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Rulemaking for Colorado Roadless Areas

Volume III

Final Environmental Impact Statement Appendices A - I

Colorado national forests with roadless areas include:

Arapaho and Roosevelt; Grand Mesa, Uncompahgre, and Gunnison; Manti-La Sal (portion in Colorado); Pike and San Isabel; Rio Grande; Routt; San Juan; and White River National Forests



Commonly Used Acronyms

AR – Arapaho Roosevelt National Forests
BLM – Bureau of Land Management
CDNST – Continental Divide National Scenic Trail
CDPA – Congressional Designated Protection Area
CDPW – Colorado Division of Parks and Wildlife
CFR – Code of Federal Regulations
CFS – Colorado State Forest Service
CPZs – Community Protection Zones
CRAs – Colorado Roadless Areas
CWPP – Community Wildfire Protection Plan
DEIS – Draft Environmental Impact Statement
DNR – Department of Natural Resources
ESA – Endangered Species Act
FEIS – Final Environmental Impact Statement
FR – Federal Register
FSM – Forest Service Manual
GMUG – Grand Mesa, Uncompahgre, and Gunnison National Forest
IRAs – Inventoried Roadless Areas
LCZs – Linear Construction Zones
MIS – Management Indicator Species
NEPA – National Environmental Policy Act
NFMA – National Forest Management Act
NFS – National Forest System
NSO – No Surface Occupancy
OHV – Off Highway Vehicle
PSI – Pike San Isabel National Forests
RDEIS – Revised Draft Environmental Impact Statement
RFD – Regional Forester Determination
RFD(s) – Reasonable Foreseeable Development Scenarios
RG – Rio Grande National Forest
SJ – San Juan National Forest
TEPS – Threatened, Endangered, Proposed and Sensitive Species
USDA – United States Department of Agriculture
USDI – United States Department of Interior
USFWS – U.S. Fish and Wildlife Service
WR – White River National Forest

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Rulemaking for Colorado Roadless Areas Final Draft Environmental Impact Statement Volume III: Appendices

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Appendix A: Comparison of Colorado Roadless Areas with Inventoried Roadless Areas

Introduction

The roadless area petition from the State of Colorado that was used for developing the Colorado Roadless Area Rule (proposed rule) proposed that “the Colorado roadless rulemaking process should use the most updated inventoried roadless area boundaries available”. Thus, a concerted effort was made to use the best available and current roadless area boundaries for the analysis in this EIS. During the public comment periods on the DEIS and RDEIS, comments on the boundaries were received from both the public and the Colorado Department of Parks and Wildlife. In Colorado, the Grand Mesa, Uncompahgre, and Gunnison National Forests; the Manti-La Sal National Forest; the Pike and San Isabel National Forests; and the San Juan National Forest are currently, or will be, revising their forest plans. The Colorado roadless area boundaries reflect the inventories these forests have done during their revision or pre-revision processes, as well as the comments received during the public comment period. Where forests have completed their revisions, (the Arapaho and Roosevelt National Forests, the Rio Grande National Forest, the Routt National Forest, and the White River National Forest), mapping errors or updated GIS technology have identified boundaries that needed to be changed to be accurate with conditions on the land, as well as public comments received when they were in the category of mapping errors or updated GIS technology. All updates provided by the forests have been incorporated into the Colorado Roadless Areas (CRAs).

This appendix discloses and explains the differences between the CRAs analyzed in alternatives 2 and 4 in this EIS and the 2001 Roadless Rule inventoried roadless area (IRAs) boundaries analyzed in Alternative 1. In chapter 2, the sections titled *Roadless Area Designation* under each alternative discuss the reasons behind the acreage analyzed under the particular alternative. Refer to the map packet for maps that reflect the differences in the boundaries.

In this document, the following roadless definitions apply:

- ◆ **Inventoried Roadless Areas (IRA):** The 2001 Roadless Rule identifies approximately 4.43 million acres, or about 31 percent, of the National Forest System (NFS) lands in Colorado, as “inventoried roadless areas” (IRAs), based on the inventories of roadless areas that existed at the time. (Maps are available on the Internet at www.roadless.fs.fed.us). The IRAs used for Alternatives 1 and 3 in this FEIS are a modification of the 2001 Roadless Rule IRAs in which Congressionally designated areas and private land were removed, as well as some changes due to minor mapping errors.
- ◆ **Colorado Roadless Areas (CRA):** Approximately 4.19 million acres of NFS lands in Colorado would be identified as CRAs. The CRAs would exclude the congressionally designated areas that overlap portions of the original 2001 Roadless Rule IRAs. Further, Alternative 2 incorporates updated roadless area information from the four national forests that are, or will be, working on land management plan revisions (GMUG; Manti-La Sal; Pike-San Isabel; and San Juan National Forests). Alternative 2 also eliminated mapping errors on the four national forests in Colorado that completed roadless inventories from 1996-2002 as part of their revised land management plans (Arapaho-Roosevelt; Rio Grande; Routt, and White River). Alternative 4 also uses CRAs, but allocates more CRA acres to the upper tier.



Table A-1. Net Change in Roadless Acreage by Forest IRA Acres to CRA Acres

Table A-1 illustrates, by forest, the acres analyzed under the 2001 Roadless Rule FEIS.

<i>Forests & Regions¹</i>	<i>2001 Rule Total IRA Acres²</i>	<i>IRA Acres in CO Database³</i>	<i>IRA Acres Not Included in CRAs</i>	<i>Roadless Acres Added to CRAs</i>	<i>Total Roadless Acres To Be Managed Under CO Rule⁴</i>	<i>Net Change Bet. 2001 IRA & CRA Acres</i>
Region 2 Colorado						
Arapaho-Roosevelt	391,000 (1997)	352,500	10,800	5,400	347,100	(5,400)
GMUG ⁵	1,127,000 (1979)	1,058,300	281,500	124,200	901,100	(157,200)
Pike-San Isabel	688,000 (1979)	667,300	62,900	170,300	774,700	107,400
Rio Grande	530,000 (1996)	529,000	14,200	3,800	518,600	(10,400)
Routt	442,000 (1998)	442,300	10,400	1,700	433,600	(8,800)
San Juan	604,000 (1979)	543,600	76,500	98,900	566,100	22,500
White River	640,000 (2002)	639,500	7,400	4,700	636,700	(2,800)
Region 4 Colorado						
Manti-La Sal	11,000 (1979)	11,000	3,800	500	7,700	(3,300)
Total, State of Colorado	4,433,000	4,243,600	467,400	409,500	4,185,600	(58,000)

1) Column 1 acres rounded to nearest 1,000 acres; others rounded to nearest 100 acres. Acres do not add due to rounding.

2) The 2001 Roadless Rule used the inventoried roadless areas from the Forest Plan that was in effect when the 2001 Rule was developed, or a roadless inventory that had undergone public involvement. The date of each Forest's inventory used for the 2001 Rule is shown here. Acreages are from the 2001 Roadless Rule FEIS.



3) The acres used for the rulemaking analysis differ from the acres reported in the RACR FEIS because some wilderness, private, and special areas were included in the 2001 roadless inventory. These acres will not be included in this rulemaking analysis as acres to be managed under a Colorado Rule because Congress has already set out specific management for those acres. Excluded acres are miscellaneous private and wilderness acres that have been found as mapping errors in the 2001 Rule IRA acres, as well as those acres in the James Peak and Spanish Peak Wildernesses, the Indian Peaks Wilderness, Bowen Gulch and James Peak Protection Areas, Roubideau and Tabeguache Special Areas, Fossil Ridge Recreation Management Area, and the Piedra Special Management Unit, all designated by Congress, but were not excluded from the 2001 RACR inventory.

4) When the Colorado Roadless Rule is published, all Colorado Forests IRAs are superseded by the CRAs. The CRA Inventory takes effect when the Colorado Rule is signed.

5) GMUG refers to Grand Mesa, Uncompahgre, and Gunnison National Forests.

Table A-1 summarizes the iterative change in acres from 2001 to those analyzed under alternatives 1 and 3, and the additional change in acres analyzed under alternatives 2 and 4, including the following:

- ◆ 4.433 million acres were analyzed in the 2001 Roadless Rule (column 1).
- ◆ Subtracted from this total, for analysis in this EIS, are 189,400 acres of both congressionally designated lands that are managed under the laws that established them and private lands. These acres are not analyzed as part of the IRA or CRA acreage under any of the alternatives. Column 2 illustrates the IRA acres in the Colorado database. See chapter 2 discussion.
- ◆ Column 3 shows the acres not included within CRAs that are within the IRAs. This category includes adjustments made to CRAs due to mapping errors (other than private lands and congressionally designated lands), updated GIS technology, land exchanges, removal of ski areas, or areas that have been substantially altered by road construction or tree-cutting.
- ◆ Column 4 shows unroaded acres added into the CRAs that are not currently included as roadless areas within IRAs. Mapping errors, acquired lands, or updated GIS technology have identified these additional roadless acres to include in CRAs.
- ◆ Column 5 displays the total CRA acres analyzed under alternatives 2 and 4.
- ◆ Column 6 displays the net change by forest between IRAs and CRAs.

The map packet includes a map showing the acreage and boundary differences.

Table A-2. Inventoried Roadless Area Names and Acreage

Table A-2 Lists, by forest, the names and number of acres in each inventoried roadless area. The map packet includes a map with the IRAs.

<i>Roadless Area #</i>	<i>IRA Name</i>	<i>IRA Acres*</i>
<i>Arapaho and Roosevelt National Forests</i>		
1	Bard Creek	25,400
2	Byers Peak	10,100
3	Cache La Poudre Adjacent Areas	3,200
4	Cherokee Park	7,800
5	Comanche Peak Adjacent Areas	46,000
6	Copper Mountain	13,500
7	Crosier Mountain	7,200
8	Gold Run	6,500
9	Green Ridge – East	26,700
10	Green Ridge – West	13,600
11	Grey Rock	12,200
12	Hell Canyon	5,900
13	Indian Peaks Adjacent Areas	28,400
14	James Peak	2,800
15	Kelly Creek	8,200
16	Lion Gulch	6,600
17	Mt. Evans Adjacent Areas	10,200
18	Mt. Sniktau	8,300
19	Neota Adjacent Area	2,200
20	Never Summer Adjacent Area	11,400
21	North Lone Pine	9,500
22	North St. Vrain	7,200
23	North St. Vrain RNA	4,500
24	Rawah Adjacent Areas	2,700
25	Square Top Mountain	6,400
26	Troublesome	13,800
27	Vasquez Adjacent Area	6,100
28	White Pine Mountain	10,200
29	Williams Fork	35,900
<i>Grand Mesa, Uncompahgre, and Gunnison National Forests</i>		
30	Baldy Peak	1,900
31	Battlement Mesa	36,500
32	Beaver Castle	35,700
33	Beaver Creek	1,900
34	Black Point	9,900
35	Boston Peak	46,700
36	Campbell Point	11,300
37	Cannibal Plateau	14,200



<i>Roadless Area #</i>	<i>IRA Name</i>	<i>IRA Acres*</i>
38	Canyon Creek	12,600
39	Carson Peak	25,300
40	Chipeta	16,200
41	Cimarron	15,600
42	Clear Creek	42,900
43	Cochetopa Dome	7,200
44	Cochetopa Hill	71,400
45	Crystal Creek	28,700
46	Crystal Peak	5,500
47	Drift Creek	9,400
48	El Paso Creek	1,700
49	Electric Mountain	8,200
50	Elk Creek	2,700
51	Elk Mountains – Collegiate	65,100
52	Flattop Mountain	20,400
53	Gothic Mountain	6,200
54	Hightower	4,600
55	Iron Mountain	7,600
56	Johnson Creek	10,800
57	Kannah Creek	34,200
58	Kelso Point	34,400
59	Kreutzer – Princeton	15,400
60	La Garita	300
61	Matchless	34,100
62	Middle Fork	11,200
63	Mineral Mountain	6,400
64	Monchego	3,900
65	Nick Mountain	10,400
66	Ophir Needles	100
67	Priest Mountain	95,000
68	Raggeds	27,000
69	Romley	8,300
70	Roubideau	2,800
71	Salt Creek	11,100
72	San Miguel	9,100
73	Sawtooth Mountain	44,500
74	Springhouse Creek	17,600
75	Sunshine Mesa	700
76	Tabeguache	2,400
77	Uncompahgre	26,100
78	Ute Creek	29,800
79	West Elk	94,600



<i>Roadless Area #</i>	<i>IRA Name</i>	<i>IRA Acres*</i>
80	Whetstone Mountain	17,500
81	Wilson Mesa	1,200
<i>Manti-La Sal National Forest</i>		
82	Roc Creek	11,000
<i>Pike and San Isabel National Forests</i>		
83	3a and various others	83,000
84	5 Rare 2	41,900
85	8b	2,200
86	8c	400
87	Arnold Gulch	5,100
88	Aspen Ridge	15,600
89	Badger Creek	14,400
90	Boreas	5,300
91	Buffalo Peaks	18,200
92	Burning Bear	17,700
93	Chipeta	19,500
94	Cuchara	18,100
95	East Pikes Peak	12,700
96	Elk Mountain-Collegiate	18,300
97	Farnum	1,400
98	Front Range	25,600
99	Green Mountain	10,200
100	Greenhorn Mountain	14,100
101	Gunbarrel	8,800
102	Hardscrabble	7,500
103	Highline	12,200
104	Holy Cross	6,400
105	Jefferson	7,100
106	Kreutzer-Princeton	29,000
107	Lost Creek	25,600
108	Mad Creek DB&DB1	1,100
109	Mt. Antero	33,200
110	Mt. Blanca	2,800
111	Mt. Elbert	2,500
112	Mt. Evans	13,900
113	Mt. Massive	1,000
114	Porphyry Peak	3,400
115	Puma	8,500
116	Purgatoire	13,200
117	Rampart West	23,700
118	Romley	6,900
119	Sangre de Cristo	32,600



Roadless Area #	IRA Name	IRA Acres*
120	Scraggy Peaks	8,200
121	Sheep Rock	2,200
122	Silverheels	6,600
123	Spanish Peaks	5,700
124	Spanish Peaks- proposed	1,300
125	Square Top Mountain	5,900
126	St. Charles Peak	11,600
127	Starvation Creek	8,200
128	Tanner Peak	17,800
129	Thirtynine Mile Mountain	9,500
130	Thunder Butte	4,600
131	West Pikes Peak	9,600
132	Weston Peak	13,100
Rio Grande National Forest		
133	Alamosa River	5,000
134	Antora Meadows / Bear Creek	22,800
135	Beartown	2,400
136	Beaver Mountain	7,100
137	Bennet Mountain / Blowout / Willow Creek / Lion Point / Greenie Mountain	52,900
138	Big Buck / Kitty / Ruby	9,800
139	Box / Road Canyon	1,500
140	Bristol Head	46,400
141	Butterfly	1,900
142	Chama Basin	21,600
143	Conejos River / Lake Fork	900
144	Copper Mountain / Sulphur	5,300
145	Cotton Creek	2,300
146	Crestone	6,900
147	Cumbres	10,600
148	Deep Creek / Boot Mountain	28,900
149	Dorsey Creek	3,600
150	Elkhorn Peak	10,800
151	Four Mile Creek	10,500
152	Fox Creek	6,100
153	Fox Mountain	7,800
154	Gibbs Creek	1,700
155	Gold Creek / Cascade Creek	900
156	Hot Springs	500
157	Indian Ridge	1,600
158	Kitty Creek	1,400
159	La Garita Wilderness	12,100



<i>Roadless Area #</i>	<i>IRA Name</i>	<i>IRA Acres*</i>
160	Lake Fork	10,800
161	Lower East Bellows	1,800
162	Middle Alder	5,700
163	Miller Creek	1,000
164	Pole Creek	1,000
165	Pole Mountain / Finger Mesa	43,800
166	Red Mountain	4,200
167	Ruby Lake	7,100
168	Sawlog	10,500
169	Sheep Mountain	3,200
170	Silver Lakes / Stunner	6,000
171	Snowshoe Mountain	31,900
172	Spectacle Lake	800
173	Spruce Hole / Sheep Creek	7,700
174	Stunner Pass / Dolores Canyon	3,000
175	Sulphur Tunnel	1,900
176	Summit Peak / Elwood Pass	3,300
177	Taylor Canyon	6,100
178	Tewksberry	6,700
179	Tobacco Lakes	3,400
180	Trout Mountain / Elk Mountain	33,400
181	Ute Pass	9,100
182	Wason Park	20,500
183	Wightman Fork / Upper Burro	7,200
184	Wightman Fork to Lookout	5,900
185	Willow Mountain	9,900
<i>Routt National Forest</i>		
186	Barber Basin	5,500
187	Black Mountain	22,800
188	Bunker Basin	12,800
189	Bushy Creek	11,400
190	Chatfield	11,300
191	Chedsey Creek	1,000
192	Dome	2,100
193	Dome Peak	36,700
194	Elkhorn	11,000
195	Gold Creek	3,100
196	Grizzly Helena	6,400
197	Kettle Lakes	11,100
198	Little Green Creek	800
199	Long Park	44,000
200	Mad Creek	25,100



<i>Roadless Area #</i>	<i>IRA Name</i>	<i>IRA Acres*</i>
201	Morrison Creek	8,400
202	Never Summer North	3,700
203	Never Summer South	7,600
204	Nipple Peak North	6,300
205	Nipple Peak South	13,800
206	Pagota Peak	57,800
207	Shield Mountain	10,200
208	South Fork	4,700
209	Sugarloaf North	15,100
210	Sugarloaf South	23,300
211	Troublesome North	32,800
212	Troublesome South	47,000
213	Walton Peak	5,300
214	Whalen Creek	1,100
<i>San Juan National Forest</i>		
215	Blackhawk Mountain	17,200
216	Davis Mountain	1,400
217	East Animas	15,200
218	Florida River	35,400
219	Graham Park	11,100
220	HD Mountain	20,000
221	Hermosa	141,500
222	Lizard Head	5,300
223	Martinez Creek	4,600
224	Monk Rock	3,000
225	Piedra	53,900
226	Poison Park	7,900
227	Runlett Park	5,000
228	Ryman	7,400
229	San Miguel	58,100
230	Sheep Mountain	3,800
231	South San Juan	51,300
232	Storm Peak	49,400
233	Treasure Mountain	20,900
234	Turkey Creek	22,300
235	West Needle	2,500
236	West Needle Wilderness	5,900
237	Williams Creek White Fir Natural Area	500
<i>White River National Forest</i>		
238	Adam Mountain	8,200
239	Ashcroft	900
240	Assignment Ridge	13,300



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<i>Roadless Area #</i>	<i>IRA Name</i>	<i>IRA Acres*</i>
241	Baldy Mountain	6,000
242	Basalt Mountain A	14,000
243	Basalt Mountain B	7,400
244	Berry Creek	8,600
245	Big Ridge to South Fork A	35,300
246	Big Ridge to South Fork B	6,000
247	Black Lake East	700
248	Black Lake West	900
249	Blair Mountain	500
250	Boulder	1,300
251	Budges	1,000
252	Buffer Mountain	11,000
253	Burnt Mountain	1,700
254	Chicago Ridge	5,100
255	Corral Creek	3,100
256	Crystal River	6,100
257	Deep Creek	9,900
258	Dome Peak	12,000
259	East Divide / Four Mile Park	8,700
260	East Vail	8,000
261	East Willow	7,100
262	Elk Creek B	7,200
263	Elliot Ridge	3,200
264	Fawn Creek / Little Lost Park	5,500
265	Freeman Creek	1,000
266	Gallo Hill	1,400
267	Game Creek	6,900
268	Grizzly Creek	6,600
269	Gypsum Creek	17,900
270	Hardscrabble	11,700
271	Hay Park	11,100
272	Holy Cross City	800
273	Homestake	4,100
274	Hoosier Ridge	6,100
275	Housetop Mountain	12,700
276	Hunter	1,100
277	Little Grande Mesa	6,500
278	Lower Piney	13,400
279	Mamm Peak	25,300
280	Maroon East	1,400
281	Maryland Creek	1,500
282	McClure Pass	2,200



<i>Roadless Area #</i>	<i>IRA Name</i>	<i>IRA Acres*</i>
283	McFarlane	1,400
284	Meadow Mountain A	2,100
285	Meadow Mountain B	3,100
286	Morapos A	27,600
287	Morapos B	10,100
288	Mormon Creek	3,000
289	No Name	3,800
290	North Elk	10,000
291	North Independent A	4,500
292	North Independent B	900
293	North Woody	8,500
294	Pagoda Peak	9,200
295	Piney Lake	900
296	Porcupine Peak	8,700
297	Ptarmigan A	2,700
298	Ptarmigan B	1,800
299	Ptarmigan C	900
300	Ptarmigan Hill A	13,100
301	Ptarmigan Hill B	7,700
302	Red Dirt A	10,200
303	Red Dirt B	2,400
304	Red Mountain	6,500
305	Red Table	39,100
306	Reno Mountain	12,400
307	Ripple Creek Pass/Trappers Lake	600
308	Ryan Gulch	600
309	Salt Creek	5,600
310	Sloan Peak	20,100
311	Spraddle Creek A	900
312	Spraddle Creek B	6,500
313	Sweetwater A	11,900
314	Sweetwater B	4,300
315	Tenderfoot Mountain	8,400
316	Tenmile	6,400
317	Thompson Creek	18,500
318	Tigiwon	2,000
319	Treasure Mountain	1,500
320	West Brush Creek	5,800
321	West Lake Creek	3,300
322	Wildcat Mountain	3,500
323	Wildcat Mountain B	2,300
324	Wildcat Mountain C	4,700



Roadless Area #	IRA Name	IRA Acres*
325	Williams Fork	6,700
326	Willow	1,200
327	Woods Lake	9,500
Total		4,243,600

* Rounded to nearest 100 acres

Table A-3. Colorado Roadless Area Names and Acreage

Table A-3 Lists, by forest, the names and number of acres in each Colorado Roadless Area. The map packet includes a map with the Colorado Roadless Areas.

Roadless Area #	CRA Name	CRA Acres*
Arapaho and Roosevelt National Forests		
1	Bard Creek	22,800
2	Byers Peak	10,200
3	Cache LaPoudre Adjacent Areas	2,900
4	Cherokee Park	7,600
5	Comanche Peak Adjacent Areas	44,200
6	Copper Mountain	13,200
7	Crosier Mountain	7,300
8	Gold Run	6,600
9	Green Ridge-East	26,600
10	Green Ridge-West	13,700
11	GreyRock	12,100
12	Hell Canyon	5,800
13	Indian Peaks Adjacent Areas	28,600
14	James Peak	2,300
15	Kelly Creek	8,200
16	Lion Gulch	6,600
17	Mount Evans Adjacent Areas	9,900
18	Mount Sniktau	7,800
19	Neota Adjacent Area	2,200
20	Never Summer Adjacent Area	11,400
21	North Lone Pine	9,400
22	North St. Vrain	11,200
23	Rawah Adjacent Areas	2,800
24	Square Top Mountain	6,500
25	Troublesome	13,800
26	Vasquez Adjacent Area	6,900
27	White Pine Mountain	10,400
28	Williams Fork	36,300
Grand Mesa, Uncompahgre, and Gunnison National Forests		
29	Agate Creek	11,800



Roadless Area #	CRA Name	CRA Acres*
30	American Flag Mountain	11,900
31	Baldy	2,300
32	Battlements	24,400
33	Beaver	3,700
34	Beckwiths	18,400
35	Calamity Basin	12,500
36	Cannibal Plateau	14,500
37	Canyon Creek	10,900
38	Canyon Ck / Antero	1,700
39	Carson	6,000
40	Castle	9,400
41	Cataract	10,200
42	Cimarron Ridge	12,600
43	Clear Fork	24,300
44	Cochetopa	6,600
45	Cochetopa Hills	48,500
46	Cottonwoods	11,200
47	Crystal Creek	500
48	Crystal Peak	11,500
49	Curecanti	12,400
50	Currant Creek	10,800
51	Deer Creek	9,500
52	Dominguez	12,500
53	Doubleton	23,800
54	East Elk	6,000
55	Electric Mountain	9,800
56	Failes Creek / Soldier Creek	8,900
57	Flatirons	11,500
58	Flattop Mountain	5,400
59	Flattops / Elk Park	75,700
60	Gothic	5,800
61	Granite Basin	25,500
62	Hightower	3,600
63	Hope Lake	8,200
64	Horse Ranch Park	3,900
65	Horsefly Canyon	6,200
66	Huntsman Ridge	10,600
67	Italian Mountain	9,000
68	Johnson Basin	11,900
69	Kannah Creek	34,500
70	Kelso Mesa	35,500
71	Last Dollar / Sheep Creek	6,400



Roadless Area #	CRA Name	CRA Acres*
72	Little Cimarron	4,200
73	Long Canyon	17,200
74	Matchless Mountain	27,000
75	Matterhorn	3,600
76	McClure Pass	300
77	Mendicant	19,100
78	Mineral Mountain	2,400
79	Mirror Lake	6,000
80	Mount Lamborn	22,600
81	Munsey/Erickson	3,500
82	Naturita Canyon	4,600
83	North Henson	600
84	Pilot Knob	17,200
85	Poverty Gulch	5,500
86	Salt Creek	9,000
87	Sanford Basin	12,900
88	Sawtooth	22,800
89	Schofield Pass	900
90	Soap Creek	8,100
91	Steuben	3,500
92	Sunnyside	10,700
93	Sunset	5,800
94	Texas Creek	2,600
95	Tomahawk	12,900
96	Turner Creek	12,800
97	Turret Ridge	5,500
98	UnawEEP	12,200
99	Union	1,600
100	Whetstone	15,400
101	Whitehouse Mountain	14,400
102	Willow Creek	300
103	Wilson	2,600
104	Windy Point	12,800
Manti-La Sal National Forest		
105	Roc Creek	7,700
Pike and San Isabel National Forests		
106	Antelope Creek	6,900
107	Aspen Ridge	14,200
108	Babcock Hole	8,900
109	Badger Creek	12,400
110	Boreas	10,200
111	Buffalo Peaks East	5,700



Roadless Area #	CRA Name	CRA Acres*
112	Buffalo Peaks South	15,300
113	Buffalo Peaks West	8,300
114	Burning Bear	19,300
115	Chicago Ridge	5,900
116	Chipeta	28,700
117	Cuchara North	8,200
118	Cuchara South	7,700
119	Elk Mountain-Collegiate North	32,100
120	Elk Mountain-Collegiate South	6,600
121	Elk Mountain-Collegiate West	6,200
122	Farnum	11,100
123	Green Mountain	11,100
124	Greenhorn Mountain: Badito Coneto Dry Creek	2,300
125	Greenhorn Mountain: Cisneros Creek to Upper Turkey Creek	2,100
126	Greenhorn Mountain: Graneros Creek to Section 10	4,800
127	Greenhorn Mountain: Little Saint Charles Creek to Greenhorn Creek	5,200
128	Gunbarrel	7,700
129	Hardscrabble	7,800
130	Highline	22,700
131	Holy Cross	9,100
132	Hoosier Ridge	2,900
133	Jefferson	10,900
134	Kaufman Ridge	10,200
135	Kreutzer-Princeton	43,300
136	Little Fountain Creek	7,700
137	Lost Creek East	14,900
138	Lost Creek South	5,900
139	Lost Creek West	14,400
140	Methodist Mountain	6,900
141	Mount Antero	38,700
142	Mount Elbert	22,100
143	Mount Evans	15,400
144	Mount Massive	1,400
145	Pikes Peak East	13,700
146	Pikes Peak West	13,900
147	Porphyry Peak	3,900
148	Puma Hills	8,800
149	Purgatoire	16,800
150	Rampart East	28,300
151	Rampart West	28,800
152	Reveille Canyon	7,000
153	Romley	7,300



Roadless Area #	CRA Name	CRA Acres*
154	Saint Charles Peak	11,200
155	Sangre de Cristo: Alvarado Campground to Music Pass	8,000
156	Sangre de Cristo: Blanca Peak to Slide Mountain	4,100
157	Sangre de Cristo: Lake Creek to Hermit Creek	11,400
158	Sangre de Cristo: Medano Pass to Carbonate Mountain	7,000
159	Sangre de Cristo: Silverheels Gulch to Hunts Creek	6,000
160	Sangre de Cristo: West Creek to Big Cottonwood	7,400
161	Schoolmarm Mountain	6,000
162	Scraggy Peaks	16,700
163	Sheep Rock	8,000
164	Silverheels	8,300
165	Spanish Peaks	7,400
166	Square Top Mountain	7,100
167	Starvation Creek	7,600
168	Tanner Peak	17,700
169	Thirtynine Mile Mountain	11,800
170	Thunder Butte	7,400
171	Weston Peak	17,800
Rio Grande National Forest		
172	Alamosa River	4,900
173	Antora Meadows / Bear Creek	22,800
174	Beartown	2,400
175	Beaver Mountain	7,100
176	Bennet Mountain / Blowout / Willow Creek / Lion Point / Greenie Mountain	52,000
177	Big Buck / Kitty / Ruby	9,900
178	Box / Road Canyon	1,200
179	Bristol Head	46,100
180	Butterfly	1,900
181	Chama Basin	21,600
182	Conejos River/Lake Fork	900
183	Copper Mountain/Sulphur	5,200
184	Cotton Creek	2,300
185	Crestone	7,100
186	Cumbres	10,400
187	Deep Creek/Boot Mountain	27,600
188	Dorsey Creek	3,400
189	Elkhorn Peak	10,500
190	Four Mile Creek	10,200
191	Fox Creek	6,100
192	Fox Mountain	6,100
193	Gibbs Creek	1,400
194	Gold Creek/Cascade Creek	900



Roadless Area #	CRA Name	CRA Acres*
195	Hot Springs	500
196	Indian Ridge	1,600
197	Kitty Creek	1,500
198	La Garita	10,700
199	Lake Fork	10,700
200	Lower East Bellows	1,700
201	Middle Alder	5,400
202	Miller Creek	1,100
203	Pole Creek	1,000
204	Pole Mountain/Finger Mesa	43,900
205	Red Mountain	4,100
206	Ruby Lake	6,800
207	Sawlog	10,500
208	Sheep Mountain	3,100
209	Silver Lakes/Stunner	5,800
210	Snowshoe Mountain	31,500
211	Spectacle Lake	600
212	Spruce Hole/Sheep Creek	7,600
213	Stunner Pass/Dolores Canyon	3,000
214	Sulphur Tunnel	1,800
215	Summit Peak/Elwood Pass	3,200
216	Taylor Canyon	6,000
217	Tewksberry	6,600
218	Tobacco Lakes	3,300
219	Trout Mountain/Elk Mountain	33,100
220	Ute Pass	8,700
221	Wason Park	20,500
222	Wightman Fork/Upper Burro	6,700
223	Wightman Fork to Lookout	5,700
224	Willow Mountain	10,000
Routt National Forest		
225	Barber Basin	5,500
226	Black Mountain	22,700
227	Bunker Basin	12,800
228	Bushy Creek	11,300
229	Chatfield	11,300
230	Chedsey Creek	1,000
231	Dome	2,100
232	Dome Peak	35,700
233	Elkhorn	10,500
234	Gold Creek	3,200
235	Grizzly Helena	6,100



Roadless Area #	CRA Name	CRA Acres*
236	Kettle Lakes	10,800
237	Little Green Creek	900
238	Long Park	42,100
239	Mad Creek	24,300
240	Morrison Creek	8,500
241	Never Summer North	3,700
242	Never Summer South	7,600
243	Nipple Peak North	6,300
244	Nipple Peak South	11,900
245	Pagoda Peak	57,700
246	Shield Mountain	9,400
247	South Fork	4,700
248	Sugarloaf North	15,000
249	Sugarloaf South	23,200
250	Troublesome North	31,700
251	Troublesome South	47,400
252	Walton Peak	5,300
253	Whalen Creek	1,100
San Juan National Forest		
254	Baldy	20,300
255	Blackhawk Mountain	17,500
256	East Animas	16,900
257	Fish Creek	13,500
258	Florida River	5,700
259	Graham Park	17,800
260	HD Mountains	25,000
261	Hermosa	148,100
262	Lizard Head Adjacent	5,800
263	Piedra Area Adjacent	40,800
264	Runlett Park	5,600
265	Ryman	8,700
266	San Miguel	64,300
267	South San Juan Adjacent	34,900
268	Storm Peak	57,600
269	Treasure Mountain	22,500
270	Turkey Creek	25,300
271	Weminuche Adjacent	23,600
272	West Needles	6,900
273	Winter Hills/Serviceberry Mountain	5,100
White River National Forest		
274	Adam Mountain	8,200
275	Ashcroft	900



Roadless Area #	CRA Name	CRA Acres*
276	Assignment Ridge	13,300
277	Baldy Mountain	6,100
278	Basalt Mountain A	13,900
279	Basalt Mountain B	7,400
280	Berry Creek	8,600
281	Big Ridge to South Fork A	35,400
282	Big Ridge to South Fork B	6,000
283	Black Lake East	800
284	Black Lake West	900
285	Blair Mountain	500
286	Boulder	1,300
287	Budges	1,000
288	Buffer Mountain	11,000
289	Burnt Mountain	1,600
290	Chicago Ridge	5,100
291	Corral Creek	3,300
292	Crystal River	6,100
293	Deep Creek	9,900
294	Dome Peak	12,000
295	East Divide/Four Mile Park	8,700
296	East Vail	8,000
297	East Willow	7,200
298	Elk Creek B	7,200
299	Elliot Ridge	3,200
300	Fawn Creek/Little Lost Park	5,400
301	Freeman Creek	1,000
302	Gallo Hill	1,400
303	Game Creek	6,100
304	Grizzly Creek	6,700
305	Gypsum Creek	17,900
306	Hardscrabble	11,800
307	Hay Park	11,100
308	Holy Cross City	900
309	Homestake	4,200
310	Hoosier Ridge	6,000
311	Housetop Mountain	12,900
312	Hunter	1,100
313	Little Grand Mesa	6,300
314	Lower Piney	13,500
315	Mamm Peak	25,300
316	Maroon East	1,400
317	Maryland Creek	1,500



Roadless Area #	CRA Name	CRA Acres*
318	McClure Pass	2,200
319	McFarlane	1,400
320	Meadow Mountain A	1,500
321	Meadow Mountain B	3,100
322	Morapos A	23,600
323	Morapos B	14,100
324	Mormon Creek	3,000
325	No Name	3,900
326	North Elk	9,900
327	North Independent A	4,500
328	North Independent B	900
329	North Woody	8,600
330	Pagoda Peak	9,100
331	Piney Lake	900
332	Porcupine Peak	7,600
333	Ptarmigan A	2,700
334	Ptarmigan B	1,800
335	Ptarmigan C	900
336	Ptarmigan Hill A	13,100
337	Ptarmigan Hill B	7,000
338	Red Dirt A	10,200
339	Red Dirt B	2,500
340	Red Mountain	6,500
341	Red Table	39,100
342	Reno Mountain	12,400
343	Ripple Creek Pass/Trappers Lake	600
344	Ryan Gulch	600
345	Salt Creek	5,600
346	Sloan Peak	20,100
347	Spraddle Creek A	900
348	Spraddle Creek B	6,500
349	Sweetwater A	12,000
350	Sweetwater B	4,300
351	Tenderfoot Mountain	8,400
352	Tenmile	6,300
353	Thompson Creek	18,500
354	Tigiwon	2,000
355	Treasure Mountain	1,500
356	West Brush Creek	5,900
357	West Lake Creek	3,300
358	Wildcat Mountain	3,700
359	Wildcat Mountain B	2,300



Roadless Area #	CRA Name	CRA Acres*
360	Wildcat Mountain C	4,800
361	Williams Fork	6,600
362	Willow	1,100
363	Woods Lake	9,500
Total		4,185,600

*Rounded to nearest 100 acres

Tables A-4a through A-4e

Tables A-4a through A-4e cross-reference three forests where many IRA names differ from some CRAs names:

- ◆ Grand Mesa, Uncompahgre, and Gunnison National Forests
- ◆ Pike and San Isabel National Forests
- ◆ San Juan National Forest

Three of the forests currently undergoing forest plan revisions have changed the names for some of the roadless areas during their most recent inventory process. On some forests, adjustments to roadless area boundaries resulted in multiple roadless areas.

