter states that from their mining experience, industry can be motivated to make better habitat than what existed before. Commenter describes collaborative work between the local mines and the Forest Service and asserts it debunked many of the U.S. Fish and Wildlife Service and Center for Biological Diversity assertions of threats to the species**.** Commenter states the mines and the Forest Service were able to create habitat for the species along the Gila River and watch it become occupied habitat in record time. **Associated Letter: 675**

Response: We appreciate all our partnerships and the work we accomplish together. We acknowledge the commenter's opinions.

Mexican spotted owl

Comment 115: Commenter is concerned that the draft documents fail to address the risk posed to Mexican spotted owl by logging and mechanical forest restoration treatments. Commenter acknowledges that the effects of mechanical thinning and high-severity fire on the Mexican spotted owl have not been extensively studied and are not well understood, but the draft documents assume mechanical thinning is consistently beneficial and high-severity fire is consistently harmful. Commenter states that the draft documents ignore the best available science that clearly demonstrates that the short-term impacts of restoration or fuels reduction-based thinning treatments are negative and there is no definitive conclusion about the long-term effects.

Further, commenter states that the best available science specifically states that "forest restoration and thinning activities also may threaten owls and their existing habitat," and that "Commercial timber harvesting remains a potential threat for all 3 spotted owl subspecies, but effects from forest thinning may be increasing because of the heightened emphasis on fuels reduction and forest restoration treatments on public lands. Owl response to mechanical tree removal, especially forest thinning, remains understudied." Commenter notes none of these studies were cited in the draft EIS.

Commenter states that the Mexican spotted owl is the least understood subspecies of the spotted owl taxa but that there are some relevant studies from dry, frequent fire-adapted forests of southern California. Commenters discuss these studies and note several conclusions drawn by the researchers, namely: "mixed-severity fire does not appear to be a serious threat to owl populations; rather, wildfire has arguably more benefits than costs" To further support their argument, commenters refer to a recent paper published by owl experts asserting that the 'debate' over the impacts of fire or logging to spotted owls is not settled and recent monitoring of Mexican spotted owls in the area of the Nuttall-Gibson Fire of 2004 in the Coronado National Forest seems to indicate that Mexican spotted owls appear to survive and thrive in some post-fire environments. Commenter states the information reported in these sources directly undercuts the 2012 Mexican spotted owl revised recovery plan's assumptions with respect to Mexican spotted owl responses to fire and, more importantly, the conclusion that the risk to Mexican spotted owl habitat posed by the threat of fire justifies large-scale restoration projects, which is itself associated with significant negative effects to the Mexican spotted owl and its habitat. Commenters suggest that in some cases the evidence suggests that wildfire may promote the recovery of the Mexican spotted owl despite the 2012 Revised Recovery Plan's suggestion to the contrary.

Commenters are concerned that the environmental analysis creates confusion, as on one hand it claims that historical silvicultural practices are the cause of habitat loss, and that current restoration-based practices ameliorate those concerns, but on the other hand still admits that vegetation treatments are still disturbances. Commenters recommend the analysis should acknowledge that restoration treatments that involve substantial tree cutting and removal can have deleterious effects that are similar to commercial timber harvest: the roads, the noise, the soil disturbance, the dust, human presence in the forest, and the direct loss and removal of forest structural elements.

Commenter states that as long as the Forest Service Southwestern Region refuses to protect old and large trees; aims to thin every acre to 40 to 80 square feet of basal area; refuses to measure or retain canopy cover;

and the measure of success is "interspace," the agency is fundamentally using the same tools of "historical" silviculture, and as such, can have similar impacts on wildlife.

Commenter recommends the following actions to remedy their concerns:

1) Incorporate, summarize, and cite the best available science referenced here into the analysis of the effects of plan approval and/or proposed or possible actions on the Mexican spotted owl.

2) Discuss the threats posed to Mexican spotted owl by logging, including mechanical forest restoration thinning operations, and associated disturbance caused by road building and human intrusion into owl habitats.

3) The DEIS correctly states that high canopy cover is a habitat feature required by Mexican spotted owls. However, the draft plan does not provide any plan components to maintain or protect the canopy cover needed by Mexican spotted owls, or other canopy-dependent species like the northern goshawk. Owl experts have suggested that forests revise desired conditions to emphasize canopy cover requirements in spotted owl habitat. We recommend a standard that sets a requirement for meeting canopy cover levels in protected activity centers and recovery habitat, as specified in the Recovery Plan.

4) The Mexican Spotted Owl Recovery Plan is clear that the owl relies on old and large trees. We recommend that any subsequent version of the revised forest plan include standards and guidelines that protect the large and old trees and old-growth structure needed by spotted owls and northern goshawk. These plan components should be included in the plan sections on forested ERUs and the Forestry and Forest Products and specify that large trees are those over 18 inches dbh and old trees are those 150 years old and older. The plan lacks these species-specific plan components.

Another commenter suggests the plan should prohibit all cutting and burning in Mexican spotted owl habitat until scientifically credible, long-term, and region-wide population monitoring is complete, impacts are documented, and recovery is ensured.

Associated Comments: 712, 728.259, and 728.312

Response: The plan incorporates all U.S. Fish and Wildlife Service-approved recovery plans by reference (Wildlife, Fish, and Plants draft G3 and final S4). Project-level work would incorporate conservation measures identified during consultation. The FEIS discloses the effects of the proposed plan and its alternatives including the potential for short-term disturbance and displacement. Alterative 5 restricts the use of mechanical treatments to the wildland-urban interface, making exceptions for those areas that a science-based analysis demonstrates are necessary to treat for fire to play its natural role on the landscape. The FEIS discloses that debate remains within the scientific community about the long-term impacts of mechanical thinning and high-intensity wildfire.

Monitoring and research efforts are ongoing with a wide range of agencies, research institutions, and non-governmental organizations. This includes monitoring work set in motion by the Mexican Spotted Owl Leadership Forum Workgroup (2020) and the Mexican Spotted Owl Joint Stipulation Agreement (2020). The Forest Service Southwestern Region, U.S. Fish and Wildlife Service, Center for Biological Diversity, New Mexico Forestry Division, Arizona's Department of Forestry and Fire Management, New Mexico Department of Game and Fish, Arizona Fish and Game Department, New Mexico Forest Industry Association, and eastern Arizona counties were all represented and contributed to the Workgroup and development of the stipulation agreement.

The plan includes desired conditions for old growth that include old and large trees, snags, and down logs (see also response to comment 11 under the Upland Vegetation, Fire Ecology and Fuels heading in this appendix regarding old growth). The plan's desired conditions contain a range of basal area values and other plan

content discussing application of those ranges. Seral state diversity, one of the plan's desired conditions for vegetation, includes quantitative measures of canopy cover and seral state diversity is included in the plan's monitoring program (draft and final plan chapter 5 Minimum Required Monitoring). A management approach titled Old Growth and Seral State Diversity has been added to the final plan to better support shared understanding of the relationship between seral state diversity and desired conditions for old growth.

Literature Cited in Response:

Mexican Spotted Owl Leadership Forum Workgroup. 2020. June 17 and 26 Workshop Notes. Unpublished document. 27pp.

WildEarth Guardians v. United States Fish and Wildlife Service and United States Forest Service (United States District Court for the District of Arizona Oct. 27, 2020). CASE NO. 4:13-cv-151-RCC.

Comment 116: Commenters are concerned that the draft plan rolls back road building guidelines meant to protect Mexican spotted owl and is not consistent with the recovery plan. According to the comparison of alternatives table in the first chapter of the DEIS, the 1986 plan includes a guideline stating that "Road building in Protected Activity Centers [PACs] should be avoided but may be permitted on a case-by-case basis for pressing management reasons." This is removed in the proposed plan even though the environmental analysis lists the threats to the species as "habitat loss due to historical silvicultural treatments, uncharacteristic wildfire, and increased human activities in proximity to nest/roost territories."

Commenters quote the 2012 recovery plan on the effects of roads on the owl and request that, consistent with the recovery plan, the following be included verbatim as guidelines in the plan:

> "New road construction should be avoided whenever possible, and temporary road and skid trail construction should be designed to minimize impacts on soil integrity and natural recovery processes. All new and temporary roads and skid trails should be decommissioned and obliterated after use."
>
> "New road or trail construction is not recommended in PACs."

Commenters also ask that the following draft guideline for motorized trails be converted to a standard because there are no alternative means to achieve the purpose of this direction: "New motorized trails shall be designed and located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other identified sensitive areas." **Associated Letter: 712**

Response: The 1986 plan guideline incorporated elements of a now-superseded recovery plan. The plan incorporates all U.S. Fish and Wildlife Service-approved recovery plans by reference (Wildlife, Fish, and Plants draft G3 and final S4). Additional conservation measures identified during project-level consultation will also be incorporated.

The plan contains standards and guidelines in the Roads section that emphasize existing designated open roads over new road construction forestwide, require best management practices to mitigate impacts to soil and water resources and processes, and address decommissioning and other management aspects of temporary roads that may be needed to implement projects. Skid trails associated with vegetation management are rehabilitated or restored as part of those projects. This is a common best management practice that would be consistent with standards and guidelines in the Timber, Forest, and Botanical Products section of the draft and final plan. The recreation sections of the plan have been condensed under the Sustainable Recreation heading. The guideline for motorized trails has been retained in this section as G14. There may be other ways to achieve the intent of avoiding or minimizing the impacts of a motorized trail, such as seasonal restrictions and closures.

Comment 117: Commenters are concerned that the draft plan fails to recognize riparian areas as habitat for Mexican spotted owl even though the environmental analysis includes riparian areas in a list of key ecological

conditions for the owl and seems to admit the owl uses riparian areas. Commenters state that designated critical habitat for the Mexican spotted owl includes riparian areas as they are a crucial component of the forested and mountainous landscape and important for the full life cycle of the species. Commenter notes there are no riparian plan components that protect the primary constituent elements needed by the Mexican spotted owl in riparian habitats.

Commenter points to the General Technical Reference-256, where U.S. Forest Service owl experts specify that riparian areas are used less often than mixed conifer or ponderosa pine forest for nesting and roosting in the Upper Gila Mountains Recovery Unit, but they are still used. Moreover, the document states "Riparian forest along major rivers in the Southwest also may provide Mexican spotted owls with movement corridors in a landscape that otherwise might prove resistant to effective movement or dispersal." Commenter discusses another study that found stream proximity to be the most important variable in predicting the likelihood of owl presence on the Gila National Forest. Commenter recommends planning documents clearly indicate that Mexican spotted owls use and rely on riparian habitat, especially at higher elevations and provide plan components that protect riparian features used by the owl. **Associated Letter: 712**

Response: The final documents provide recognition that riparian areas provide important habitat for Mexican spotted owl. The plan incorporates all U.S. Fish and Wildlife Service-approved recovery plans by reference (Wildlife, Fish, and Plants draft G3 and final S4), which address primary constituent elements. Additional project-level conservation measures identified during consultation would be incorporated into those projects. While the Riparian and Aquatic Ecosystems draft plan components did provide for the ecological conditions required by the Mexican spotted owl, the draft desired conditions have been revised to better align with the Southwestern Region's Riparian and Aquatic Ecosystem Strategy's associated desired conditions.