These tables also show the changes on the Rio Grande National Forest, where two IRAs were combined into one CRA, and the change of one IRA on the Arapaho and Roosevelt National Forests.

Table A-4a. Cross-Reference of IRA Names to CRA Names: GMUG National Forests

2001 IRA Names	CRA Name(s)
Baldy Peak	Baldy
Battlement Mesa	Battlements, Sunnyside
Beaver Castle	Beaver, Castle, East Elk, Steuben, Willow Creek
Beaver Creek	Whitehouse Mountain
Black Point	Dominguez
Boston Peak	American Flag Mountain, Granite Basin
Campbell Point	Long Canyon
Cannibal Plateau	Cannibal Plateau
Canyon Creek	Canyon Creek
Carson Peak	Carson, Cataract
Chipeta	Agate Creek
Cimarron	Cimarron Ridge
Clear Creek	Clear Fork, Turner Creek
Cochetopa Dome	Not included in CRAs
Cochetopa Hill	Cochetopa Hill
Crystal Creek	Crystal Creek, Union
Crystal Peak	Crystal Peak
Drift Creek	Huntsman Ridge
El Paso Creek	Matterhorn, North Henson
Electric Mountain	Electric Mountain



2001 IRA Names	CRA Name(s)
Elk Creek	Part of Failes Creek/Soldier Creek
Elk Mountains - Collegiate	Deer Creek, Double Top, part of Gothic, Italian Mountain, Schofield Pass, Texas Creek
Flattop Mountain	Flattop Mountain
Gothic Mountain	Part of Gothic
Hightower	Hightower
Iron Mountain	Last Dollar/Sheep Creek
Johnson Creek	Johnson Basin, Windy Point
Kannah Creek	Kannah Creek
Kelso Point	Kelso Mesa
Kreutzer - Princeton	Sanford Basin
La Garita	Not included in CRAs
Matchless	Matchless Mountain
Middle Fork	Cochetopa
Mineral Mountain	Mineral Mountain
Monchego	Not included in CRAs
Nick Mountain	Cottonwoods
Ophir Needles	Not included in CRAs
Priest Mountain	Current Creek, Flattops/Elk Park
Raggeds	Horse Ranch Park, McClure Pass, Munsey/Erickson, Poverty Gulch, Tomahawk
Romley	Mirror Lake
Roubideau	Not included in CRAs
Salt Creek	Salt Creek
San Miguel	Hope Lake
Sawtooth Mountain	Sawtooth
Springhouse Creek	Pilot Knob
Sunshine Mesa	part of Wilson
Tabeguache	Not included in CRAs
Uncompahgre	part of Failes Creek/Soldier Creek, Little Cimarron, Turret Ridge
Ute Creek	Calamity Basin, UnawEEP
West Elk	Beckwiths, Curecanti, Flatirons, Mendicant, Mount Lamborn, Soap Creek, Sunset
Whetstone Mountain	Whetstone
Wilson Mesa	part of Wilson
Not included in IRAs	<p>The following were not within IRAs:</p> <ul style="list-style-type: none"> • Canyon Creek/Antero • Horsefly Canyon • Naturita Canyon



Table A-4b. *Cross-Reference of IRA Names to CRA Names for The Pike and San Isabel National Forests*

<i>2001 IRA Names</i>	<i>CRA Name</i>
3a and various others	part of Buffalo Peaks East
	part of Buffalo Peaks West
	part of Chipeta
	part of Elk Mountain-Collegiate North
	part of Elk Mountain-Collegiate South
	part of Elk Mountain-Collegiate West
	part of Farnum
	part of Greenhorn Mountain: Little Saint Charles Creek to Greenhorn
	part of Holy Cross
	part of Jefferson
	part of Kreuter-Princeton
	part of Lost Creek East
	part of Lost Creek West
	part of Mount Elbert
	part of Sangre de Cristo: Blanco Peak to Slide Mountain
	part of Sangre de Cristo: Lake Creek to Hermit Creek
	part of Sheep Rock
	part of Spanish Peaks
	part of Thunder Butte
	part of Weston Peak
5 Rare2	part of Aspen Ridge
	part of Buffalo Peaks East
	part of Elk Mountain-Collegiate North
	part of Elk Mountain-Collegiate West
	part of Greenhorn Mountain: Cisneros Ck to Upper Turkey Creek
	part of Jefferson
	part of Kreutzer-Princeton
	part of Lost Creek South
	part of Lost Creek West
	part of Mount Antero
	part of Pikes Peak West
	part of Rampart East
	part of Sangre de Cristo: Alvarado Campground to Music Pass
	part of Sangre de Cristo: Lake Creek to Hermit Creek
	part of Sangre de Cristo: Medano Pass to Carbonate Mountain
	part of Sangre de Cristo: Silverheels Gulch to Hunts Creek
part of Scraggy Peaks	
part of Silverheels	
part of Thirtynine Mile Mountain	
8b	part of Buffalo Peaks East
	part of Buffalo Peaks West



2001 IRA Names	CRA Name
	part of Greenhorn Mountain: Badito Cone to Dry Creek
	part of Sangre de Cristo: West Creek to Big Cottonwood
8c	part of Elk Mountain-Collegiate West
	part of Sangre de Cristo: Alvarado Campground to Music Pass
Arnold Gulch	Not included in CRAs
Aspen Ridge	part of Aspen Ridge
Badger Creek	Badger Creek
Boreas	Boreas
Buffalo Peaks	part of Buffalo Peaks East
	Buffalo Peaks South
	part of Buffalo Peaks West
Burning Bear	Burning Bear
Chipeta	part of Chipeta
Cuchara	Cuchara North
	Cuchara South
East Pikes Peak	Pikes Peak East
Elk Mountain-Collegiate	part of Elk Mountain-Collegiate North
	part of Elk Mountain-Collegiate South
	part of Elk Mountain-Collegiate West
Farnum	part of Farnum
Front Range	part of Rampart East
Green Mountain	Green Mountain
Greenhorn Mountain	part of Greenhorn Mountain Badito Cone to Dry Creek
	part of Greenhorn Mountain Cisneros Creek to Upper Turkey Creek
	Greenhorn Mountain: Graneros Creek to Section 10
	part of Greenhorn Mountain: Little Saint Charles Creek to Greenhorn
Gunbarrel	Gunbarrel
Hardscrabble	Hardscrabble
Highline	Highline
Holy Cross	part of Holy Cross
Jefferson	part of Jefferson
Kreutzer-Princeton	part of Kreutzer-Princeton
Lost Creek	part of Lost Creek East
	part of Lost Creek South
	part of Lost Creek West
Mad Creek DB&DB1	Chicago Ridge
Mount Antero	part of Mount Antero
Mount Blanca	part of Sangre de Cristo: Blanco Peak to Slide Mountain
Mount Elbert	part of Mount Elbert
Mount Evans	Mount Evans
Mount Massive	Mount Massive, part of Mount Elbert
Porphyry Peak	Porphyry Peak
Puma	Puma Hills



2001 IRA Names	CRA Name
Purgatoire	Purgatoire
Rampart West	Rampart West
Romley	Romley
Sangre de Cristo	Methodist Mountain
	part of Sangre de Cristo: Alvarado Campground to Music Pass
	part of Sangre de Cristo: Blanco Peak to Slide Mountain
	part of Sangre de Cristo: Lake Creek to Hermit Creek
	part of Sangre de Cristo: Medano Pass to Carbonate Mountain
	part of Sangre de Cristo: Silverheels Gulch to Hunts Creek
	part of Sangre de Cristo: West Creek to Big Cottonwood
Scraggy Peaks	part of Scraggy Peaks
Sheep Rock	part of Sheep Rock
Silverheels	part of Silverheels
Spanish Peaks	part of Spanish Peaks
Spanish Peaks- proposed	part of Spanish Peaks
Square Top Mountain	Square Top Mountain
Saint Charles Peak	Saint Charles Peak
Starvation Creek	Starvation Creek
Tanner Peak	Tanner Peak
Thirtynine Mile Mountain	part of Thirtynine Mile Mountain
Thunder Butte	part of Thunder Butte
West Pikes Peak	part of Pikes Peak West
Weston Peak	part of Weston Peak
Not included in IRAs	<p>The following were not within IRAs:</p> <ul style="list-style-type: none"> • Antelope Creek • Babcock Hole • Hoosier Ridge • Kaufman Ridge • Little Fountain Creek • Reveille Canyon • Schoolmarm Mountain

Table A-4c. *Cross-Reference of IRAs Names to CRAs Names for The San Juan National Forest*

2001 IRA Names	CRA Name
Blackhawk Mountain	Blackhawk Mountain
Davis Mountain	part of Weminuche Adjacent
East Animas	East Animas
Florida River	Baldy, Florida River, part of Weminuche Adjacent
Graham Park	part of Graham Park
HD Mountain	HD Mountain
Hermosa	Hermosa



<i>2001 IRA Names</i>	<i>CRA Name</i>
Lizard Head	Lizard Head Adjacent
Martinez Creek	part of Weminuche Adjacent
Monk Rock	part of Weminuche Adjacent
Piedra	part of Graham Park, Piedra Area Adjacent
Poison Park	part of Graham Park, part of Weminuche Adjacent
Runlett Park	Runlett Park
Ryman	Ryman
San Miguel	San Miguel
Sheep Mountain	part of Turkey Creek
South San Juan	South San Juan Adjacent, Winter Hills/Serviceberry
Storm Peak	Storm Peak
Treasure Mountain	Treasure Mountain
Turkey Creek	part of Turkey Creek
West Needle	part of Weminuche Adjacent
West Needle Wilderness	West Needles
Williams Creek White Fir Natural Area	part of Graham Park
Not included in IRAs	Fish Creek

Table A-4d. *Cross-Reference of IRA Names to CRA Names for The Arapaho and Roosevelt National Forests*

All IRA names are the same as the CRA names, except for the following:

<i>2001 IRA Names</i>	<i>CRA Name</i>
North St. Vrain RNA	North St. Vrain

Table A-4e. *Cross-Reference of IRA Names to CRA Names for The Rio Grande National Forest*

All IRA names are the same as the CRA names, except for the following:

<i>2001 IRA Names</i>	<i>CRA Name</i>
La Garita Wilderness	La Garita



Appendix B: Upper Tier Acres for Alternatives 2 and 4

The following table lists all of the Colorado Roadless Areas (CRAs) and the acreage that is designated as upper tier in Alternatives 2 and 4.

Table B-1. Upper Tier Acres for Alternatives 2 and 4

<i>CRA Name</i>	<i>Total CRA Acres</i>	<i>Alternative 2 Upper Tier Acres</i>	<i>% of CRA</i>	<i>Alternative 4 Upper Tier Acres</i>	<i>% of CRA</i>
<i>Arapaho-Roosevelt</i>					
Bard Creek	22,800	18,400	81%	16,500	72%
Byers Peak	10,200	1,400	14%	7,400	73%
Cache La Poudre Adjacent Areas	2,900	100	3%	1,400	48%
Cherokee Park	7,600	0	0%	7,600	100%
Comanche Peak Adjacent Areas	44,200	11,300	26%	44,200	100%
Copper Mountain	13,200	0	0%	4,600	35%
Crosier Mountain	7,300	0	0%	7,300	100%
Gold Run	6,600	3,500	53%	1,100	17%
Green Ridge - East	26,600	5,400	20%	24,800	93%
Green Ridge - West	13,700	200	1%	3,700	27%
Grey Rock	12,100	0	0%	700	6%
Hell Canyon	5,800	0	0%	0	0%
Indian Peaks Adjacent Areas	28,600	15,800	55%	16,100	56%
James Peak	2,300	0	0%	2,200	96%
Kelly Creek	8,200	8,200	100%	6,500	79%
Lion Gulch	6,600	0	0%	1,200	18%
Mount Evans Adjacent Areas	9,900	300	3%	800	8%
Mount Sniktau	7,800	5,100	65%	1,200	15%
Neota Adjacent Area	2,200	800	36%	800	36%
Never Summer Adjacent Area	11,400	0	0%	1,600	14%
North Lone Pine	9,400	7,000	74%	0	0%
North St. Vrain	11,200	5,900	53%	0	0%
Rawah Adjacent Areas	2,800	500	18%	600	21%
Square Top Mountain	6,500	5,600	86%	0	0%



<i>CRA Name</i>	<i>Total CRA Acres</i>	<i>Alternative 2 Upper Tier Acres</i>	<i>% of CRA</i>	<i>Alternative 4 Upper Tier Acres</i>	<i>% of CRA</i>
Troublesome	13,800	10,800	78%	500	4%
Vasquez Adjacent Area	6,900	6,000	87%	6,400	93%
White Pine Mtn.	10,400	0	0%	10,400	100%
Williams Fork	36,300	28,700	79%	30,700	85%
Arapaho-Roosevelt Totals	347,100	134,800	39%	198,500	57%
Grand Mesa, Uncompahgre, Gunnison (GMUG)					
Agate Creek	11,800	0	0%	3,800	32%
American Flag Mountain	11,900	0	0%	0	0%
Baldy	2,300	0	0%	600	26%
Battlements	24,400	0	0%	24,400	100%
Beaver	3,700	3,600	97%	3,500	95%
Beckwiths	18,400	0	0%	18,400	100%
Calamity Basin	12,500	0	0%	12,500	100%
Cannibal Plateau	14,500	0	0%	1,800	12%
Canyon Creek	10,900	0	0%	7,800	72%
Canyon Ck/Antero	1,700	0	0%	200	12%
Carson	6,000	400	7%	0	0%
Castle	9,400	0	0%	7,100	76%
Cataract	10,200	3,200	31%	8,600	84%
Cimarron Ridge	12,600	0	0%	4,800	38%
Clear Fork	24,300	0	0%	24,300	100%
Cochetopa	6,600	2,500	38%	0	0%
Cochetopa Hills	48,500	0	0%	25,200	52%
Cottonwoods	11,200	0	0%	11,200	100%
Crystal Creek	500	0	0%	0	0%
Crystal Peak	11,500	500	4%	0	0%
Curecanti	12,400	5,900	48%	0	0%
Currant Creek	10,800	0	0%	10,800	100%
Deer Creek	9,500	0	0%	5,400	57%
Dominguez	12,500	0	0%	12,500	100%
Double Top	23,800	0	0%	6,900	29%
East Elk	6,000	0	0%	1,200	20%
Electric Mountain	9,800	0	0%	1,300	13%



<i>CRA Name</i>	<i>Total CRA Acres</i>	<i>Alternative 2 Upper Tier Acres</i>	<i>% of CRA</i>	<i>Alternative 4 Upper Tier Acres</i>	<i>% of CRA</i>
Failes Creek/Soldier Creek	8,900	6,200	70%	2,000	22%
Flat Irons	11,500	0	0%	800	7%
Flattop Mountain	5,400	0	0%	0	0%
Flattops/Elk Park	75,700	0	0%	75,700	100%
Gothic	5,800	0	0%	0	0%
Granite Basin	25,500	2,200	9%	25,500	100%
Hightower	3,600	0	0%	1,900	53%
Hope Lake	8,200	200	2%	600	7%
Horse Ranch Park	3,900	0	0%	0	0%
Horsefly Canyon	6,200	5,800	94%	0	0%
Huntsman Ridge	10,600	0	0%	10,600	100%
Italian Mountain	9,000	0	0%	4,200	47%
Johnson Basin	11,900	3,200	27%	8,500	71%
Kannah Creek	34,500	0	0%	34,600	100%
Kelso Mesa	35,500	0	0%	13,400	38%
Last Dollar/Sheep Creek	6,400	0	0%	2,400	38%
Little Cimarron	4,200	4,200	100%	0	0%
Long Canyon	17,200	0	0%	17,200	100%
Matchless Mountain	27,000	0	0%	27,000	100%
Matterhorn	3,600	3,200	89%	0	0%
McClure Pass	300	0	0%	0	0%
Mendicant	19,100	13,100	69%	19,100	100%
Mineral Mountain	2,400	1,600	67%	0	0%
Mirror Lake	6,000	0	0%	2,800	47%
Mount Lamborn	22,600	8,600	38%	22,600	100%
Munsey/Erickson	3,500	1,300	37%	3,100	89%
Naturita Canyon	4,600	4,400	96%	0	0%
North Henson	600	0	0%	0	0%
Pilot Knob	17,200	0	0%	700	4%
Poverty Gulch	5,500	4,600	84%	1,200	22%
Salt Creek	9,000	0	0%	7,600	84%
Sanford Basin	12,900	6,400	50%	0	0%
Sawtooth	22,800	22,000	96%	17,700	78%



<i>CRA Name</i>	<i>Total CRA Acres</i>	<i>Alternative 2 Upper Tier Acres</i>	<i>% of CRA</i>	<i>Alternative 4 Upper Tier Acres</i>	<i>% of CRA</i>
Schofield Pass	900	0	0%	0	0%
Soap Creek	8,100	6,000	74%	0	0%
Steuben	3,500	0	0%	100	3%
Sunnyside	10,700	0	0%	10,700	100%
Sunset	5,800	0	0%	0	0%
Texas Creek	2,600	0	0%	100	4%
Tomahawk	12,900	0	0%	7,000	54%
Turner Creek	12,800	0	0%	12,900	101%
Turret Ridge	5,500	5,200	95%	0	0%
UnawEEP	12,200	7,100	58%	900	7%
Union	1,600	0	0%	1,600	100%
Whetstone	15,400	0	0%	11,000	71%
Whitehouse Mountain	14,400	7,700	53%	2,900	20%
Willow Creek	300	0	0%	0	0%
Wilson	2,600	900	35%	1,100	42%
Windy Point	12,800	0	0%	4,800	38%
GMUG Totals	901,100	130,300	14%	544,900	60%
Manti-La Sal					
Roc Creek	7,700	7,700	100%	7,700	100%
Manti-La Sal Totals	7,700	7,700	100%	7,700	100%
Pike-San Isabel					
Antelope Creek	6,900	0	0%	3,500	51%
Aspen Ridge	14,200	11,900	84%	0	0%
Babcock Hole	8,900	0	0%	8,900	100%
Badger Creek	12,400	11,600	94%	100	1%
Boreas	10,200	0	0%	10,200	100%
Buffalo Peaks East	5,700	1,000	18%	1,000	18%
Buffalo Peaks South	15,300	0	0%	2,500	16%
Buffalo Peaks West	8,300	7,400	89%	1,600	19%
Burning Bear	19,300	16,800	87%	5,500	28%
Chicago Ridge	5,900	0	0%	1,800	31%
Chipeta	28,700	0	0%	12,200	43%
Cuchara North	8,200	0	0%	0	0%
Cuchara South	7,700	0	0%	0	0%



<i>CRA Name</i>	<i>Total CRA Acres</i>	<i>Alternative 2 Upper Tier Acres</i>	<i>% of CRA</i>	<i>Alternative 4 Upper Tier Acres</i>	<i>% of CRA</i>
Elk Mountain-Collegiate North	32,100	8,000	25%	12,100	38%
Elk Mountain-Collegiate South	6,600	0	0%	5,500	83%
Elk Mountain-Collegiate West	6,200	6,100	98%	3,700	60%
Farnum	11,100	0	0%	0	0%
Green Mountain	11,100	0	0%	0	0%
Greenhorn Mountain: Bandito Cone to Dry Creek	2,300	600	26%	2,300	100%
Greenhorn Mountain: Cisneros Creek to Upper Turkey Creek	2,100	0	0%	2,100	100%
Greenhorn Mountain: Graneros Creek to Section 10	4,800	3,000	63%	4,800	100%
Greenhorn Mountain: Little Saint Charles Creek to Greenhorn Creek	5,200	0	0%	5,200	100%
Gunbarrel	7,700	0	0%	0	0%
Hardscrabble	7,800	0	0%	7,800	100%
Highline	22,700	0	0%	22,700	100%
Holy Cross	9,100	5,800	64%	1,200	13%
Hoosier Ridge	2,900	1,700	59%	1,700	59%
Jefferson	10,900	0	0%	10,900	100%
Kaufman Ridge	10,200	0	0%	3,200	31%
Kreutzer-Princeton	43,300	3,400	8%	43,300	100%
Little Fountain Creek	7,700	2,700	35%	0	0%
Lost Creek East	14,900	0	0%	0	0%
Lost Creek South	5,900	0	0%	0	0%
Lost Creek West	14,400	0	0%	0	0%
Methodist Mountain	6,900	0	0%	1,700	25%
Mount Antero	38,700	0	0%	6,500	17%
Mt. Elbert	22,100	0	0%	1,100	5%



Rulemaking for Colorado Roadless Areas

<i>CRA Name</i>	<i>Total CRA Acres</i>	<i>Alternative 2 Upper Tier Acres</i>	<i>% of CRA</i>	<i>Alternative 4 Upper Tier Acres</i>	<i>% of CRA</i>
Mount Evans	15,400	7,400	48%	2,300	15%
Mount Massive	1,400	800	57%	700	50%
Pikes Peak East	13,700	0	0%	9,500	69%
Pikes Peak West	13,900	0	0%	4,200	30%
Porphyry Peak	3,900	0	0%	0	0%
Puma Hills	8,800	0	0%	0	0%
Purgatoire	16,800	1,600	10%	16,800	100%
Rampart East	28,300	6,500	23%	0	0%
Rampart West	28,800	0	0%	0	0%
Reveille Canyon	7,000	0	0%	4,300	61%
Romley	7,300	7,300	100%	0	0%
Saint Charles Peak	11,200	0	0%	8,400	75%
Sangre de Cristo: Alvarado Campground to Music Pass	8,000	5,700	71%	1,900	24%
Sangre de Cristo: Blanca Peak to Slide Mountain	4,100	2,000	49%	4,100	100%
Sangre de Cristo: Lake Creek to Hermit Creek	11,400	7,500	66%	1,600	14%
Sangre de Cristo: Medano Pass to Carbonate Mountain	7,000	4,600	66%	5,600	80%
Sangre de Cristo: Silverheels Gulch to Hunts Creek	6,000	0	0%	3,500	58%
Sangre de Cristo: West Creek to Big Cottonwood	7,400	0	0%	4,800	65%
Schoolmarm Mountain	6,000	0	0%	0	0%
Scraggy Peaks	16,700	0	0%	16,700	100%
Sheep Rock	8,000	0	0%	0	0%
Silverheels	8,300	500	6%	500	6%
Spanish Peaks	7,400	200	3%	7,400	100%
Square Top Mountain	7,100	5,600	79%	1,600	23%
Starvation Creek	7,600	0	0%	3,500	46%
Tanner Peak	17,700	5,100	29%	17,700	100%



<i>CRA Name</i>	<i>Total CRA Acres</i>	<i>Alternative 2 Upper Tier Acres</i>	<i>% of CRA</i>	<i>Alternative 4 Upper Tier Acres</i>	<i>% of CRA</i>
Thirtynine Mile Mountain	11,800	9,400	80%	9,400	80%
Thunder Butte	7,400	0	0%	0	0%
Weston Peak	17,800	5,100	29%	5,100	29%
<i>Pike-San Isabel Totals</i>	<i>774,700</i>	<i>149,400</i>	<i>19%</i>	<i>312,900</i>	<i>40%</i>
<i>Rio Grande</i>					
Alamosa River	4,900	1,000	20%	4,800	98%
Antora Meadows / Bear Creek	22,800	19,400	85%	22,800	100%
Beartown	2,400	2,300	96%	0	0%
Beaver Mountain	7,100	4,000	56%	0	0%
Bennet Mountain / Blowout / Willow Creek / Lion Point / Greenie Mountain	52,000	29,600	57%	30,100	58%
Big Buck / Kitty / Ruby	9,900	6,300	64%	5,900	60%
Box / Road Canyon	1,200	300	25%	0	0%
Bristol Head	46,100	34,900	76%	46,100	100%
Butterfly	1,900	0	0%	1,800	95%
Chama Basin	21,600	17,400	81%	21,600	100%
Conejos River / Lake Fork	900	0	0%	0	0%
Copper Mountain / Sulphur	5,200	5,100	98%	2,200	42%
Cotton Creek	2,300	0	0%	0	0%
Crestone	7,100	0	0%	0	0%
Cumbres	10,400	5,800	56%	8,800	85%
Deep Creek / Boot Mountain	27,600	12,100	44%	27,600	100%
Dorsey Creek	3,400	0	0%	3,100	91%
Elkhorn Peak	10,500	8,800	84%	0	0%
Four Mile Creek	10,200	8,300	81%	1,200	12%
Fox Creek	6,100	1,400	23%	900	15%
Fox Mountain	6,100	6,100	100%	2,100	34%
Gibbs Creek	1,400	0	0%	900	64%
Gold Creek / Cascade Creek	900	800	89%	0	0%



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<i>CRA Name</i>	<i>Total CRA Acres</i>	<i>Alternative 2 Upper Tier Acres</i>	<i>% of CRA</i>	<i>Alternative 4 Upper Tier Acres</i>	<i>% of CRA</i>
Hot Springs	500	0	0%	0	0%
Indian Ridge	1,600	1,400	88%	1,600	100%
Kitty Creek	1,500	0	0%	1,500	100%
La Garita	10,700	6,800	64%	0	0%
Lake Fork	10,700	3,800	36%	4,100	38%
Lower East Bellows	1,700	0	0%	0	0%
Middle Alder	5,400	4,900	91%	2,400	44%
Miller Creek	1,100	0	0%	1,000	91%
Pole Creek	1,000	0	0%	0	0%
Pole Mountain / Finger Mesa	43,900	31,900	73%	43,900	100%
Red Mountain	4,100	4,000	98%	800	20%
Ruby Lake	6,800	4,700	69%	100	1%
Sawlog	10,500	8,800	84%	8,600	82%
Sheep Mountain	3,100	3,000	97%	2,400	77%
Silver Lakes / Stunner	5,800	2,500	43%	2,300	40%
Snowshoe Mountain	31,500	21,600	69%	3,800	12%
Spectacle Lake	600	0	0%	0	0%
Spruce Hole / Sheep Creek	7,600	2,600	34%	2,400	32%
Stunner Pass / Dolores Canyon	3,000	2,900	97%	1,300	43%
Sulphur Tunnel	1,800	0	0%	0	0%
Summit Peak / Elwood Pass	3,200	3,200	100%	0	0%
Taylor Canyon	6,000	6,000	100%	0	0%
Tewksberry	6,600	4,300	65%	0	0%
Tobacco Lakes	3,300	2,500	76%	100	3%
Trout Mountain / Elk Mountain	33,100	23,200	70%	33,100	100%
Ute Pass	8,700	5,600	64%	0	0%
Wason Park	20,500	18,000	88%	20,500	100%
Wightman Fork / Upper Burro	6,700	2,400	36%	700	10%
Wightman Fork To Lookout	5,700	4,500	79%	5,700	100%
Willow Mountain	10,000	7,900	79%	7,300	73%



<i>CRA Name</i>	<i>Total CRA Acres</i>	<i>Alternative 2 Upper Tier Acres</i>	<i>% of CRA</i>	<i>Alternative 4 Upper Tier Acres</i>	<i>% of CRA</i>
Rio Grande Totals	518,600	340,300	66%	323,500	62%
Routt					
Barber Basin	5,500	0	0%	5,300	96%
Black Mountain	22,700	0	0%	22,700	100%
Bunker Basin	12,800	11,700	91%	9,100	71%
Bushy Creek	11,300	0	0%	6,000	53%
Chatfield	11,300	5,900	52%	4,500	40%
Chedsey Creek	1,000	0	0%	0	0%
Dome	2,100	0	0%	300	14%
Dome Peak	35,700	400	1%	35,700	100%
Elkhorn	10,500	0	0%	10,500	100%
Gold Creek	3,200	0	0%	0	0%
Grizzly Helena	6,100	0	0%	2,500	41%
Kettle Lakes	10,800	8,800	81%	9,200	85%
Little Green Creek	900	0	0%	800	89%
Long Park	42,100	0	0%	24,500	58%
Mad Creek	24,300	0	0%	24,300	100%
Morrison Creek	8,500	0	0%	600	7%
Never Summer North	3,700	0	0%	500	14%
Never Summer South	7,600	0	0%	0	0%
Nipple Peak North	6,300	100	2%	6,300	100%
Nipple Peak South	11,900	8,200	69%	11,900	100%
Pagoda Peak	57,700	55,200	96%	57,500	100%
Shield Mountain	9,400	3,100	33%	9,400	100%
South Fork	4,700	1,700	36%	1,500	32%
Sugarloaf North	15,000	0	0%	15,000	100%
Sugarloaf South	23,200	17,700	76%	23,200	100%
Troublesome North	31,700	16,200	51%	31,700	100%
Troublesome South	47,400	43,300	91%	47,400	100%
Walton Peak	5,300	0	0%	1,700	32%
Whalen Creek	1,100	0	0%	0	0%
Routt Totals	433,600	172,100	40%	362,000	83%



<i>CRA Name</i>	<i>Total CRA Acres</i>	<i>Alternative 2 Upper Tier Acres</i>	<i>% of CRA</i>	<i>Alternative 4 Upper Tier Acres</i>	<i>% of CRA</i>
San Juan					
Baldy	20,300	0	0%	0	0%
Blackhawk Mountain	17,500	0	0%	15,500	89%
East Animas	16,900	6,900	41%	3,200	19%
Fish Creek	13,500	0	0%	13,500	100%
Florida River	5,700	0	0%	100	2%
Graham Park	17,800	9,000	51%	17,800	100%
HD Mountains	25,000	0	0%	25,000	100%
Hermosa	148,100	55,800	38%	148,100	100%
Lizard Head Adjacent	5,800	2,200	38%	2,400	41%
Piedra Area Adjacent	40,800	800	2%	30,300	74%
Runlett Park	5,600	0	0%	4,300	77%
Ryman	8,700	4,900	56%	7,300	84%
San Miguel	64,300	40,700	63%	64,100	100%
South San Juan Adjacent	34,900	13,600	39%	34,900	100%
Storm Peak	57,600	0	0%	44,000	76%
Treasure Mountain	22,500	9,100	40%	22,500	100%
Turkey Creek	25,300	7,500	30%	25,300	100%
Weminuche Adjacent	23,600	2,000	8%	23,600	100%
West Needles	6,900	700	10%	0	0%
Winter Hills/Serviceberry Mountain	5,100	0	0%	100	2%
San Juan Totals	566,100	153,200	27%	482,000	85%
White River					
Adam Mountain	8,200	0	0%	8,200	100%
Ashcroft	900	0	0%	0	0%
Assignment Ridge	13,300	9,200	69%	4,400	33%
Baldy Mountain	6,100	0	0%	1,900	31%
Basalt Mountain A	13,900	0	0%	12,200	88%
Basalt Mountain B	7,400	0	0%	1,900	26%
Berry Creek	8,600	0	0%	8,600	100%



<i>CRA Name</i>	<i>Total CRA Acres</i>	<i>Alternative 2 Upper Tier Acres</i>	<i>% of CRA</i>	<i>Alternative 4 Upper Tier Acres</i>	<i>% of CRA</i>
Big Ridge to South Fork A	35,400	30,400	86%	19,400	55%
Big Ridge to South Fork B	6,000	6,000	100%	1,000	17%
Black Lake East	800	0	0%	800	100%
Black Lake West	900	0	0%	900	100%
Blair Mountain	500	0	0%	0	0%
Boulder	1,300	0	0%	700	54%
Budges	1,000	0	0%	0	0%
Buffer Mountain	11,000	0	0%	11,000	100%
Burnt Mountain	1,600	0	0%	800	50%
Chicago Ridge	5,100	1,900	37%	1,500	29%
Corral Creek	3,300	1,900	58%	3,100	94%
Crystal River	6,100	0	0%	2,200	36%
Deep Creek	9,900	4,900	49%	9,900	100%
Dome Peak	12,000	600	5%	0	0%
East Divide/Four Mile Park	8,700	0	0%	7,000	80%
East Vail	8,000	0	0%	7,200	90%
East Willow	7,200	0	0%	5,300	74%
Elk Creek B	7,200	0	0%	7,200	100%
Elliot Ridge	3,200	1,500	47%	1,900	59%
Fawn Creek/Little Lost Park	5,400	0	0%	5,400	100%
Freeman Creek	1,000	300	30%	1,000	100%
Gallo Hill	1,400	0	0%	1,400	100%
Game Creek	6,100	0	0%	1,200	20%
Grizzly Creek	6,700	0	0%	0	0%
Gypsum Creek	17,900	15,100	84%	7,000	39%
Hardscrabble	11,800	0	0%	1,900	16%
Hay Park	11,100	0	0%	8,700	78%
Holy Cross City	900	0	0%	0	0%
Homestake	4,200	0	0%	0	0%
Hoosier Ridge	6,000	300	5%	6,000	100%
Housetop Mountain	12,900	0	0%	12,900	100%
Hunter	1,100	1,000	91%	1,000	91%
Little Grand Mesa	6,300	3,700	59%	0	0%



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<i>CRA Name</i>	<i>Total CRA Acres</i>	<i>Alternative 2 Upper Tier Acres</i>	<i>% of CRA</i>	<i>Alternative 4 Upper Tier Acres</i>	<i>% of CRA</i>
Lower Piney	13,500	0	0%	13,500	100%
Mamm Peak	25,300	0	0%	25,300	100%
Maroon East	1,400	0	0%	0	0%
Maryland Creek	1,500	0	0%	800	53%
McClure Pass	2,200	0	0%	2,200	100%
McFarlane	1,400	0	0%	400	29%
Meadow Mountain A	1,500	0	0%	900	60%
Meadow Mountain B	3,100	0	0%	100	3%
Morapos A	23,600	0	0%	13,600	58%
Morapos B	14,100	0	0%	12,300	87%
Mormon Creek	3,000	3,000	100%	3,000	100%
No Name	3,900	0	0%	0	0%
North Elk	9,900	0	0%	9,900	100%
North Independent A	4,500	2,500	56%	0	0%
North Independent B	900	0	0%	0	0%
North Woody	8,600	0	0%	0	0%
Pagoda Peak	9,100	0	0%	8,400	92%
Piney Lake	900	0	0%	900	100%
Porcupine Peak	7,600	2,400	32%	7,600	100%
Ptarmigan A	2,700	0	0%	2,700	100%
Ptarmigan B	1,800	1,800	100%	1,200	67%
Ptarmigan C	900	900	100%	900	100%
Ptarmigan Hill A	13,100	0	0%	300	2%
Ptarmigan Hill B	7,000	0	0%	6,900	99%
Red Dirt A	10,200	0	0%	6,700	66%
Red Dirt B	2,500	0	0%	0	0%
Red Mountain	6,500	0	0%	2,500	38%
Red Table	39,100	27,200	70%	8,400	21%
Reno Mountain	12,400	0	0%	9,400	76%
Ripple Creek Pass/Trappers Lake	600	600	100%	600	100%
Ryan Gulch	600	0	0%	100	17%
Salt Creek	5,600	0	0%	5,600	100%
Sloan Peak	20,100	6,700	33%	10,600	53%



<i>CRA Name</i>	<i>Total CRA Acres</i>	<i>Alternative 2 Upper Tier Acres</i>	<i>% of CRA</i>	<i>Alternative 4 Upper Tier Acres</i>	<i>% of CRA</i>
Spraddle Creek A	900	900	100%	900	100%
Spraddle Creek B	6,500	0	0%	6,500	100%
Sweetwater A	12,000	800	7%	0	0%
Sweetwater B	4,300	0	0%	0	0%
Tenderfoot Mountain	8,400	500	6%	8,400	100%
Tenmile	6,300	0	0%	4,400	70%
Thompson Creek	18,500	0	0%	18,500	100%
Tigiwon	2,000	1,300	65%	0	0%
Treasure Mountain	1,500	1,500	100%	1,100	73%
West Brush Creek	5,900	0	0%	5,900	100%
West Lake Creek	3,300	0	0%	3,300	100%
Wildcat Mountain	3,700	0	0%	100	3%
Wildcat Mountain B	2,300	0	0%	0	0%
Wildcat Mountain C	4,800	0	0%	0	0%
Williams Fork	6,600	0	0%	5,200	79%
Willow	1,100	0	0%	600	55%
Woods Lake	9,500	4,100	43%	9,500	100%
<i>White River Totals</i>	<i>636,700</i>	<i>131,000</i>	<i>21%</i>	<i>382,700</i>	<i>60%</i>



Appendix C: Forest Plan Management Direction in Roadless Areas

The management direction in forest plans guides the development, planning, and implementation of proposed actions on National Forest System (NFS) lands. Forest plans contain forest-wide direction, as well as direction specific to each allocated management area. Management area direction typically defines management practices and land uses to be emphasized on NFS lands within that management area, as well as the activities that are limited or prohibited within the area. Management direction may be expressed in the form of desired conditions or goals, as well as standards and guidelines.

Standards are defined as courses of action or levels of attainment required to achieve the desired conditions, and are mandatory. Guidelines are defined as preferred or advisable courses of action or levels of attainment designed to meet the desired conditions. If deviation from a guideline or desired condition is necessary, document the rationale during the project-level environmental analysis. The inventoried roadless areas (IRAs) and Colorado roadless areas (CRAs) overlap many different management areas, and management area allocations are variable among the forest plans.

Alternatives 1, 2, and 4 generally prohibit road construction and reconstruction, as well as tree cutting, sale, or removal in roadless areas other than under specific exceptional circumstances. Under these alternatives, where forest plan direction regarding road construction or tree cutting activities in a roadless area is more restrictive than the applicable roadless rule, the forest plan direction would apply. Refer to *Chapter 2: Alternatives* for details about these alternatives.

Alternative 3 does not involve any roadless-rule-related prohibitions on road construction or tree cutting activities in the roadless areas. Under this alternative, the forest plan direction governs those land-use activities in the full analysis area. Refer to *Chapter 2: Alternatives*, for details about this alternative. Forest plan direction is subject to change through amendment or revision processes, as described in Chapter 2.

As a step of analysis, management area direction from each forest plan was categorized in terms of its restrictions or permissions on road construction and tree-cutting activities. These management categories are used throughout this appendix.

Road construction categories are defined by the letters A through D:

- ◆ **A:** Roads prohibited (except reserved and outstanding rights)
- ◆ **B:** Roads generally restricted by desired conditions or guidelines
- ◆ **C:** Roads generally not restricted, except under some specific circumstances (limited by specific language or road density requirements)
- ◆ **D:** Roads not restricted

Tree-cutting categories are defined by numbers 1 through 4:

- ◆ **1:** Tree cutting prohibited (except incidental)
- ◆ **2:** Tree cutting generally restricted by desired conditions or guidelines
- ◆ **3:** Tree cutting generally not restricted, except for regulated commercial timber purposes
- ◆ **4:** Tree cutting not restricted

Categories A through D for road construction and 1 through 4 for tree cutting were combined into 10 management categories of forest plan direction as described in Table C-1. The specific language regarding road construction and tree cutting from each forest plan management area is documented in the EIS record. LCZs are rarely discussed within a forest plan, so they are not addressed here.

Table C-1. Management Category Descriptions

<i>Management Category</i>	<i>Road Construction/Reconstruction</i>	<i>Tree Cutting</i>
A1	Prohibited	Prohibited
A2	Prohibited	Generally restricted by desired conditions or guidelines
A3	Prohibited	Generally not restricted, except for regulated commercial timber purposes
B1	Generally restricted by desired conditions or guidelines	Prohibited
B2	Generally restricted by desired conditions or guidelines	Generally restricted by desired conditions or guidelines
B3	Generally restricted by desired conditions or guidelines	Generally not restricted, except for regulated commercial timber purposes
C3	Generally not restricted, except under some specific circumstances	Generally not restricted, except for regulated commercial timber purposes
C4	Generally not restricted, except under some specific circumstances	Not restricted
D3	Not restricted	Generally not restricted, except for regulated commercial timber purposes
D4	Not restricted	Not restricted



Table C-2 Lists forest plan management area names and numbers, from each of the eight forest plans for National Forests in Colorado. It also shows the management category for road construction and tree cutting associated with that forest plan management area. The table includes all forest plan management areas, although they are not all represented within IRAs or CRAs. The same management area name may be common to several forest plans, even though the associated management category for road construction and tree cutting may differ in each forest plan.

Table C-2. Management Area Direction for Road Construction and Tree Cutting

Management Area Name & Number, & Applicable National Forest	Management Category									
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4
Wilderness 1, 1.1, 1.11, 1.12, 1.13, 8A, 8B, 8C, 8D all National Forests in Colorado, except Manti-La Sal	✓									
Recommended for wilderness 1.2 Arapaho and Roosevelt		✓								
Recommended for wilderness 1.2 White River	✓									
Backcountry recreation 1.3 Arapaho and Roosevelt		✓								
Backcountry recreation 1.31, 1.32 White River					✓					
Backcountry recreation 1.32 Routt1					✓		✓			
Core habitats – existing 1.41 Arapaho and Roosevelt, White River		✓								
Core habitats – restoration 1.42 Arapaho and Roosevelt		✓								
Wild and scenic rivers / wild 1.5 Rio Grande	✓									
Wild and scenic rivers / wild 1.5 Arapaho and Roosevelt, White River		✓								



Management Area Name & Number, & Applicable National Forest	Management Category									
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4
Wild and scenic rivers / wild 1.5 Routt			✓							
Wild and scenic rivers 10D San Juan							✓			
Special interest areas 2.1 Routt							✓			
Special interest areas 2.1 White River					✓					
Research natural areas 2.2 Arapaho and Roosevelt, Routt	✓									
Research natural areas 2.2, 10A Rio Grande, White River, GMUG, Pike and San Isabel, San Juan				✓						
Special interest areas 3.1 Rio Grande				✓						
Special interest areas 3.1 Arapaho and Roosevelt, White River					✓					
Special interest areas 10C GMUG2				✓						
Special interest areas 10C Pike and San Isabel, San Juan					✓					
Limited use 3.21 Arapaho and Roosevelt, White River							✓			
Municipal watersheds 3.23 Routt									✓	
Riparian areas 9A GMUG					✓					



Management Area Name & Number, & Applicable National Forest	Management Category									
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4
Riparian areas 9A Pike and San Isabel, San Juan						✓				
Municipal watersheds 10E GMUG, Pike and San Isabel										✓
Backcountry 3.3 Rio Grande				✓						
Backcountry motorized 3.3 Arapaho and Roosevelt							✓			
Backcountry motorized 3.31 Routt			✓							
Backcountry motorized 3.31 White River					✓					
Backcountry summer non-motorized 3.32 White River					✓					
Semi-primitive non-motorized 3A GMUG, Pike and San Isabel, San Juan								✓		
Wild and scenic / scenic 3.4 Routt, White River			✓							
Wild and scenic / scenic 3.4 Rio Grande						✓				
Forested flora and fauna habitats 3.5 Arapaho and Roosevelt						✓				
Corridors connecting core areas 3.5 White River					✓					
Corridors connecting core areas 3.55 Arapaho and Roosevelt						✓				



Management Area Name & Number, & Applicable National Forest	Management Category									
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4
Prairie woodlands 3.61 Arapaho and Roosevelt							✓			
Scenery 4.2 Arapaho and Roosevelt, Routt									✓	
Scenery 4.2 White River					✓					
Scenic byways 4.21 Rio Grande										✓
Scenic byways 4.23 White River									✓	
Dispersed recreation 4.3 Arapaho and Roosevelt, Routt									✓	
Dispersed recreation 4.3 Rio Grande										✓
Dispersed recreation 4.3, 4.32 White River					✓					
Semi-primitive motorized 2A GMUG, Pike and San Isabel, San Juan								✓		
Roaded-natural and rural recreation 2B GMUG, Pike and San Isabel, San Juan								✓		
Semi-primitive recreation SPR Manti-La Sal										✓
Wild and scenic / recreation 4.4 Arapaho and Roosevelt, White River									✓	
Wild and scenic / recreation 4.4 Rio Grande							✓			



Management Area Name & Number, & Applicable National Forest	Management Category									
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4
General forest 5.11 Arapaho and Roosevelt, Rio Grande, Routt										✓
General forest – range emphasis 5.12 Routt										✓
General forest – range emphasis 5.12 White River								✓		
Forest products 5.13 Arapaho and Roosevelt, Rio Grande, Routt										✓
Forest products 5.13 White River								✓		
Timber management – wood fiber production 7A, 7C, 7D GMUG, Pike and San Isabel, San Juan										✓
Timber management – gentle slopes 7E San Juan								✓		
Wood-fiber production and harvest TBR Manti-La Sal										✓
Experimental forest 5.31 Arapaho and Roosevelt							✓			
Experimental forest 10B Pike and San Isabel							✓			
Increased water yield 9B Pike and San Isabel, San Juan										✓
Forested flora and fauna habitats 5.4 White River								✓		
Deer and elk winter range 5.41 Rio Grande								✓		



Management Area Name & Number, & Applicable National Forest	Management Category									
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4
Deer and elk winter range 5.41 Routt							✓			
Deer and elk winter range 5.41 White River					✓					
Bighorn sheep habitat 5.42 Rio Grande							✓			
Bighorn sheep habitat 5.42 White River					✓					
Elk habitat 5.43 – White River								✓		
Big game winter range 5A, 5B GMUG, Pike and San Isabel, San Juan								✓		
General big-game winter range (GWR) Manti-La Sal							✓			
MIS3 habitat 4B GMUG, Pike and San Isabel, San Juan								✓		
Aspen management 4D GMUG, Pike and San Isabel										✓
Forested landscape linkages 5.5 White River					✓					
Dispersed recreation and forest products 5.5 Arapaho and Roosevelt										✓
Livestock grazing 6A GMUG										✓
Livestock grazing 6B GMUG, Pike and San Isabel										✓
Livestock grazing 6B San Juan								✓		



Management Area Name & Number, & Applicable National Forest	Management Category									
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4
Grasslands 6.4, 6.6 Arapaho and Roosevelt										✓
Grasslands 6.6 Rio Grande									✓	
Production of forage RNG Manti-La Sal									✓	
Residential / forest interface 7.1 Arapaho and Roosevelt, Routt, White River									✓	
Developed recreation complexes 8.21 Arapaho and Roosevelt, White River									✓	
Developed recreation sites 1A GMUG, Pike and San Isabel, San Juan									✓	
Ski resorts 8.22, 8.25 Arapaho and Roosevelt, Routt, White River, Rio Grande									✓	
Ski resorts 1B GMUG, Pike and San Isabel, San Juan									✓	
Administrative sites 1C Pike and San Isabel										✓
Utility corridors and electronic sites 8.3, 8.31, 8.32 Arapaho and Roosevelt, Routt, White River									✓	
Utility corridors and electronic sites 1D GMUG, Pike and San Isabel, San Juan									✓	

1) For management code 1.32 on the Routt, vegetation management is allowed for specific reasons in the Troublesome and Middle Yampa Geographic Areas (category C3); it is discouraged in the remainder of the Forest (category B2).

2) GMUG: Grand Mesa, Uncompahgre, and Gunnison

3) MIS: management indicator species



Table C-3 lists the acres in each management category for road construction/reconstruction and tree cutting activities (categories A1 to D4) associated with each IRA on each National Forest. Acres are rounded to the nearest 100 acres. There are approximately 4.24 million acres in IRAs, (refer to Appendix A for details on acres included in IRAs). See Tables C-1 and C-2 for an explanation of management area categories.

Table C-3. Inventoried Roadless Area Acres by Management Category

IRA Name	Acres										Total IRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Arapaho and Roosevelt National Forests											
Bard Creek	--	15,100	--	--	--	4,400	200	--	5,700	--	25,400
Byers Peak	--	--	--	--	--	--	--	--	1,600	8,500	10,100
Cache La Poudre adjacent areas	--	100	--	--	--	2,600	--	--	500	--	3,200
Cherokee Park	--	--	--	--	--	3,500	--	--	--	4,300	7,800
Comanche Peak adjacent areas		17,100	--	--	--	16,900	500	--	7,800	3,700	46,000
Copper Mountain	--	--	--	--	--	--	2,100	--	--	11,400	13,500
Crosier Mountain	--	--	--	--	--	6,300	--	--	900	--	7,200
Gold Run	--	5,300	--	--	--	--	--	--	900	300	6,500
Green Ridge - East	--	9,700	--	--	--	4,200	4,800	--	3,100	4,900	26,700
Green Ridge - West	200	--	--	--	--	9,300	1,800	--	900	1,300	13,600
Grey Rock	--	--	--	--	--	5,900	--	--	6,300	--	12,200
Hell Canyon	--	--	--	--	--	5,900	--	--	--	--	5,900
Indian Peaks adjacent areas	--	13,800	--	--	11,900	--	900	--	1,600	--	28,400
James Peak	--	--	--	--	400	1,600	200	--	700	--	2,800
Kelly Creek	--	7,900	--	--	--	300	--	--	--	--	8,200
Lion Gulch	--	--	--	--	2,000	4,400	--	--	200	--	6,600
Mt. Evans adjacent areas	200	5,300	--	--	--	2,800	--	--	2,000	--	10,200
Mt. Sniktau	--	5,100	--	--	500	--	--	--	2,700	--	8,300
Neota adjacent area	--	800	--	--	--	--	--	--	1,300	100	2,200



IRA Name	Acres										
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	Total IRA
Never Summer adjacent area	--	--	--	--	--	--	7,600	--	3,500	400	11,400
North Lone Pine	4,100	5,400	--	--	--	--	--	--	--	--	9,500
North St. Vrain	--	2,500	--	--	--	4,700	--	--	--	--	7,200
North St. Vrain RNA	4,500	--	--	--	--	--	--	--	--	--	4,500
Rawah adjacent areas	--	500	--	--	--	800	--	--	1,000	500	2,700
Square Top Mountain	--	5,000	--	--	--	--	--	--	1,500	--	6,400
Troublesome	--	11,500	--	--	--	--	1,500	--	400	500	13,800
Vasquez adjacent area	--	5,100	--	--	--	--	100	--	300	500	6,100
White Pine Mountain	--	--	--	--	--	10,100	--	--	100	--	10,200
Williams Fork	--	30,800	--	--	--	--	--	--	1,900	3,200	35,900
Arapaho-Roosevelt Total	9,000	141,000	--	--	14,800	83,700	19,700	--	44,900	39,600	352,500
Grand Mesa, Uncompahgre, and Gunnison National Forests											
Baldy Peak	--	--	--	--	--	--	--	1,900	--	--	1,900
Battlement Mesa	--	--	--	--	--	--	--	16,800	--	19,700	36,500
Beaver Castle	--	--	--	--	--	--	--	13,000	--	22,800	35,700
Beaver Creek	--	--	--	--	--	--	--	1,900	--	--	1,900
Black Point	--	--	--	--	--	--	--	8,800	--	1,100	9,900
Boston Peak	--	--	--	--	--	--	--	18,400	--	28,300	46,700
Campbell Point	--	--	--	--	--	--	--	4,000	--	7,400	11,300
Cannibal Plateau	--	--	--	100	--	--	--	7,700	--	6,400	14,200
Canyon Creek	--	--	--	--	--	--	--	9,400	--	3,200	12,600
Carson Peak	--	--	--	--	--	--	--	22,100	--	3,200	25,300
Chipeta	--	--	--	--	--	--	--	10,600	--	5,600	16,200
Cimarron	--	--	--	--	--	--	--	8,700	--	6,900	15,600
Clear Creek	--	--	--	--	--	--	--	1,600	--	41,300	42,900



IRA Name	Acres										Total IRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Cochetopa Dome	--	--	--	--	--	--	--	7,200	--	--	7,200
Cochetopa Hill	--	--	--	--	--	--	--	39,200	--	32,200	71,400
Crystal Creek	--	--	--	--	--	--	--	15,100	--	13,600	28,700
Crystal Peak	--	--	--	--	--	--	--	--	--	5,500	5,500
Drift Creek	--	--	--	--	--	--	--	6,300	--	3,100	9,400
El Paso Creek	--	--	--	--	--	--	--	--	--	1,700	1,700
Electric Mountain	--	--	--	--	--	--	--	300	--	7,900	8,200
Elk Creek	--	--	--	--	--	--	--	1,100	--	1,600	2,700
Elk Mountains - Collegiate	--	--	--	--	--	--	--	42,100	--	23,000	65,100
Flattop Mountain	--	--	--	--	--	--	--	18,100	--	2,300	20,400
Gothic Mountain	--	--	--	1,100	--	--	--	3,400	900	900	6,200
Hightower	--	--	--	--	--	--	--	--	--	4,600	4,600
Iron Mountain	--	--	--	--	--	--	--	6,300	--	1,300	7,600
Johnson Creek	--	--	--	--	--	--	--	10,400	--	400	10,800
Kannah Creek	--	--	--	--	--	--	--	17,100	--	17,100	34,200
Kelso Point	--	--	--	--	--	--	--	20,200	--	14,200	34,400
Kreutzer - Princeton	--	--	--	--	--	--	--	5,300	--	10,200	15,400
La Garita	--	--	--	--	--	--	--	300	--	--	300
Matchless	--	--	--	--	--	--	--	21,400	--	12,700	34,100
Middle Fork	--	--	--	--	--	--	--	400	--	10,700	11,200
Mineral Mountain	--	--	--	--	--	--	--	3,600	--	2,800	6,400
Monchego	--	--	--	--	--	--	--	200	--	3,700	3,900
Nick Mountain	--	--	--	--	--	--	--	5,000	--	5,500	10,400
Ophir Needles	--	--	--	100	--	--	--	--	--	--	100
Priest Mountain	--	--	--	--	--	--	--	11,200	--	83,800	95,000



IRA Name	Acres										Total IRA	
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4		
Raggeds	--	--	--	--	--	--	--	20,400	--	6,600	27,000	
Romley	--	--	--	--	--	--	--	8,200	--	100	8,300	
Roubideau	--	--	--	--	--	--	--	1,800	--	900	2,800	
Salt Creek	--	--	--	--	--	--	--	1,200	--	10,000	11,100	
San Miguel	--	--	--	--	--	--	--	9,100	--	--	9,100	
Sawtooth Mountain	--	--	--	--	--	--	--	4,900	--	39,500	44,500	
Springhouse Creek	--	--	--	--	--	--	--	--	--	17,600	17,600	
Sunshine Mesa	--	--	--	--	--	--	--	400	--	300	700	
Tabeguache	--	--	--	--	--	--	--	--	--	2,400	2,400	
Uncompahgre	--	--	--	--	--	--	--	9,000	--	17,100	26,100	
Ute Creek	--	--	--	--	--	--	--	24,000	--	5,800	29,800	
West Elk	--	--	--	--	--	--	--	51,600	--	43,000	94,600	
Whetstone Mountain	--	--	--	--	--	--	--	10,800	--	6,700	17,500	
Wilson Mesa	--	--	--	--	--	--	--	100	--	1,100	1,200	
GMUG Total	--	--	--	1,300	--	--	--	500,600	900	555,800	1,058,300	
Manti-La Sal National Forest (portion located in Colorado)												
Roc Creek	--	--	--	--	--	--	--	3,900	--	2,100	5,000	11,000
Manti-La Sal Total	--	--	--	--	--	--	--	3,900	--	2,100	5,000	11,000
Pike and San Isabel National Forests												
3a and various others	--	--	--	--	--	--	--	83,000	--	--	83,000	
5 Rare 2	--	--	--	--	--	--	--	22,400	600	18,900	41,900	
8b	--	--	--	--	--	--	--	2,200	--	--	2,200	
8c	--	--	--	--	--	--	--	--	--	300	400	
Arnold Gulch	--	--	--	--	--	--	--	2,600	--	2,500	5,100	
Aspen Ridge	--	--	--	--	--	--	--	9,400	--	6,200	15,600	



IRA Name	Acres										Total IRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Badger Creek	--	--	--	--	--	--	--	11,000	--	3,500	14,400
Boreas	--	--	--	--	--	--	--	900	--	4,400	5,300
Buffalo Peaks	--	--	--	--	--	--	--	4,200	--	14,000	18,200
Burning Bear	--	--	--	--	--	--	--	14,100	3,700	--	17,700
Chipeta	--	--	--	--	--	--	--	10,700	--	8,800	19,500
Cuchara	--	--	--	--	--	--	--	13,400	1,500	3,300	18,100
East Pikes Peak	--	--	--	500	--	--	--	200	200	11,800	12,700
Elk Mountain-Collegiate	--	--	--	--	--	--	--	17,500	800	--	18,300
Farnum	--	--	--	--	--	--	--	1,400	--	--	1,400
Front Range	--	--	--	--	--	--	--	22,200	--	3,400	25,600
Green Mountain	--	--	--	--	--	--	--	5,900	--	4,300	10,200
Greenhorn Mountain	--	--	--	--	--	--	--	11,500	--	2,600	14,100
Gunbarrel	--	--	--	--	--	--	--	4,600	--	4,100	8,800
Hardscrabble	--	--	--	--	--	--	--	7,500	--	--	7,500
Highline	--	--	--	--	--	--	--	7,600	--	4,700	12,200
Holy Cross	--	--	--	--	--	--	--	6,400	--	--	6,400
Jefferson	--	--	--	--	--	--	--	6,000	--	1,100	7,100
Kreutzer-Princeton	--	--	--	--	--	--	--	22,600	--	6,400	29,000
Lost Creek	--	--	--	--	--	--	--	18,600	--	6,900	25,600
Mad Creek DB&DB1	--	--	--	--	--	--	--	600	600	--	1,100
Mt. Antero	--	--	--	--	--	--	--	26,500	--	6,700	33,200
Mt. Blanca	--	--	--	--	--	--	--	2,800	--	--	2,800
Mt. Elbert	--	--	--	--	--	--	--	2,500	--	--	2,500
Mt. Evans	--	--	--	--	--	--	--	9,600	--	4,300	13,900
Mt. Massive	--	--	--	--	--	--	--	1,000	--	--	1,000



IRA Name	Acres										Total IRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Porphyry Peak	--	--	--	--	--	--	--	400	--	3,000	3,400
Puma	--	--	--	--	--	--	--	8,500	--	--	8,500
Purgatoire	--	--	--	--	--	--	--	7,000	--	6,200	13,200
Rampart West	--	--	--	--	--	--	--	14,200	--	9,500	23,700
Romley	--	--	--	--	--	--	--	4,800	--	2,100	6,900
Sangre de Cristo	--	--	--	--	--	--	--	24,300	--	8,300	32,600
Scraggy Peaks	--	--	--	--	--	--	--	5,500	--	2,600	8,200
Sheep Rock	--	--	--	--	--	--	--	1,900	--	300	2,200
Silverheels	--	--	--	--	--	--	--	3,600	--	2,900	6,600
Spanish Peaks	--	--	--	--	--	--	--	5,500	--	200	5,700
Spanish Peaks – proposed	--	--	--	--	--	--	--	1,300	--	--	1,300
Square Top Mountain	--	--	--	--	--	--	--	5,500	400	--	5,900
St. Charles Peak	--	--	--	--	--	--	--	3,500	--	8,000	11,600
Starvation Creek	--	--	--	--	--	--	--	200	--	8,000	8,200
Tanner Peak	--	--	--	--	--	--	--	17,800	--	--	17,800
Thirtynine Mile Mountain	--	--	--	--	--	--	--	4,300	--	5,200	9,500
Thunder Butte	--	--	--	--	--	--	--	3,900	--	700	4,600
West Pikes Peak	--	--	--	--	--	--	--	4,100	--	5,600	9,600
Weston Peak	--	--	--	--	--	--	--	10,000	--	3,000	13,100
Pike-San Isabel Total	--	--	--	500	--	--	--	475,200	7,800	183,800	667,300
Rio Grande National Forest											
Alamosa River	--	--	--	3,300	--	--	1,600	--	--	100	5,000
Antora Meadows / Bear Creek	--	--	--	22,600	--	--	--	--	--	300	22,800
Beartown	--	--	--	2,300	--	--	--	--	--	100	2,400
Beaver Mountain	--	--	--	5,600	--	--	--	1,400	--	200	7,100



IRA Name	Acres										Total IRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Bennet Mountain / Blowout / Willow Creek / Lion Point / Greenie Mountain	--	--	--	37,700	--	--	6,100	900	6,400	1,800	52,900
Big Buck / Kitty / Ruby	--	--	--	9,800	--	--	--	--	--	--	9,800
Box / Road Canyon	--	--	--	1,100	--	200	--	--	--	100	1,500
Bristol Head	--	--	--	38,400	--	--	--	600	--	7,300	46,400
Butterfly	--	--	--	--	--	--	--	1,900	--	--	1,900
Chama Basin	--	--	--	18,400	--	3,200	--	--	--	--	21,600
Conejos River / Lake Fork	--	--	--	--	--	--	900	--	--	--	900
Copper Mountain / Sulphur	--	--	--	5,300	--	--	--	--	--	--	5,300
Cotton Creek	--	--	--	--	--	--	--	2,300	--	--	2,300
Crestone	--	--	--	1,600	--	--	3,600	1,700	--	--	6,900
Cumbres	--	--	--	9,100	--	--	1,000	--	--	500	10,600
Deep Creek / Boot Mountain	--	--	--	20,100	--	--	--	--	8,600	200	28,900
Dorsey Creek	--	--	--	--	--	--	--	--	--	3,600	3,600
Elkhorn Peak	--	--	--	10,800	--	--	--	--	--	--	10,800
Four Mile Creek	--	--	--	8,600	--	1,800	--	--	--	--	10,500
Fox Creek	--	--	--	4,900	--	--	900	--	--	200	6,100
Fox Mountain	--	--	--	7,700	--	--	--	--	--	--	7,800
Gibbs Creek	--	--	--	--	--	200	--	--	--	1,600	1,700
Gold Creek / Cascade Creek	--	--	--	900	--	--	--	--	--	--	900
Hot Springs	--	--	--	--	--	--	--	500	--	--	500
Indian Ridge	--	--	--	1,400	--	--	--	--	--	200	1,600
Kitty Creek	--	--	--	--	--	--	--	--	--	1,400	1,400
La Garita Wilderness	--	--	--	8,600	--	--	2,100	--	--	1,400	12,100
Lake Fork	--	--	--	3,900	--	--	--	--	--	6,900	10,800



IRA Name	Acres										Total IRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Lower East Bellows	--	--	--	--	--	--	--	1,800	--	--	1,800
Middle Alder	--	--	--	5,700	--	--	--	--	--	--	5,700
Miller Creek	--	--	--	--	--	--	--	1,000	--	--	1,000
Pole Creek	--	--	--	--	--	--	--	1,000	--	--	1,000
Pole Mountain / Finger Mesa	--	--	--	41,800	--	--	--	--	--	2,000	43,800
Red Mountain	--	--	--	4,100	--	--	--	--	--	100	4,200
Ruby Lake	--	--	--	6,300	--	--	--	--	--	700	7,100
Sawlog	--	--	--	10,500	--	--	--	--	--	--	10,500
Sheep Mountain	--	--	--	3,200	--	--	--	--	--	--	3,200
Silver Lakes / Stunner	--	--	--	5,000	--	--	--	--	--	1,000	6,000
Snowshoe Mountain	--	--	--	31,600	--	--	--	100	--	200	31,900
Spectacle Lake	--	--	--	--	--	--	--	--	--	800	800
Spruce Hole / Sheep Creek	--	--	--	6,700	--	--	900	--	100	--	7,700
Stunner Pass / Dolores Canyon	--	--	--	2,900	--	--	--	--	--	100	3,000
Sulphur Tunnel	--	--	--	--	--	--	--	--	--	1,900	1,900
Summit Peak / Elwood Pass	--	--	--	3,200	--	--	--	--	--	--	3,300
Taylor Canyon	--	--	--	6,000	--	--	--	--	--	--	6,100
Tewksberry	--	--	--	6,000	--	--	100	--	--	500	6,700
Tobacco Lakes	100	--	--	3,300	--	--	--	--	--	--	3,400
Trout Mountain / Elk Mountain	--	--	--	30,900	--	--	200	100	--	2,200	33,400
Ute Pass	--	--	--	7,500	--	--	1,500	--	--	--	9,100
Wason Park	--	--	--	20,300	--	100	--	--	--	--	20,500
Wightman Fork / Upper Burro	--	--	--	6,000	--	--	--	--	--	1,200	7,200
Wightman Fork to Lookout	--	--	--	5,700	--	--	--	--	--	200	5,900
Willow Mountain	--	--	--	8,200	--	--	1,800	--	--	--	9,900



IRA Name	Acres										
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	Total IRA
Rio Grande Total	100	--	--	437,000	--	5,500	20,700	13,300	15,100	36,800	529,200
Routt National Forest											
Barber Basin	--	--	--	--	--	--	300	--	--	5,200	5,500
Black Mountain	--	--	--	--	10,300	--	--	--	500	11,900	22,800
Bunker Basin	--	--	--	--	11,700	--	--	--	1,100	--	12,800
Bushy Creek	--	--	--	--	--	--	--	--	600	10,800	11,400
Chatfield	--	--	--	--	5,900	--	300	--	100	5,000	11,300
Chedsey Creek	--	--	--	--	800	--	--	--	100	--	1,000
Dome	--	--	--	--	--	--	--	--	200	1,900	2,100
Dome Peak	--	--	700	--	11,400	--	1,100	--	500	22,900	36,700
Elkhorn	--	--	--	--	--	--	900	--	--	10,200	11,000
Gold Creek	--	--	100	--	3,000	--	--	--	--	--	3,100
Grizzly Helena	--	--	6,400	--	--	--	--	--	--	--	6,400
Kettle Lakes	1,900	--	7,200	--	800	--	--	--	1,200	--	11,100
Little Green Creek	--	--	--	--	--	--	--	--	--	900	800
Long Park	--	--	2,800	--	--	--	22,100	--	18,700	300	44,000
Mad Creek	--	--	--	--	15,400	--	6,600	--	3,200	--	25,100
Morrison Creek	--	--	--	--	4,200	--	600	--	900	2,800	8,400
Never Summer North	--	--	--	--	3,700	--	--	--	--	--	3,700
Never Summer South	--	--	700	--	5,200	--	--	--	600	1,000	7,600
Nipple Peak North	--	--	100	--	--	--	600	--	200	5,500	6,300
Nipple Peak South	--	--	--	--	10,200	--	2,500	--	1,100	100	13,800
Pagota Peak	--	--	400	--	55,800	--	1,500	--	200	--	57,800
Shield Mountain	--	--	3,400	--	6,300	--	300	--	100	100	10,200
South Fork	--	--	2,000	--	--	--	--	--	--	2,700	4,700



IRA Name	Acres										Total IRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Sugarloaf North	--	--	--	--	--	--	1,600	--	700	12,900	15,100
Sugarloaf South	--	--	--	--	17,700	--	1,300	--	100	4,200	23,300
Troublesome North	--	--	--	--	--	--	16,400	--	--	16,500	32,800
Troublesome South	--	--	--	--	--	--	46,400	--	--	700	47,000
Walton Peak	--	--	--	--	--	--	--	--	1,300	4,000	5,300
Whalen Creek	--	--	--	--	1,100	--	--	--	--	--	1,100
Routt Total	1,900	--	23,800	--	163,400	--	102,500	--	31,400	119,600	442,200
San Juan National Forest											
Blackhawk Mountain	--	--	--	--	--	--	--	17,200	--	--	17,200
Davis Mountain	--	--	--	--	--	--	100	1,300	--	--	1,400
East Animas	--	--	--	--	--	--	--	15,200	--	--	15,200
Florida River	--	--	--	--	--	--	--	35,400	--	--	35,400
Graham Park	--	--	--	--	--	--	--	11,100	--	--	11,100
HD Mountain	--	--	--	--	--	--	--	20,000	--	--	20,000
Hermosa	--	--	--	--	--	--	--	141,500	--	--	141,500
Lizard Head	--	--	--	--	--	--	300	4,900	--	--	5,300
Martinez Creek	--	--	--	--	--	--	--	4,600	--	--	4,600
Monk Rock	--	--	--	--	--	--	--	3,000	--	--	3,000
Piedra	--	--	--	--	--	--	700	53,200	--	--	53,900
Poison Park	--	--	--	--	--	--	200	7,700	--	--	7,900
Runlett Park	--	--	--	--	--	--	--	5,000	--	--	5,000
Ryman	--	--	--	--	--	--	--	7,400	--	--	7,400
San Miguel	--	--	--	--	--	--	--	58,100	--	--	58,100
Sheep Mountain	--	--	--	--	--	--	--	3,800	--	--	3,800
South San Juan	--	--	--	--	--	--	--	46,600	4,700	--	51,300