Comment 118: Commenter is concerned that the plan fails to address monitoring requirements for Mexican spotted owl as required by the recovery plan or provide adequate assurance that real science-based learning will be achieved as the agency increases the pace, scale, and intensity of mechanical treatment in spotted owl habitat. Commenter states that recovery is only possible if the agency fully commits to the recovery plan which acknowledges that it will require large-scale monitoring of trends to justify delisting. Commenter suggests the revised plan is the opportunity to demonstrate such commitment by providing one or more standards that require the forest to contribute and participate in range-wide monitoring. Commenter asserts the lack of such standards means the plan fails to provide for the owl's recovery, despite the environmental analysis stating that Gila National Forest staff and leadership will support such efforts.

Commenter asserts that the monitoring question associated with the Mexican spotted owl as a focal species doesn't identify the need to monitor abundance, it just asks about the "status." Commenter states that without defining "status" the monitoring question is virtually meaningless and that if monitoring is limited only to protected activity centers, it doesn't support the larger effort to determine range-wide trends in abundance and distribution. Commenter states the agency must identify, map, and manage for Mexican spotted owl recovery habitat as defined in the 2012 recovery plan. Commenter also states the DEIS contains no reference to any biological opinion, so it appears that consultation with the U.S. Fish and Wildlife Service was neglected, violating the Endangered Species Act. Commenter states at the very least, the analysis failed to evaluate how the plan complies with the recovery plan and asserts that plan objectives, standards and guidelines are likely to adversely affect the owl and its preferred habitat. Commenter states that forest staff must consult with the U.S. Fish and Wildlife Service and that if the biological opinion concludes the revised forest plan will not jeopardize the survival and recovery of the Mexican spotted owl but may incidentally "take" individual Mexican spotted owl, an incidental take statement must be prepared as part of the biological opinion. Commenter summarizes what must be done to remedy their concerns as:

1) Identify, map, and manage for Mexican spotted owl recovery habitat as defined in the 2012 recovery plan.

2) Provide clear plans for monitoring abundance and distribution.

3) Reflect the outcome of any Section 7 consultation under the Endangered Species Act.

4) Delineate required pre- and post-project monitoring consistent with the 2012 Recovery Plan for all activities, including, but not limited to, forest management activities (e.g., thinning, logging, prescribed burns), livestock grazing, oil and gas development, mining, and recreation (in particular, motorized recreation). This is especially relevant to the agency's unsupported claim that timber management will benefit Mexican spotted owl and its habitat. Such scientific experiments remain unproven, as described above.

5) Use the best available science and information and share that science and information with the public as part of the required processes under the Endangered Species Act and National Environmental Policy Act.

6) Analyze the cumulative impacts of all management activities on Mexican spotted owl and include the results of all monitoring data collected as part of those activities, as required by the existing forest plan and Mexican spotted owl biological opinions. This includes pre- and post- project monitoring and population and habitat monitoring.

7) Add a standard that requires contribution to range-wide population trend monitoring per the recovery plan requirements and recommendations.

8) Pursuant to the adaptive management framework of the recovery plan, the Forest Service will use the information and assessments of effects of management experiments and scientific studies (or the best available science) to inform and modify ongoing forest management actions and future decisions. Furthermore, monitoring and management requirements, and plan components should be updated based on additional publication of best available science and any new or revised recovery plans.

9) Add a standard that requires that, for all management activities, implementation of the monitoring plans identified in any biological opinions is an integral and mandatory part of any management action assessed in the opinion.

10) Add a standard that requires compliance with the area limitation on mechanical treatment of non-core protected activity center habitat as detailed in the recovery plan.

Associated Letter: 712

Response: The plan incorporates all U.S. Fish and Wildlife Service-approved recovery plans by reference (Wildlife, Fish, and Plants draft G3 and final S4). The Gila National Forest participates in and contributes to region-wide survey and monitoring for Mexican spotted owl that is ongoing and includes work with partners such as Bird Conservancy of the Rockies. See response to comment 115 about monitoring and the Mexican Spotted Owl Leadership Forum Workgroup and Mexican Spotted Owl Joint Stipulation Agreement, in which the commenter was represented. Plan standards specifying monitoring requirements are not consistent with Forest Service Handbook 1909.12 chapter 20 section 22.13. The Mexican spotted owl is a focal species in the plan's monitoring program. Its associated question and indicator have been revised based on further review and in response to comment. The draft documents are what were consulted on with the U.S. Fish and Wildlife Service, so the biological opinion was necessarily not discussed or included because we had not reached that part of the process. The FEIS does discuss the biological opinion, and that opinion will be made public alongside the final plan, its EIS and the draft Record of Decision.

This response has thus far addressed many of the numbered items in the comment (items 1, 2, 3, 7, 8, 9, and 10). Regarding item 5, the best available scientific information has been used and is made available to the public throughout the process as documented by the extensive reference sections in every planning document we have released to the public. The scientific publications that we reviewed but did not have a need to reference are contained in the project record, which is also available to the public upon request. Regarding

item 6, programmatic cumulative effects take a multi-jurisdictional look at actions and their associated effects, but the focus is on reasonably foreseeable future actions likely to occur during implementation that could have effects on neighboring lands, as well as actions likely to occur under the plans of other jurisdictions that could affect the forest. This is explained at the beginning of chapter 3 of the FEIS.

Yellow-billed cuckoo

Comment 119: Commenters are concerned that the plan does not adequately provide the ecological conditions necessary to contribute to the recovery of the yellow-billed cuckoo. Commenters note the environmental analysis mentions the species briefly, but it does not dedicate adequate attention to the cuckoo's threats, needs, nor the fact that it will soon have designated critical habitat in the Gila National Forest. Commenter observes that appendix D lists many possible plan components that could be applicable to the cuckoo but states they are not species-specific and are too generalized and vague to be meaningful.

Commenter specifically notes the discussion of some Riparian and Aquatic Ecosystems desired conditions that are consistent with riparian ecosystem integrity, but assert they are not specific enough to provide ecological conditions necessary for the cuckoo and they lack associated objectives, standards, and/or guidelines to enable their achievement. Commenter points to the following standard as an example:

> "Preferential consideration will be given to riparian and aquatic resources, with preferential consideration being determined by a condition class of properly functioning (or equivalent condition class) or a trend toward it. Resource uses and activities will occur to the extent that they support or do not adversely affect achievement or maintenance of desired conditions. Site- and circumstance-specific adaptive management actions will be used to ensure this does not preclude the exercise of private property rights recognized by Federal or State law."

Commenter states the language is unclear and asks what preferential consideration means and what it applies to. Commenter recommends additional time should be spent looking specifically at the cuckoo and its habitat and develop species-specific plan components. Commenter suggests wild and scenic river designation and recommended wilderness would benefit the cuckoo and almost all the other forest species. Commenter prefers the protections offered by alternative 5 in terms of recommended wilderness, botanical areas, limiting herbicide use, and preventing disturbance within 500 feet of 100-year floodplains rather than the 300 feet of the other alternatives and believes it would benefit the cuckoo.

Alternative 5 would also designate three new botanical areas focused on protection of endemic species, with significantly larger acreage than the only other alternative (2) that designates the botanical areas. These areas would not only be focused on preservation of endemic species, which would benefit the cuckoo, it would also have much more limited use of herbicides, which can harm them. As noted by the Forest Service, treatments on the landscape in the uplands have the potential to increase impacts to riparian and aquatic areas, so limiting treatments should in turn reduce impacts to the cuckoo's primary habitat. **Associated Letter: 712**

Response: The plan incorporates all U.S. Fish and Wildlife Service-approved recovery plans by reference (Wildlife, Fish, and Plants draft G3 and final S4). Critical habitat is designated by the U.S. Fish and Wildlife Service. Programmatic cumulative effects take a multi-jurisdictional look at actions and their associated effects, but the focus is on reasonably foreseeable future actions likely to occur during implementation that could have effects on neighboring lands, as well as actions likely to occur under the plans of other jurisdictions that could affect the forest. Draft appendix D, now final appendix G, has been revised in response to comments and changes between draft and final (see also appendix B to the FEIS regarding changes between draft and final).

The Riparian and Aquatic Ecosystems desired conditions have been revised to better align with the Southwestern Region's Riparian and Aquatic Ecosystem Strategy desired conditions and includes an additional desired condition providing for the ecological conditions required by the cuckoo (6th level watershed scale DC4). The standard discussed by the commenter has been revised, measuring preferential

consideration by the inclusion of best management practices that avoid or mitigate the potential adverse effects of management actions. We acknowledge the commenter's opinion about which alternative would provide the most benefits to the cuckoo.

Mexican gray wolf

Comment 120: There are differing perspectives on what the plan and analysis should say about management for the Mexican gray wolf. Some commenters are concerned that the draft documents fail to address the Mexican gray wolf or provide any plan components to provide for their habitat needs. Commenters assert that livestock grazing with no mandatory livestock-protective measures, and open forest roads are the two greatest Forest Service-controlled causes of wolf genetic decline. Commenters note that appendix D in volume 4 of the FEIS crosswalks plan components to at-risk species to show that the plan components address the species' needs does not link a single plan component to the wolf.

Commenter is also concerned that the draft documents do not address the relationship between wolf killings and roads. Commenter points to data that says between 1998 and 2018, 96 out of 171 documented wolf mortalities (excluding agency-caused or authorized mortalities) were caused by illegal gunshots. Commenter states: "In other words, the majority of wolves that die in the wild die of illegally fired gunshots. The culprits in very few such killings have been prosecuted. Almost all of those killings occurring in the Gila National Forest happen within a few hundred feet of a forest road." Commenter suggests road density must be reduced in part to provide wolves with greater security from illegal shootings and the best place to begin is where illegal shootings were facilitated by road access. provided that neither rights would be infringed, nor well-used public amenities curtailed through such road closures (for example, in places in which the road provides sole access to private land or to a developed campground).

Commenter states the plan should include a provision that would result in timely identification of roads used in the future to provide access that enables the illegal killings of wolves, and a process to automatically close such roads. Again, with exceptions to ensure access to private lands and well-used public amenities. At a minimum, the Forest Service should consider at least one alternative that requires such closures.

Commenter reviews conclusions of the U.S. Fish and Wildlife Service's Mexican Wolf Recovery Team and the importance of the Gila National Forest to the Mexican Wolf Experimental Population Area and overall recovery effort. Commenters express concern over the lack of plan direction or analysis for the wolf and the fact that the plan virtually ignores the Mexican Wolf Experimental Population Area. Commenter states the primary impediment to long-term persistence of wolf packs is conflicts with livestock that result in agency wolf removals. Removals result in loss of genetic diversity and increased inbreeding.