IRA Name	Acres										Total IRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Storm Peak	--	--	--	--	--	--	300	49,200	--	--	49,400
Treasure Mountain	--	--	--	--	--	--	--	18,500	2,300	--	20,900
Turkey Creek	--	--	--	--	--	--	--	22,300	--	--	22,300
West Needle	--	--	--	--	--	--	--	2,500	--	--	2,500
West Needle Wilderness	--	--	--	--	--	--	--	5,900	--	--	5,900
Williams Creek White Fir natural area	--	--	--	500	--	--	--	--	--	--	500
San Juan Total	--	--	--	500	--	--	1,600	534,400	7,000	--	543,600
White River National Forest											
Adam Mountain	--	--	--	--	--	--	--	8,200	--	--	8,200
Ashcroft	--	--	--	--	--	--	--	--	900	--	900
Assignment Ridge	11,800	--	--	--	--	--	--	1,400	--	--	13,300
Baldy Mountain	--	--	--	--	2,500	--	--	3,500	--	--	6,000
Basalt Mountain A	--	--	--	--	2,100	--	--	11,900	--	--	14,000
Basalt Mountain B	--	--	--	--	3,800	--	--	3,600	--	--	7,400
Berry Creek	--	--	--	--	2,700	--	--	5,800	--	--	8,600
Big Ridge to South Fork A	--	--	100	--	35,100	--	--	--	--	--	35,300
Big Ridge to South Fork B	--	--	300	--	5,700	--	--	--	--	--	6,000
Black Lake East	--	--	--	--	--	--	--	700	--	--	700
Black Lake West	--	--	--	--	--	--	--	900	--	--	900
Blair Mountain	--	--	--	--	--	--	--	500	--	--	500
Boulder	--	--	--	--	--	--	--	1,300	--	--	1,300
Budges	--	--	--	--	800	--	--	--	200	--	1,000
Buffer Mountain	--	--	--	--	4,100	--	--	6,300	700	--	11,000
Burnt Mountain	--	--	--	--	300	--	--	1,300	100	--	1,700
Chicago Ridge	--	--	--	--	5,000	--	--	--	100	--	5,100



IRA Name	Acres										Total IRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Corral Creek	--	--	--	--	2,800	--	--	--	200	--	3,100
Crystal River	--	--	--	--	4,900	--	--	--	1,100	--	6,100
Deep Creek	--	4,900	--	--	300	--	--	4,700	--	--	9,900
Dome Peak	600	--	--	--	--	--	--	11,400	--	--	12,000
East Divide / Four Mile Park	--	--	--	--	--	--	--	8,700	--	--	8,700
East Vail	--	--	--	--	7,600	--	--	--	400	--	8,000
East Willow	--	--	--	--	--	--	--	7,100	--	--	7,100
Elk Creek B	--	--	--	2,500	1,600	--	--	3,100	--	--	7,200
Elliot Ridge	--	--	--	--	1,500	--	--	1,700	--	--	3,200
Fawn Creek / Little Lost Park	--	--	--	--	5,500	--	--	--	--	--	5,500
Freeman Creek	300	--	--	--	700	--	--	--	--	--	1,000
Gallo Hill	--	--	--	--	1,400	--	--	--	--	--	1,400
Game Creek	--	--	--	--	4,800	--	--	--	2,100	--	6,900
Grizzly Creek	--	--	--	--	6,300	--	--	100	200	--	6,600
Gypsum Creek	15,900	--	--	--	200	--	--	1,800	--	--	17,900
Hardscrabble	--	--	--	--	11,200	--	--	200	300	--	11,700
Hay Park	--	--	--	--	5,400	--	--	5,600	100	--	11,100
Holy Cross City	--	--	--	--	800	--	--	--	--	--	800
Homestake	--	--	--	--	3,700	--	--	400	--	--	4,100
Hoosier Ridge	--	--	--	300	5,700	--	--	--	--	--	6,100
Housetop Mountain	--	--	--	11,000	--	--	--	1,700	--	--	12,700
Hunter	1,100	--	--	--	--	--	--	--	--	--	1,100
Little Grande Mesa	--	--	--	--	4,100	--	--	700	1,700	--	6,500
Lower Piney	--	--	--	--	1,800	--	--	11,700	--	--	13,400
Mamm Peak	--	--	--	--	9,600	--	--	15,700	--	--	25,300



IRA Name	Acres										Total IRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Maroon East	--	--	--	--	1,400	--	--	--	--	--	1,400
Maryland Creek	--	--	--	--	--	--	--	1,500	--	--	1,500
McClure Pass	--	--	--	--	2,100	--	--	--	100	--	2,200
McFarlane	--	--	--	--	900	--	--	--	600	--	1,400
Meadow Mountain A	--	--	--	--	300	--	--	1,300	500	--	2,100
Meadow Mountain B	--	--	--	--	--	--	--	3,100	--	--	3,100
Morapos A	--	--	--	--	20,300	--	--	7,300	--	--	27,600
Morapos B	--	--	--	--	2,800	--	--	7,300	--	--	10,100
Mormon Creek	3,000	--	--	--	--	--	--	--	--	--	3,000
No Name	--	--	--	--	3,800	--	--	--	--	--	3,800
North Elk	--	--	--	--	--	--	--	10,000	--	--	10,000
North Independent A	3,000	--	--	--	1,600	--	--	--	--	--	4,500
North Independent B	--	--	--	--	900	--	--	--	--	--	900
North Woody	--	--	--	--	8,300	--	--	200	--	--	8,500
Pagoda Peak	--	--	--	--	9,200	--	--	--	--	--	9,200
Piney Lake	--	--	--	--	--	--	--	900	--	--	900
Porcupine Peak	--	--	--	--	7,700	--	--	--	1,000	--	8,700
Ptarmigan A	--	--	--	--	2,500	--	--	--	200	--	2,700
Ptarmigan B	1,800	--	--	--	--	--	--	--	--	--	1,800
Ptarmigan C	900	--	--	--	--	--	--	--	--	--	900
Ptarmigan Hill A	--	--	--	--	9,000	--	--	4,000	--	--	13,100
Ptarmigan Hill B	--	--	--	--	6,900	--	--	--	800	--	7,700
Red Dirt A	--	--	--	--	2,400	--	--	7,800	--	--	10,200
Red Dirt B	--	--	--	--	--	--	--	2,400	--	--	2,400
Red Mountain	--	--	--	--	2,400	--	--	4,100	--	--	6,500



IRA Name	Acres										Total IRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Red Table	30,900	--	--	--	3,900	--	--	4,200	100	--	39,100
Reno Mountain	--	--	--	--	5,200	--	--	7,100	--	--	12,400
Ripple Creek Pass/Trappers Lake	600	--	--	--	--	--	--	--	--	--	600
Ryan Gulch	--	--	--	--	--	--	--	600	--	--	600
Salt Creek	--	--	--	--	3,000	--	--	2,600	--	--	5,600
Sloan Peak	--	--	--	--	20,000	--	--	100	--	--	20,100
Spraddle Creek A	900	--	--	--	--	--	--	--	--	--	900
Spraddle Creek B	--	--	--	--	900	--	--	5,500	--	--	6,500
Sweetwater A	800	--	--	--	1,600	--	--	9,500	--	--	11,900
Sweetwater B	--	--	--	--	--	--	--	4,300	--	--	4,300
Tenderfoot Mountain	--	--	--	--	8,200	--	--	--	100	--	8,400
Tenmile	--	--	--	--	6,100	--	--	--	300	--	6,400
Thompson Creek	--	--	--	--	--	--	--	18,500	--	--	18,500
Tigiwon	--	--	--	--	1,400	--	--	600	--	--	2,000
Treasure Mountain	1,500	--	--	--	--	--	--	--	--	--	1,500
West Brush Creek	--	--	--	--	400	--	--	5,300	100	--	5,800
West Lake Creek	--	--	--	--	700	--	--	2,600	--	--	3,300
Wildcat Mountain	--	--	--	--	1,700	--	--	1,800	--	--	3,500
Wildcat Mountain B	--	--	--	--	2,300	--	--	--	--	--	2,300
Wildcat Mountain C	--	--	--	--	4,700	--	--	--	--	--	4,700
Williams Fork	--	--	--	--	--	--	--	6,300	400	--	6,700
Willow	--	--	--	--	--	--	--	1,200	--	--	1,200
Woods Lake	4,600	--	--	--	2,300	--	--	2,700	--	--	9,500
White River Total	77,600	4,900	500	13,800	287,000	--	--	242,900	12,300	--	639,500

Note: Numbers might not add due to rounding



Table C-4 summarizes the acres in each management category for road construction and tree-cutting activities (categories A1 to D4) that are associated with IRAs on each national forest. Acres are rounded to the nearest 100 acres. There are approximately the 4.24 million acres in IRAs (refer to Appendix A for details on acres included in IRAs). See Tables C-1 and C-2 for an explanation of management area categories.

Table C-4. Summary of IRA Acres per Management Category by Forest

National Forest	Acres										Total IRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Arapaho and Roosevelt	9,000	141,000	--	--	14,800	83,700	19,700	--	44,900	39,600	352,500
Grand Mesa, Uncompahgre, and Gunnison	--	--	--	1,300	--	--	--	500,600	900	555,800	1,058,300
Manti-La Sal	--	--	--	--	--	--	3,900	--	2,100	5,000	11,000
Pike and San Isabel	--	--	--	500	--	--	--	475,200	7,800	183,800	667,300
Rio Grande	100	--	--	437,000	--	5,500	20,700	13,300	15,100	36,800	529,200
Routt	1,900	--	23,800	--	163,500	--	102,500	--	31,400	119,600	442,200
San Juan	--	--	--	500	--	--	1,600	534,400	7,000	--	543,600
White River	77,600	4,900	500	13,800	287,000	--	--	242,900	12,300	--	639,500
Colorado	88,500	145,900	24,300	453,100	465,200	89,200	148,200	1,767,400	121,500	940,600	4,243,600
Percent of total	2%	3%	1%	11%	11%	2%	3%	42%	3%	22%	100%

Note: Numbers might not add due to rounding



Table C-5 lists the acres in each management category for road construction/reconstruction and tree cutting activities (categories A1 to D4) associated with each CRA on each national forest. Acres are rounded to the nearest 100 acres. There are approximately 4.19 million acres within CRAs in Alternatives 2 and 4 (refer to Appendix A for details on acres included in CRAs). See Tables C-1 and C-2 for an explanation of management area categories.

Table C-5. Colorado Roadless Area Acres by Management Category

CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Arapaho - Roosevelt National Forests											
Bard Creek	--	14,900	--	--	--	4,400	200	--	3,300	--	22,800
Byers Peak	--	--	--	--	--	--	--	--	1,600	8,500	10,200
Cache La Poudre Adjacent Areas	--	100	--	--	--	2,400	--	--	500	--	2,900
Cherokee Park	--	--	--	--	--	3,500	--	--	--	4,100	7,600
Comanche Peak Adjacent Areas	--	17,100	--	--	--	17,000	500	--	6,400	3,200	44,200
Copper Mountain	--	--	--	--	--	--	2,100	--	--	11,100	13,200
Crosier Mountain	--	--	--	--	--	6,300	--	--	1,000	--	7,300
Gold Run	--	5,400	--	--	--	--	--	--	900	300	6,600
Green Ridge – East	--	9,700	--	--	--	4,200	4,800	--	3,100	4,800	26,600
Green Ridge – West	200	--	--	--	--	9,400	1,900	--	900	1,300	13,700
Grey Rock	--	--	--	--	--	5,800	--	--	6,200	--	12,100
Hell Canyon	--	--	--	--	--	5,800	--	--	--	--	5,800
Indian Peaks Adjacent Areas	--	13,800	--	--	12,200	--	900	--	1,700	--	28,600
James Peak	--	--	--	--	400	1,200	200	--	500	--	2,300
Kelly Creek	--	7,900	--	--	--	300	--	--	--	--	8,200
Lion Gulch	--	--	--	--	2,000	4,400	--	--	300	--	6,600



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Mount Evans Adjacent Areas	200	5,000	--	--	--	2,800	--	--	1,900	--	9,900
Mount Sniktau	--	5,100	--	--	500	--	--	--	2,100	--	7,800
Neota Adjacent Area	--	800	--	--	--	--	--	--	1,300	100	2,200
Never Summer Adjacent Area	--	--	--	--	--	--	7,600	--	3,400	300	11,400
North Lone Pine	4,000	5,400	--	--	--	--	--	--	--	--	9,400
North St. Vrain	4,400	2,100	--	--	--	4,600	--	--	--	--	11,200
Rawah Adjacent Areas	--	500	--	--	--	800	--	--	1,000	600	2,800
Square Top Mountain	--	5,000	--	--	--	--	--	--	1,500	--	6,500
Troublesome	--	11,500	--	--	--	--	1,500	--	400	500	13,800
Vasquez Adjacent Area	--	5,900	--	--	--	--	100	--	400	500	6,900
White Pine Mountain	--	--	--	--	--	10,100	--	--	300	--	10,400
Williams Fork	--	30,800	--	--	--	--	--	--	2,100	3,500	36,300
Arapaho-Roosevelt Total	8,800	141,000	--	--	15,100	83,000	19,800	--	40,800	38,800	347,100
Grand Mesa, Uncompahgre, and Gunnison National Forests											
Agate Creek	--	--	--	--	--	--	--	7,200	--	4,600	11,800
American Flag Mountain	--	--	--	--	--	--	--	4,500	--	7,300	11,900
Baldy	--	--	--	--	--	--	--	2,300	--	--	2,300
Battlements	--	--	--	--	--	--	--	5,300	--	19,200	24,400
Beaver	--	--	--	--	--	--	--	1,700	--	2,000	3,700



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Beckwiths	--	--	--	--	--	--	--	11,400	--	7,000	18,400
Calamity Basin	--	--	--	--	--	--	--	11,800	--	700	12,500
Cannibal Plateau	--	--	--	100	--	--	--	8,000	--	6,500	14,500
Canyon Creek	--	--	--	--	--	--	--	8,200	--	2,700	10,900
Canyon Creek/Antero	--	--	--	--	--	--	--	1,700	--	--	1,700
Carson	--	--	--	--	--	--	--	6,000	--	--	6,000
Castle	--	--	--	--	--	--	--	1,300	--	8,100	9,400
Cataract	--	--	--	--	--	--	--	10,200	--	--	10,200
Cimarron Ridge	--	--	--	--	--	--	--	6,700	--	6,000	12,600
Clear Fork	--	--	--	--	--	--	--	--	--	24,300	24,300
Cochetopa	--	--	--	--	--	--	--	--	--	6,600	6,600
Cochetopa Hills	--	--	--	--	--	--	--	22,800	--	25,700	48,500
Cottonwoods	--	--	--	--	--	--	--	6,000	--	5,300	11,200
Crystal Creek	--	--	--	--	--	--	--	500	--	--	500
Crystal Peak	--	--	--	--	--	--	--	--	--	11,500	11,500
Curecanti	--	--	--	--	--	--	--	6,400	--	6,000	12,400
Currant Creek	--	--	--	--	--	--	--	--	--	10,800	10,800
Deer Creek	--	--	--	--	--	--	--	5,600	--	3,800	9,500
Dominguez	--	--	--	--	--	--	--	9,000	--	3,500	12,500
Double Top	--	--	--	--	--	--	--	19,300	--	4,400	23,800
East Elk	--	--	--	--	--	--	--	4,300	--	1,700	6,000
Electric Mountain	--	--	--	--	--	--	--	600	--	9,200	9,800
Failes Creek/Soldier Creek	--	--	--	--	--	--	--	2,800	--	6,200	8,900



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Flat Irons	--	--	--	--	--	--	--	1,100	--	10,400	11,500
Flattop Mountain								5,400			5,400
Flattops/Elk Park								8,700		67,000	75,700
Gothic	--	--	--	1,000	--	--	--	3,900	--	800	5,800
Granite Basin	--	--	--	--	--	--	--	11,000	--	14,500	25,500
Hightower										3,600	3,600
Hope Lake	--	--	--	--	--	--	--	8,200	--		8,200
Horse Ranch Park	--	--	--	--	--	--	--	3,900	--		3,900
Horsefly Canyon	--	--	--	--	--	--	--	4,800	--	1,400	6,200
Huntsman Ridge	--	--	--	--	--	--	--	7,100	--	3,500	10,600
Italian Mountain	--	--	--	--	--	--	--	6,300	--	2,800	9,000
Johnson Basin	--	--	--	--	--	--	--	11,400	--	600	11,900
Kannah Creek	--	--	--	--	--	--	--	18,000	--	16,500	34,500
Kelso Mesa	--	--	--	--	--	--	--	19,300	--	16,200	35,500
Last Dollar/Sheep Creek	--	--	--	--	--	--	--	5,100	--	1,300	6,400
Little Cimarron	--	--	--	--	--	--	--	900	--	3,300	4,200
Long Canyon	--	--	--	--	--	--	--	8,900	--	8,300	17,200
Matchless Mountain	--	--	--	--	--	--	--	20,900	--	6,100	27,000
Matterhorn	--	--	--	--	--	--	--		--	3,600	3,600
McClure Pass										300	300
Mendicant	--	--	--	--	--	--	--	5,500	--	13,600	19,100
Mineral Mountain								2,300		100	2,400
Mirror Lake	--	--	--	--	--	--	--	5,900	--	100	6,000
Mount Lamborn	--	--	--	--	--	--	--	20,800	--	1,800	22,600



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Munsey/Erickson	--	--	--	--	--	--	--	3,500	--	--	3,500
Naturita Canyon	--	--	--	--	--	--	--	1,500	--	3,100	4,600
North Henson										600	600
Pilot Knob	--	--	--	--	--	--	--	--	--	17,200	17,200
Poverty Gulch	--	--	--	--	--	--	--	4,900	--	600	5,500
Salt Creek	--	--	--	--	--	--	--	--	--	9,000	9,000
Sanford Basin	--	--	--	--	--	--	--	5,300	--	7,600	12,900
Sawtooth	--	--	--	--	--	--	--	2,700	--	20,200	22,800
Schofield Pass								900			900
Soap Creek	--	--	--	--	--	--	--	6,300	--	1,800	8,100
Steuben								800		2,700	3,500
Sunnyside	--	--	--	--	--	--	--	10,700	--	--	10,700
Sunset	--	--	--	--	--	--	--	1,100	--	4,700	5,800
Texas Creek	--	--	--	--	--	--	--	2,100	--	500	2,600
Tomahawk	--	--	--	--	--	--	--	7,500	--	5,400	12,900
Turner Creek	--	--	--	--	--	--	--	1,600	--	11,200	12,800
Turret Ridge	--	--	--	--	--	--	--	3,000	--	2,400	5,500
UnawEEP	--	--	--	--	--	--	--	11,300	--	900	12,200
Union	--	--	--	--	--	--	--	1,500	--	100	1,600
Whetstone	--	--	--	--	--	--	--	10,200	--	5,200	15,400
Whitehouse Mountain	--	--	--	--	--	--	--	14,400	--		14,400
Willow Creek										300	300
Wilson	--	--	--	--	--	--	--	1,300	--	1,300	2,600
Windy Point	--	--	--	--	--	--	--	6,600	--	6,100	12,800



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
GMUG Total	--	--	--	1,100	--	--	--	440,200	--	459,800	901,100
Manti-La Sal National Forest, within Colorado											
Roc Creek	--	--	--	--	--	--	900	--	2,000	4,800	7,700
Manti-La Sal Total	--	--	--	--	--	--	900	--	2,000	4,800	7,700
Pike and San Isabel National Forests											
Antelope Creek										6,900	6,900
Aspen Ridge	--	--	--	--	--	--	--	8,600		5,600	14,200
Babcock Hole								2,700		6,200	8,900
Badger Creek	--	--	--	--	--	--	--	10,800		1,600	12,400
Boreas	--	--	--	--	--	--	--	2,500		7,700	10,200
Buffalo Peaks East	--	--	--	--	--	--	--	1,600		4,100	5,700
Buffalo Peaks South	--	--	--	--	--	--	--	6,200		9,100	15,300
Buffalo Peaks West	--	--	--	--	--	--	--	6,800		1,500	8,300
Burning Bear	--	--	--	--	--	--	--	15,700	3,700		19,300
Chicago Ridge								4,400		1,600	5,900
Chipeta	--	--	--	--	--	--	--	20,900		7,800	28,700
Cuchara North	--	--	--	--	--	--	--	5,500		2,700	8,200
Cuchara South	--	--	--	--	--	--	--	7,700			7,700
Elk Mountain-Collegiate North	--	--	--	--	--	--	--	31,100	900		32,100
Elk Mountain-Collegiate South	--	--	--	--	--	--	--	6,600			6,600
Elk Mountain-Collegiate West	--	--	--	--	--	--	--	6,200			6,200
Farnum	--	--	--	--	--	--	--	9,500		1,600	11,100



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Green Mountain	--	--	--	--	--	--	--	6,900		4,200	11,100
Greenhorn Mountain: Badito Cone to Dry Creek	--	--	--	--	--	--	--	2,300			2,300
Greenhorn Mountain: Cisneros Creek to Upper Turkey Creek	--	--	--	--	--	--	--	600		1,600	2,100
Greenhorn Mountain: Graneros Creek to Section 10	--	--	--	--	--	--	--	4,800			4,800
Greenhorn Mountain: Little Saint Charles Creek to Greenhorn Creek	--	--	--	--	--	--	--	4,900		300	5,200
Gunbarrel	--	--	--	--	--	--	--	4,500		3,100	7,700
Hardscrabble	--	--	--	--	--	--	--	7,800			7,800
Highline	--	--	--	--	--	--	--	18,100		4,600	22,700
Holy Cross	--	--	--	--	--	--	--	9,100			9,100
Hoosier Ridge								800		2,100	2,900
Jefferson	--	--	--	--	--	--	--	8,700		2,200	10,900
Kaufman Ridge										10,200	10,200
Kreutzer-Princeton	--	--	--	--	--	--	--	32,400		10,800	43,300
Little Fountain Creek								7,400		300	7,700
Lost Creek East	--	--	--	--	--	--	--	13,100		1,900	14,900
Lost Creek South	--	--	--	--	--	--	--	5,900			5,900
Lost Creek West	--	--	--	--	--	--	--	6,500		7,900	14,400



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Methodist Mountain	--	--	--	--	--	--	--	6,900			6,900
Mount Antero	--	--	--	--	--	--	--	31,500		7,200	38,700
Mount Elbert	--	--	--	--	--	--	--	22,100			22,100
Mount Evans	--	--	--	--	--	--	--	11,000		4,300	15,400
Mount Massive	--	--	--	--	--	--	--	1,400			1,400
Pikes Peak East	--	--	--	500	--	--	--	200	300	12,700	13,700
Pikes Peak West	--	--	--	--	--	--	--	4,700		9,100	13,900
Porphyry Peak	--	--	--	--	--	--	--	700		3,200	3,900
Puma Hills	--	--	--	--	--	--	--	8,800			8,800
Purgatoire	--	--	--	--	--	--	--	7,900		8,900	16,800
Rampart East	--	--	--	--	--	--	--	22,000		6,300	28,300
Rampart West	--	--	--	--	--	--	--	16,700		12,100	28,800
Reveille Canyon								200		6,900	7,000
Romley	--	--	--	--	--	--	--	5,200		2,100	7,300
Saint Charles Peak	--	--	--	--	--	--	--	3,400		7,700	11,200
Sangre de Cristo: Alvarado Campground to Music Pass	--	--	--	--	--	--	--	4,000		3,900	8,000
Sangre de Cristo: Blanca Peak to Slide Mountain	--	--	--	--	--	--	--	4,100			4,100
Sangre de Cristo: Lake Creek to Hermit Creek	--	--	--	--	--	--	--	7,800	100	3,500	11,400
Sangre de Cristo: Medano Pass to Carbonate	--	--	--	--	--	--	--	4,100		3,000	7,000



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Mountain											
Sangre de Cristo: Silverheels Gulch to Hunts Creek	--	--	--	--	--	--	--	6,000			6,000
Sangre de Cristo: West Creek to Big Cottonwood	--	--	--	--	--	--	--	6,800		600	7,400
Schoolmarm Mountain								4,900		1,100	6,000
Scraggy Peaks	--	--	--	--	--	--	--	13,900		2,800	16,700
Sheep Rock	--	--	--	--	--	--	--	7,600		300	8,000
Silverheels	--	--	--	--	--	--	--	5,200		3,100	8,300
Spanish Peaks	--	--	--	--	--	--	--	7,200		200	7,400
Square Top Mountain	--	--	--	--	--	--	--	6,600	500		7,100
Starvation Creek	--	--	--	--	--	--	--	200		7,300	7,600
Tanner Peak	--	--	--	--	--	--	--	17,700			17,700
Thirtynine Mile Mountain	--	--	--	--	--	--	--	4,300		7,400	11,800
Thunder Butte	--	--	--	--	--	--	--	6,700		600	7,400
Weston Peak	--	--	--	--	--	--	--	14,400		3,400	17,800
Pike-San Isabel Total	--	--	--	500	--	--	--	544,800	5,500	223,300	774,700
Rio Grande National Forest											
Alamosa River	--	--	--	3,200	--	--	1,600	--	--	100	4,900
Antora Meadows / Bear Creek	--	--	--	22,600	--	--	--	--	--	200	22,800



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Beartown	--	--	--	2,300	--	--	--	--	--	100	2,400
Beaver Mountain	--	--	--	5,500	--	--	--	1,400	--	200	7,100
Bennet Mountain / Blowout / Willow Creek / Lion Point / Greenie Mountain	--	--	--	36,700	--	--	5,800	1,400	6,300	1,900	52,000
Big Buck / Kitty / Ruby	--	--	--	9,700	--	--	--	--	--	100	9,900
Box / Road Canyon	--	--	--	1,100	--	--	--	--	--	100	1,200
Bristol Head	--	--	--	38,200	--	--	--	600	--	7,300	46,100
Butterfly	--	--	--	--	--	--	--	1,900	--	--	1,900
Chama Basin	--	--	--	18,400	--	3,200	--	--	--	--	21,600
Conejos River / Lake Fork	--	--	--	--	--	--	900	--	--	--	900
Copper Mountain / Sulphur	--	--	--	5,100	--	--	--	--	--	--	5,200
Cotton Creek	--	--	--	--	--	--	--	2,300	--	--	2,300
Crestone	--	--	--	1,400	--	--	4,000	1,700	--	--	7,100
Cumbres	--	--	--	9,000	--	--	1,000	--	--	400	10,400
Deep Creek / Boot Mountain	--	--	--	18,900	--	--	--	--	8,500	200	27,600
Dorsey Creek	--	--	--	--	--	--	--	--	--	3,400	3,400
Elkhorn Peak	--	--	--	10,500	--	--	--	--	--	--	10,500
Four Mile Creek	--	--	--	8,300	--	1,800	--	--	--	--	10,200
Fox Creek	--	--	--	4,900	--	--	1,000	--	--	200	6,100
Fox Mountain	--	--	--	6,100	--	--	--	--	--	--	6,100
Gibbs Creek	--	--	--	--	--	200	--	--	--	1,300	1,400



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Gold Creek / Cascade Creek	--	--	--	900	--	--	--	--	--	--	900
Hot Springs	--	--	--	--	--	--	--	500	--	--	500
Indian Ridge	--	--	--	1,400	--	--	--	--	--	200	1,600
Kitty Creek	--	--	--	--	--	--	--	--	--	1,500	1,500
La Garita	--	--	--	8,100	--	--	2,100	--	--	600	10,700
Lake Fork	--	--	--	3,800	--	--	--	--	--	6,800	10,700
Lower East Bellows	--	--	--	--	--	--	--	1,700	--	--	1,700
Middle Alder	--	--	--	5,300	--	--	--	200	--	--	5,400
Miller Creek	--	--	--	--	--	--	--	1,100	--	--	1,100
Pole Creek	--	--	--	--	--	--	--	1,000	--	--	1,000
Pole Mountain / Finger Mesa	--	--	--	41,500	--	--	--	--	--	2,400	43,900
Red Mountain	--	--	--	4,000	--	--	--	--	--	100	4,100
Ruby Lake	--	--	--	6,200	--	--	--	--	--	700	6,800
Sawlog	--	--	--	10,300	--	--	--	200	--	--	10,500
Sheep Mountain	--	--	--	3,000	--	--	--	--	--	--	3,100
Silver Lakes / Stunner	--	--	--	4,900	--	--	--	--	--	900	5,800
Snowshoe Mountain	--	--	--	31,200	--	--	--	100	--	200	31,500
Spectacle Lake	--	--	--	--	--	--	--	--	--	600	600
Spruce Hole / Sheep Creek	--	--	--	6,700	--	--	900	--	--	--	7,600
Stunner Pass / Dolores Canyon	--	--	--	2,900	--	--	--	--	--	100	3,000
Sulphur Tunnel	--	--	--	--	--	--	--	--	--	1,800	1,800



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Summit Peak / Elwood Pass	--	--	--	3,200	--	--	--	--	--	--	3,200
Taylor Canyon	--	--	--	6,000	--	--	--	--	--	--	6,000
Tewksberry	--	--	--	6,000	--	--	100	--	--	500	6,600
Tobacco Lakes	100	--	--	3,300	--	--	--	--	--	--	3,300
Trout Mountain / Elk Mountain	--	--	--	30,800	--	--	200	100	--	1,900	33,100
Ute Pass	--	--	--	7,100	--	--	1,500	200	--	--	8,700
Wason Park	--	--	--	20,300	--	200	--	--	--	--	20,500
Wightman Fork / Upper Burro	--	--	--	5,800	--	--	--	--	--	900	6,700
Wightman Fork to Lookout	--	--	--	5,500	--	--	--	--	--	200	5,700
Willow Mountain	--	--	--	8,200	--	--	1,700	--	--	--	10,000
Rio Grande Total	100	--	--	428,300	--	5,400	20,800	14,400	14,800	45,900	518,600
Routt National Forest											
Barber Basin	--	--	--	--	--	--	300	--	--	5,200	5,500
Black Mountain	--	--	--	--	10,300	--	--	--	500	11,800	22,700
Bunker Basin	--	--	--	--	11,700	--	--	--	1,100	--	12,800
Bushy Creek	--	--	--	--	--	--	--	--	500	10,800	11,300
Chatfield	--	--	--	--	5,900	--	300	--	100	5,000	11,300
Chedsey Creek	--	--	--	--	800	--	--	--	100	--	1,000
Dome	--	--	--	--	--	--	--	--	200	1,900	2,100
Dome Peak	--	--	700	--	11,000	--	1,100	--	600	22,300	35,700
Elkhorn	--	--	--	--	--	--	900	--	--	9,600	10,500
Gold Creek	--	--	100	--	3,000	--	--	--	--	--	3,200



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Grizzly Helena	--	--	6,100	--	--	--	--	--	--	--	6,100
Kettle Lakes	1,900	--	6,900	--	800	--	--	--	1,200	--	10,800
Little Green Creek	--	--	--	--	--	--	--	--	--	900	900
Long Park	--	--	2,700	--	19,800	--	2,300	--	17,000	300	42,100
Mad Creek	--	--	--	--	15,400	--	6,000	--	2,900	--	24,300
Morrison Creek	--	--	--	--	4,200	--	600	--	900	2,800	8,500
Never Summer North	--	--	--	--	3,700	--	--	--	--	--	3,700
Never Summer South	--	--	800	--	5,200	--	--	--	700	1,000	7,600
Nipple Peak North	--	--	100	--	--	--	600	--	200	5,500	6,300
Nipple Peak South	--	--	--	--	8,200	--	2,500	--	1,200	100	11,900
Pagota Peak	--	--	100	--	55,900	--	1,500	--	200	--	57,700
Shield Mountain	--	--	3,200	--	5,800	--	300	--	100	100	9,400
South Fork	--	--	2,000	--	--	--	--	--	--	2,700	4,700
Sugarloaf North	--	--	--	--	--	--	1,600	--	700	12,800	15,000
Sugarloaf South	--	--	--	--	17,700	--	1,300	--	100	4,200	23,200
Troublesome North	--	--	--	--	16,200	--	--	--	--	15,500	31,700
Troublesome South	--	--	--	--	44,300	--	2,400	--	--	600	47,400
Walton Peak	--	--	--	--	--	--	--	--	1,200	4,000	5,300
Whalen Creek	--	--	--	--	1,100	--	--	--	--	--	1,100
Roott Total	1,900	--	22,700	--	241,100	--	21,700	--	29,500	117,100	433,600
San Juan National Forest											
Baldy	--	--	--	--	--	--	--	20,300	--	--	20,300
Blackhawk Mountain	--	--	--	--	--	--	--	17,500	--	--	17,500



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
East Animas	--	--	--	--	--	--	--	16,900	--	--	16,900
Fish Creek	--	--	--	--	--	--	100	13,400	--	--	13,500
Florida River	--	--	--	--	--	--	--	5,700	--	--	5,700
Graham Park	--	--	--	500	--	--	--	17,300	--	--	17,800
HD Mountains	--	--	--	--	--	--	--	25,000	--	--	25,000
Hermosa	--	--	--	--	--	--	--	148,100	--	--	148,100
Lizard Head Adjacent	--	--	--	--	--	--	400	5,400	--	--	5,800
Piedra Area Adjacent	--	--	--	--	--	--	1,200	39,500	--	--	40,800
Runlett Park	--	--	--	--	--	--	--	5,600	--	--	5,600
Ryman	--	--	--	--	--	--	--	8,700	--	--	8,700
San Miguel	--	--	--	--	--	--	--	64,300	--	--	64,300
South San Juan Adjacent	--	--	--	--	--	--	--	30,300	4,600	--	34,900
Storm Peak	--	--	--	--	--	--	1,600	56,100	--	--	57,600
Treasure Mountain	--	--	--	--	--	--	--	20,100	2,400	--	22,500
Turkey Creek	--	--	--	--	--	--	--	25,300	--	--	25,300
Weminuche Adjacent	--	--	--	--	--	--	400	23,200	--	--	23,600
West Needles	--	--	--	--	--	--	--	6,900	--	--	6,900
Winter Hills/Serviceberry Mountain	--	--	--	--	--	--	--	5,100	--	--	5,100
San Juan Total	--	--	--	500	--	--	3,800	554,700	7,000	--	566,100
White River National Forest											
Adam Mountain	--	--	--	--	--	--	--	8,200	--	--	8,200



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Ashcroft	--	--	--	--	--	--	--	--	900	--	900
Assignment Ridge	11,800	--	--	--	--	--	--	1,400	100	--	13,300
Baldy Mountain	--	--	--	--	2,600	--	--	3,500	--	--	6,100
Basalt Mountain A	--	--	--	--	2,100	--	--	11,800	--	--	13,900
Basalt Mountain B	--	--	--	--	3,800	--	--	3,600	--	--	7,400
Berry Creek	--	--	--	--	2,700	--	--	5,900	--	--	8,600
Big Ridge to South Fork A	--	--	100	--	35,200	--	--	--	--	--	35,400
Big Ridge to South Fork B	--	--	300	--	5,700	--	--	--	--	--	6,000
Black Lake East	--	--	--	--	--	--	--	800	--	--	800
Black Lake West	--	--	--	--	--	--	--	900	--	--	900
Blair Mountain	--	--	--	--	--	--	--	500	--	--	500
Boulder	--	--	--	--	--	--	--	1,300	--	--	1,300
Budges	--	--	--	--	800	--	--	--	200	--	1,000
Buffer Mountain	--	--	--	--	4,100	--	--	6,300	700	--	11,000
Burnt Mountain	--	--	--	--	300	--	--	1,300	--	--	1,600
Chicago Ridge	--	--	--	--	5,000	--	--	--	100	--	5,100
Corral Creek	--	--	--	--	2,900	--	--	--	300	--	3,300
Crystal River	--	--	--	--	4,900	--	--	--	1,200	--	6,100
Deep Creek	--	4,900	--	--	300	--	--	4,700	--	--	9,900
Dome Peak	600	--	--	--	--	--	--	11,400	--	--	12,000
East Divide / Four Mile Park	--	--	--	--	--	--	--	8,700	--	--	8,700
East Vail	--	--	--	--	7,600	--	--	--	400	--	8,000
East Willow	--	--	--	--	--	--	--	7,100	--	--	7,200