Commenters state that scientists have recommended several measures to prevent wolves from preying on livestock as mandatory practices, even though the U.S. Fish and Wildlife Service has rejected that approach. Commenters then go on to express concern that the draft documents fail to establish adequate monitoring requirements or guidelines related to Livestock Grazing DC3 and S1, which is necessary to inform adaptive management actions as it relates to the wolf. Commenters assert that because there are no plan components requiring range staff or permittees to evaluate the impact of grazing in such a way that it would produce the data required by Livestock Grazing S1, the ability to implement adaptive management strategies that achieve the desired conditions, objectives and themes of the plan is undermined. Commenters recommend planning staff review the numerous studies showing the efficacy of non-lethal methods and modify the following into plan components to address these concerns:

1) Permittees must ensure that the carcasses of any livestock that die of non-wolf causes are rendered inedible (through several means that can be specified in the permit, including the application of lime) before any wolves begin feeding on the carrion;

2) Permittees must ensure that sick or injured livestock are removed from the allotments, so they are not targeted by wolves;

3) Permittees must ensure the presence at all times of a person equipped to non-injuriously protect livestock from wolves through harassing and scaring away any wolves that are hunting livestock, especially during times that livestock are in a unit with an active wolf den site or rendezvous site;

4) Delaying livestock turnout until after early to mid-June if an active wolf den site is within 1 mile of a pasture, so deer will be birthing fawns and can provide an abundant and easy prey source for wolves;

5) If an active wolf den site is within or adjacent to an allotment, delay turnout of calves in the area until after they average 200 lbs in weight to minimize depredation potential;

6) Prohibit allotment management activities by humans near active wolf den sites during the denning period, to avoid human disturbance of the site;

7) Minimize conflict by prohibiting the use of salt or other attractants near dens or rendezvous sites;

8) In the event of depredation, consider moving livestock to another grazing unit;

9) Managing grazing livestock near the core areas (dens, rendezvous sites) of wolf territories to minimize wolf-livestock interactions, such as by placing watering sites, mineral blocks, and supplemental feed away from wolf core areas;

10) Temporarily switch grazing sites and move livestock to another location away from core areas;

11) Increase the frequency of human presence by using range riders and guard animals and frequently check livestock in areas with wolves or when wolves are in the vicinity of livestock pastures. People should be constantly present in stocked allotments to deter wolf predation.

Commenters are also concerned that the draft plan fails to provide guidance for allotment retirement, which condemns future permittees to uncertain economics on known high-conflict allotments and allows the agency to perpetuate natural resource conflict for the duration of the new plan. Commenters propose that at least one alternative, and preferably the proposed action, adopt the following language to mimic the "Grizz Amendment" to the six national forests in the Greater Yellowstone Ecosystem to support the agency's obligation to recover the grizzly bear:

> "When resource conflicts due to managing for productive grazing and drought, wildfire impacts, threatened and endangered species, recreation, water quality, water quantity, economic viability of a ranching operation, disease conflict with native wildlife or other multiple uses arise, and the permittee is willing, retiring and/or permanently closing grazing allotments is a viable and permissible range management tool."

Another commenter states the final analysis must identify the ecological conditions necessary to the recovery of Mexican gray wolf and document:

1) Historical and current trends in distribution, abundance and population demographics.

2) Population effects resulting from mortality associated with human-wolf conflicts.

3) The status and trend of necessary ecological conditions to support recovery.

4) Status and trends in the amount, quality, distribution, and connectivity of habitat.

5) The role of human-related stressors that threaten recovery.

6) The anticipated future status of ecological conditions that contribute to recovery assuming management continues under the current management plan.

7) The anticipated future status of ecological conditions that contribute to recovery assuming management continues under the proposed alternatives.

8) The Forest Service must provide a scientifically supported discussion of the role Forest Service management plays in providing the ecological conditions that contribute to recovery.

9) The Forest Service must consider, analyze, and disclose the impacts of livestock grazing on Mexican wolves vis-à-vis the effects on prey species. It is well understood that livestock significantly displace certain native ungulates (Wallace and Krausman 1987). Some deer species are known to avoid cattle (Krämer 1973). Elk and deer densities can decline by as much as 92 percent in response to introduction of livestock (Clegg 1994). Because wild ungulates and cattle use the landscape in similar ways (by eating plants and moving about the landscape), but wild ungulates are more effective agents of landscape change in a reflexive relationship with ideas of land that stress natural amenities over production (Hobson et al. 2006). The Forest Service must consider the habitat preferences of ungulates as part of this planning process (Frisina 1992). Given that each AUM allocated to livestock effectively redirects the same forage away from native wildlife, the Forest Service should accurately discuss the public trust resources (wildlife) being replaced by private profit (livestock).

Other commenters simply state the plan must address the impacts of livestock grazing on the wolf, including monitoring and reporting conflict and livestock loss, and the impacts of climate change on the availability of water and forage for commercial livestock operations.

Other commenters state opposition to the wolf program and assert these animals are actually hybridized with dogs, inbred, and acclimated to humans because they have been repeatedly handled and fed by human hands. These commenters state that wolves are killing machines that kill not just for food but for the fun of killing. Commenters are concerned that wolves are putting ranchers out of business; that the U.S. Fish and Wildlife Service has no oversight, doesn't answer to any other entity, operates across state lines with self-autonomy and doesn't even stay within any budgetary requirements; and that the Gila National Forest is denying their responsibility in the matter.

One commenter is concerned that the documents fail to mention the entire premise of re-introduction is false because Mexican gray wolves did not go extinct in this area of the country. Commenter asserts it was the Mogollon mountain wolf that occupied the area so the U.S. Fish and Wildlife Service and the Gila National Forest are trying to reintroduce a breed of wolf that was never here in the first place. **Associated Letters: 53, 54, 142, 565, 567, 617, 647, 663, 684, 690, 712, 713, 718.3838, 720.5, 720.27, 724.6, 726.0 through 726.12547, 726.12355, 726.12359, 726.12369, 726.12374, 726.12380, 726.12381, 726.12394, 726.12398, 726.12402, 726.12418, 726.12422, 726.12428, 726.12429, 726.12430, 726.12462, 726.12470, 726.12478, $726.12488, 726.12491, 726.12536, 728.263**

Response: The Mexican gray wolf is listed as an endangered, non-essential experimental population with U.S. Fish and Wildlife Service. There are protections and prohibitions for the species within its recovery plan that is managed through an interagency team made up of biologists from U.S. Fish and Wildlife Service, U.S. Forest Service, Arizona Department of Game and Fish, and New Mexico Department of Game and Fish. The Mexican Wolf Experimental Population Area is established by the U.S. Fish and Wildlife Service.

The forest plan incorporates all U.S. Fish and Wildlife Service-approved recovery plans by reference (Wildlife, Fish, and Plants draft G3 and final S4). Additionally, when specific projects are proposed on the forest, the appropriate project-level environmental analysis would be conducted. Another consultation with U.S. Fish and Wildlife Service would be done at this stage depending on the results of the analysis. Draft appendix D, now final appendix G, identifies the plan components that provide for the ecological conditions needed by the Mexican gray wolf.

The Mexican gray wolf is a wide-ranging generalist species whose required ecological conditions and threats were discussed in the assessment report, the body of the DEIS and in appendix G to the FEIS. The Wildlife,

Fish, and Plants section of the EIS has been substantially reorganized to better align with the requirements of the 2012 Planning Rule and the analyses found in the habitat-oriented sections (such as Upland Vegetation, Fire Ecology and Fuels). It also contains revisions for brevity and clarity.

Human persecution of federally listed species such as Mexican gray wolf is against Federal law. It is an enforcement issue, not a planning issue. The travel management decision signed in 2014 identifies the minimum road system necessary to provide for public access, multiple uses, and administration of the forest. The forest plan provides direction to support future project-level road projects and includes an objective for decommissioning unneeded roads. Livestock Grazing S1 relates to best management practices for soil and water resources. The plan's management approach Livestock and Wildlife, discusses conflicts between cattle and Mexican gray wolves, roles and responsibilities of various parties, and how management would likely approach this issue. Adaptive management action as it relates to the wolf, is informed by Mexican gray wolf monitoring conducted by the interagency field team and monitoring conducted at the allotment level.

The planning team has reviewed the studies regarding conflict reduction practices. While undoubtedly valuable practices that forest leadership, staff, and the interagency field team would support and encourage, the suggestions for plan standards are either unnecessary or unreasonable. Requiring a constant human presence is not practicable in most cases. As most allotments typically involve large and remote areas, active permittees may not discover a sick, injured, or dead animal until it's too late to adhere to these standards. In suggestion 1, the permittee may discover a dead animal in a remote location and have to leave and come back with what is needed to render the carcass inedible. Sick or injured animals may not be able to make it out of the woods on their own power, and again, the choices available to the permittee may be limited. Livestock are typically removed from areas with an active den, as it is in their own best interests to protect their cattle. Similarly, it makes no sense for a permittee to place supplements near known dens or rendezvous sites. It isn't in their best interest to invite conflict.

A delayed turnout is another option in some cases, but a change in pasture rotation to remove the cattle from proximity to an active den might also be a viable option. The interagency field team typically works with the permittees to help minimize disturbance to the wolves. Specifically relevant to suggestion 8, the plan does provide a guideline (Livestock Grazing G6) and an accompanying management approach that would establish a network of vacant allotments that permittees could move their cattle. While we appreciate the language from the "Grizz Amendment," it's not necessary to state. If a permittee is willing, retiring or permanently closing a grazing allotment is a permissible and legal alternative to consider.

The Mexican gray wolf is not hybridized with dogs. The Forest Service is required by law to contribute to the recovery of species listed by the U.S. Fish and Wildlife Service under the Endangered Species Act. The Mexican gray wolf and the Mogollon mountain wolf are distinct subspecies with overlapping ranges.

Comment 121: Commenter suggests that line 4 of the second paragraph on page 181 of the draft EIS should state "…most genetically distinct subspecies of gray wolf…" **Associated Letter: 151**

Response: The Wildlife, Fish, and Plants section of the EIS has been substantially reorganized to better align with the requirements of the 2012 Planning Rule and the analyses found in the habitat-oriented sections (such as Upland Vegetation, Fire Ecology and Fuels). It also contains revisions for brevity and clarity. This comment refers to a discussion that has otherwise been revised.

Comment 122: Commenter suggests that the most recent survey numbers should be used on page 181 of the draft EIS. **Associated Letter: 151**

Response: See response to comment 129.

Comment 123: Commenter suggests that the EIS's description of the Mexican gray wolf as a non-essential, experimental population and which identifies threats, including in-breeding and human harassment, needs to

be corrected to acknowledge that the status of the wolf is currently in flux and the threats include not only human harassment, but the illegal killing of wolves by livestock grazing permittees. Commenter states that while the Fish and Wildlife Service made a non-essential determination in 2015, that decision was challenged in court. Commenter reports that in April of 2018, the court concluded that "because the effect of the 2015 rulemaking was to authorize the release of an experimental population outside its current range, a new essentiality determination was required and the agency's decision to maintain the population's nonessential status without consideration of the best available information was arbitrary and capricious." Commenter states that the essential or non-essential status of the Mexican gray wolf is not as described by the Forest Service in the DEIS and the Forest Service may need to consult with the U.S. Fish and Wildlife Service regarding the species before issuing a record of decision for the forest plan because the agency can't make a determination that the project poses no jeopardy to the species based on an erroneous "non-essential" status of that species. Commenter states the analysis should have described how livestock presence impacts wolves, including the displacement of prey for the wolves and the consequences for wolves if livestock are not properly managed. **Associated Letter: 713**

Response: The non-essential determination remains in effect. The biological opinion resulting from our consultation with the U.S. Fish and Wildlife Service about the plan will be made available to the public alongside the final plan, final EIS, and draft Record of Decision. The level of analysis in the draft and final EIS is appropriate for the programmatic nature of the forest plan.

Comment 124: Commenter suggests the plan could have identified a Mexican gray wolf management or geographic area that would include the Blue Range and Mexican Wolf Experimental Population Area, and other areas known to be valuable to wolf recovery efforts. Commenter recommends that as part of these designations, the Forest Service could prohibit livestock grazing, require a higher level of livestock management, or advise livestock permittees that permits will be revoked for ongoing unauthorized livestock use in these wolf areas. The planning team has chosen not to identify these areas and we ask for an explanation as to why this was not done. **Associated Letter: 713, 726.12428**

Response: The U.S. Fish and Wildlife Service establishes management areas for the Mexican gray wolf. The plan provides strategic direction for the management of livestock grazing, which is one of the uses the Forest Service provides for as part of its multiple-use mandate. More specific provisions are established at the allotment level through site-specific environmental analyses, allotment management plans, and annual operation instructions. Unauthorized livestock grazing is a compliance issue, not a planning issue. Permit revocation is an option to address chronic non-compliance.

Comment 125: There is a recommendation that the final plan contain the following desired condition: "The Forest is a core area for Mexican gray wolves, facilitates the successful establishment of wolf packs, and protects habitat connectivity to allow wolf movement through and beyond the forest boundaries." **Associated Letter: 713**

Response: Wildlife, Fish, and Plants draft DCs1-8 and 9, and final DCs 1-3, 5-7 and 11 address this suggestion for all common and uncommon species, including the Mexican gray wolf. The plan also incorporates all U.S. Fish and Wildlife Service-approved recovery plans by reference (draft G3 and final S4).

Comment 126: There is a recommendation that the final plan contain the following desired condition: "The Forest provides secure denning and rendezvous sites for wolf packs and management activities and permitted uses are avoided during critical biological periods, including whelping and rearing." **Associated Letter: 713**

Response: The plan addresses this suggestion by incorporating all U.S. Fish and Wildlife Service-approved recovery plans by reference (draft G3 and final S4).

Comment 127: There is a recommendation that the final plan contain the following desired condition: "The Forest provides a secure condition for Mexican gray wolves by identifying, preventing, and addressing livestock-wolf conflicts; limiting and reducing human-caused wolf mortality; and is progressing toward the target of zero human-caused wolf mortalities per year." **Associated Letter: 713**

Response: In addition to the plan content identified in response to comment 134 above, the plan addresses this suggestion in the Livestock Grazing section of the plan (draft and final DC3, G6 and Livestock and Wildlife management approach).

Comment 128: There is a recommendation that the final plan contain the following desired condition: "The Forest supports a prey base for Mexican gray wolves that provides for sustained wolf presence in the forest." **Associated Letter: 713**

Response: This addressed for all predator-prey interactions by all the plan's ecological content (the desired conditions for vegetation communities for example) and more specifically by final Wildlife, Fish, and Plants DC 5.

Comment 129: There is a recommendation that the final plan contain the following desired condition: "The Forest allows grazing permittees to voluntarily relinquish or retire all or portions of allotments and close allotments to future grazing where removal of livestock grazing would support Mexican gray wolf recovery." **Associated Letter: 713**

Response: Grazing permittees may relinquish their permits back to the Forest Service for any reason they may have. The fate of that permit would depend on an allotment-specific National Environmental Policy Act decision-making process under all alternatives. Alternative 2 would consider the allotment's appropriateness to serve as part of a network of swing allotments to be used when any permittee's allotment was not available due to conflicts with wildlife or disturbances like drought, wildfire, prescribed fire, or vegetation treatment. Alternatives 3 and 4 would not establish a network of swing allotments and emphasize reissuing the permit as quickly as possible to the maximum extent possible. Alternative 5 would not establish swing allotments, nor would it emphasize reissuing the permit.

Comment 130: There is a recommendation that the final plan contain the following desired condition: "The Forest works toward lowering road density below one mile per square mile of land. (c.f., Thiel 1985; Mech et al. 1988. See also the Travel Management Planning record and NEPA documents.)." **Associated Letter: 713**

Response: Road density is a useful condition indicator but may be arbitrary as a management goal. This is because the effects of roads on habitat connectivity also depend, at least, on traffic volume, speed, the species and sometimes the sex of the species, road location, design features, maintenance, the size and topography of the watershed, and the vegetative cover over the rest of the watershed.

Comment 131: There is a recommendation that the final plan contain the following desired condition: "The Forest works with adjacent and nearby government and private landowners to maintain and restore Mexican gray wolf habitat connectivity." **Associated Letter: 713**

Response: This suggestion is addressed for all species by the Cross-Jurisdictional Connectivity management approach.

Comment 132: There is a recommendation that the final plan contain the following standard: "Avoid or limit disturbance within 0.5 mile of known, active dens and rendezvous sites, incorporating measures to avoid or mitigate impacts of activities from April 1 to July 1." **Associated Letter: 713**

Response: The plan addresses this suggestion by incorporating all U.S. Fish and Wildlife Service-approved recovery plans by reference (draft G3 and final S4).

Comment 133: There is a recommendation that the final plan contain the following standard: "Existing non-system roads and motorized trails are obliterated where conflicts with wildlife occur." **Associated Letter: 713**

Response: The plan contains an objective for decommissioning unneeded roads, which would include any system or non-system road determined to be unneeded through project-level travel management decisions, which would be supported by an environmental analysis that would explore the effects of alternatives on wildlife species.

Comment 134: There is a recommendation that the final plan contain the following standard: "Existing system roads and motorized trails are closed and decommissioned if conflicts with wildlife cannot be mitigated." **Associated Letter: 713**

Response: See response to comment 141 above.

Comment 135: There is a recommendation that the final plan contain the following standard: "Within areas identified as having a potential for high conflict, prioritize redundant roads for decommissioning, and obliteration where appropriate, to facilitate an open road density of less than 1 mile of road per square mile of land, calculated on an appropriate HUC scale." **Associated Letter: 713**

Response: The plan contains an objective for decommissioning unneeded roads and the accompanying management approach identifies habitat connectivity, species movements and areas of high potential conflict as prioritization factors for decommissioning those unneeded roads.

Comment 136: There is a recommendation that the final plan contain the following standard: "Within in or in proximity to established wolf pack home ranges, permits for livestock grazing require the reporting of livestock carcasses within 24 hours of discovery, followed by proper disposal of the carcass." **Associated Letter: 713**

Response: While we agree this would be ideal, it is not practicable. As most allotments typically involve large and remote areas, active permittees may not discover a sick, injured, or dead animal until it's too late to adhere to these standards. In suggestion 1, the permittee may discover a dead animal in a remote location and have to leave and come back with what is needed to render the carcass inedible. Sick or injured animals may not be able to make it out of the woods on their own power, and again, the choices available to the permittee may be limited. Further, the plan can only put constraints on Forest Service actions such as authorizing grazing permits, it is not the place to put constraints on permittees.

Comment 137: There is a recommendation that the final plan contain the following standard: "No boneyards may be established on forest lands (Breck and Meier 2004)." **Associated Letter: 713**

Response: We reviewed the cited literature and found no reference to "boneyards," only to practices that may reduce conflict between wolves and livestock. If what the commenter is referring to is a place where livestock carcasses are piled up in one place on forest lands, the only time that has occurred was when there were multiple livestock carcasses, confirmed as wolf depredations, that were temporarily consolidated in one spot in the process of gathering them up to remove them from the forest. It was a temporary, logistical necessity and it may be a temporary, logistical necessity again in the future.

Comment 138: There is a recommendation that the final plan contain the following standard: "Within or in proximity to established wolf pack home ranges, annual operating instructions for grazing permittees will include specific best management practices [BMPs] to reduce livestock-wolf conflicts. These BMPs will include, at a minimum, the removal of wolf attractants during calving season, increased human presence during vulnerable periods, use of range-riders and diversionary and deterrent tools such as fladry fencing,

airhorns, crackershells, etc. The Forest will provide additional information regarding conflict-reduction resources as they are developed." **Associated Letter: 713**

Response: Allotment management and the adaptive management framework is guided by a document called an Allotment Management Plan, which is developed through a site-specific National Environmental Policy Act decision-making process. Grazing permits incorporate the Allotment Management Plan and may also include additional allotment-specific terms. Both the issuance of the permit and the development or amendment of an Allotment Management Plan that becomes part of the permit is considered an administrative action that implements the National Environmental Policy Act decision (FSH 2209.13, chapter 90, section 94). Permanent grazing management modifications are authorized through the term grazing permit, consistent with the National Environmental Policy Act decision.

Each year, the district ranger sends each permittee Annual Operating Instructions to implement the Allotment Management Plan and permit. Annual operating instructions allow for temporary adjustments while implementing the terms and conditions of a term grazing permit. Annual operating instructions do not constitute a permit modification and are not an appealable decision (36 CFR 214.4). Allotment grazing management modifications may be made through the Allotment Management Plan, term grazing permits, and Annual Operating Instructions, all of which are done at the site-specific level and outside the scope of a forest plan.

Allotment management plans in the recovery area routinely include measures to reduce livestock-wolf conflicts such as placing temporary restrictions around denning sites, moving livestock, changing pasture rotations and range-riders (for example USDA FS 2013). Diversionary tactics or deterrent tools such as fladry fencing are not long-term solutions (Breck and Meier 2004) but are certainly allowable when and where it makes sense for the producer to employ them. The plan discusses how leadership and staff further encourage measures to reduce conflict in the Livestock and Wildlife management approach.

Literature Cited in Response:

Breck, S.W. and T. Meier. 2004. Managing Wolf Depredation in the United States: Past, Present and Future. *USDA National Wildlife Research Center-Staff Publications.* 83. https://digitalcommons.unl.edu/icwdm_usdanwrc/83.

USDA FS (United States Department of Agriculture – Forest Service. 2013. Allotment Management Plan: Deadman Allotment. Southwestern Region, Gila National Forest, Reserve Ranger District. 8 pp.

Comment 139: There is a recommendation that the final plan contain the following standard: "Within established wolf pack home ranges, new permits and reauthorization of existing permits, Allotment Management Plans, and Annual Operating Plans will incorporate measures to reduce livestock-wolf conflicts. New or re-authorized permits will include a clause requiring the modification, cancellation, suspension, or temporary cessation of activities to resolve livestock-wolf conflicts." **Associated Letter: 713**

Response: See response to comment 138 above. Allotment management plans routinely incorporate measures to reduce conflict, including temporary restrictions around denning areas. Permit cancellation or suspension is an option if a permittee is in non-compliance with the terms and conditions of their permit.

Comment 140: There is a recommendation that the final plan contain the following standard: "A grazing permit in non-use status shall not be allowed to increase allowable animal unit months when returning to use to help prevent livestock-wolf conflicts within established wolf pack home ranges." **Associated Letter: 713**

Response: Allotments may enter non-use status for a variety of reasons. When returning to use, authorized-use would be consistent with what is allowable in the applicable allotment-level environmental analysis and the resource conditions within that allotment.

Comment 141: There is a recommendation that the final plan contain the following standard: "There will be no increase in the number of active livestock allotments or in permitted AUMs above the baseline on Forest Service-managed lands within established wolf pack home ranges." **Associated Letter: 713**

Response: Allotment status and permitted use is determined at the allotment-level, where site-specific conditions and circumstances can be accounted for.

Comment 142: There is a recommendation that the final plan contain the following standard: "Allowable AUMs shall not be increased on inactive allotments. **"Associated Letter: 713**

Response: The proposed standard as written does not account for varying circumstances, conditions, or baselines and would, therefore, be arbitrary. As long as the decision either maintains or makes progress toward the desired conditions in the plan, the District Ranger has the authority to allow another permit holder, in good standing, up to the full permitted numbers on an inactive (vacant) allotment if that ranger determines the conditions and management of the operation would be consistent with what is described in the National Environmental Policy Act decision documentation. Within that decision, grazing is authorized based on available forage, which is site-specific and varies widely depending on precipitation and time of year.