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Elk Creek B	--	--	--	2,500	1,600	--	--	3,100	--	--	7,200
Elliot Ridge	--	--	--	--	1,600	--	--	1,600	--	--	3,200
Fawn Creek / Little Lost Park	--	--	--	--	5,400	--	--	--	--	--	5,400
Freeman Creek	300	--	--	--	700	--	--	--	--	--	1,000
Gallo Hill	--	--	--	--	1,400	--	--	--	--	--	1,400
Game Creek	--	--	--	--	4,900	--	--	--	1,200	--	6,100
Grizzly Creek	--	--	--	--	6,400	--	--	100	200	--	6,700
Gypsum Creek	15,900	--	--	--	200	--	--	1,800	--	--	17,900
Hardscrabble	--	--	--	--	11,300	--	--	200	300	--	11,800
Hay Park	--	--	--	--	5,500	--	--	5,600	100	--	11,100
Holy Cross City	--	--	--	--	900	--	--	--	--	--	900
Homestake	--	--	--	--	3,700	--	--	400	--	--	4,200
Hoosier Ridge	--	--	--	300	5,700	--	--	--	--	--	6,000
Housetop Mountain	--	--	--	11,000	--	--	--	1,900	--	--	12,900
Hunter	1,100	--	--	--	--	--	--	--	--	--	1,100
Little Grande Mesa	--	--	--	--	4,100	--	--	500	1,700	--	6,300
Lower Piney	--	--	--	--	1,800	--	--	11,800	--	--	13,500
Mamm Peak	--	--	--	--	9,500	--	--	15,900	--	--	25,300
Maroon East	--	--	--	--	1,400	--	--	--	--	--	1,400
Maryland Creek	--	--	--	--	--	--	--	1,500	--	--	1,500
McClure Pass	--	--	--	--	2,100	--	--	--	100	--	2,200
McFarlane	--	--	--	--	900	--	--	--	500	--	1,400
Meadow Mountain A	--	--	--	--	300	--	--	1,300	--	--	1,500



CRA Name	Acres										Total CRA
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Meadow Mountain B	--	--	--	--	--	--	--	3,100	--	--	3,100
Morapos A	--	--	--	--	20,200	--	--	3,400	--	--	23,600
Morapos B	--	--	--	--	2,700	--	--	11,300	--	--	14,100
Mormon Creek	3,000	--	--	--	--	--	--	--	--	--	3,000
No Name	--	--	--	--	3,900	--	--	--	--	--	3,900
North Elk	--	--	--	--	--	--	--	9,900	--	--	9,900
North Independent A	3,000	--	--	--	1,600	--	--	--	--	--	4,500
North Independent B	--	--	--	--	900	--	--	--	--	--	900
North Woody	--	--	--	--	8,400	--	--	200	--	--	8,600
Pagoda Peak	--	--	--	--	9,100	--	--	--	--	--	9,100
Piney Lake	--	--	--	--	--	--	--	900	--	--	900
Porcupine Peak	--	--	--	--	7,600	--	--	--	--	--	7,600
Ptarmigan A	--	--	--	--	2,500	--	--	--	200	--	2,700
Ptarmigan B	1,800	--	--	--	--	--	--	--	--	--	1,800
Ptarmigan C	900	--	--	--	--	--	--	--	--	--	900
Ptarmigan Hill A	--	--	--	--	9,000	--	--	4,000	--	--	13,100
Ptarmigan Hill B	--	--	--	--	6,900	--	--	--	100	--	7,000
Red Dirt A	--	--	--	--	2,400	--	--	7,800	--	--	10,200
Red Dirt B	--	--	--	--	--	--	--	2,500	--	--	2,500
Red Mountain	--	--	--	--	2,500	--	--	3,900	--	--	6,500
Red Table	30,900	--	--	--	3,900	--	--	4,200	100	--	39,100
Reno Mountain	--	--	--	--	5,300	--	--	7,100	--	--	12,400
Ripple Creek Pass /	600	--	--	--	--	--	--	--	--	--	600



CRA Name	Acres										Total CRA	
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4		
Trappers Lake												
Ryan Gulch	--	--	--	--	--	--	--	600	--	--	600	
Salt Creek	--	--	--	--	3,000	--	--	2,600	--	--	5,600	
Sloan Peak	--	--	--	--	20,000	--	--	100	--	--	20,100	
Spraddle Creek A	900	--	--	--	--	--	--	--	--	--	900	
Spraddle Creek B	--	--	--	--	900	--	--	5,500	100	--	6,500	
Sweetwater A	800	--	--	--	1,600	--	--	9,600	--	--	12,000	
Sweetwater B	--	--	--	--	--	--	--	4,300	--	--	4,300	
Tenderfoot Mountain	--	--	--	--	8,300	--	--	--	100	--	8,400	
Tenmile	--	--	--	--	6,100	--	--	--	200	--	6,300	
Thompson Creek	--	--	--	--	--	--	--	18,500	--	--	18,500	
Tigiwon	--	--	--	--	1,400	--	--	600	--	--	2,000	
Treasure Mountain	1,500	--	--	--	--	--	--	--	--	--	1,500	
West Brush Creek	--	--	--	--	400	--	--	5,400	100	--	5,900	
West Lake Creek	--	--	--	--	700	--	--	2,600	--	--	3,300	
Wildcat Mountain	--	--	--	--	1,700	--	--	2,000	--	--	3,700	
Wildcat Mountain B	--	--	--	--	2,300	--	--	--	--	--	2,300	
Wildcat Mountain C	--	--	--	--	4,800	--	--	--	--	--	4,800	
Williams Fork	--	--	--	--	--	--	--	6,100	500	--	6,600	
Willow	--	--	--	--	--	--	--	1,100	--	--	1,100	
Woods Lake	4,600	--	--	--	2,300	--	--	2,700	--	--	9,500	
White River Total	77,700	4,900	400	13,800	287,800	--	--	243,100	9,400	--	636,700	

Note: Numbers might not add due to rounding



Table C-6 lists a summary of the acres in each management category for road construction and tree cutting activities (categories A1 to D4) associated with CRAs on each National Forest. Acres are rounded to the nearest 100 acres. There are approximately the 4.19 million acres in CRAs under Alternatives 2 and 4 (refer to Appendix A for details on acres included in CRAs). See Tables C-1 and C-2 for an explanation of management area categories.

Table C-6. Summary of CRA Acres per Management Category by Forest

National Forest	Acres										
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	Total CRA
Arapaho and Roosevelt	8,800	141,000	--	--	15,100	83,000	19,800	--	40,800	38,800	347,100
Grand Mesa, Uncompahgre, and Gunnison	--	--	--	1,100	--	--	--	440,200	--	459,800	901,100
Manti-La Sal	--	--	--	--	--	--	900	--	2,000	4,800	7,700
Pike and San Isabel	--	--	--	500	--	--	--	544,800	5,500	223,300	774,700
Rio Grande	100	--	--	428,300	--	5,400	20,800	14,400	14,800	34,900	518,600
Routt	1,900	--	22,700	--	241,100	--	21,700	--	29,500	117,100	433,600
San Juan	--	--	--	500	--	--	3,800	554,700	7,000	--	566,100
White River	77,700	4,900	400	13,800	287,800	--	--	243,100	9,400	--	636,700
Colorado	88,500	145,900	23,100	444,200	544,000	88,400	67,000	1,797,200	109,000	878,700	4,185,600
Percent of total	2%	3%	1%	11%	13%	2%	2%	43%	3%	21%	100%

Note: Numbers might not add due to rounding



Table C-7 shows upper tier acres that are in Alternative 2 for the National Forests. CRA upper tier acres are specific portions of, or entire CRAs, that are identified in the set of forest roadless area maps maintained at the national office of the U.S. Forest Service. All road construction or reconstruction is prohibited on these acres, except where needed pursuant to reserved or outstanding rights, as provided for by statute or treaty; or to protect public health and safety from an imminent threat of a catastrophic event that would cause the loss of life or property. Tree cutting, sale, or removal is prohibited, except for when it is incidental to implementing a management activity not otherwise prohibited and as appropriate for personal or administrative use. Only CRAs with the upper tier acres in Alternative 2 are displayed in this table. See Tables C-1 and C-2 for an explanation of management area categories.

Table C-7. Upper Tier Acres in Alternative 2

Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Arapaho-Roosevelt												
Bard Creek	22,800	--	14,800	--	--	--	3,300	100	--	100	--	18,400
Byers Peak	10,200	--									1,400	1,400
Cache La Poudre Adjacent Areas	2,900	--	100	--	--	--	--	--	--	--	--	100
Comanche Peak Adjacent Areas	44,200	--	11,100	--	--	--	--	--	--	100	200	11,300
Gold Run	6,600	--	3,500	--	--	--	--	--	--	--	--	3,500
Green Ridge -East	26,600	--	5,400	--	--	--	--	--	--	--	--	5,400
Green Ridge -West	13,700	200		--	--	--	--	--	--	--	--	200
Indian Peaks Adjacent Areas	28,600	--	6,100	--	--	9,600	--	200	--	--	--	15,800
Kelly Creek	8,200	--	7,900	--	--	--	300	--	--	--	--	8,200
Mount Evans Adjacent Areas	9,900	200	200	--	--	--	--	--	--	--	--	300
Mount Sniktau	7,800	--	5,100	--	--	--	--	--	--	--	--	5,100
Neota Adjacent Area	2,200	--	800	--	--	--	--	--	--	--	--	800
North Lone Pine	9,400	4,000	3,100	--	--	--			--	--	--	7,000



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
North St. Vrain	11,200	4,400	1,500	--	--	--	--	--	--	--	--	5,900
Rawah Adjacent Areas	2,800	--	500	--	--	--	--	--	--	--	--	500
Square Top Mountain	6,500	--	5,000	--	--	--	--	--	--	600	--	5,600
Troublesome	13,800	--	10,800	--	--	--	--	--	--	--	--	10,800
Vasquez Adjacent Area	6,900	--	5,900	--	--	--	--	--	--	--	100	6,000
Williams Fork	36,300	--	28,700	--	--	--	--	--	--	--	--	28,700
Arapaho-Roosevelt Total		8,800	110,500	--	--	9,600	3,600	300	--	800	1,700	134,800
Grand Mesa, Uncompahgre, Gunnison												
Beaver	3,700	--	--	--	--	--	--	--	1,600	--	1,900	3,600
Carson	6,000	--	--	--	--	--	--	--	400	--	--	400
Cataract	10,200	--	--	--	--	--	--	--	3,200	--	--	3,200
Cochetopa	6,600	--	--	--	--	--	--	--	--	--	2,500	2,500
Crystal Peak	11,500	--	--	--	--	--	--	--	--	--	500	500
Curecanti	12,400	--	--	--	--	--	--	--	3,000	--	2,900	5,900
Failes Creek/Soldier Creek	8,900	--	--	--	--	--	--	--	1,700	--	4,500	6,200
Granite Basin	25,500	--	--	--	--	--	--	--	1,200	--	1,000	2,200
Hope Lake	8,200	--	--	--	--	--	--	--	200	--	--	200
Horsefly Canyon	6,200	--	--	--	--	--	--	--	4,400	--	1,400	5,800
Johnson Basin	11,900	--	--	--	--	--	--	--	3,200	--	--	3,200
Little Cimarron	4,200	--	--	--	--	--	--	--	900	--	3,300	4,200
Matterhorn	3,600	--	--	--	--	--	--	--	--	--	3,200	3,200
Mendicant	19,100	--	--	--	--	--	--	--	5,200	--	7,900	13,100



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Mineral Mountain	2,400	--	--	--	--	--	--	--	1,500	--	100	1,600
Mount Lamborn	22,600	--	--	--	--	--	--	--	8,100	--	600	8,600
Munsey/Erickson	3,500	--	--	--	--	--	--	--	1,300	--	--	1,300
Naturita Canyon	4,600	--	--	--	--	--	--	--	1,500	--	2,900	4,400
Poverty Gulch	5,500	--	--	--	--	--	--	--	4,000	--	600	4,600
Sanford Basin	12,900	--	--	--	--	--	--	--	4,100	--	2,300	6,400
Sawtooth	22,800	--	--	--	--	--	--	--	2,600	--	19,400	22,000
Soap Creek	8,100	--	--	--	--	--	--	--	5,500	--	500	6,000
Turret Ridge	5,500	--	--	--	--	--	--	--	2,700	--	2,400	5,200
Unawep	12,200	--	--	--	--	--	--	--	6,800	--	300	7,100
Whitehouse Mountain	14,400	--	--	--	--	--	--	--	7,700	--	--	7,700
Wilson	2,600	--	--	--	--	--	--	--	900	--	--	900
GMUG Total		--	--	--	--	--	--	--	71,700	1,900	58,200	130,300
Manti-La Sal National Forests												
Roc Creek	7,700	--	--	--	--	--	--	900	--	2,000	4,800	7,700
Manti-La Sal Total		--	--	--	--	--	--	900	--	2,000	4,800	7,700
Pike- San Isabel National Forest												
Aspen Ridge	14,200	--	--	--	--	--	--	--	7,300	--	4,600	11,900
Badger Creek	12,400	--	--	--	--	--	--	--	10,500	--	1,100	11,600
Buffalo Peaks East	5,700	--	--	--	--	--	--	--	--	--	1,000	1,000
Buffalo Peaks West	8,300	--	--	--	--	--	--	--	6,000	--	1,500	7,400
Burning Bear	19,300	--	--	--	--	--	--	--	13,300	--	3,600	16,800
Elk Mountain-Collegiate North	32,100	--	--	--	--	--	--	--	8,000	--	--	8,000
Elk Mountain-	6,200	--	--	--	--	--	--	--	6,100	--	--	6,100



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total	
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4		
Collegiate West													
Greenhorn Mountain: Bandito Cone to Dry Creek	2,300	--	--	--	--	--	--	--	--	600	--	--	600
Greenhorn Mountain: Graneros Creek to Section 10	4,800	--	--	--	--	--	--	--	--	3,000	--	--	3,000
Holy Cross	9,100	--	--	--	--	--	--	--	--	5,800	--	--	5,800
Hoosier Ridge	2,900	--	--	--	--	--	--	--	--	--	--	1,700	1,700
Kreutzer-Princeton	43,300	--	--	--	--	--	--	--	--	2,100	--	1,300	3,400
Little Fountain Creek	7,700	--	--	--	--	--	--	--	--	2,700	--	--	2,700
Mount Evans	15,400	--	--	--	--	--	--	--	--	3,800	--	3,500	7,400
Mount Massive	1,400	--	--	--	--	--	--	--	--	800	--	--	800
Purgatoire	16,800	--	--	--	--	--	--	--	--	1,600	--	--	1,600
Rampart East	28,300	--	--	--	--	--	--	--	--	5,600	--	900	6,500
Romley	7,300	--	--	--	--	--	--	--	--	5,200	--	2,100	7,300
Sangre de Cristo: Alvarado Campground to Music Pass	8,000	--	--	--	--	--	--	--	--	3,000	--	2,700	5,700
Sangre de Cristo: Blanca Peak to Slide Mountain	4,100	--	--	--	--	--	--	--	--	2,000	--	--	2,000
Sangre de Cristo: Lake Creek to Hermit Creek	11,400	--	--	--	--	--	--	--	--	6,000	100	1,400	7,500
Sangre de Cristo: Medano Pass to Carbonate Mountain	7,000	--	--	--	--	--	--	--	--	2,100	--	2,500	4,600
Silverheels	8,300	--	--	--	--	--	--	--	--	500	--	--	500



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Spanish Peaks	7,400	--	--	--	--	--	--	--	200	--	--	200
Square Top Mountain	7,100	--	--	--	--	--	--	--	5,600	400	--	6,100
Tanner Peak	17,700	--	--	--	--	--	--	--	5,100	--	--	5,100
Thirtynine Mile Mountain	11,800	--	--	--	--	--	--	--	2,300	--	7,200	9,400
Weston Peak	17,800	--	--	--	--	--	--	--	3,800	--	1,300	5,100
Pike- San Isabel Total		--	--	--	--	--	--	--	113,000	100	36,400	149,900
Rio Grande												
Alamosa River	4,900	--	--	--	1,000	--	--	--	--	--	--	1,000
Antora Meadows/Bear Creek	22,800	--	--	--	19,400	--	--	--	--	--	--	19,400
Beartown	2,400	--	--	--	2,300	--	--	--	--	--	--	2,300
Beaver Mountain	7,100	--	--	--	4,000	--	--	--	--	--	--	4,000
Bennet Mountain/Blowout/Wil low Creek/Lion Point/Greenie Mountain	52,000	--	--	--	29,600	--	--	--	--	--	--	29,600
Big Buck/Kitty/Ruby	9,900	--	--	--	6,300	--	--	--	--	--	--	6,300
Box/Road Canyon	1,200	--	--	--	300	--	--	--	--	--	--	300
Bristol Head	46,100	--	--	--	34,900	--	--	--	--	--	--	34,900
Chama Basin	21,600	--	--	--	17,400	--	--	--	--	--	--	17,400



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Cooper Mountain/Sulphur	5,200	--	--	--	5,100	--	--	--	--	--	--	5,100
Cumbres	10,400	--	--	--	5,800	--	--	--	--	--	--	5,800
Deep Creek/Boot Mountain	27,600	--	--	--	12,100	--	--	--	--	--	--	12,100
Elkhorn Peak	10,500	--	--	--	8,800	--	--	--	--	--	--	8,800
Four Mile Creek	10,200	--	--	--	8,300	--	--	--	--	--	--	8,300
Fox Creek	6,100	--	--	--	1,400	--	--	--	--	--	--	1,400
Fox Mountain	6,100	--	--	--	6,100	--	--	--	--	--	--	6,100
Gold Creek/Cascade Creek	900	--	--	--	800	--	--	--	--	--	--	800
Indian Ridge	1,600	--	--	--	1,400	--	--	--	--	--	--	1,400
La Garita	10,700	--	--	--	6,800	--	--	--	--	--	--	6,800
Lake Fork	10,700	--	--	--	3,800	--	--	--	--	--	--	3,800
Middle Alder	5,400	--	--	--	4,900	--	--	--	--	--	--	4,900
Pole Mountain/Finger Mesa	43,900	--	--	--	31,900	--	--	--	--	--	--	31,900
Red Mountain	4,100	--	--	--	4,000	--	--	--	--	--	--	4,000
Ruby Lake	6,800	--	--	--	4,700	--	--	--	--	--	--	4,700
Sawlog	10,500	--	--	--	8,800	--	--	--	--	--	--	8,800



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Sheep Mountain	3,100	--	--	--	3,000	--	--	--	--	--	--	3,000
Silver Lakes/Stunner	5,800	--	--	--	2,500	--	--	--	--	--	--	2,500
Snowshoe Mountain	31,500	--	--	--	21,600	--	--	--	--	--	--	21,600
Spruce Hole/Sheep Creek	7,600	--	--	--	2,600	--	--	--	--	--	--	2,600
Stunner Pass/Dolores Canyon	3,000	--	--	--	2,900	--	--	--	--	--	--	2,900
Summit Peak/Elwood Pass	3,200	--	--	--	3,200	--	--	--	--	--	--	3,200
Taylor Canyon	6,000	--	--	--	6,000	--	--	--	--	--	--	6,000
Tewksberry	6,600	--	--	--	4,300	--	--	--	--	--	--	4,300
Tobacco Lakes	3,300	100	--	--	2,500	--	--	--	--	--	--	2,500
Trout Mountain/Elk Mountain	33,100	--	--	--	23,200	--	--	--	--	--	--	23,200
Ute Pass	8,700	--	--	--	5,600	--	--	--	--	--	--	5,600
Wason Park	20,500	--	--	--	18,000	--	--	--	--	--	--	18,000
Wightman Fork/Upper Burro	6,700	--	--	--	2,400	--	--	--	--	--	--	2,400
Wightman Fork to Lookout	5700	--	--	--	4500	--	--	--	--	--	--	4,500
Willow Mountain	10,000	--	--	--	7,900	--	--	--	--	--	--	7,900



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Rio Grande Total		100	--	--	340,100	--	--	--	--	--	--	340,300
Routt												
Bunker Basin	12,800	--	--	--	--	11,700	--	--	--	--	--	11,700
Chatfield	11,300	--	--	--	--	5,900	--	--	--	--	--	5,900
Dome Peak	35,700	--	--	400	--	--	--	--	--	--	--	400
Kettle Lakes	10,800	1,900	--	6,900	--	--	--	--	--	--	--	8,800
Nipple Peak North	6,300	--	--	100	--	--	--	--	--	--	--	100
Nipple Peak South	7,600	--	--	--	--	8,200	--	--	--	--	--	8,200
Pagoda Peak	57,700	--	--	--	--	55,200	--	--	--	--	--	55,200
Shield Mountain	9,400	--	--	3,100	--	--	--	--	--	--	--	3,100
South Fork	4,700	--	--	1,700	--	--	--	--	--	--	--	1,700
Sugarloaf South	23,200	--	--	--	--	17,700	--	--	--	--	--	17,700
Troublesome North	31,700	--	--	--	--	--	--	16,200	--	--	--	16,200
Troublesome South	47,400	--	--	--	--	--	--	43,300	--	--	--	43,300
Routt Total		1,900	--	12,200	--	98,700	--	59,500	--	--	--	172,100
San Juan												
East Animas	16,900	--	--	--	--	--	--	--	6,900	--	--	6,900
Graham Park	17,800	--	--	--	500	--	--	--	8,500	--	--	9,000
Hermosa	148,100	--	--	--	--	--	--	--	55,800	--	--	55,800
Lizard Head Adjacent	5,800	--	--	--	--	--	--	300	1,900	--	--	2,200
Piedra Area Adjacent	40,800	--	--	--	--	--	--	800	--	--	--	800
Ryman	8,700	--	--	--	--	--	--	--	4,900	--	--	4,900
San Miguel	64,300	--	--	--	--	--	--	--	40,700	--	--	40,700
South San Juan Adjacent	34,900	--	--	--	--	--	--	--	9,000	4,600	--	13,600



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Treasure Mountain	22,500	--	--	--	--	--	--	--	9,100	--	--	9,100
Turkey Creek	25,300	--	--	--	--	--	--	--	7,500	--	--	7,500
Weminuche Adjacent	23,600	--	--	--	--	--	--	--	2,000	--	--	2,000
West Needles	6,900	--	--	--	--	--	--	--	700	--	--	700
San Juan Total		--	--	--	500	--	--	1,100	147,000	4,600	--	153,200
White River												
Assignment Ridge	13,300	9,200	--	--	--	--	--	--	--	--	--	9,200
Big Ridge to South Fork A	35,400			100		30,300						30,400
Big Ridge to South Fork B	6,000			300		5,700						6,000
Chicago Ridge	5,100					1,900						1,900
Corral Creek	3,300					1,900						1,900
Deep Creek	9,900	--	4,900	--	--	--	--	--	--	--	--	4,900
Dome Peak	12,000	600	--	--	--	--	--	--	--	--	--	600
Elliot Ridge	3,200					1,500						1,500
Freeman Creek	1,000	300	--	--	--	--	--	--	--	--	--	300
Gypsum Creek	17,900	15,100	--	--	--	--	--	--	--	--	--	15,100
Hoosier Ridge	6,000	--	--	--	300	--	--	--	--	--	--	300
Hunter	1,100	1,000	--	--	--	--	--	--	--	--	--	1,000
Little Grand Mesa	6,300					3,700						3,700
Mormon Creek	3,000	3,000	--	--	--	--	--	--	--	--	--	3,000
North Independent A	4,500	2,500	--	--	--	--	--	--	--	--	--	2,500
Porcupine Creek	7,600	--	--	--	--	2,400	--	--	--	--	--	2,400
Ptarmigan B	1,800	1,800	--	--	--	--	--	--	--	--	--	1,800
Ptarmigan C	900	900	--	--	--	--	--	--	--	--	--	900



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Red Table	39,100	27,200	--	--	--	--	--	--	--	--	--	27,200
Ripple Creek Pass/Trappers Lake	600	600	--	--	--	--	--	--	--	--	--	600
Sloan Peak	20,100	--	--	--	--	6,700	--	--	--	--	--	6,700
Spraddle Creek A	900	900	--	--	--	--	--	--	--	--	--	900
Sweetwater A	12,000	800	--	--	--	--	--	--	--	--	--	800
Tenderfoot Mountain	8,400	--	--	--	--	500	--	--	--	--	--	500
Tigiwon	2,000	--	--	--	--	1,300	--	--	--	--	--	1,300
Treasure Mountain	1,500	1,500	--	--	--	--	--	--	--	--	--	1,500
Woods Lake	9,500	4,100	--	--	--	--	--	--	--	--	--	4,100
White River Total		69,500	4,900	400	300	55,900	--	--	--	--	--	131,000

Note: Numbers might not add due to rounding. See Table C-1 and C-2 for an explanation of management categories.



Table C-8 summarizes the acres in each management category for road construction and tree cutting activities (categories A1 to D4) associated with Alternative 2 upper tier acres in the CRAs on each national forest. Acres are rounded to the nearest 100 acres. There are approximately 1,024,000 upper tier acres in the 4.19 million acres in CRAs under Alternative 2. See Tables C-1 and C-2 for an explanation of management area categories.

Table C-8. Summary of Upper Tier CRA Acres per Management Category by Forest in Alternative 2

National Forest	Acres										Total Upper tier Acres
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Arapaho and Roosevelt	8,800	110,500			9,600	3,600	300		800	1,700	134,800
Grand Mesa, Uncompahgre, and Gunnison								71,700	1,900	58,200	130,300
Manti-La Sal							900		2,000	4,800	7,700
Pike and San Isabel								113,000	100	36,400	149,900
Rio Grande	100			340,100							340,300
Routt	1,900	0	12,200	0	98,700	0	59,500	0	0	0	172,100
San Juan				500			1,100	147,000	4,600		153,200
White River	69,500	4,900	400	300	55,900						131,000
Percent of Total Upper Tier Acres	7%	9%	1%	28%	13%	0.3%	5%	27%	1%	8%	100%

Note: Numbers might not add due to rounding.



Table C-9 shows upper tier acres that are in Alternative 4 for the National Forests. Upper tier acres in CRAs are specific portions of, or entire CRAs, that are identified in the set of forest roadless area maps maintained at the national office of the U.S. Forest Service. All road construction or reconstruction is prohibited on these acres, except where needed pursuant to reserved or outstanding rights, as provided for by statute or treaty; or to protect public health and safety from an imminent threat of a catastrophic event that would cause the loss of life or property. Tree cutting, sale, or removal is prohibited, except for when it is incidental to implementing a management activity not otherwise prohibited, and as appropriate for personal or administrative use. Only CRAs with the upper tier acres in Alternative 4 are displayed in this table. See Tables C-1 and C-2 for an explanation of management area categories.

Table C-9. Upper Tier Acres in Alternative 4 on the National Forests

Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Arapaho-Roosevelt												
Bard Creek	22,800	--	11,600	--	--	--	2,500	200	--	2,200	--	16,500
Byers Peak	10,200	--	--	--	--	--	--	--	--	1,000	6,500	7,400
Cache La Poudre Adjacent Areas	2,900	--	100	--	--	--	1,300	--	--	--	--	1,400
Cherokee Park	7,600	--	--	--	--	--	3,500	--	--	--	4,100	7,600
Comanche Peak Adjacent Areas	44,200	--	17,100	--	--	--	17,000	500	--	6,400	3,200	44,200
Copper Mountain	13,200	--	--	--	--	--	--	1,100	--	--	3,400	4,600
Crosier Mountain	7,300	--	--	--	--	--	6,300	--	1,000	--	--	7,300
Gold Run	6,600	--	800	--	--	--	--	--	--	300	--	1,100
Green Ridge -East	26,600	--	9,100	--	--	--	4,200	4,800	--	2,800	3,900	24,800
Green Ridge -West	13,700	200	--	--	--	--	1,900	1,500	--	--	200	3,700
Grey Rock	12,100	--	--	--	--	--	700	--	--	--	--	700
Indian Peaks Adjacent Areas	28,600	--	5,000	--	--	9,400	--	100	--	1,600	--	16,100
James Peak	2,300	--	--	--	--	300	1,200	200	--	500	--	2,200
Kelly Creek	8,200	--	6,200	--	--	--	200	--	--	--	--	6,500
Lion Gulch	6,600	--	--	--	--	1,000	200	--	--	--	--	1,200
Mount Evans Adjacent Areas	9,900	--	400	--	--	--	200	--	--	200	--	800



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Mount Sniktau	7,800	--	1,200	--	--	--	--	--	--	--	--	1,200
Neota Adjacent Area	2,200	--	200	--	--	--	--	--	--	1,600	100	800
Never Summer Adjacent Area	11,400	--	--	--	--	--	--	--	--	1,600	--	1,600
Rawah Adjacent Areas	2,800	--	--	--	--	--	500	--	--	100	--	600
Troublesome	13,800	--	200	--	--	--	--	300	--	--	--	500
Vasquez Adjacent Area	6,900	--	5,900	--	--	--	--	100	--	400	--	6,400
White Pine Mountain	10,400	--	--	--	--	--	10,100	--	--	300	--	10,400
Williams Fork	36,300	--	26,000	--	--	--	--	--	--	1,200	3,500	30,700
Arapaho-Roosevelt Total	347,100	200	83,800	--	--	10,800	49,900	8,800	--	20,100	24,900	198,500
Grand Mesa, Uncompahgre, Gunnison												
Agate Creek	11,800	--	--	--	--	--	--	--	2,100	--	1,700	3,800
Baldy	2,300	--	--	--	--	--	--	--	600	--	--	600
Battlements	24,400	--	--	--	--	--	--	--	5,300	--	19,200	24,400
Beaver	3,700	--	--	--	--	--	--	--	1,600	--	1,800	3,500
Beckwiths	18,400	--	--	--	--	--	--	--	11,400	--	7,000	18,400
Calamity Basin	12,500	--	--	--	--	--	--	--	11,800	--	700	12,500
Cannibal Plateau	14,500	--	--	--	--	--	--	--	800	--	1,000	1,800
Canyon Creek	10,900	--	--	--	--	--	--	--	5,600	--	2,100	7,800
Canyon Ck/Antero	1,700	--	--	--	--	--	--	--	200	--	--	200
Castle	9,400	200	--	--	--	--	--	--	1,200	--	5,800	7,100
Cataract	10,200	--	--	--	--	--	--	--	8,600	--	--	8,600
Cimarron Ridge	12,600	--	--	--	--	--	--	--	500	--	4,200	4,800
Clear Fork	24,300	--	--	--	--	--	--	--	--	--	24,300	24,300
Cochetopa Hills	48,500	--	--	--	--	--	--	--	11,400	--	13,800	25,200



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Cottonwoods	11,200	--	--	--	--	--	--	--	6,000	--	5,300	11,200
Currant Creek	10,800	--	--	--	--	--	--	--	--	--	10,800	10,800
Deer Creek	9,500	--	--	--	--	--	--	--	3,400	--	2,100	5,400
Dominguez	12,500	--	--	--	--	--	--	--	9,000	--	3,500	12,500
Double Top	23,800	--	--	--	--	--	--	--	6,100	--	800	6,900
East Elk	6,000	--	--	--	--	--	--	--	1,100	--	100	1,200
Electric Mountain	9,800	--	--	--	--	--	--	--	--	--	1,300	1,300
Failes Creek/Soldier Creek	8,900	--	--	--	--	--	--	--	1,300	--	700	2,000
Flat Irons	11,500	--	--	--	--	--	--	--	400	--	300	800
Flattops/Elk Park	75,700	--	--	--	--	--	--	--	8,800	--	67,000	75,700
Granite Basin	25,500	--	--	--	--	--	--	--	11,000	--	14,500	25,500
Hightower	3,600	--	--	--	--	--	--	--	--	--	1,900	1,900
Hope Lake	8,200	--	--	--	--	--	--	--	600	--	--	600
Huntsman Ridge	10,600	--	--	--	--	--	--	--	7,100	--	3,500	10,600
Italian Mountain	9,000	--	--	--	--	--	--	--	2,700	--	1,500	4,200
Johnson Basin	11,900	--	--	--	--	--	--	--	7,900	--	600	8,500
Kannah Creek	34,500	--	--	--	--	--	--	--	18,100	--	16,500	34,500
Kelso Mesa	35,500	--	--	--	--	--	--	--	2,100	--	11,200	13,400
Last Dollar/Sheep Creek	6,400	--	--	--	--	--	--	--	2,400	--	--	2,400
Long Canyon	17,200	--	--	--	--	--	--	--	8,900	--	8,300	17,200
Matchless Mountain	27,000	--	--	--	--	--	--	--	20,900	--	6,100	27,000
Mendicant	19,100	--	--	--	--	--	--	--	5,500	--	13,600	19,100
Mirror Lake	6,000	--	--	--	--	--	--	--	2,800	--	--	2,800
Mount Lamborn	22,600	--	--	--	--	--	--	--	20,700	--	1,800	22,600



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Munsey /Erickson	3,500	--	--	--	--	--	--	--	3,100	--	--	3,100
Pilot Knob	17,200	--	--	--	--	--	--	--	--	--	700	700
Poverty Gulch	5,500	--	--	--	--	--	--	--	1,200	--	--	1,200
Salt Creek	9,000	--	--	--	--	--	--	--	--	--	7,600	7,600
Sawtooth	22,800	--	--	--	--	--	--	--	2,500	--	15,200	17,700
Steuben	3,500	--	--	--	--	--	--	--	--	--	100	100
Sunnyside	10,700	--	--	--	--	--	--	--	10,700	--	--	10,700
Texas Creek	2,600	--	--	--	--	--	--	--	100	--	--	100
Tomahawk	12,900	--	--	--	--	--	--	--	6,400	--	600	7,000
Turner Creek	12,800	--	--	--	--	--	--	--	1,600	--	11,300	12,800
UnawEEP	12,200	--	--	--	--	--	--	--	700	--	200	900
Union	1,600	--	--	--	--	--	--	--	1,500	--	100	1,600
Whetstone	15,400	--	--	--	--	--	--	--	7,200	--	3,800	11,000
Whitehouse Mountain	14,400	--	--	--	--	--	--	--	2,900	--	--	2,900
Wilson	2,600	--	--	--	--	--	--	--	300	--	800	1,100
Windy Point	12,800	--	--	--	--	--	--	--	500	--	4,300	4,800
GMUG Total	901,100	200	--	--	--	--	--	--	246,200	--	298,000	544,900
Manti-La Sal												
Roc Creek	7,700	--	--	--	--	--	--	900	--	2,000	4,800	7,700
Manti- La Sal Total	7,700	--	--	--	--	--	--	900	--	2,000	4,800	7,700
Pike-San Isabel												
Antelope Creek	6,900	--	--	--	--	--	--	--	--	--	3,500	3,500
Babcock Hole	8,900	--	--	--	--	--	--	--	2,700	--	6,200	8,900
Badger Creek	12,400	--	--	--	--	--	--	--	100	--	--	100
Boreas	10,200	--	--	--	--	--	--	--	2,500	--	7,700	10,200



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total	
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4		
Buffalo Peaks East	5,700	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Buffalo Peaks South	15,300	--	--	--	--	--	--	--	--	500	--	2,000	2,500
Buffalo Peaks West	8,300	--	--	--	--	--	--	--	--	1,000	--	500	1,600
Burning Bear	19,300	--	--	--	--	--	--	--	--	5,100	400	--	5,500
Chicago Ridge	5,900	--	--	--	--	--	--	--	--	600	--	1,200	1,800
Chipeta	28,700	--	--	--	--	--	--	--	--	10,400	--	1,900	12,200
Elk Mountain-Collegiate North	32,100	--	--	--	--	--	--	--	--	11,500	600	--	12,100
Elk Mountain-Collegiate South	6,600	--	--	--	--	--	--	--	--	5,500	--	--	5,500
Elk Mountain-Collegiate West	6,200	--	--	--	--	--	--	--	--	3,700	--	--	3,700
Greenhorn Mountain: Badito Cone to Dry Creek	2,300	--	--	--	--	--	--	--	--	2,300	--	--	2,300
Greenhorn Mountain: Cisneros Creek to Upper Turkey Creek	2,100	--	--	--	--	--	--	--	--	600	--	1,600	2,100
Greenhorn Mountain: Graneros Creek to Section 10	4,800	--	--	--	--	--	--	--	--	4,800	--	--	4,800
Greenhorn Mountain: Little Saint Charles Creek to Greenhorn Creek	5,200	--	--	--	--	--	--	--	--	4,900	--	300	5,200
Hardscrabble	7,800	--	--	--	--	--	--	--	--	7,800	--	--	7,800
Highline	22,700	--	--	--	--	--	--	--	--	18,100	--	4,600	22,700
Holy Cross	9,100	--	--	--	--	--	--	--	--	1,200	--	--	1,200
Hoosier Ridge	2,900	--	--	--	--	--	--	--	--	--	--	1,700	1,700
Jefferson	10,900	--	--	--	--	--	--	--	--	8,700	--	2,200	10,900
Kaufman Ridge	10,200	--	--	--	--	--	--	--	--	--	--	3,200	3,200
Kreutzer-Princeton	43,300	--	--	--	--	--	--	--	--	32,400	--	10,800	43,300
Methodist Mountain	6,900	--	--	--	--	--	--	--	--	1,700	--	--	1,700



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Mount Antero	38,700	--	--	--	--	--	--	--	2,800	--	3,700	6,500
Mount Elbert	22,100	--	--	--	--	--	--	--	1,100	--	--	1,100
Mount Evans	15,400	--	--	--	--	--	--	--	2,100	--	200	2,300
Mount Massive	1,400	--	--	--	--	--	--	--	700	--	--	700
Pikes Peak East	13,700	--	--	--	500	--	--	--	200	--	8,800	9,500
Pikes Peak West	13,900	--	--	--	--	--	--	--	200	--	4,000	4,200
Purgatoire	16,800	--	--	--	--	--	--	--	7,900	--	8,900	16,800
Reveille Canyon	7,000	--	--	--	--	--	--	--	--	--	4,300	4,300
Saint Charles Peak	11,200	--	--	--	--	--	--	--	--	--	--	8,400
Sangre de Cristo: Alvarado Campground to Music Pass	8,000	--	--	--	--	--	--	--	1,200	--	700	1,900
Sangre de Cristo: Blanca Peak to Slide Mountain	4,100	--	--	--	--	--	--	--	4,100	--	--	4,100
Sangre de Cristo: Lake Creek to Hermit Creek	11,400	--	--	--	--	--	--	--	1,400	--	200	1,600
Sangre de Cristo: Medano Pass to Carbonate Mountain	7,000	--	--	--	--	--	--	--	2,900	--	2,700	5,600
Sangre de Cristo: Silverheels Gulch to Hunts Creek	6,000	--	--	--	--	--	--	--	3,500	--	--	3,500
Sangre de Cristo: West Creek to Big Cottonwood	7,400	--	--	--	--	--	--	--	4,400	--	500	4,800
Scraggy Peaks	16,700	--	--	--	--	--	--	--	13,900	--	2,800	16,700
Silverheels	8,300	--	--	--	--	--	--	--	500	--	--	500
Spanish Peaks	7,400	--	--	--	--	--	--	--	7,200	--	200	7,400
Square Top Mountain	7,100	--	--	--	--	--	--	--	1,200	400	--	1,600
Starvation Creek	7,600	--	--	--	--	--	--	--	200	--	3,300	3,500
Tanner Peak	17,700	--	--	--	--	--	--	--	17,700	--	--	17,700



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Thirtynine Mile Mountain	11,800	--	--	--	--	--	--	--	2,300	--	7,200	9,400
Weston Peak	17,800	--	--	--	--	--	--	--	3,800	--	1,300	5,100
Pike-San Isabel Total	774,700	--	--	--	500	--	--	--	208,800	1,500	102,100	312,900
Rio Grande												
Alamosa River	4,900	--	--	--	3,200	--	--	1,500	--	--	100	4,800
Antora Meadows / Bear Creek	22,800	--	--	--	22,600	--	--	--	--	--	200	22,800
Bennet Mountain / Blowout / Willow Creek / Lion Point / Greenie Mountain	52,000	--	--	--	18,400	--	--	5,800	700	4,400	900	30,100
Big Buck / Kitty / Ruby	9,900	--	--	--	5,900	--	--	--	--	--	100	5,900
Bristol Head	46,100	--	--	--	38,200	--	--	--	600	--	7,300	46,100
Butterfly	1,900	--	--	--	--	--	--	--	1,800	--	--	1,800
Chama Basin	21,600	--	--	--	18,400	--	3,200	--	--	--	--	21,600
Copper Mountain / Sulphur	5,200	--	--	--	2,200	--	--	--	--	--	--	2,200
Cumbres	10,400	--	--	--	7,800	--	--	800	--	--	200	8,800
Deep Creek / Boot Mountain	27,600	--	--	--	18,900	--	--	--	--	8,500	200	27,600
Dorsey Creek	3,400	--	--	--	--	--	--	--	--	--	3,100	3,100
Four Mile Creek	10,200	--	--	--	1,000	--	100	--	--	100	--	1,200
Fox Creek	6,100	--	--	--	900	--	--	--	--	--	--	900
Fox Mountain	6,100	--	--	--	2,100	--	--	--	--	--	--	2,100
Gibbs Creek	1,400	--	--	--	--	--	200	--	--	--	800	900
Indian Ridge	1,600	--	--	--	1,400	--	--	--	--	--	200	1,600
Kitty Creek	1,500	--	--	--	--	--	--	--	--	--	1,500	1,500
Lake Fork	10,700	--	--	--	3,400	--	--	--	--	--	700	4,100
Middle Alder	5,400	--	--	--	2,400	--	--	--	--	--	--	2,400



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Miller Creek	1,100	--	--	--	--	--	--	--	1,000	--	--	1,000
Pole Mountain / Finger Mesa	43,900	--	--	--	41,500	--	--	--	--	--	2,300	43,900
Red Mountain	4,100	--	--	--	800	--	--	--	--	--	--	800
Ruby Lake	6,800	--	--	--	100	--	--	--	--	--	--	100
Sawlog	10,500	--	--	--	8,400	--	--	--	200	--	--	8,600
Sheep Mountain	3,100	--	--	--	2,400	--	--	--	--	--	--	2,400
Silver Lakes / Stunner	5,800	--	--	--	2,000	--	--	--	--	--	300	2,300
Snowshoe Mountain	31,500	--	--	--	3,800	--	--	--	--	--	--	3,800
Spruce Hole / Sheep Creek	7,600	--	--	--	2,400	--	--	--	--	--	--	2,400
Stunner Pass / Dolores Canyon	3,000	--	--	--	1,300	--	--	--	--	--	--	1,300
Tobacco Lakes	3,300	--	--	--	100	--	--	--	--	--	--	100
Trout Mountain / Elk Mountain	33,100	--	--	--	30,800	--	--	200	100	--	1,900	33,100
Wason Park	20,500	100	--	--	20,200	--	100	--	--	--	--	20,500
Wightman Fork / Upper Burro	6,700	--	--	--	700	--	--	--	--	--	--	700
Wightman Fork To Lookout	5,700	--	--	--	5,500	--	--	--	--	--	200	5,700
Willow Mountain	10,000	--	--	--	7,200	--	--	--	--	--	--	7,300
Rio Grande Total	518,600	100	--	--	273,800	--	3,600	8,400	4,400	12,900	20,100	323,500
Routt												--
Barber Basin	5,500	--	--	--	--	--	--	300	--	--	5,000	5,300
Black Mountain	22,700	--	--	--	--	10,300	--	--	--	500	11,800	22,700
Bunker Basin	12,800	--	--	--	--	8,000	--	--	--	1,100	--	9,100
Bushy Creek	11,300	--	--	--	--	--	--	--	--	100	5,800	6,000
Chatfield	11,300	--	--	--	--	2,700	--	300	--	100	1,400	4,500
Dome	2,100	--	--	--	--	--	--	--	--	100	200	300



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Dome Peak	35,700	--	--	700	--	11,000	--	1,100	--	600	22,300	35,700
Elkhorn	10,500	--	--	--	--	--	--	900	--	--	9,600	10,500
Grizzly Helena	6,100	--	--	2,500	--	--	--	--	--	--	--	2,500
Kettle Lakes	10,800	1,900	--	6,100	--	600	--	--	--	600	--	9,200
Little Green Creek	900	--	--	--	--	--	--	--	--	--	800	800
Long Park	42,100	--	--	--	--	--	--	21,000	--	3,500	--	24,500
Mad Creek	24,300	--	--	--	--	5,800	--	15,600	--	2,900	--	24,300
Morrison Creek	8,500	--	--	--	--	--	--	--	--	--	600	600
Never Summer North	3,700	--	--	--	--	500	--	--	--	--	--	500
Nipple Peak North	6,300	--	--	100	--	--	--	600	--	200	5,500	6,300
Nipple Peak South	11,900	--	--	--	--	8,200	--	2,500	--	1,200	100	11,900
Pagoda Peak	57,700	--	--	100	--	55,700	--	1,500	--	200	--	57,500
Shield Mountain	9,400	--	--	3,200	--	5,800	--	300	--	100	100	9,400
South Fork	4,700	--	--	--	--	--	--	--	--	--	1,500	1,500
Sugarloaf North	15,000	--	--	--	--	--	--	1,600	--	700	12,800	15,000
Sugarloaf South	23,200	--	--	--	--	17,700	--	1,300	--	100	4,200	23,200
Troublesome North	31,700	--	--	--	--	--	--	16,200	--	--	15,500	31,700
Troublesome South	47,400	--	--	--	--	--	--	46,700	--	--	600	47,400
Walton Peak	5,300	--	--	--	--	--	--	--	--	1,000	600	1,700
Routt Total	433,600	1,900	--	12,800	--	126,500	--	109,700	--	12,800	98,300	362,000
San Juan			--									
Blackhawk Mountain	17,500	--	--	--	--	--	--	--	15,500	--	--	15,500
East Animas	16,900	--	--	--	--	--	--	--	3,200	--	--	3,200
Fish Creek	13,500	--	--	--	--	--	--	100	13,400	--	--	13,500



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Florida River	5,700	--	--	--	--	--	--	--	100	--	--	100
Graham Park	17,800	--	--	--	500	--	--	--	17,300	--	--	17,800
HD Mountains	25,000	--	--	--	--	--	--	--	25,000	--	--	25,000
Hermosa	148,100	--	--	--	--	--	--	--	148,100	--	--	148,100
Lizard Head Adjacent	5,800	--	--	--	--	--	--	--	2,400	--	--	2,400
Piedra Area Adjacent	40,800	--	--	--	--	--	--	100	30,200	--	--	30,300
Runlett Park	5,600	--	--	--	--	--	--	--	4,300	--	--	4,300
Ryman	8,700	--	--	--	--	--	--	--	7,300	--	--	7,300
San Miguel	64,300	--	--	--	--	--	--	--	64,100	--	--	64,100
South San Juan Adjacent	34,900	--	--	--	--	--	--	--	30,200	4,600	--	34,900
Storm Peak	57,600	--	--	--	--	--	--	--	44,000	--	--	44,000
Treasure Mountain	22,500	--	--	--	--	--	--	--	20,100	2,400	--	22,500
Turkey Creek	25,300	--	--	--	--	--	--	--	25,300	--	--	25,300
Weminuche Adjacent	23,600	--	--	--	--	--	--	400	23,200	--	--	23,600
Winter Hills/Serviceberry Mountain	5,100	--	--	--	--	--	--	--	100	--	--	100
Rio Grande Total	566,100	--	--	--	500	--	--	600	473,800	7,000	--	482,000
White River												
Adam Mountain	8,200	--	--	--	--	--	--	--	8,200	--	--	8,200
Assignment Ridge	13,300	3,700	--	--	--	--	--	--	700	--	--	4,400
Baldy Mountain	6,100	--	--	--	--	300	--	--	1,600	--	--	1,900
Basalt Mountain A	13,900	--	--	--	--	2,000	--	--	10,200	--	--	12,200
Basalt Mountain B	7,400	--	--	--	--	300	--	--	1,600	--	--	1,900
Berry Creek	8,600	--	--	--	--	2,700	--	--	5,800	--	--	8,600
Big Ridge to South Fork A	35,400	--	--	--	--	19,400	--	--	--	--	--	19,400



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Big Ridge to South Fork B	6,000	--	--	--	--	1,000	--	--	--	--	--	1,000
Black Lake East	800	--	--	--	--	--	--	--	800	--	--	800
Black Lake West	900	--	--	--	--	--	--	--	900	--	--	900
Boulder	1,300	--	--	--	--	--	--	--	700	--	--	700
Buffer Mountain	11,000	--	--	--	--	4,100	--	--	6,300	700	--	11,000
Burnt Mountain	1,600	--	--	--	--	--	--	--	800	--	--	800
Chicago Ridge	5,100	--	--	--	--	1,500	--	--	--	--	--	1,500
Corral Creek	3,300	--	--	--	--	2,900	--	--	--	200	--	3,100
Crystal River	6,100	--	--	--	--	1,700	--	--	--	500	--	2,200
Deep Creek	9,900	--	4,900	--	--	300	--	--	4,700	--	--	9,900
East Divide/Four Mile Park	8,700	--	--	--	--	--	--	--	6,900	--	--	7,000
East Vail	8,000	--	--	--	--	6,800	--	--	--	400	--	7,200
East Willow	7,200	--	--	--	--	--	--	--	5,300	--	--	5,300
Elk Creek B	7,200	--	--	--	2,500	1,600	--	--	3,100	--	--	7,200
Elliot Ridge	3,200	--	--	--	--	1,600	--	--	300	--	--	1,900
Fawn Creek/Little Lost Park	5,400	--	--	--	--	5,400	--	--	--	--	--	5,400
Freeman Creek	1,000	300	--	--	--	700	--	--	--	--	--	1,000
Gallo Hill	1,400	--	--	--	--	1,400	--	--	--	--	--	1,400
Game Creek	6,100	--	--	--	--	--	--	--	--	1,200	--	1,200
Gypsum Creek	17,900	6,400	--	--	--	--	--	--	600	--	--	7,000
Hardscrabble	11,800	--	--	--	--	1,800	--	--	--	--	--	1,900
Hay Park	11,100	--	--	--	--	3,500	--	--	5,200	--	--	8,700
Hoosier Ridge	6,000	--	--	--	300	5,700	--	--	--	--	--	6,000
Housetop Mountain	12,900	--	--	--	11,000	--	--	--	1,900	--	--	12,900



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Hunter	1,100	1,000	--	--	--	--	--	--	--	--	--	1,000
Lower Piney	13,500	--	--	--	--	1,800	--	--	11,600	--	--	13,500
Mamm Peak	25,300	--	--	--	--	9,400	--	--	15,800	--	--	25,300
Maryland Creek	1,500	--	--	--	--	--	--	--	800	--	--	800
McClure Pass	2,200	--	--	--	--	2,100	--	--	--	100	--	2,200
McFarlane	1,400	--	--	--	--	300	--	--	--	100	--	400
Meadow Mountain A	1,500	--	--	--	--	--	--	--	900	--	--	900
Meadow Mountain B	3,100	--	--	--	--	--	--	--	100	--	--	100
Morapos A	23,600	--	--	--	--	10,200	--	--	3,400	--	--	13,600
Morapos B	14,100	--	--	--	--	1,500	--	--	10,800	--	--	12,300
Mormon Creek	3,000	3,000	--	--	--	--	--	--	--	--	--	3,000
North Elk	9,900	--	--	--	--	--	--	--	9,900	--	--	9,900
Pagoda Peak	9,100	--	--	--	--	8,400	--	--	--	--	--	8,400
Piney Lake	900	--	--	--	--	--	--	--	900	--	--	900
Porcupine Peak	7,600	--	--	--	--	7,600	--	--	--	--	--	7,600
Ptarmigan A	2,700	--	--	--	--	2,500	--	--	--	100	--	2,700
Ptarmigan B	1,800	1,200	--	--	--	--	--	--	--	--	--	1,200
Ptarmigan C	900	900	--	--	--	--	--	--	--	--	--	900
Ptarmigan Hill A	13,100	--	--	--	--	300	--	--	--	--	--	300
Ptarmigan Hill B	7,000	--	--	--	--	6,800	--	--	--	100	--	6,900
Red Dirt A	10,200	--	--	--	--	2,400	--	--	4,300	--	--	6,700
Red Mountain	6,500	--	--	--	--	1,700	--	--	800	--	--	2,500
Red Table	39,100	7,400	--	--	--	600	--	--	300	--	--	8,400
Reno Mountain	12,400	--	--	--	--	3,300	--	--	6,100	--	--	9,400



Colorado Roadless Area	Total CRA Acres	Management Area Category										Total	
		A1	A2	A3	B1	B2	B3	C3	C4	D3	D4		
Ripple Creek Pass/Trappers Lake	600	600	--	--	--	--	--	--	--	--	--	--	600
Ryan Gulch	600	--	--	--	--	--	--	--	100	--	--	--	100
Salt Creek	5,600	--	--	--	--	3,000	--	--	2,600	--	--	--	5,600
Sloan Peak	20,100	--	--	--	--	10,500	--	--	100	--	--	--	10,600
Spraddle Creek A	900	900	--	--	--	--	--	--	--	--	--	--	900
Spraddle Creek B	6,500	--	--	--	--	900	--	--	5,500	100	--	--	6,500
Tenderfoot Mountain	8,400	--	--	--	--	8,200	--	--	--	100	--	--	8,400
Tenmile	6,300	--	--	--	--	4,400	--	--	--	--	--	--	4,400
Thompson Creek	18,500	--	--	--	--	--	--	--	18,400	--	--	--	18,500
Treasure Mountain	1,500	1,100	--	--	--	--	--	--	--	--	--	--	1,100
West Brush Creek	5,900	--	--	--	--	400	--	--	5,400	100	--	--	5,900
West Lake Creek	3,300	--	--	--	--	700	--	--	2,600	--	--	--	3,300
Wildcat Mountain	3,700	--	--	--	--	--	--	--	100	--	--	--	100
Williams Fork	6,600	--	--	--	--	--	--	--	4,800	400	--	--	5,200
Willow	1,100	--	--	--	--	--	--	--	600	--	--	--	600
Woods Lake	9,500	4,600	--	--	--	2,300	--	--	2,700	--	--	--	9,500
White River Total	636,700	31,100	4,900	--	13,800	153,400	--	--	174,500	4,400	--	--	382,700

Note: Numbers might not add due to rounding.



Table C-10 summarizes the acres in each management category for road construction and tree cutting activities (categories A1 to D4) associated with Alternative 4 upper tier acres in the CRAs on each National Forest. Acres are rounded to the nearest 100 acres. Approximately 2.61 million acres are designated as upper tier within the 4.19 million acres of CRA under Alternative 4. See Tables C-1 and C-2 for an explanation of management categories.

Table C-10. Summary of Upper Tier CRA Acres Per Management Category by Forest in Alternative 4

National Forest	Acres										Total Upper Tier
	A1	A2	A3	B1	B2	B3	C3	C4	D3	D4	
Arapaho and Roosevelt	200	83,800	--	--	10,800	49,900	8,800	--	20,100	24,900	198,500
Grand Mesa, Uncompahgre, and Gunnison	200	--	--	--	--	--	--	246,200	--	298,000	544,900
Manti-La Sal	--	--	--	--	--	--	900	--	2,000	4,800	7,700
Pike and San Isabel	--	--	--	500	--	--	--	208,800	1,500	102,100	312,900
Rio Grande	100	--	--	273,800	--	3,600	8,400	4,400	12,900	20,100	323,500
Routt	1,900	--	12,800	--	126,500	--	109,700	--	12,800	98,300	362,000
San Juan	--	--	--	500	--	--	600	473,800	7,000	--	482,000
White River	31,100	4,900	--	13,800	153,400	--	--	174,500	4,400	--	382,700
Percent of Total Upper Tier Acres	1%	3%	<1%	11%	11%	2%	5%	42%	2%	21%	100%

Note: Numbers might not add due to rounding.



Appendix D: Ski Areas within Roadless Areas

This appendix displays the 14 ski areas (on nine maps) that would be affected by the alternatives because they are at least partially located in roadless areas. The nine maps highlight the IRA and CRA boundaries and names, as well as the permitted or allocated ski area boundaries. For 12 of the 14 ski areas, the ski resort acres that are allocated in the forest plan and ski area permits have the same boundary. For the Durango Mountain Resort and Loveland Ski Area, some ski resort acres that are allocated in the forest plan, but lie outside the ski area permit boundaries.

Refer to the “Developed Ski Areas” section in chapter 3 for additional details.

Alternative 1

Tree cutting, sale, or removal; road construction; and LCZs would be allowed on IRA acres within permitted ski areas as of the effective date of the 2001 Roadless Rule. Road construction/reconstruction would be prohibited on IRA acres that are added to a ski area permit boundary while the 2001 Roadless Rule is in effect. This prohibition includes those acres that are currently allocated to ski area management in forest plans, but that are not currently included in a permit boundary for a ski area. Tree cutting, sale, or removal would be allowed on IRA acres that might be added to a ski area permit boundary while the 2001 Roadless Rule is in effect when the tree-cutting is incidental to a management activity not otherwise prohibited. This allowance includes the cutting of trees for ski runs or where needed to construct a new lift. LCZs are not limited in use by the 2001 Roadless Rule.

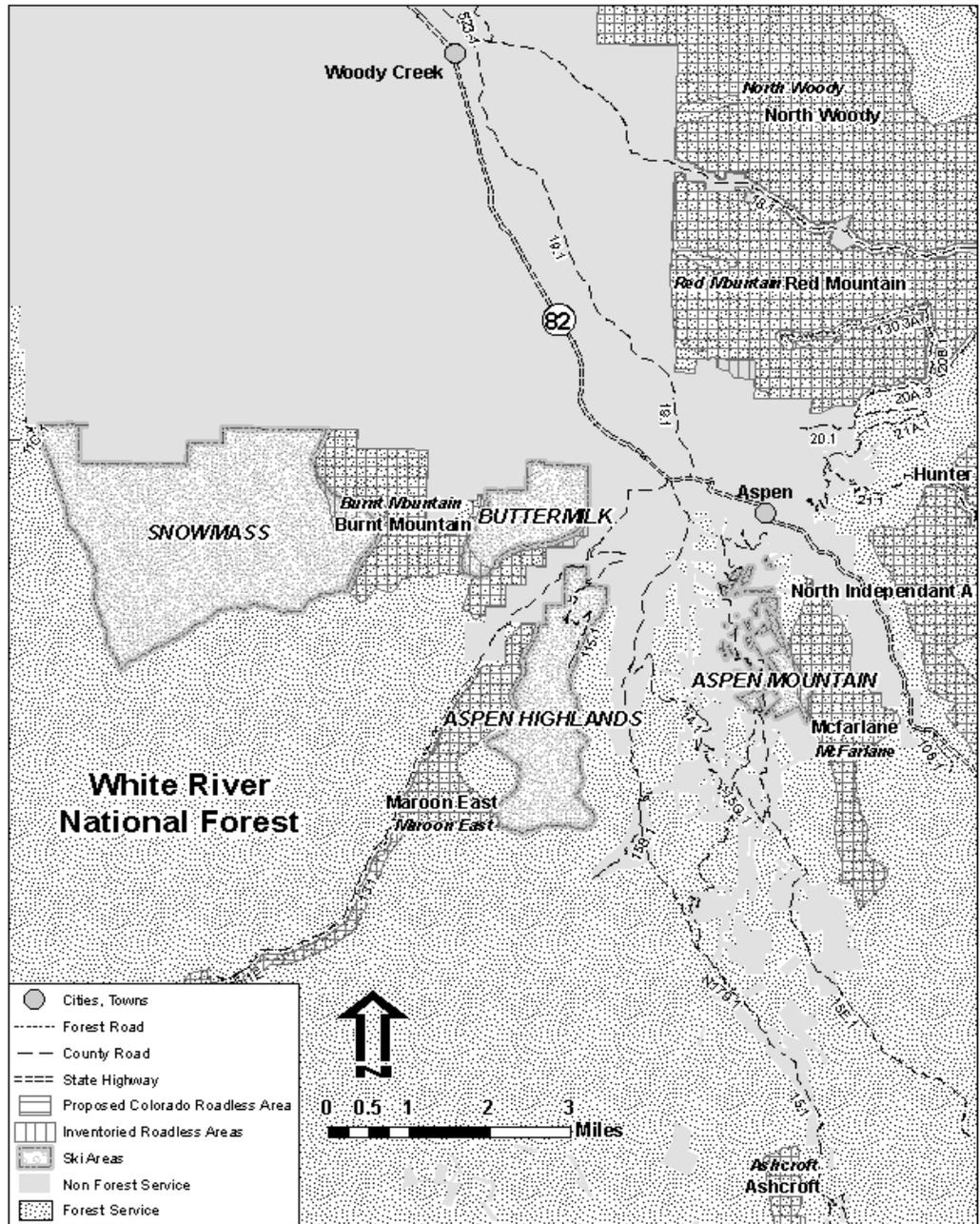
Alternative 2 and Alternative 4

Ski-area acres currently permitted and allocated in forest plans are not included in CRA boundaries. Those acres would not be affected by roadless area rule provisions and would be managed based on forest plan direction and any applicable ski-area permit decisions. Tree-cutting, sale, or removal would be allowed on CRA acres that might be added to a permit boundary for a ski area after the rule’s effective date, when the tree-cutting is incidental to a management activity that is not otherwise prohibited. This allowance includes the cutting of trees for ski runs, or where needed to construct a new lift. LCZs would be limited on those acres that might be added to a permit boundary for a ski area after the proposed rule’s effective date.

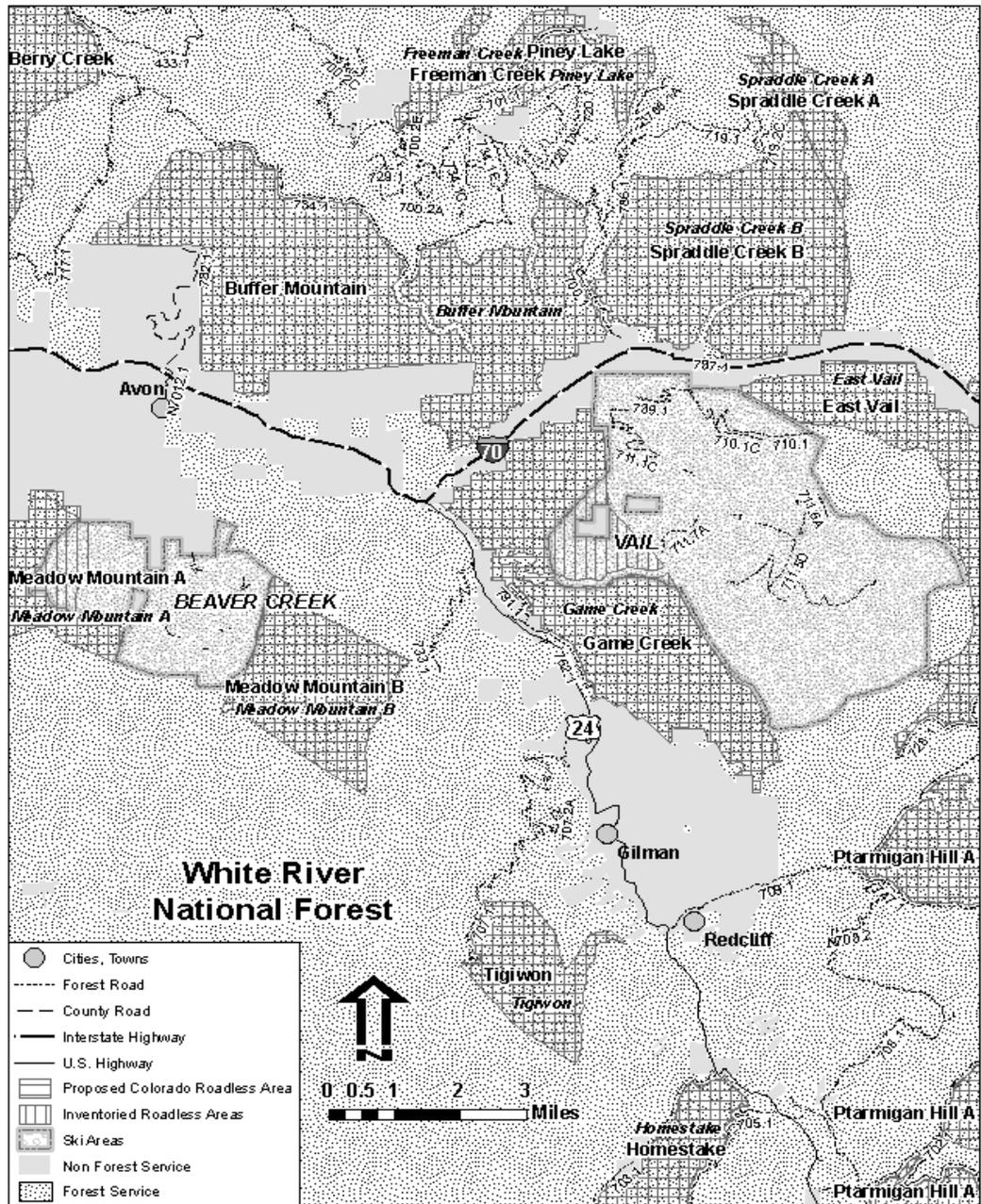
Alternative 3

Ski-area acres that lie within IRAs and are currently permitted and allocated in forest plans would remain permitted and allocated. These areas would continue to be managed according to the provisions of the forest plans and any applicable permit decisions for a ski area.