Comment 143: There is a recommendation that the final plan contain the following standard: "Existing allotments may be combined or divided as long as doing so does not result in grazing on currently un-allotted lands or an increase in AUMs." **Associated Letter: 713**

Response: Existing allotments may be combined with other allotments or divided into more than one allotment based on a project-level environmental analysis and decision-making process. Allotment, or project-level environmental analyses and decision-making processes would determine the appropriate level of use.

New Mexico meadow jumping mouse

Comment 144: Commenter points to page 186 of the draft EIS and suggests that this section should include conservation measures for this species. **Associated Letter: 151**

Response: Conservation measures for the New Mexico meadow jumping mouse have been added to the Wildlife, Fish, and Plants section of the final EIS.

Comment 145: Commenter is concerned the plan does not adequately provide the ecological conditions necessary to contribute to the recovery of the New Mexico meadow jumping mouse. Commenter states that the New Mexico meadow jumping mouse is on the precipice of extinction, and remaining populations requires immediate conservation management to recover. The status of the mouse and its habitat were not examined in the assessment phase because, at the time, there were no records that it occurred on the forest. In 2018, the species was found on a segment of Dry Blue Creek. Commenter observes some information about the mouse in the draft EIS, but it is not clear which Ecological Response Units are associated with the species which makes it impossible to determine the condition of that habitat. Commenter then states a concern that the plan does not adequately provide the ecological conditions necessary to contribute to the recovery of the mouse.

Commenter notes that appendix D provides a long list of plan components that may or may not apply to the mouse but states most of them are not relevant. Commenter states Gila National Forest management can play an important role in contributing to the recovery of the New Mexico meadow jumping mouse and suggests a management area be designated through the plan that includes occupied and suitable or restorable habitat.

Commenter suggests the following should be incorporated as elements of desired conditions:

Resilient populations of New Mexico meadow jumping mice occur on the Forest.

Riparian communities along rivers and streams, springs and wetlands, or canals and ditches that contain:

1) Persistent emergent herbaceous wetlands especially characterized by presence of primarily forbs and sedges (Carex spp. or *Schoenoplectus pungens*).

2) Scrub-shrub riparian areas that are composed of willows (Salix spp.) or alders (Alnus spp.) with an understory of primarily forbs and sedges.

3) Flowing water that provides saturated soils throughout the jumping mouse's active season that supports tall (average stubble height of herbaceous vegetation of at least 61 cm (24 inches)) and dense herbaceous riparian vegetation composed primarily of sedges

Commenters suggest objectives with the following elements:

1) Restore habitat by fencing of riparian areas.

2) Restore beavers to areas that are occupied by jumping mice or have the potential to provide suitable recovery habitat.

3) Restore and maintain habitat connectivity across multiple local populations along streams to maintaining genetic diversity and provide sources for recolonization when local populations are extirpated.

Commenters suggest standards and guidelines that incorporate elements of the recovery outline:

1) Maintain occupied jumping mouse sites with active management to continue the protection of these areas from livestock grazing.

2) Design and install effective barriers or exclosures or change livestock management techniques (e.g., fencing, reconfiguration of grazing units, off-site water development, or changing the timing or duration of livestock use) to limit ungulate grazing and protect riparian habitats from damage.

3) Maintain the required microhabitat components or modify or limit actions (e.g., bridge and road realignment projects, water use and management, stream restoration, and vegetation management) that preclude their development and restoration, in order to stabilize and expand current jumping mouse populations.

4) Identify priority areas to reduce fuels to minimize the risk of severe wildland fire and identify techniques for post-fire stabilization in areas that burn.

5) Modify off-road vehicle use and manage dispersed recreation through fencing, signage, education, and timing of use.

6) Facilitate the natural expansion of jumping mouse habitat through the management and restoration of beaver.

7) Complete an emergency contingency and salvage plan to capture jumping mice and bring individuals into captivity in the event of severe wildland fire, post-fire flooding, or severe drought.

Commenters also suggest the plan's monitoring program establish a monitoring protocol to determine presence or absence or estimate the abundance of jumping mouse populations and incorporate the following elements of the recovery outline as management approaches.

1) Formally evaluate whether assisted translocation or a captive breeding program for jumping mice would be beneficial as a recovery option. Establish partnerships to design and install effective barriers or exclosures or change livestock management techniques (e.g., fencing, reconfiguration of

grazing units, off-site water development, or changing the timing or duration of livestock use) to limit ungulate grazing and protect riparian habitats from damage.

2) Work cooperatively with stakeholders to maintain the required microhabitat components or modify or limit actions (e.g., bridge and road realignment projects, water use and management, stream restoration, and vegetation management) that preclude their development and restoration, to stabilize and expand current jumping mouse populations.

Associated Letter: 712

Response: The Wildlife, Fish, and Plants section of the EIS, and appendix D (now final appendix F) has been substantially reorganized to better align with the requirements of the 2012 Planning Rule and the analyses found in the habitat-oriented sections (such as Upland Vegetation, Fire Ecology and Fuels). It also contains revisions for brevity, clarity and in response to comments.

The commenter's suggestions for desired conditions are consistent the New Mexico meadow jumping mouse's approved recovery plan. The plan incorporates all U.S. Fish and Wildlife Service-approved recovery plans by reference (Wildlife, Fish, and Plants draft G3 and final S4). Further, the plan's final desired conditions for Riparian and Aquatic Ecosystems have been revised to better align with those associated with the Southwestern Region's Riparian and Aquatic Ecosystem Strategy. This includes final DC3, a fine-filter plan component for riparian- and wetland-dependent species including the New Mexico meadow jumping mouse.

Regarding the suggested objective to fence off riparian areas, please refer to chapter 2 of the EIS where this is discussed as an alternative element considered but eliminated from detailed study. Regarding beaver reintroduction and suggest plan components, please see response to comment 76 in this section of this appendix. Riparian and Aquatic Ecosystems O1 and Wildlife, Fish, and Plants O4 are inclusive of projects that would restore and maintain habitat connectivity for the mouse. In addition to incorporating the approved recovery plan by reference, which includes monitoring, future projects, including grazing, would be consulted on with the U.S. Fish and Wildlife Service. These projects would incorporate any additional conservation measures identified through that process. Any translocation of the mouse would be coordinated with the U.S. Fish and Wildlife Service and any captive breeding program would be under the jurisdiction of the U.S. Fish and Wildlife Service.

Gunnison's prairie dog

Comment 146: Commenter states this species is an example of one that requires specific plan components to contribute to their recovery or maintain their viability and provides the following recommendations:

1) Work with other public land agencies and stakeholders to identify management emphasis areas where intensive management can focus on landscape scale conservation for the entire prairie dog ecosystem.

2) Reintroduce and translocate prairie dogs to augment populations.

3) Prohibit recreational shooting of prairie dogs.

4) Prohibit lethal control of prairie dogs.

5) Close and obliterate roads and motorized activity in and around prairie dog colonies and re-introduction sites to minimize disturbance and discourage shooting.

6) Prevent plague by implementing a plague management and reduction program that includes the use of insecticide dusting and vaccination.

7) Minimize impacts of energy and/or mineral development on prairie dogs.

Associated Letter: 712

Response: The New Mexico Department of Game and Fish and the U.S. Fish and Wildlife Service are the lead agencies responsible for managing wildlife populations in New Mexico and the New Mexico Department of Game and Fish is the lead agency for any reintroduction, translocation, and plague management actions. The plan discusses the ongoing coordination and collaboration between the Department and Gila National Forest leadership and staff in the Adaptation, Restoration and Relationships management approach in the Wildlife, Fish, and Plants section. This would include management for Gunnison's prairie dog. Recreational shooting and lethal control of prairie dogs will likely continue until it is either listed as a federal threatened, endangered, or candidate species, or there is a change in the New Mexico statute. Because the New Mexico state statute does not recognize Gunnison's prairie dog as a game species, the New Mexico Department of Game and Fish has no authority to regulate hunting them. The plan contains an objective for decommissioning of unneeded roads and an accompanying management approach that identifies at-risk species issues as one of the factors that would make an unneeded road a priority for decommissioning. The impacts of energy or mineral development would be addressed and mitigated at the project level to maintain or move toward desired conditions (Wildlife, Fish, and Plants DCs, Minerals DC1, Renewable Energy DC1, Utilities DC3).

Chiricahua leopard frog

Comment 147: Commenter states the plan does not adequately provide the ecological conditions necessary to contribute to the recovery of the Chiricahua leopard frog, which is federally recognized as a threatened species. Commenter discusses the status of the recovery effort and the conservation actions outlined in the recovery plan. Commenter states appendix D was not helpful because some of the plan components identified do not apply to the leopard frog and the introductory narrative indicates the table content are just examples. Commenter asserts the plan does not provide enough regulatory certainty in the form of plan standards to support the recovery effort and recommends the following elements be incorporated into the plan:

1) perennial source of running or standing water in the form of cienegas, springs, pools, cattle tanks, lakes, reservoirs, streams, and rivers that are occupied by few or zero non-native predators (e.g., American bullfrogs, fishes, and crayfishes)

2) permanent or semi-permanent pools for breeding, water characterized by low levels of contaminants and moderate pH, and may be excluded or exhibit periodic die-offs where a pathogenic chytridiomycete fungus is present

3) habitat with a variety of structure and cover, including emergent and submergent vegetation

4) edge vegetation, overhanging banks, and organic debris

5) connected floodplains

6) water quality

Commenter cites the following desired condition from the draft plan's Riparian and Aquatic Ecosystems section (WS-DC1): "Riparian areas have ecological conditions that contribute to the recovery of listed species and support the persistence of species of conservation concern, as well as native and desired nonnative aquatic and riparian-dependent plant and animal species." Commenter observes that this is merely a restatement of the planning rule requirement, and the plan must have actual desired conditions that specifically outline the ecological conditions necessary for the leopard frog's recovery. Commenter says there are helpful desired conditions (Riparian and Aquatic Ecosystems WS-DC2 and FS-DCs1 and 2) but there are insufficient objectives, standards, and guidelines to achieve these conditions. Commenters note there is nothing in the restoration objectives for Riparian and Aquatic Ecosystems or Wildlife, Fish, and Plants that directs projects to improve leopard frog habitat. Commenter points to the following Riparian and Aquatic Ecosystems

standard (S1): "Preferential consideration will be given to riparian and aquatic resources, with preferential consideration being determined by a condition class of properly functioning (or equivalent condition class) or a trend toward it. Resource uses and activities will occur to the extent that they support or do not adversely affect achievement or maintenance of desired conditions. Site- and circumstance-specific adaptive management actions will be used to ensure this does not preclude the exercise of private property rights recognized by Federal or State law." Commenter states this does not provide an activity or project constraint that helps promote the achievement of desired conditions that pertain to the frog and so it doesn't comply with the planning rule. Similarly, commenter cites the standard requiring decontamination procedures which contains a footnote describing where the procedures can be found and states it must reference a specific document or website that provides the direction because it's not clear what the documents are. Commenter is also concerned that Water Uses DC1 is unclear because "favorable conditions of water flow" is undefined and unclear.