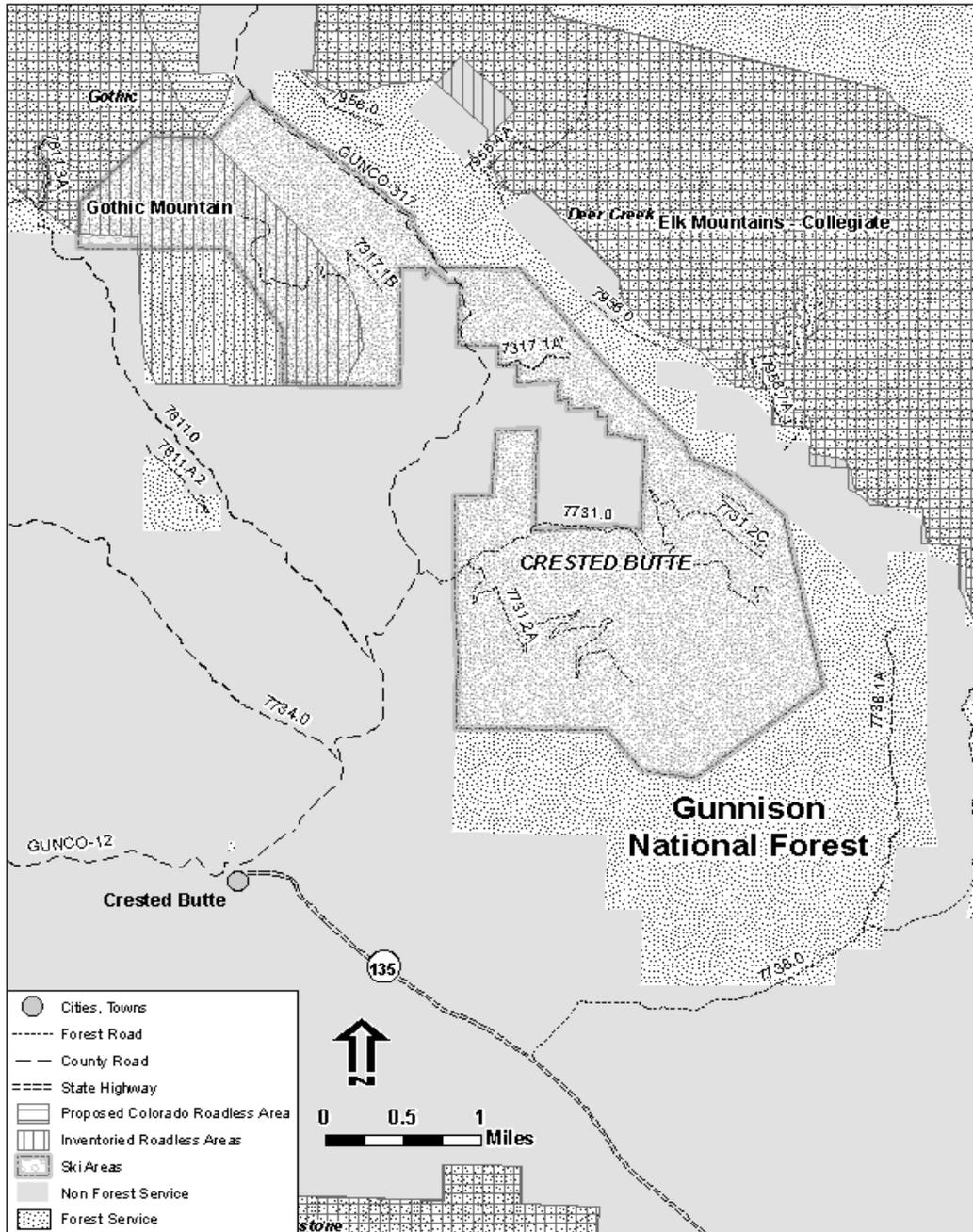
Map 2: Aspen Highlands, Aspen Mountain, Buttermilk, and Snowmass Ski Areas



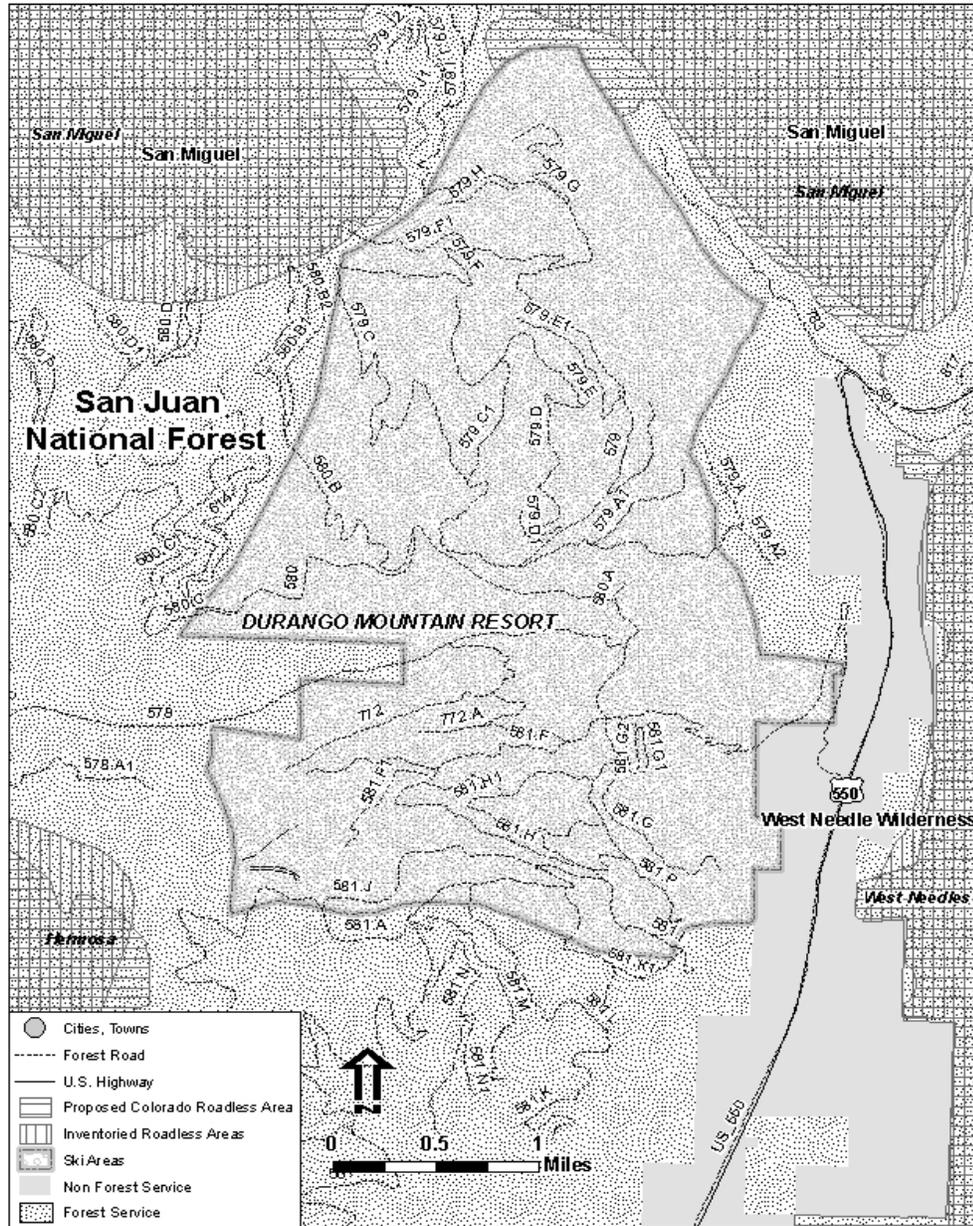
Map 3: Beaver Creek and Vail Ski Areas



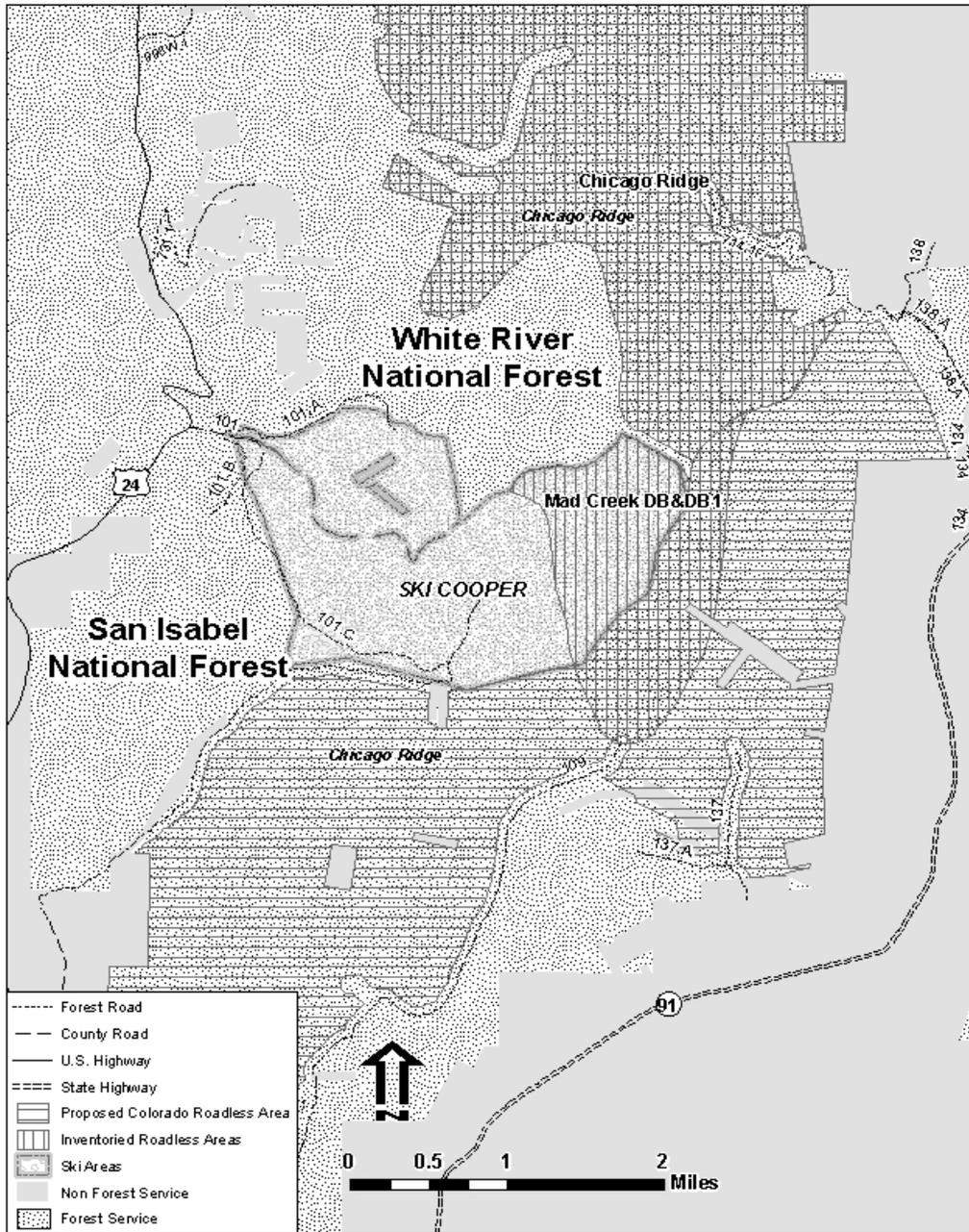
Map 5: Crested Butte Ski Area



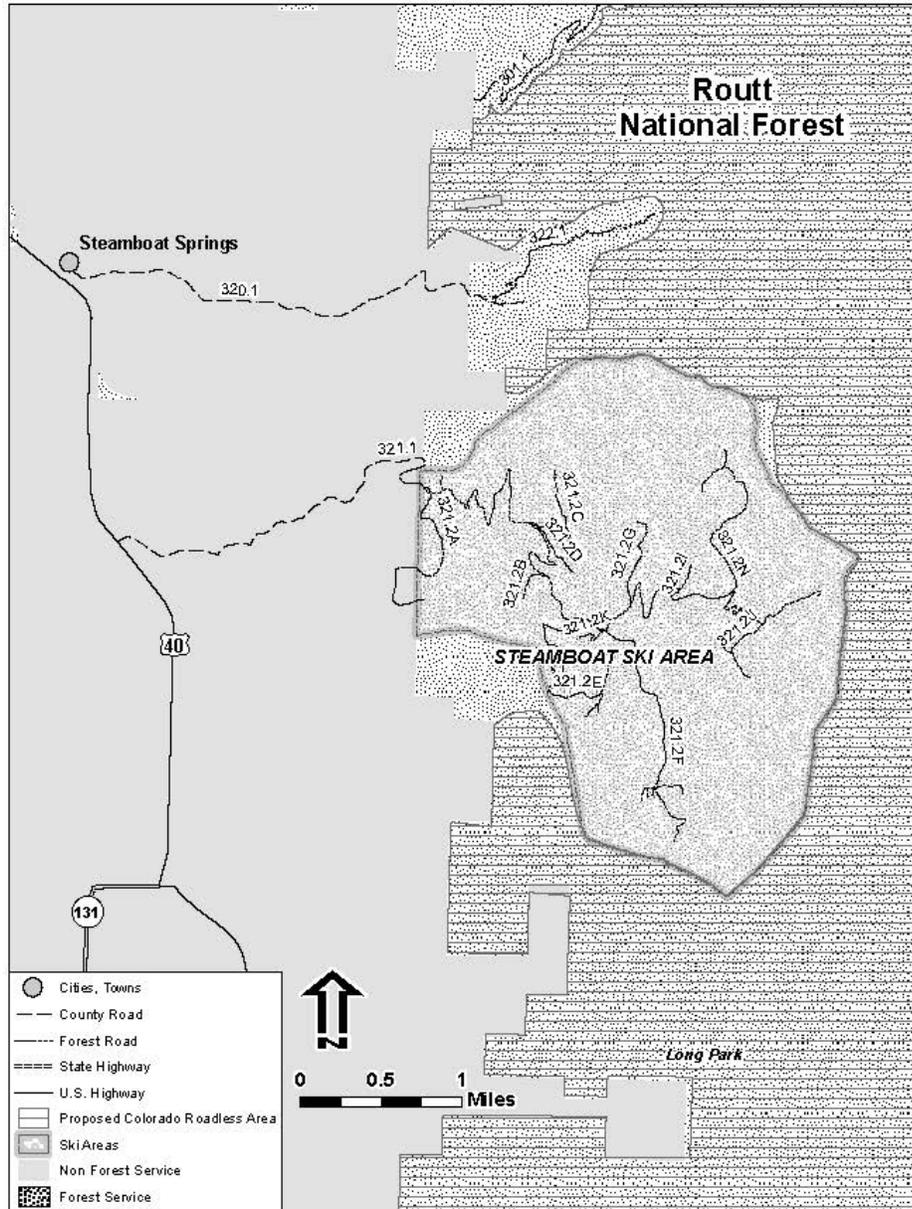
Map 6: Durango Mountain Resort Ski Area



Map 7: Ski Cooper Ski Area



Map 8: Steamboat Ski Area



Appendix E: Maps of Demographics in Colorado

This appendix displays county-level demographics for the State of Colorado in a spatial format. The social section in Chapter 3 of the FEIS provides this information in tabular format for those counties in Colorado that contain roadless acres. All 64 counties in Colorado are included in this appendix. Maps 1- 7 and 9 include data from the 2010 Census, which provides the most recent data available at the county level. Maps 8 and 10, *Disabilities*, and *Homes Using Wood Heat*, contain data from the 2000 Census because the 2010 Census did not update these indicators.

Map 2. Percent of American Indians and Alaska Natives by County in Colorado (2010 Census)



Source: U.S. Census Bureau, 2010 Census



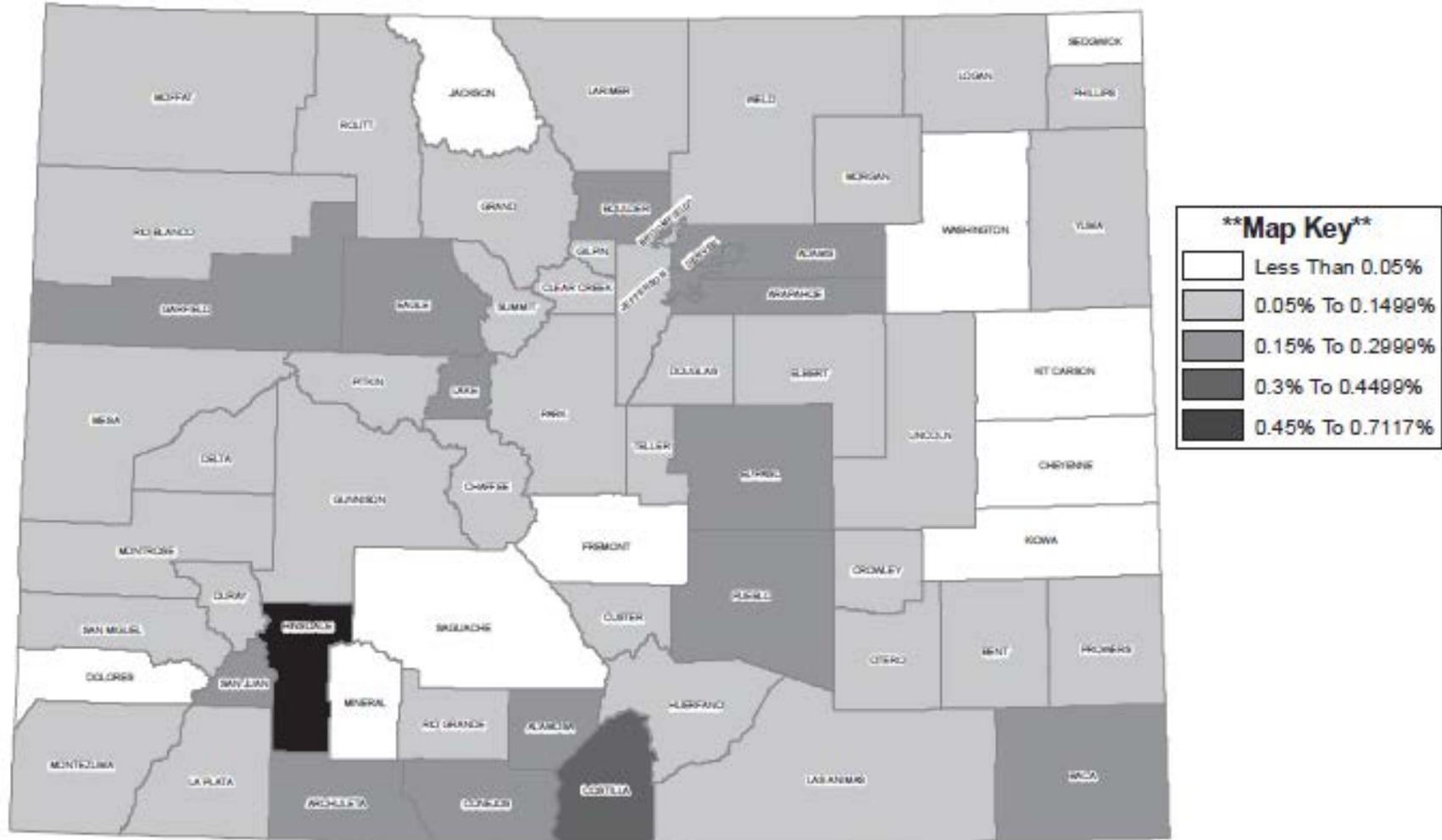
Map 3. Percent of Asians, Native Hawaiians, and Other Pacific Islanders by County in Colorado (Census 2010)



Source: U.S. Census Bureau, 2010 Census



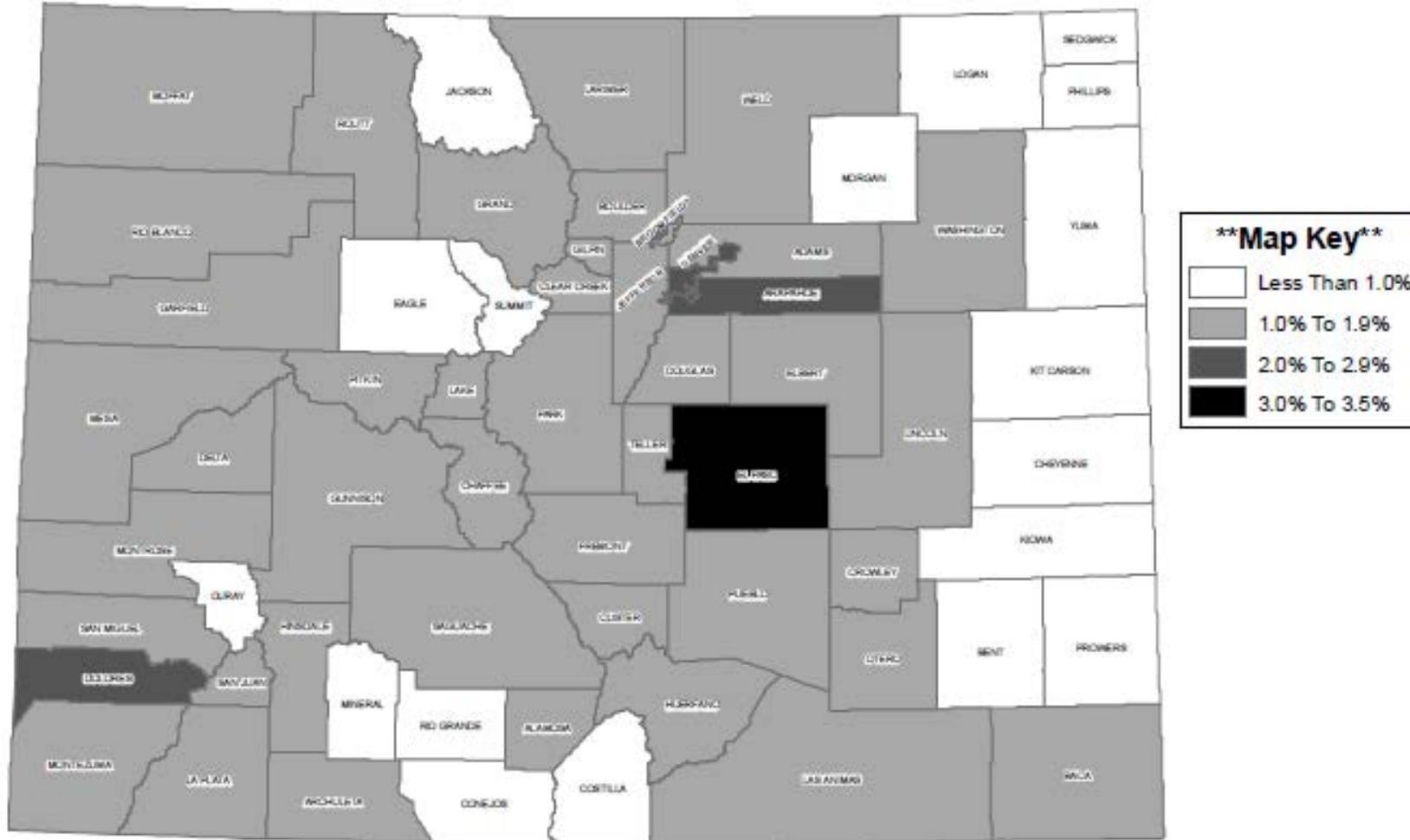
Map 4. Percent of Some Other Race by County in Colorado (2010 Census)



Source: U.S. Census Bureau, 2010 Census



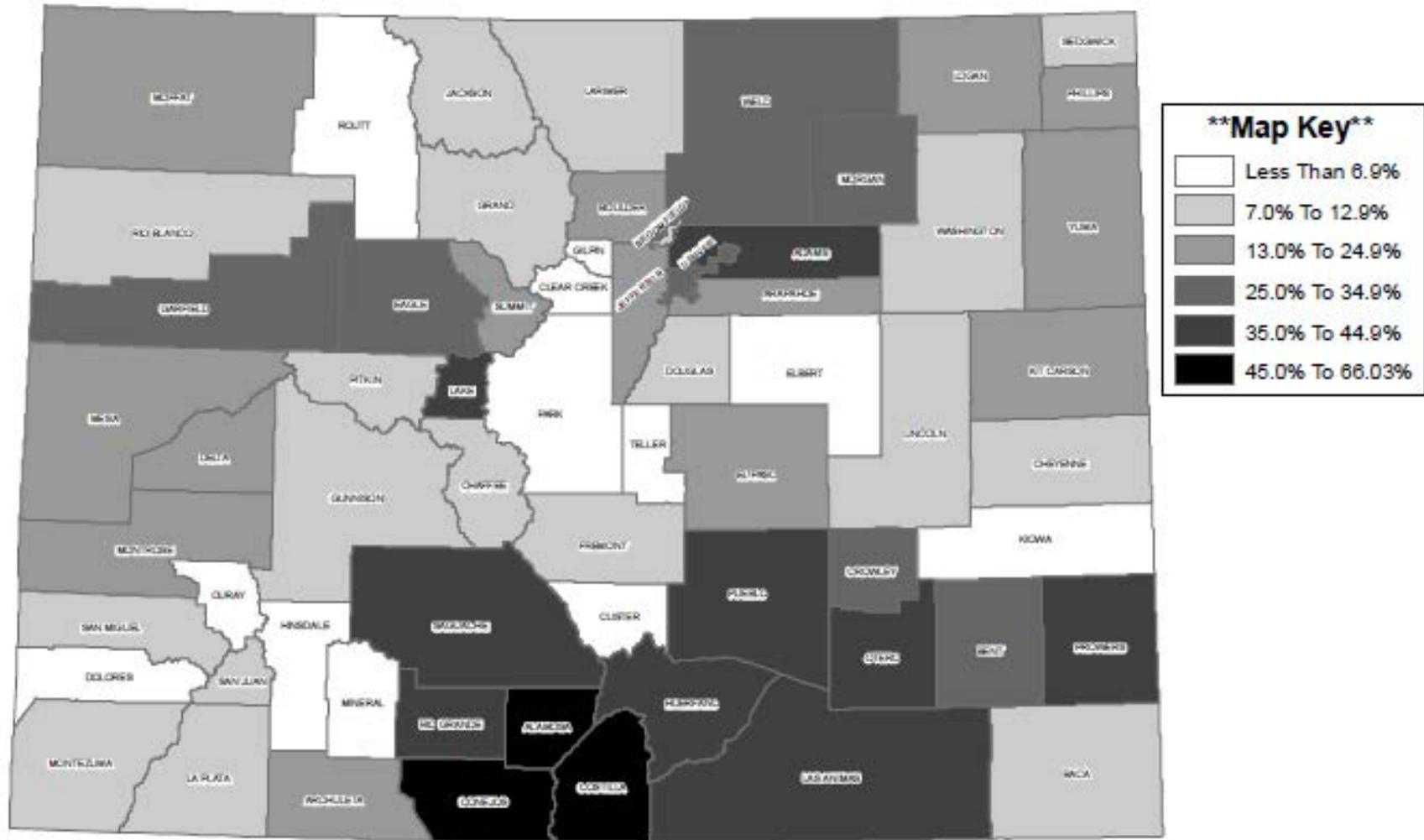
Map 5. Percent of Two or More Races by County in Colorado (2010 Census)



Source: U.S. Census Bureau, 2010 Census



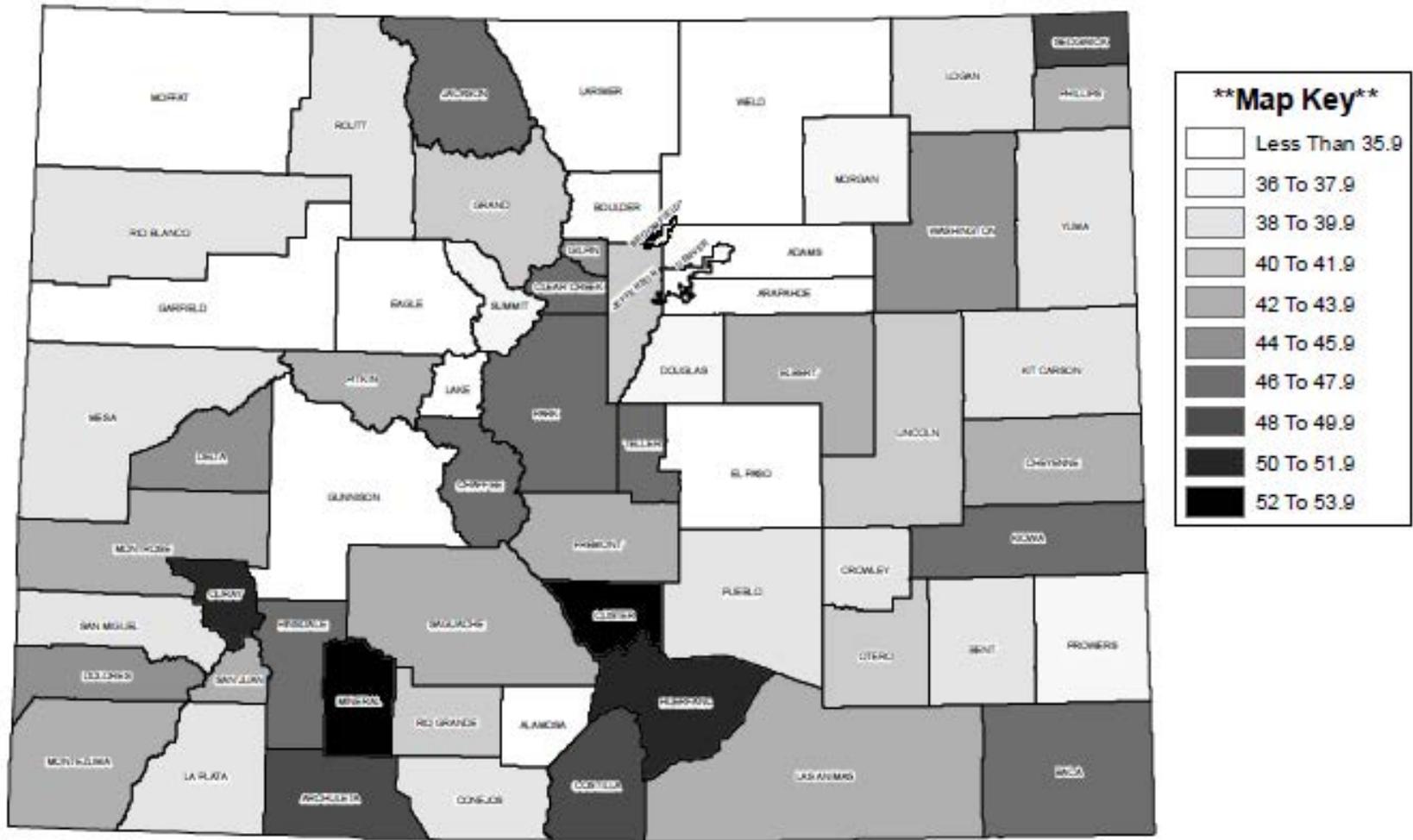
Map 6. Percent of Hispanic or Latino (any race) by County in Colorado (2010 Census)



Source: U.S. Census Bureau, 2010 Census



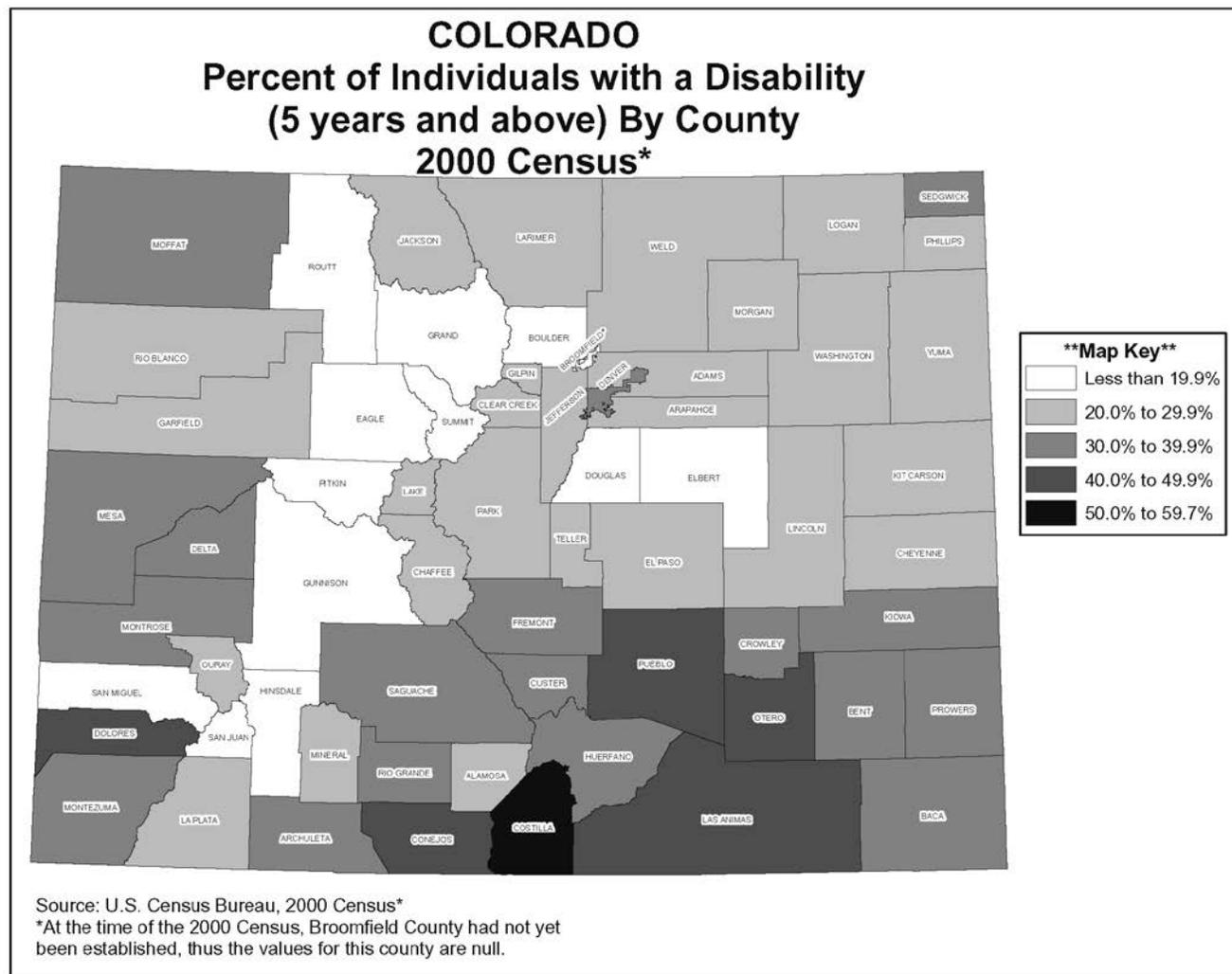
Map 7. Median Age by County in Colorado (2010 Census)



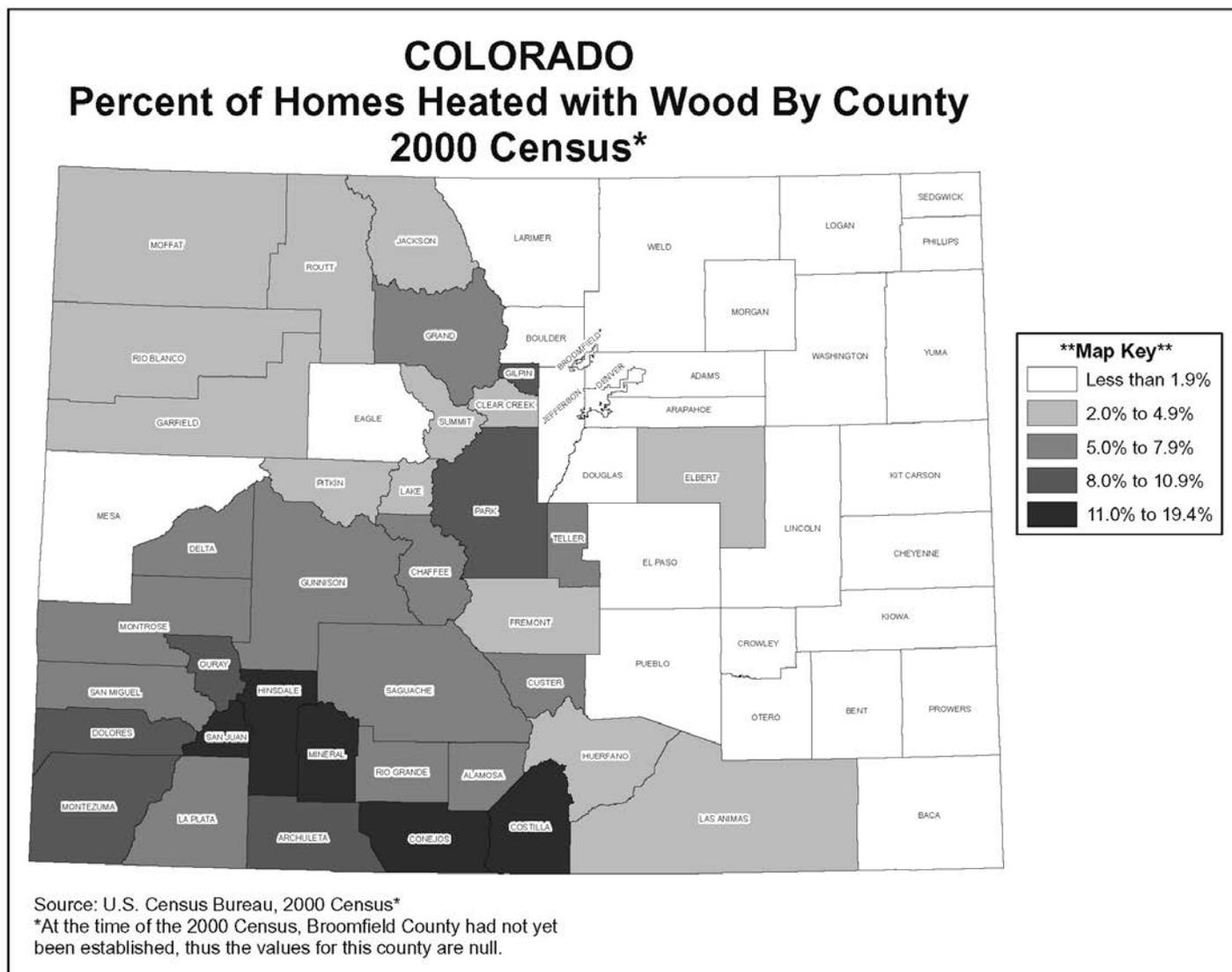
Source: U.S. Census Bureau, 2010 Census



Map 8. Percentage of Individuals with a Disability by County in Colorado. (2000 Census)



Map 10. Percent of Homes Heated with Wood by County in Colorado (2000 Census)





Appendix F: Temporary Road Guidance for Alternatives 2 and 4

This appendix was developed to guide temporary road construction activities in Colorado Roadless Areas (CRAs) under either Alternative 2 or 4 for activities related to road planning, location, design, construction, operation, maintenance, and decommissioning. The term “temporary road” addresses roads necessary for emergency operations or authorized by contract, permit, lease, or other written authorization. Also included in this appendix are criteria for temporary road bridges; these criteria are required due to the unique nature of temporary bridges.

Although a temporary road is decommissioned at the end of its authorized use, temporary roads can be in operation for a few years to a decade or more. Temporary roads are not open to public travel. However, they shall be developed, managed, and obliterated according to related Forest Service Manual and Handbook directives to ensure safe operation and minimal affect on the environment. These directives shall provide the basis for planning, location, design, construction, operation, maintenance, and decommissioning of temporary roads.