Commenter suggests the Wildlife, Fish, and Plants guideline that incorporates recovery plans by reference is insufficient and that the elements of recovery plans should specifically be written into the plan as standards and guidelines. Further, commenter states that the plan components only address a subset of the frog's threats and stressors. The draft EIS claims several Timber, Forest, and Botanical Products plan components would minimize the impacts of sedimentation from vegetation treatments and reduce undesirable impacts from uncharacteristic fire and drought. Commenters find Timber, Forest, and Botanical Products DC1 acceptable, but the standards and guidelines listed as pertaining to the frog will not assure that these desired conditions will be achieved. Commenters provide the following on the standards and guidelines in this section of the draft plan:

- S1 directs vegetation management projects to have inclusive interdisciplinary teams. The plan must clarify whether "interdisciplinary teams" are Forest Service personnel or external participants. There is no constraint on activities or projects, so the standard does not comply with the planning rule.
- S5 requires vegetation management projects to provide for forest health through detection, monitoring, and control. How does that apply to the frog?
- G3 requires vegetation management projects to promote movement toward desired conditions for vegetation communities and habitats and is written more like a desired condition than a standard. It mandates to constraints that involve leopard frog habitat and no real direction for project managers, so it doesn't even comply with planning rule requirements.
- G7 directs managers to favor natural reforestation over artificial reforestation. How does this mitigate sedimentation, uncharacteristic wildfire, or drought impacts that threaten the frog?

Commenters provide the following on plan components for the Livestock Grazing section of the draft plan:

- DC3. "Livestock grazing and use is compatible with the desired conditions for ecosystems, soils, watersheds, native plant and animal species, and other activities and resources." There is no way to measure trends toward the achievement of this desired condition, so it doesn't meet planning rule requirements.
- DC4. Again, it is unclear how providing for habitat connectivity and wildlife movement with cattle grazing will be measured so it doesn't meet planning rule requirements.
- S1. Livestock management will be compatible with carrying capacity and address ecological resources (such as forage, invasive plants, at-risk species, soils, riparian health, and water quality) that are departed from desired conditions, as determined by temporally and spatially appropriate data. This standard provides no constraint on livestock grazing activity and, therefore, does not comply with the planning rule. The word "address" could mean almost anything.

- S3. Commenters state this is an important standard.
- G1 and G5. Again, the plan must be clear about the make-up, authority, and procedures that will be undertaken by these "interdisciplinary teams." Specific and appropriate best available science metrics must be used to make these determinations.
- G3 requires mineral supplements to be placed away from riparian management zones and other surface waters with some exceptions. This may help, in small part, mitigate a stressor on the frog.
- G4 provides direction to evaluate range readiness after wildfire or other major disturbance and requires that any livestock use on riparian vegetation should be managed to maintain or improve cover, but livestock should not be using recovering riparian vegetation at all so this is not compatible with recovering the frog. Keeping livestock out of recovering riparian areas should be a standard.

Commenters provide the following on plan components for the Roads section of the draft plan:

- DC5. "Unneeded roads are closed to motor vehicle use and decommissioned to reduce impacts to ecological resources (that is, watersheds, wildlife and fish habitat, and soil erosion)." This is written like a standard and should be a plan standard instead of a desired condition
- G1 and G2 are too vague and general to provide followable management direction. They don't provide constraints on specific projects or activities and so don't comply with the planning rule.

Commenters recommend the plan incorporate a management area for leopard frog habitat or restorable habitat and incorporate the specific actions including in the recovery plan as forest plan standards and guidelines.
Associated Letters: 712 and 724.1 through 724.11

Response: The Wildlife, Fish, and Plants section of the EIS, and appendix D (now final appendix G) have been substantially reorganized to better align with the requirements of the 2012 Planning Rule and the analyses found in the habitat-oriented sections (such as Upland Vegetation, Fire Ecology and Fuels). It also contains revisions for brevity, clarity and in response to comments.

The plan incorporates all U.S. Fish and Wildlife Service-approved recovery plan by reference (Wildlife, Fish, and Plants draft G3 and final S4). Further, the plan's final desired conditions for Riparian and Aquatic Ecosystems have been revised to better align with those associated with the Southwestern Region's Riparian and Aquatic Ecosystem Strategy. This includes final DC3, a fine-filter plan component for riparian- and wetland-dependent species including the leopard frog. Plan direction found in the Water Quality, Watersheds, Non-native Invasive Species and Wildlife, Fish, and Plants sections of the plan also support the ecological conditions and address threats to the persistence of the frog, consistent with suggestions 1 through 6 provided by commenters. For example, Non-native Invasive Species draft G7 (final G12) specifically requires habitat improvement and aquatic restoration projects that include habitat occupied by Chiricahua leopard frogs to include provisions to remove non-native invasive animals. All projects proposed under any of the alternatives with the potential to impact the frog would be consulted on and any additional conservation measure identified through consultation would be included.

The plan's reference to decontamination measures identifies "the most current version of Preventing Spread of Aquatic Invasive Organisms Common to the Southwestern Region and in the most current National Interagency Fire Center guidance." We acknowledge that there is some lack of clarity around the "favorable conditions of water flow." That is the direction provided to the Forest Service through 1897 Organic Act. Regarding the plan direction in the Timber, Forest, and Botanical products section of the plan and S1's reference to interdisciplinary teams, the responsible official has the authority to appoint the team. Generally, these are composed of agency personnel, but could include other qualified personnel from outside the agency. This standard contributes to meeting the requirements found in Forest Service Handbook 1909.12 chapter 60, as does G3. Timber, Forest, and Botanical Products S5 does not apply to the frog (see appendix F to the final

EIS). Draft G7 has been revised based on further review but does not apply to the frog in its draft or final form (appendix F to the final EIS).

Regarding the comments on the direction found in the Livestock Grazing section of the plan, DC3 can be measured, although we acknowledge it may be indirect. Progress toward desired conditions for ecosystems, soils, watersheds, species can be measured. So, if management is maintaining or moving toward those desired conditions, then it is reasonable to conclude livestock grazing and use is being managed so that it is compatible. Conversely, if management is moving away from desired conditions, then a need for change and an adaptive management response would be indicated. Progress toward DC4 could be measured, for example, by the number of projects incorporating measures that maintain or enhance safe access to water, connectivity, and movement. S1 has been removed (see response to comment 62 in the Livestock Grazing section of this appendix) and S3 is now S2. Specific and appropriate best available science is routinely used by interdisciplinary teams to develop recommendations and alternatives for the responsible official's consideration in the project-level decision-making process. This would be the case when implementing G1 (final G3). Draft G5 has been removed because it compelled action, rather than placing constraints on action. Draft G4 is now final G6; it is now specific to prescribed fire and the language referring to riparian areas was no longer deemed relevant. At draft, it compelled action rather than constraining actions such as prescribed fire.

Regarding the comments on plan components for roads, DC5's wording is consistent with a desired condition. If it were worded as a standard, it would include a "shall," "must," or "will." Gs1 and 2 are implementable. They direct projects to include consideration of other uses and resources into project proposal development, alternative development, and maintenance activities. This could be things like aquatic organism passage, reduced number of stream crossings, et cetera.

Rio Grande sucker

Comment 148: Commenter points to page 213 of the draft EIS and suggests that the current distribution of this species should be updated to reflect current information. Commenter states: "Rio Grande suckers are native to the San Francisco River drainage (Turner et al. 2019). In addition, nonnative predators were eliminated from the Mimbres River following the 2013 Silver Fire, thus are no longer contributing to population declines." There is a recommendation to clarify trends in distribution, abundance and other measures of population status and the timeframe for identifying long-term trends. **Associated Letter: 151**

Response: The Wildlife, Fish, and Plants section of the EIS has been substantially reorganized and focused on the effects of plan direction, brevity, clarity and to better align with supporting analyses such the Upland Vegetation, Fire Ecology and Fuels analysis.

Chihuahua chub

Comment 149: Commenter points to page 184 of the draft EIS and states that a past attempt at establishing this species in McKnight Creek was unsuccessful but recently they were introduced again and their status there is currently unknown. **Associated Letter: 151**

Response: See response to comment 148 above.

Comment 150: Commenter recommends the section on Chihuahua chub needs to be updated with current information. Commenter states that nonnative predators were eliminated from the basin after the Silver Fire and Chihuahua chub are currently found throughout the majority of the Mimbres River basin. Commenter notes the statement that Chihuahua chub are only found regularly at Moreno Springs is no longer accurate. **Associated Letter: 151**

Response: Commenter is correct that the discussion of Chihuahua chub was outdated, and after the 2022 Black Fire, it may have changed again. See response to comment 148 above.

Roundtail chub

Comment 151: Commenters suggest that since the Gila chub and headwater chub have both been reclassified to the single species roundtail chub, that this needs to be updated and clarified in the documents. Specific instances where this should happen include the Riparian and Aquatic Ecosystems list of at-risk species in the draft plan and page 179 in volume 1 of the draft EIS. Additionally, critical habitat for Gila chub should be given in stream miles, not acres as it is for other fish species with critical habitat. **Associated Letter: 151**

Response: The current classification is now reflected in the documents. See also response to comment 148 above.

Comment 152: Commenter points to page 213 of the draft EIS and says the first sentence in the roundtail chub section is very confusing and doesn't make sense. **Associated Letter: 151**

Response: Commenter is correct. See response to comment 156 above.

Comment 153: Commenter states they were glad to see the headwater and roundtail chub are again considered the same species and no longer endangered. **Associated Letter: 39**

Response: Thank you for your comment. A review of the species status is ongoing. It remains undetermined if the species will be listed.

Spikedace

Comment 154: There is a recommendation to update the description of spikedace distribution in the EIS to include the lower Middle Fork Gila River based on a 2018 publication. **Associated Letter: 151**

Response: See response to comment 148 above.

Gila Trout

Comment 155: There are differing perspectives on the Gila trout recovery program. One commenter states it is useless and has ruined fishing opportunities within the forest. This commenter suggests adding Gila trout to streams is fine but poisoning other trout is ridiculous.

Other commenters support the recovery program. One of these commenters suggests the best way to restore Gila trout populations is to collaborate with the U.S. Fish and Wildlife Service, New Mexico Department of Game and Fish, Trout Unlimited, and other interested stakeholders to prioritize and restore riparian and aquatic habitat and reduce competition with non-native species through the installation of fish barriers. Commenter relays there must be a sense of urgency associated with this work given climate change, wildfire, livestock grazing, and competition from nonnative species. Commenter stresses the importance of clearly defined riparian management zones, including intermittent and ephemeral stream channels, an ambitious set of restoration objectives, and the inclusion of standards and guidelines that constrain mining, grazing, road development, and other forest uses to mitigate the potential impacts to water quality, stream habitat, and aquatic species. Commenter suggests plan components should incorporate the following:

1) Work with New Mexico Game and Fish to identify opportunities to secure and protect Gila trout populations from non-native fish by erecting fish migration barriers and improve connectivity between isolated Gila trout populations by creating sustainable meta-populations where feasible.

2) Develop recreational Gila trout fishery opportunities intended to engage Forest users with native fish. Create educational experiences around Gila trout, their natural history and importance.

3) Include a restoration objective for restoring Gila trout to their historic range and reconnecting isolated populations occurring in headwater streams as is done in the Santa Fe and Carson National Forest plans.

Associated Letters: 545, 672, and 724.1 through 724.11

Response: The Gila trout program aims to maintain native species on the landscape and build resiliency into ecosystems. Having native species that evolved with disturbances will aid in building that resiliency along with restoring the uplands that drain into the streams that support fish. Five historically large wildfires and subsequent post-fire flood flows over the last dozen years have greatly impacted the pool habitat. Some places may never be the same as we have seen increased intermittency and increased temperature. In places like Willow and Gilita Creek, the Whitewater/Baldy fire eliminated all trout (even Gila trout stocked for recreation prior to the fires) from the drainages, and that's when we installed a barrier and repatriated the drainages with Gila trout. No piscicide was applied to these streams. It wasn't necessary.

The New Mexico Department of Game and Fish passed a policy of not stocking nonnative fish in the rivers and streams of the Gila National Forest. If it wasn't for the Gila trout program and the associated 4(d) special rule of the Endangered Species Act, which allow for recreational angling of Gila trout, the fishing in any of these places would be much worse or nonexistent. The reason for the small size of Gila trout in Willow Creek is because of the fishing pressure it receives from the public and the habitat is just not there to support big numbers of larger fish yet. Willow/Gilita is very accessible and gets a lot of pressure throughout the year. Higher quality fishing experiences require hiking either farther up into the wilderness or seeking out otherwise less accessible streams.

The success of the recovery program depends on continued coordination and collaboration between the Gila National Forest, New Mexico Department of Game and Fish, and the U.S. Fish and Wildlife Service. Trout Unlimited is a highly valued partner that has and continues to make critical contributions to the recovery effort. These relationships are highlighted in the final Adaptation, Restoration and Relationships management approach in the Wildlife, Fish, and Plants section of the plan. The Engaging Youth management approach in the Community and Tribal Relationships section of the final plan discusses collaborative education and outreach opportunities, including Fish in the Classroom and the annual fishing derby at Lake Roberts.

The objective of the Gila trout recovery program is to restore the species. Work done under Wildlife, Fish, and Plants Os2-4 will contribute to that goal. Riparian management zones, as defined in the plan, include intermittent and ephemeral drainages that support riparian function, or have the ecological and hydrological potential to do so.

Comment 156: Commenter believes that piscicides should not be used to remove non-native trout. Commenter states that brown trout can co-exist with Gila trout and the plan and EIS give this topic very little attention. Commenter is concerned that there is no documentation provided on repopulation of aquatic invertebrates, amphibians, and native fish after "renovation" for Gila trout. **Associated Letter: 39**

Response: Brown trout are highly piscivorous, meaning they feed on fish. Due to the timing of their spawn, they have a significant competitive advantage over Gila trout and other trout species. Brown trout and Gila trout may co-exist for a short period of time, but Gila trout will eventually be out competed to the point that there is no longer a viable Gila trout population capable of sustaining itself over time without continual intervention. There is a significant amount of literature available on the recovery of macroinvertebrates following piscicide treatments. Macroinvertebrate communities typically recover to pre-treatment levels or higher within one year of a treatment. Some life stages of frogs are slightly affected by piscicide, but other stages are not affected and are able to repopulate these reaches. Other native fish species that were present prior to the treatment are manually repatriated into the renovated areas upstream of the fish barrier for repopulation of these reaches.

Anaxyrus microscaphus (Arizona toad)

Comment 157: Commenter appreciates the inclusion of this species on the species of conservation concern list as recommended in their previous comments. **Associated Letter: 151**

Response: The Arizona toad remains on the species of conservation concern.

Leptonycteris yerbabuenae (lesser longnose bat)

Comment 158: Commenter appreciates the inclusion of this species on the species of conservation concern list as recommended in their previous comments. **Associated Letter: 151**

Response: The lesser longnose bat remains on the species of conservation concern list.

Draft Plan Content

Desired Condition 1

"Native populations are abundant and adequate to ensure that they are well distributed throughout a majority of their historic range and supported by healthy ecosystems and watersheds."

Comment 159: There is support for this desired condition and a request for further explanation on what steps will be taken to ensure that native populations are abundant. Others would like to see the wording account for both historic and potential future ranges as many species may or have already shifted their distribution in response to long-term climate change. **Associated Letters: 42 and 672**

Response: The suggestion to include potential future species ranges has been incorporated into the final desired condition. Progress toward this desired condition will result from the projects implementing the plan's objectives, other project activities, and implementation of approved recovery plans and conservation agreements.

Desired Condition 2

"Habitats maintain species' richness and diversity by maintaining natural processes within low departure from reference conditions."

Desired Condition 3

"Life history, distribution, and natural population fluctuations of species are provided for by the diversity, quantity, quality and site potential of natural habitats in the forest as evidenced by low departure from reference conditions."

Comment 160: Commenter requests an explanation of what the reference conditions are for DCs 2 and 3. **Associated Letter: 151**

Response: Natural processes include fire and flood regimes, native insect infestations and native disease pathogen cycles. The information available to describe the reference conditions for each of these processes and their status is described in detail in the assessment report and summarized in the Upland Vegetation, Fire Ecology and Fuels, Riparian and Aquatic Ecosystems and Wildlife Fish, and Plants Affected Environment sections of the final EIS. Similarly, the information describing reference conditions for habitats are described in detail in the assessment report and summarized in the same Affected Environment sections of the EIS. The final plan preserves the intent of these desired conditions but reframes them in terms of desired conditions contained elsewhere in the plan for clarity (Wildlife, Fish, and Plants DCs 1-3).

Desired Condition 4

"Interconnected terrestrial, riparian, and aquatic habitats promote species' movements and genetic exchange, allow for movement of wide-ranging species, contribute to self-sustaining populations (including at-risk species), and enable species to adapt to changing environmental and climatic conditions.

Habitat loss and fragmentation is reduced and connectivity is enhanced between the national forests and other public and privately conserved lands."

Comment 161: There is support for this desired condition because it promotes habitat connectivity, but also a suggestion that the wording be modified to "enable species to adapt and move in response to environmental and climatic conditions. **"Associated Letters: 151 and 652**

Response: The language in this desired condition is removed from the final plan. Instead, habitat connectivity is the subject of the final plan's Wildlife, Fish, and Plants DCs 5–7, which provide more specificity. The concepts of adaptation and movement in response to environmental conditions, including climate are incorporated in final DCs 2 and 6.

Desired Condition 6

"Habitat conditions contribute to multiple uses and are consistent with the recovery of federally listed, proposed, and candidate species and the persistence of species of conservation concern. Hunting, fishing, plant-gathering and other species-based recreation and cultural opportunities exist but do not compromise species, populations or habitat."

Comment 162: There is support for this desired condition and a request it be included in the final plan. **Associated Letter: 672**

Response: Thank you for your comment. This desired condition was separated into final DC3 and 10.

Desired Condition 7

"Habitat features such as cliffs, caves, cavities, snags, large down woody material, herbaceous cover and shrub cover provide forage, cover, fawning and nesting sites for species requiring them."

Comment 163: Commenter suggests this desired condition should also include old-growth attributes. **Associated Letter: 151**

Response: This desired condition was removed from this section of the plan because it is redundant with the desired conditions for vegetation communities, which include the old-growth attributes of snags, large down woody material (or coarse woody debris), and large and old trees. Instead, Wildlife, Fish, and Plants DCs 1-3 incorporate the desired conditions for vegetation communities by reference.

Desired Condition 8

"Self-sustaining populations of native aquatic, semi-aquatic, riparian and terrestrial species are supported by riparian and aquatic ecosystem conditions. Wood and herbaceous overstory and understory, streambank and channel features provide fish habitat, regulate stream temperatures and maintain soil moisture in riparian management zones (RMZs)."

Comment 164: There is support for this desired condition and a request it be included in the final plan. **Associated Letter: 672**

Response: Thank you for your comment. This desired condition was removed from the final plan because it is redundant with the desired conditions for riparian and aquatic ecosystems. Instead, the final plan incorporates these desired conditions by reference in Wildlife, Fish, and Plants DCs 1-3.

Desired Condition 10

"Habitat and movement corridors for species are provided for by RMZs. Human-made barriers to movement may exist to protect native species and prevent movement of non-native species (for example, fish barrier structures to protect Gila trout populations from non-native fish)."

Comment 165: There is support for this desired condition and a request it be included in the final plan with a modification. Commenter states that fishing for desirable non-native fish species will continue to occur in natural surface waters over the life of the plan, not just reservoirs and artificial waters. Therefore, they suggest

the plan provide realistic targets for native trout restoration and the amount of habitat occupied by non-native trout like the Santa Fe National Forest's plan does. Commenter suggests that such a target should be based on consultation with the New Mexico Department of Game and Fish and the U.S. Fish and Wildlife Service. **Associated Letter: 672**

Response: This suggestion was not incorporated into the revised desired condition, which is now DC6. We will continue to coordinate with both the New Mexico Department of Game and Fish and the U.S. Fish and Wildlife Service regarding these issues. Opportunities to contribute toward shared fisheries objectives with the New Mexico Department of Game and Fish is discussed in the final EIS, Appendix E Coordination with Other Plans.

Objectives

Comment 166: Commenter points to the page containing the Wildlife, Fish, and Plants objectives and recommends that the plan should not have objectives for reducing or eradicating non-native fish, as this is the purview of the state, not the federal government. **Associated Letter: 39**

Response: We acknowledge the commenter's preference. The New Mexico Department of Game and Fish takes the lead on non-native fish removal. We work with them, and the U.S. Fish and Wildlife Service to restore native fish. Please also refer to response to comment 163 in this section of this appendix.

Comment 167: Commenters express general support for the objectives in the Wildlife, Fish, and Plants section of the draft plan especially objectives 2 and 4. **Associated Letter: 672**

Response: Thank you for your comment.

Objective 4

"Restore or enhance at least 100 miles of stream habitat over each 10-year period."

Comment 168: There is support for this objective because it would have significant benefits to aquatic, riparian, fish, and wildlife resources. **Associated Letter: 151**

Response: Thank you for your comment.

Objective 5

"Implement at least 20 projects that maintain or enhance upland habitat connectivity over each 10-year period."

Comment 169: There is support for this objective because it promotes habitat connectivity. Commenters suggest it could also be improved by providing examples of what types of activities and projects would qualify for meeting the objective and could be written to focus on aquatic habitat, not just streams. Commenter also states that if upland habitat projects would qualify for meeting this objective, there should be language describing the measure of success in enhancing connectivity rather than equating every vegetation treatment with habitat improvements. **Associated Letter: 652 and 672**

Response: The project's effects on habitat connectivity would be evaluated through the project-specific environmental analysis. If a wildlife biologist determines the project would enhance connectivity, then it would count toward this objective.

Suggested Objectives

Comment 170: There is support for the restoration objective to restore stream habitat to benefit aquatic species. Commenter suggests this should be coupled with an objective specific to restoring native fish species to their historic habitat where nonnative fish are absent and request such an objective be included in the final

plan. Commenter suggests the following objectives from the Carson and Santa Fe National Forests would complement the existing restoration objectives:

> "Reduce nonnative fish within native fish populations in 4-6 stream reaches during each 10-year period following plan approval."
>
> "Restore native fish species to 20 miles of streams where nonnative fish as absent and barriers exist every ten years."
>
> "Every 10 years, restore native fish species to 20 [or 30] miles of streams where nonnative fish are absent and where natural or human barriers exist."

Associated Letter: 672

Response: Wildlife, Fish, and Plants O4 would include this type of work on at least 100 miles of stream habitat. Wildlife, Fish, and Plants Os2 and 3 would also benefit native fish.

Comment 171: There is a request to add an objective for projects that improve wildlife connectivity for terrestrial species and include a management approach to work collaboratively with the New Mexico Department of Game and Fish to identify and protect wildlife corridors. **Associated Letter: 675 and 724.1 through 724.11**

Response: Wildlife, Fish, and Plants O5 provides for terrestrial habitat connectivity. The Wildlife Corridor Action Plan and Cross-Jurisdictional Connectivity management approaches are also responsive to these comments.

Suggested Objectives and Standards

Comment 172: Commenter is concerned that the wildlife, fish, and plants section of the draft plan does not contain objectives, standards or guidelines related to plant species of conservation concern. Commenter states that at a minimum, the following management approach language should be elevated to a mandatory objective: "Seek to strengthen and develop programs to survey, monitor, and collect data on at-risk, rare, and endemic species, especially when basic distribution and species status information is lacking in the forest. Identify, document, and correct any management conflicts to the species or their habitat." Commenter states the rest of the minimum should be the addition of a specific standard to ensure that all forest projects, restoration plans, or post-fire activities identify plant species of conservation concern habitats within the project area and cause no direct harms or disruptions to the species habitat. **Associated Letter: 137**

Response: The final Wildlife, Fish, and Plants section contains standards and guidelines related to rare and endemic plant species, including those that are also species of conservation concern. The final Adaptation, Restoration and Relationships management approach also contains content responsive to these concerns.

Guideline 1d

"Human presence should be minimized in occupied goshawk nest areas during nesting season (March 1 through September 30)."

Comment 173: "Commenters request clarification about what "minimized" means and suggest a specific disturbance buffer radius should be included. **Associated Letters: 42 and 712**

Response: This is a regionally consistent guideline that is no longer required given new information about the status of the goshawk. We opted to retain this and the other goshawk guidelines. Minimized means the least amount of management activity disturbance practicable.

Guideline 4

"Constructed features (for example, exclosures, wildlife drinkers, range improvements, fences, and culverts) should be designed, modified if existing, and maintained to conserve wildlife and fish habitat connectivity. Constructed features should be removed when no longer needed (see also Livestock Grazing)."

Comment 174: There is support for this guideline because it promotes habitat connectivity. **Associated Letter: 652**

Response: This guideline is retained in the final plan as G5 but has been refined for specificity and clarity.

Guideline 5

"Except where artificial barriers are beneficial and necessary to achieve conservation goals for aquatic species, fragmentation of aquatic habitats and isolation of aquatic species should be avoided and passage for aquatic organisms should be maintained."

Comment 175: There is support for this guideline because these structures are necessary to restore and protect native fish populations. **Associated Letter: 151**

Response: This guideline has been retained in the final plan as G6.

Guideline 10

"Where bighorn sheep occur, special use permits should not be issued, and management of vegetation with the use of domestic sheep and goats, should not be authorized to minimize the transfer of disease to bighorn sheep."

Comment 176: There are differing perspectives on this guideline and the status of the best available science about disease transmission. Some commenters are concerned that packgoat users are being ushered out of the forest based on science that is not current or reputable. These commenters state that the most current best available science indicates there is no more evidence to implicate goats in lethal disease transmission to bighorn sheep than there is evidence to implicate cattle and horses. These commenters provide additional rationale stating: (1) the statistical probability that goatpackers could cause a problem in wilderness is abysmally small; (2) due to early imprinting and socialization, packgoats are extremely tightly bonded with their owner such that they will never tolerate "their" human to be out of their direct line of sight; (3) packgoats do not go wandering, they follow religiously; and (4) if a packgoat were to become lost or separated from their human, they would go looking for their human, not for a herd of bighorn sheep to mingle with. These commenters also provide peer-reviewed, published literature to support their claims that while some goats may carry the bacteria linked to pneumonia, studies have shown that the strain goats carry results in sub-lethal infections if it is transmitted to bighorn sheep. Further, appropriate testing can prove whether an animal is carrying the bacteria or not so there is no legitimate reason for keeping them out of the forest.

To remedy their concerns, these commenters suggest: (1) removing the reference to goats from the guideline; (2) making sure the wording pertaining to grazing goats for vegetation management does not unfairly implicate packgoats because they are entirely different from grazing goats; d (3) incorporate the practices outlined by the North America Packgoat Association; and (4) use North American Packgoat Association as an expert resource to provide information.

Other commenters support this plan direction, affirm the science basis behind it and suggest it should be a standard rather than a guideline because guidelines are neither followed nor enforceable, so they are irrelevant. Some suggest the language would better reflect bighorn sheep biology and behavior if it were modified read: "Special use permits will not be issued within 10 miles of occupied or historic bighorn sheep habitat, and management of vegetation with the use of domestic sheep and goats will not be authorized." **Associated Letters: 77, 95, 97, 98, 133, 148, 194, 671, and 713**

Response: This isn't a wilderness issue, it's a bighorn sheep habitat issue. Besser and others (2017) concluded goats could induce pneumonia in bighorn sheep, but it wasn't severe enough to kill them. This is very different from the science about domestic sheep disease transmission. When domestic sheep transmit the pathogens that induce pneumonia, it is nearly always induce fatal to bighorn sheep. There are also testing and vaccinations for pneumonia-causing pathogens. This draft standard has been retained as final Sustainable Recreation S5 with modification allowing for exceptions outside of bighorn sheep-occupied range if the prospective recreation special use permittee can demonstrate their animals have tested negative for pneumonia-causing pathogens, have been vaccinated against those pathogens, and are up to date with those vaccinations. With these standards—Non-native Invasive Species S6, which prohibits the authorization of domestic sheep and goats for the purposes of invasive plant control, and Livestock Grazing S4, which prohibits grazing permit conversions from cattle, horses, or both to domestic sheep and goats—the suggestions to include historic range and larger buffers add no additional protection for bighorn sheep.

Literature Cited in Response:

Besser, T.E., E.F. Cassirer, K.A. Potter, and W.J. Foreyt. 2017. Exposure of bighorn sheep to domestic goats colonized with *Mycoplasma ovipneumoniae* induces sub-lethal pneumonia. PLoS ONE 12(6):e0178707.

Alternative 5 Guideline for Mexican Spotted Owl

"New construction or realignment of roads and motorized routes, recreation sites or other infrastructure should not be located within a half-mile of known Mexican Spotted Owl Protected Activity Centers (PACs)"

Comment 177: There are differing perspectives on the guideline that was considered as part of alterative 5. Some commenters prefer the decision-maker's discretion provided by alternative 1-no action because there are always site- and circumstance-specific factors that need to be considered. Some commenters are okay with the discretionary approach where it couldn't be avoided, the management reason was incredibly pressing, and impacts can be minimized, if these instances were rare. Some of these commenters point out that the realignment of a road might be to benefit the spotted owl if the new location is less disturbing, sometimes management needs roads to protect owls and other wildlife and that there may be other, more important competing management needs that would justify this infrastructure. Others question the ecological validity of how protected activity centers are delineated or state the owl populations are healthy and do not need protective measures. Others indicating a preference for alternative 1's approach ask that management please comply with court orders, protect habitat to the greatest extent possible, and favor roads for recreation, hunting, and conservation rather than industries. Others express concern about motorized trails and all-terrain vehicle noise disturbing the owls.

Others prefer the approach in alternatives 2, 3, and 4 where the plan is silent because the recovery plan provides direction and no more is needed—in other words, it is a compliance with the Endangered Species Act issue, not a plan issue. Others prefer the plan is silent because the spotted owl doesn't need protection and are of the opinion that this is more about politics and power. Others point out that the permittees would need to be involved, that owls move, that not all situations or conditions can be anticipated, that this would establish unreasonable limits on access and fire management, and that common sense should prevail over radical environmentalism.

Those that support the guideline in alternative 5 state that all protected species need to be a priority now because of the extinction crisis and this level of restriction would benefit the owl. Some point out the forest already has too many roads that are not being maintained so no new roads should be built. There are also suggestions for the language to be expanded to require the removal of old roads within at least a half mile. One commenter suggested the half-mile buffer may be excessive and perhaps a quarter mile would work. Others state they would prefer to see it as a standard because they don't believe they can trust the government to protect ecological resources over economic resources. **Associated Comments: OWS-1 through 144**

Response: All alternatives incorporate all U.S. Fish and Wildlife Service-approved recovery plans by reference (Wildlife, Fish, and Plants draft G3 and final S4), and therefore, the provisions in those recovery plans. The guideline in alternative 5 would double the area the Fish and Wildlife Service determined was necessary to apply these restrictions to. The forest supervisor will consider public input and the analysis in the final EIS before determining whether this alternative element will be included in the final plan.

Management Approach to Relationships

Comment 178: There is a concern with the following statement: "Educate the public on disease transmission of bighorn sheep from domestic sheep and goats." Those concerned state that the best available science doesn't show that goats represent the same risk to bighorn sheep as domestic sheep do. Commenters provide published literature and discuss the conclusions and management implications. **Associated Comments: 74, 77, 194, 671**

Response: This discussion has been revised in the final Adaptation, Restoration and Relationships management approach to reflect the changes in plan direction made in response to comment (see also response to comment 184 in this section of this appendix).

Comment 179: There is a suggestion that working with the Gila Native Plant Society, Western New Mexico University, and the Heart of the Gila should be added to this management approach. **Associated Comment: 233**

Response: This has been incorporated into the final Adaptation, Restoration and Relationships management approach.

Comment 180: "Work with partner organizations like TU [Trout Unlimited] to engage volunteers in citizen science, monitoring, and restoration projects." **Associated Comment: 672**

Response: This has been incorporated into the final Adaptation, Restoration and Relationships management approach.

Suggested Management Approaches

Comment 181: We appreciate the management approaches offered in this section of the draft plan and support their inclusion in the final plan, with two additions that are important to meeting desired conditions regarding wildlife disturbance and connectivity: (1) Consider seasonal road restrictions and area closures in small and large blocks to provide refuge for native species; (2) Work collaboratively with state agencies and other organizations to identify wildlife corridors and maintain or improve connectivity for terrestrial species. **Associated Comment: 672**

Response: Seasonal restrictions and area closures are a management option that could be considered in the future. Collaboration on connectivity issues is discussed in the final Wildlife Corridor Action Plan and Cross-Jurisdictional Connectivity management approaches.

Comment 182: Commenter discusses management approaches and states "The fact is that lower Gila River native fish as per chubs are in terrible condition due to agencies not taking actions to control exotic predatory fish. This needs to be clear. You conflate the problem if you suggest it is possible to please sport fishermen like me with preserving native species. Given the Gila's unique assemblage of fish in NM, it is tragic to allow this situation to keep degrading." **Associated Comment: 697**

Response: We acknowledge the commenter's opinion. There are efforts to remove non-native fishes in many streams and rivers within the Gila National Forest. The New Mexico Department of Game and Fish has a Statewide Fisheries Plan that states they will not augment desirable non-native fish into streams in the forest

but only into artificial, human-made lakes. The Gila National Forest and the Department of Game and Fish coordinate on all activities relating to fish on the Gila.

Wild Horse and Burro Territory

Comment: Commenters are concerned that the draft documents fail to address management of the Deep Creek Wild Horse and Burro Territory, which is listed as "inactive" in the 2014 survey of all Forest Service managed territories. Commenters are concerned because with there remains a possibility that the territory could be recolonized by wild horses from other territories on adjacent forests or by stray livestock that are later discovered and labeled as "wild and free-roaming." Commenters state these animals have negative environmental effects especially on native riparian species and would like to see plan components that require initiation of the un-designating process. One commenter stated we should do our best to eliminate wild horses.
Associated Comments: 712 and 730.60

Response: The listing is in error. Under the Standards and Guidelines heading on page 123 of the 1986 plan it states: "Discontinue the Deep Creek wild horse and burro territory as no known animals now exist." The Regional Forester's signature on the 1986 plan officially abolished the territory consistent with the authority delegated in Forest Service Manual 2260.41. There are no wild horses anywhere in the Gila National Forest and there hasn't been since at least 1986.