Approvals and Administration

The Forest Engineer shall review, and the District Ranger shall approve, proposed locations for temporary roads and their Road Management Objectives (RMOs). The road survey, design, and safety plans shall be reviewed by a qualified engineer. Qualified inspectors shall administer Construction. The Forest Engineer shall review, and the Forest Supervisor shall approve, the decommissioning plan.

Planning

The planning for temporary roads results in a travel analysis report that provides the basis for developing proposed actions to implement the minimum road system and/or to change existing travel management decisions.

Forest Plan management area direction describes what is intended to happen within the management area and leads to the development of Road Management Objectives. RMOs shall be developed for the temporary roads, in accordance with FSM 7714 and FSH 7709.59.11, to identify and document a management objective for each road. The RMO results in design criteria and operation and maintenance criteria, as well as criteria concerning safety for the intended use.

Further planning requirements for temporary roads include the following:

1. Develop Travel Analysis (FSM 7712 and FSH 7709.55.20) at the appropriate scale.
2. Select design elements and standards for the temporary roads as governed by FSH 7709.56, Chapter 4.
3. Implement traffic management measures required to control and regulate use, using current Forest Service policy for all signs and traffic control devices on temporary roads.



Location

Use of proper road location techniques is the single most important step in transportation system development for low volume and single purpose roads. This is especially true for temporary roads because the eventual decommissioning process must be considered and provided for during the planning and location phases. Optimal road location is critical in facilitation of subsequent construction, operation, maintenance, and decommissioning. No amount of extra effort during design, construction, or maintenance will effectively compensate for a substandard road corridor.

In deciding temporary road location, the Forest Service performs route selection, location, geotechnical investigation, survey, and design to a technical level sufficient for the intended use of the facility, the investment to be incurred, and the affected resource values. The location, design, and construction of the temporary road must provide the stability and durability appropriate for intended service life and uses. Preconstruction engineering is conducted under the direct supervision of individuals qualified by experience and training.

To the extent practicable, the following location principles for temporary roads are provided to minimize alterations to natural hydrology, protect environmental values, and facilitate the decommissioning process:

- ◆ A well-thought-out road location allows a road to "lie lightly" on the land, minimizes cuts and fills and other disturbed areas, and can reduce the total area impacted, in addition to minimizing alteration of natural hydrology. Locate roads as gentle a side slope as possible, although some side slope facilitates drainage of surface water.
- ◆ Criteria for facilitating decommissioning are a top priority during location of the temporary road.
- ◆ Road-surface drainage is most easily provided for on flatter vertical alignments, thus reducing water concentration and erosion potential. Locate roads with rolling rather than straight or uniform grades. A roll in the grade constitutes a dip that encourages the shedding of water, breaking up water concentrations.
- ◆ A road located on the southern or western exposure tends to dry out more quickly; similarly, choosing natural openings (or performing the extra clearing of vegetation required to open up the road corridor to sunlight) encourages drying. Balance the potential tree cutting to mitigate wet road sections, with the long-term effect on roadless area characteristics. Locate on the side of the canyon with the least number of tributaries to the main drainage for smoother alignments, less embankment haul and construction, and fewer drainage structures.
- ◆ Locating a temporary road close to a stream increases the risk of having road-related sediment enter the stream. When locating a temporary road within a native cutthroat trout catchment or identified recovery watershed, road construction or reconstruction must maintain or improve conditions in the water influence zone and in the native cutthroat habitat. Avoid placing fills in flood plains or channels, as the encroachment causes drainage paths to shorten, steepen, straighten, and speed up. Minimize temporary road embankments in the drainage bottom to reduce encroachment and the resulting modifications to waterway hydraulics.
- ◆ Consider using maximum grades and minimum curve radii to minimize road length in undesirable areas, if safe driving conditions can be maintained. Investigate the available road construction materials on alternative sections. Often adjustment in horizontal or vertical



alignment allows more favorable conditions on an adjacent section, such as less excavation or superior road construction materials.

- ◆ Avoid wetlands, bogs, and areas experiencing infiltration of groundwater during road location. These areas require mitigation and result in increased potential for environmental damage.
- ◆ Minimize alteration to existing drainage patterns. Almost any modification to the natural drainage process results in altered natural hydrology, water concentration, and increased erosion potential.
- ◆ Ridge top roads require less provision for drainage than side hill or canyon bottom roads.
- ◆ Take care to ensure proper drainage structure location and design, and that sufficient drains are provided to minimize water concentration and other alterations to the hydrology of an area.
- ◆ Design pipe outlets and armoring to prevent damage to fills, erosive soils, meadows, and streams, and to encourage the spreading of outflow.
- ◆ Plan to provide for surface drainage by using ditches, outslope, inslope, crown sections, and berms to control the flow of water off the road.
- ◆ Full-bench construction alleviates the problems associated with saturated fills, but still modifies natural slope and hydrology characteristics, and can actually intensify the interception of groundwater. The "toe of the cut" is made further into the hill, as all required road width is provided by the cut and none by embankment construction.

Design and Construction

Definitions

- ◆ **Design Criteria:** The requirements derived from management area direction, such as safety requirements and traffic characteristics that govern the selection of elements and standards for a road or section of a road.
- ◆ **Design Elements:** The physical characteristics of a road, such as traveled-way width, shoulders, slopes, curve widening, and pavement structures, that, when combined, comprise the planned facility.
- ◆ **Design Standards:** The definitive lengths, widths, and depths of individual elements, such as a 12-foot (3.6 m) traveled way, 2-foot (0.6 m) shoulders, 3/4:1 cut slopes, 3-foot (0.9 m) curve widening, and 6 inches (150 mm) of crushed aggregate, that define a road template.
- ◆ **Qualified Engineer:** A qualified engineer is one who by experience, certification, education, or license is technically trained and experienced to perform the specified tasks.

Design

Design of temporary roads shall be performed in accordance with the *Road Preconstruction Handbook FSH 7709.56- 4-Design*. When standards more stringent than those established in FSH 7709.56 are necessary, use standards developed by other recognized transportation organizations, such as the Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), or the state, to the extent that they comply with laws applicable to the National Forest System and that they are compatible with management direction.



Attest in writing that the project design has received a peer review for technical adequacy by a designer other than the primary designer and that the peer review included a timely field review. Ensure that a qualified engineer reviews all project design drawings, specifications, cost estimates, and decommissioning plans and signs the project design drawings, officially attesting to their technical adequacy.

Qualified inspectors shall administer construction of temporary roads. Ensure that construction engineering is performed by or under the supervision of an individual qualified in the applicable construction categories.

Provide the construction inspection, testing, and monitoring required to ensure that facilities are constructed in accordance with drawings and specifications, and that changes resulting from unanticipated field conditions are properly accomplished and documented.

Operation and Maintenance

Operate and maintain temporary roads in a manner that meets road management objectives (RMOs) and provides the following:

- ◆ safe and efficient travel
- ◆ access for the administration, utilization, and protection of resources
- ◆ protection of the environment, roadless area characteristics, and infrastructure investment.

Use must comply with the Colorado Roadless Rule 36 CFR 294.43(d)(4), which prohibits public motorized vehicles, including off-highway vehicles. Exceptions to the prohibition include administrative Forest Service use; motor vehicle use specifically authorized under Federal law or regulation; or motor vehicle use by any fire, emergency, or law enforcement personnel.

RMOs for temporary roads shall include operation and maintenance criteria, documented in accordance with FSM 7714. These criteria must describe how to operate and maintain temporary roads to meet management needs as determined through land management planning, travel analysis, and route and area designation (36 CFR part 212, Subpart B). At a minimum, the criteria must identify the following:

- ◆ vehicle classes and types of use for which the road is intended
- ◆ seasonal or yearlong designations necessary for meeting RMOs
- ◆ measures needed to protect the investment in the road.

Use the standards and guidance contained in the Manual on Uniform Traffic Control Devices (MUTCD) (FSM 7108.21) for all signs and traffic control devices on temporary roads, unless superseded by the Federal Highway Administration (FHWA)-approved State supplement to the MUTCD. In that situation, follow the State supplement to avoid confusing road users.

Use the MUTCD standards and guidance for signs and markings on all traffic control devices, such as gates and barricades. Neither use, nor allow others to use, chain, cable, rope, or wire as a traffic control device. See Engineering Manual (EM) 7100-15 (FSM 7160.31) for additional direction on road signing.

Develop annual maintenance plans for temporary roads to meet road maintenance objectives. Maintenance of temporary roads shall accommodate their intended use safely and in accordance with

maintenance criteria documented in their RMOs (FSM 7714). The road maintenance plans should be revised as necessary to respond to emergencies and to meet changing resource and traffic needs. Maintenance criteria shall include consideration of transportation system investment and environmental and resource values.

As stated above, temporary roads constructed in CRAs are restricted in use and they are decommissioned when no longer needed (see the section, *Decommissioning*). In rare cases, with multiple authorized users, each user will be required to perform maintenance of temporary roads in accordance with their commensurate share. Schedule and coordinate road maintenance conducted by multiple users to accomplish work in the most efficient and cost-effective manner. Use the interagency road maintenance agreement to conduct maintenance with other Federal agencies (FSM 1531.07g).

Decommissioning

Temporary roads are decommissioned when no longer needed for the established purpose or upon termination or expiration of a contract, authorization, or permit, whichever is sooner. A road is decommissioned by reestablishing vegetation and, if necessary, initiating restoration of ecological processes interrupted or adversely impacted by the temporary road. Decommissioning a temporary road must achieve complete stabilization and restoration to a condition generally consistent with the pre-existing roadless area characteristics. Restoration is designed considering safety, cost, effectiveness, and impacts on land and resources. Examples include obliteration, denial of use, elimination of travel way functionality, and removal of the road prism (restoration of the road corridor to original contour and hydrologic function). Decommissioning includes applying various treatments as needed, including one or more of the following:

- ◆ Removing culverts and other drainage structures, reestablishing drainage ways, removing fills, replacing cuts, filling ditches, and restoring the original contour
- ◆ Blocking the entrance to a road and treating, ripping, and seeding the roadbed and scattering slash in the corridor
- ◆ Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation
- ◆ Other methods designed to meet the specific conditions associated with the unneeded road corridor.

These treatments must be designed and implemented to completely eliminate the road by restoring natural contours, hydrology, and vegetation through mechanical and/or natural means, and within a reasonable time period.

Engineering Criteria for Temporary Road Bridges

The criteria stated below are minimum standards for the design, construction/reconstruction, inspection, posting, and maintenance of bridges and other drainage structures. For those counties with road and bridge standards, the more restrictive standard shall be used. A bridge is defined as a road structure, including supports, that is erected over a depression or an obstruction, such as water, and has a deck or surface for carrying traffic or other loads.

1. **Design Vehicle:** AASHTO HS20-44 (FSM 7722 and FSH 7709.56, Section 7.32) for road bridges, unless Special Vehicle(s) exceeding the HS-20 loading will travel over the structure.



AASHTO HL-93 vehicle and tandem loading shall be used for all structures designed to the LRFD Design Standard, unless a permit vehicle would control.

2. **Wind Loads:** Bridges shall be designed to resist all types of wind loads, including uplift according to AASHTO Standards for both winter and summer conditions.
3. **Live Loads:** Bridges shall be designed to resist the applicable live loads, according to AASHTO Standards.
4. **Other Loads:** All other loadings shall be in accordance with AASHTO Standards or Specifications and applied as applicable.
5. **Design Load Cases:** When the ASD or LFD methods are used, the following load grouping shall be evaluated Group I and III, as a minimum. When the LRFD method is used, the following load cases shall be evaluated Strength I, Strength II (for Special or Permit Vehicles), Strength III, Strength V, Service I, Service II (for Steel, only), Service III (for P/S concrete, only), and Fatigue I (Steel, only), as a minimum.
6. **Design Specifications:** The most current edition of the AASHTO, "Standard Specifications for Highway Bridges", Division I, including all current interims, as amended (FSM 7722 and FSH 7709.56, Section 7.1). The most current edition of the AASHTO, "LRFD Bridge Design Specifications, Customary U.S. Units" shall be used, including all current interims, as amended upon agency adoption or Permit Holder's Engineer preference
7. **Bridge Railings:** AASHTO Specifications, Section 2.7.1, modified as follows (FSH 7709.56, Section 7.34):
 - a. **Double Lane Bridges:** No allowable modification. Use full AASHTO rail load.
 - b. **Single Lane Bridges:** Use one-half of the AASHTO rail load specified.
 - c. **Crash-Tested Rails:** A TL-2 Rated Rail System can be used instead of a rail system design based on the AASHTO rail load.
 - d. **State, County, or City DOT Bridge Rail Standards** shall be used where applicable.
 - e. **Non-motorized Railings:** 50 PLF per AASHTO Standards.
 - f. **Curbs:** 500 PLF per AASHTO Standards.

Bridge deck edges shall be delineated by either a curb or railing or both. Road bridge rail heights above the travel way shall correspond to AASHTO Standards. Road bridges may have a barrier curb vs. a railing, if the bridge is located on a Forest Service Maintenance Level 2 Road, the bridge corners are delineated by Type 3 Object Markers, and appropriate for use based on a curb warrant/hazard analysis. Minimum barrier curb height shall be 12 inches above the travel way and provide a means to drain the deck, i.e., longitudinal bridge grade, scuppers, etc. A hazard analysis should consider, but not be limited to, the following:

- o the bridge/road geometrics
- o sight distance
- o possible hazards (travel surface, bridge height above obstruction, depth of water, etc.)
- o accident history (if available)
- o ADT/design speed (if appropriate)
- o engineering judgment.



The hazard analysis documentation could consist of, but is not limited to, a written evaluation, applicable photographs, applicable sketches, and other relative documentation (i.e., traffic counts, accident reports, etc.). The hazard analysis should be prepared by, sealed, signed, and dated by the Professional Engineer registered in the State where the bridge is located.

8. **Width:** The usable width of a bridge is the distance, measured perpendicular to the longitudinal centerline, between traffic faces of curbs; or, between traffic faces of bridge rails, whichever is the lesser distance.

In accordance with FSH 7709.56, Section 7.31, bridge widths should not be less than the following:

- a. Double Lane Road Bridges: 24 feet minimum. 28 feet is preferred for low volume road bridges.
- b. Single Lane Road Bridges: 14 feet minimum. 12 feet minimum if approved by the Forest Engineer.

Greater widths may be necessary to accommodate curve widening, shoulders, vehicle widths, traffic capacity, or design speed.

9. **Approach Railing:** Required for Forest Service Maintenance Level 3-5 Roads or warranted by the hazard for Forest Service Maintenance Level 2 Roads. Use of CDOT Standard Plans M-606-01B Sheets 1-3, 5, 8, 11-12, dated November 1992, is recommended for the approach rail requirements. The flared ends of the approach rails shall be 4 feet and conform to a CDOT Type 3K Breakaway System or equal. The transition section from the approach rail to the bridge rail shall conform to CDOT Type 3L End Treatment, as a minimum. Road Bridge Approach Rail Posts shall be 7 feet in length, except for breakaway flared end treatment posts. The length of approach rail shall be determined based on a risk assessment of the site, road geometrics, design speed (if applicable) and engineering judgment. State, County, City, or DOT approach rail standards shall control if they are more restrictive or are required in writing by the agency administering the connecting roadway. Bridge approach railings shall be the same height above the travel way as the bridge railings. Approach railings are not required for bridges with barrier curbs.
10. **Road Bridge Signage:** The corners of the bridge shall be delineated with Type 3 Object Markers installed in accordance with MUTCD and Forest Service Standards/Guidelines. For existing bridges that require load limit restrictions, they shall be posted in accordance with MUTCD and Forest Service Standards/Guidelines.
11. **Approach Alignment:** Tangent is recommended.
12. **Bridge Substructure Alignment:** Longitudinal centerline of bridge at 90 degrees to the stream flow line is recommended.
13. **Bridge Grade:** 6 percent maximum recommended. Bridge grades 1 percent or more shall require beveled bearing plates to account for the grade and provide uniform bearing.
14. **Hydrology:** Design flows shall be determined from appropriate regression equations and/or stream gage data. Compare regression equation results actual stream flow data to the greatest extent possible. This comparison may include comparing results of a stream gage in a similar and adjacent basin. The larger flows should also control the hydraulic design.



15. **Hydraulics:** Design the bridge to pass the 100-year flood flow with appropriate freeboard. The practices of stream simulation and aquatic organism passage should be applied to the greatest extent possible. Consult the Forest Hydrologist and Fish Biologists on AOP aspects of the design. If the stream flow is regulated, design to the normal high water with appropriate freeboard; and, check passage of maximum high water. The bridge structure should not unnecessarily restrict the channel.

The Design Engineer of Record shall ensure that the backwater relating to the drainage structure does not adversely impact the adjacent lands or facilities. The Design Engineer of Record shall also verify the scour susceptibility of the drainage structure(s) and design appropriate counter-measures or place the foundations sufficiently below the anticipated scour depth (FSH 7709.56, Section 6.46).

The hydraulic design should maintain the channel so there is no restriction under bank-full conditions. The hydraulic analysis may be completed using one-dimensional, steady flow, water-surface profile analysis. An acceptable computer programs is a version of HEC-RAS, unless otherwise noted.

The hydraulic analysis should account for any anticipated debris blockages (light to moderate anticipated debris can assume a 30 percent blockage and moderate to heavy anticipated debris can assume a 50 percent blockage). The blockages can be modeled in HEC-RAS through infective flow areas. The Mannings roughness value (n) can be reduced 20 percent for the 100 year flow vs. the 2 year flow/seasonal high water/ordinary high water. The Q2 flow should be used with the bankfull depth and width to refine Manning Roughness factors for the channel. Pebble counts of the channel material may also be considered in determining the channel roughness used for the hydraulic model.

The bridge expansion and contraction coefficients in a HEC-RAS model should be 0.5 and 0.3, while normal channel expansions and contraction coefficients may be 0.3 and 0.1, as a minimum. Expansion and contraction coefficients will vary depending on channel and overbank conditions and should be different if warranted to represent the actual flood plain.

16. **Freeboard:** Freeboard is the vertical clear distance between the design water surface (usually the 100-year flood) and the bottom of the superstructure's slab or girder. The amount of freeboard is a matter of professional judgment, dependent on the amount and type of floating debris anticipated. The need for navigational clearance should be relative to the water level expected during the navigational season.
- a. The recommended freeboard to pass floating debris is usually 2-3 feet at the design water level (usually the 100 year flood flow).
 - b. Freeboard can also be based on the maximum stream velocity during the peak project design flow.
 - c. Navigational clearance depends on local requirements, maximum water level during the navigational season, and the type of water use expected. The recommended minimum navigational clearance is usually 5 feet at the maximum water level during the navigational season.
17. **Abutments:** The abutment and wing wall design shall minimize channel/overbank scour and approach roadway erosion. The abutment design shall minimize encroachment upon the stream channel. An abutment and wing wall minimum factor of safety of 2 is recommended against



sliding/rotation stability resisting at-rest lateral earth pressure. An abutment and wing wall minimum factor of safety of 3 is recommended for applied (dead load and maximum live load) soil or rock pressure. Align abutments parallel with the direction of the design flow. The use of spill-through abutments is recommended versus a vertical-wall abutment to minimize scour impacts.

18. **Scour:** The depth of anticipated scour is again a matter of engineering judgment, depending on the channel and soil characteristics, water depth and velocity, bridge/channel alignment, and substructure geometry. Determine pier scour depth by the most recent edition of the Hydraulic Engineering Circular (HEC) No. 18, "Evaluating Scour at Bridges". The bottom of abutment footings is usually placed a minimum of 6 feet below the lowest point in the channel. The lowest point in the channel is determined from the channel profile taken along the bridge longitudinal centerline.

The abutment and pier footings may be set at a shallower depth than stated above if adequate counter-measures are taken to minimize the probability of scour under the abutment or pier footings or footings are keyed into competent bedrock. Scour/ counter-measure design velocities should determine from the hydraulic model with the anticipated blockage during the 100 year flood event. If riprap is used as a counter-measure, it should conform to HEC 18. Spill-through abutments as defined by the Corps of Engineers are recommended versus vertical wall abutment with or without wingwalls to reduce scour impacts.

19. **Materials and final treatment:** Usually a matter of permittee's preference; however, selection may be subject to District's visual/resource management requirements. If treated timber is used, the treatment method shall include the "Best Management Practices for the Use of Treated Wood in Aquatic Environments" latest edition, published by the Western Wood Preservers Institute (800-279-WOOD).
20. **Drainage:** The bridge deck/road surface should be free draining. Drainage off the deck directly into the stream is not recommended if dust palliative or de-icing salts will be used. If deck drainage is toward one of the abutments, the appropriate abutment/wingwalls must be designed to minimize the subsequent erosion. Minimum longitudinal road bridge grade is 1 percent.
21. **Bridge Approaches:** Design the bridge and the bridge's approach roadways for the most restrictive anticipated design vehicle to determine vertical and horizontal alignments, curve widening (if necessary), maximize site distances, and another road design features. The design vehicles should also include any attached trailer(s), too.
22. **Soils:** Soil(s)/rock must be investigated for bearing capacity, general stability under the loading proposed, and scour/erosion potential for the water velocities involved. A geotechnical investigation report should be prepared, sealed, signed and dated by a Registered Professional Engineer who is licensed in the state where the structure is being built. The report shall contain the method of investigation, foundation recommendations, and design criteria for the applicable foundation (spread footing or pile). Design criteria shall include, but not be limited to, bearing capacity for spread footing (if applicable), equivalent lateral fluid pressure, unit weight of soil(s), pile capacities per foot for each size and type of pile proposed (if applicable), pavement design (if applicable), coefficient of friction for concrete on soil/rock (if applicable), pile lateral analysis (if applicable), construction recommendations, anticipated scour depth, frost depth, and

recommended scour/erosion counter-measures. A copy of the geotechnical investigation report shall be submitted with bridge design for review.

23. **Piers:** Piers or other structures within the channel are not recommended. If piers are required, they must be aligned in the direction of design flow and constructed below the anticipated scour depth. If piles are used for a pier, the Design Engineer of Record must provide written proof that the structure is stable after maximum anticipated scour has occurred.
24. **Span:** Place the bridge at the narrowest point of a straight reach of stream channel, if possible. At a minimum, abutments shall be located outside the bank full-stream channel and with adequate measures or mitigations to protect against resource damage. The height of the side slopes would be determined from the bottom of slab or girder, less the sill or foundation height above the adjacent soil. The bottom of slab or girder would equal the bank full-flow depth plus 2 feet freeboard, plus any additional height to pass debris flows (1/2 diameter of a log or root wad).
25. **Camber:** Camber should not be less than the following limits:
 - a. **Solid Timber:** Install with crown up.
 - b. **Glu-Laminated Timber:** 2 x dead load def + 1/2 live load def (Timber Construction Manual, 1985).
 - c. **Steel & Concrete:** Dead load deflection plus vertical road alignment curvature. (AASHTO 10.14).
 - d. **Pre-stressed Concrete:** Dead load deflection plus pre-stressing plus vertical road alignment curvature.
26. **Deflection:** Deflection due to distributed live load plus impact should not exceed the following limits:
 - a. **Timber:** L/500 (AASHTO 13.4.3).
 - b. **Steel, Concrete, & Pre-stressed Concrete:** L/800 (AASHTO 8.9.3.1, 9.11.3.1 and 10.6.2).
 - c. **Steel, Concrete, & Pre-stressed Concrete:** Cantilever Spans L/375 (AASHTO 8.9.3.2, 9.11.3.2 and 10.6.3).
27. **As-Built Drawings and Construction Documentation:** All as-built drawings, inspection reports, and material testing records shall be sealed, signed, and dated by a Professional Engineer registered in the State where the bridge is located.
28. **Construction:** Any construction documentation shall include provisions for Forest Service required resource protection (i.e., noxious weed controls, sediment and erosion control measures, and fire preventive measures). The permit holder should have a full-time project manager during any construction. Any construction shall have quality assurance and quality control (QA/QC) provisions specified by the design engineer. The QA/QC documentation shall be available for Forest Service review upon request.
29. **Bridge Inspections:** Bridges should be inspected as a minimum every two years by a Bridge Inspector who meets the requirements of 23 CFR 650.309. The bridge inspection report shall be sealed, signed and dated by a Professional Engineer licensed in the State where the bridge is located. Bridge inspection reports shall include, but not be limited to the following:
 - a. a FHWA Structure



- b. Inventory and Appraisal Sheet
- c. a list of bridge maintenance items (description of required maintenance; estimated quantities material or hours of equipment/labor; time to correct maintenance; amount of engineer support, required; indication if maintenance work is new, incomplete, or reoccurring; and, if past maintenance was satisfactorily corrected)
- d. photographs (bridge elevation, bridge approaches, up and downstream channels, existing/corrected bridge deficiencies, etc.)
- e. bridge sketches (typical section perpendicular to the road/bridge center line, bridge elevation view, bridge plan view, existing bridge deficiencies (if appropriate), etc.).

A copy of any bridge inspection report shall be available to the Forest Service upon request.

30. **Bridge Load Rating and Posting:** The bridge shall be load-rated after any initial inspection, or if the structural condition changes from the last inspection. If the bridge does not conform to state legal loads, it should be posted in accordance with Forest Service requirements. The bridge-load rating analysis shall be sealed, signed, and dated by a Professional Engineer licensed in the State where the bridge is located. The permit holder shall maintain records of all vehicles that exceed the inventory load rating of the road bridge. The permit holder shall maintain a copy of the most recent load rating analysis documents, which shall be available to the Forest Service upon request.

31. **Bridge Maintenance:** Bridge maintenance determined during the inspection shall be documented and completed within the timeframe stated on the inspection report. As a minimum, bridge maintenance shall be completed prior to the next biannual inspection, unless the inspector requires a shorter completion time. If the inspector designates that specific maintenance work requires engineering, the permit holder shall submit the design documents for review by Forest and/or Regional Engineering and acceptance by the Authorized Officer before starting work. The bridge maintenance design shall be sealed, signed, and dated by a Professional Engineer licensed in the State where the bridge is located. The permit holder shall maintain a copy of all bridge maintenance design documents, which shall be available to the Forest Service upon request.

32. **Submittals:** The following submittals are required:

a. **Drawings:**

1. *Construction drawings* shall consist of, but not be limited to, the following:
 - plans and profiles of proposed and existing bridge and road alignments
 - plan views
 - elevation views
 - typical road and bridge sections
 - erosion control plans
 - traffic control plans
 - structural plans, elevations, sections
 - other details, as deemed necessary to accurately assess the work and materials involved
 - Location of borrow pits and disposal areas should also be shown. District staff may require such locations be off lands administered by the Forest Service.



- FSH 7709.56b, Chapter 3 should be consulted for more detail.
- 2. *Engineered maintenance drawings* shall consist of, but not be limited to all plans, elevations, sections, and details, as deemed necessary to accurately assess the work and materials involved.
- 3. *Specifications*: Sufficient specifications to define the materials, quality control and construction methods proposed.
- b. **Design Calculations**: Engineering calculations shall be prepared by, or under the direction of, a Professional Engineer licensed in the state where the bridge will be constructed. Calculations may include computer printouts of input and output and/or hand calculations. Calculations shall be prepared for all hydraulic, geotechnical, road/bridge geometrics, and structural aspects of the design.
- c. **Design Certification**: Design complies with appropriate sections of the most current edition of the AASHTO, "Standard Specification for Highway Bridges", Division I, including all interims; and the drawings, specifications, and design calculations, when submitted by a permittee, shall be letter sealed, signed, and dated by a Registered Professional Engineer (this is generally a condition of the Special Use Permit) licensed in the state where the bridge will be built and in accordance with State Law.
- d. **Construction Certification**: Construction complies with the accepted plans and specifications and that any modifications to the original construction documents were approved by the Design Engineer of Record. The certification shall be a letter sealed, signed, and dated by a Registered Professional Engineer (this is generally a condition of the Special Use Permit) licensed in the state where the bridge will be built and in accordance with State Law.
- e. **Used and New Material Certifications**: The permit holder shall provide copies of all material certifications to the Forest Engineer, which shall include but not be limited to, the following:
 - timber treatment certifications
 - timber grading certifications
 - structural steel mill certification reports
 - rebar yield strength test reports
 - rebar shop drawings/concrete as-built drawings
 - cast-in-place concrete compressive strength reports
 - Structural Steel Charpy V-Notch Testing Reports, etc.

Used materials shall be inspected and certified for their intended use by a registered Professional Engineer licensed in the State where the material is being reused. The inspection reports and related design shall reflect any structural rehabilitation and periodic maintenance and inspections to ensure a 50-year structural life. If used structural-steel members are to be used, the used steel members shall be free of detrimental plastic deformation along the structural member; have no significant loss of material cross-section due to delamination, corrosion or member failure; and new or existing holes or penetrations in the steel shall not adversely impact the member's structural life. If used timber members are used, the used timber members shall be free of decay or insect damage; free of flexural and shear cracks; free of crushed wood; and new or existing holes or penetrations in the



timber shall not adversely impact the member's structural life. If used concrete members are used, the used concrete members shall be free of delaminations, freeze/thaw damage, significant loss of section due to spalling, exposed pre-stress strands or rebar, evidence of corroded rebar, flexural or shear cracks, and crushing. In addition, the Engineers of Record shall document within their inspection report, engineering calculations, and design drawings: the location(s), size(s), and length(s) of all shake(s), check(s), and split(s); structural steel defects; and, concrete defects. The reuse of railroad flatcar(s) shall be prohibited. Railroad flatcar bridges shall be prohibited from use.

- f. **Other Related Requirements:** Water quality and fisheries shall be addressed in the design and construction processes. When bridges would be located within a native cutthroat trout catchment or identified recovery watershed, as with construction of the temporary road, bridge construction must maintain or improve conditions in the water influence zone and in the native cutthroat trout habitat over the long term. It may be necessary to phase construction to mitigate fish migration. It may also be necessary to specify the installation of straw bales, silt fence, sediment ponds, etc. to mitigate stream sediment. The Corp of Engineers should be consulted for any 404 Permit requirements (excavation and embankments within the waterway exceed 100 CY), as well as wetland/riparian mitigation. Forest Resource Specialists shall also be consulted for any NEPA documentation requirements and/or wetland/riparian mitigation.
 - g. **Corps of Engineers:** A copy of the Nationwide or Individual Permit application, including all figures and the Corps of Engineers' written approval, including all provisions, shall be submitted to the Forest Engineer, before the start of construction.
 - h. **DOT Access Permits:** A copy of the access permit application, including all figures, and the applicable agency written approval, including all of their provisions, shall be submitted to the Forest Engineer, if applicable, before the start of construction.
 - i. **Bridge Approval:** All road bridges shall be reviewed and acceptance recommended by the Regional Director of Engineering and Regional Bridge Engineer before the start of construction, unless authority is delegated to specific individuals on the Forest Engineering Staff. Final acceptance of a special use permit bridge project shall be in writing from the Forest Service Authorized Officer.
33. **Bridge Decommissioning:** During the decommissioning of the approach roads, any bridges, structural metal plate structures or culverts shall be removed, including all sign installations, railing systems, or other constructed features associated with the structure(s). Structural demolition shall consist of removal of the entire structure, except piles. Bridge piles shall be removed to 12 inches below final finished grade. Channel banks shall be pulled back and re-contoured to match existing natural banks near the structure. Cover or embankment materials shall be disposed of as directed by Forest Engineering or Resource Specialists. All re-contoured channel side slopes shall receive plantings and/or seeding and erosion control mats or mulch to establish a permanent erosion control. Seed, Mulch, Erosion Control Mats, and Planting specifications shall be obtained from the Forest Resource Specialist(s), where the work is being performed. All materials associated with structure(s) shall be removed and disposed of off National Forest System lands in accordance with all State, Federal and Local laws, rules, and regulations.



Appendix G: Biological Assessment

This appendix contains the full text of the Biological Assessment Report that was prepared for this EIS. See Chapter 3 for an assessment of impact to each resource. Pagination for this appendix follows that of the original document.



United States
Department of
Agriculture



Forest Service

Rulemaking for Colorado Roadless Areas

Biological Assessment (Revised)

February 2012

For The Following National Forests in Colorado:

Arapaho-Roosevelt National Forests;
Grand Mesa, Uncompahgre, and Gunnison National Forests;
Manti-La Sal National Forest (the portion in Colorado);
Pike-San Isabel National Forests;
Rio Grande National Forest;
Routt National Forest;
San Juan National Forest; and
White River National Forest.

Preparers

Terrestrial Wildlife:

Nancy Warren /s/ Nancy Warren Date: 2/27/12
Regional TES Species Program Leader

Fisheries:

David Winters /s/ Dave Winters Date: 2/27/12
Regional Fisheries Program Leader and Aquatic Ecologist

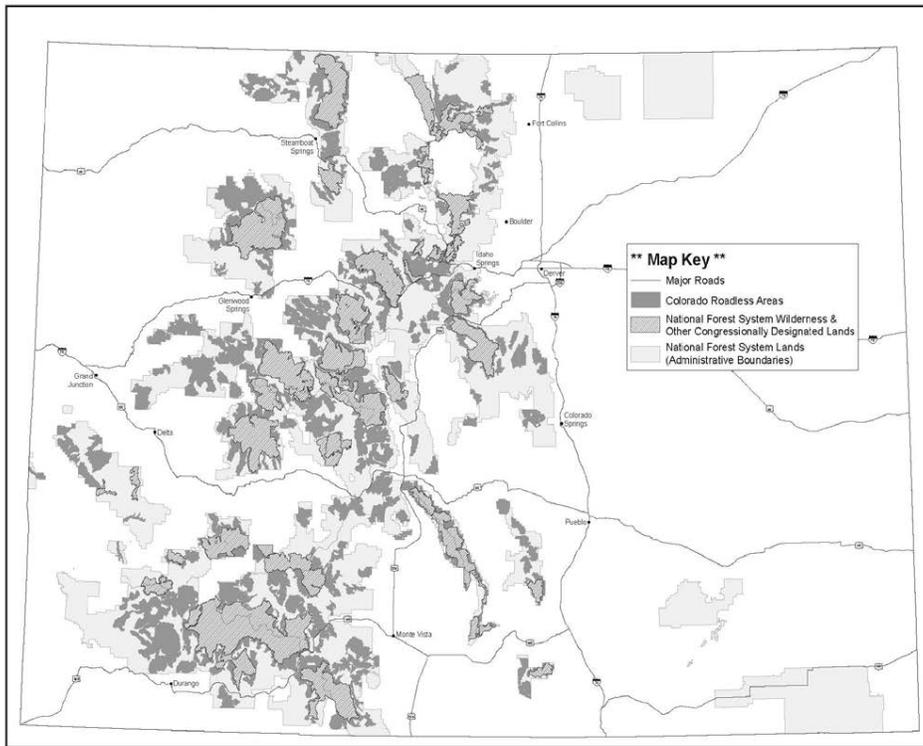
TES Plants:

Andrew Kratz /s/ Andrew Kratz Date: 2/27/12
Regional Botanist



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Fig. 1. Roadless Areas in Colorado



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I. Introduction

This document evaluates the potential effects of implementation of the Colorado Roadless Rule, promulgated by the Secretary of Agriculture, on aquatic and terrestrial threatened, endangered and proposed species and designated critical habitat in the state of Colorado. This revises a previous Biological Assessment prepared on Sept. 26, 2011, and amended on Jan. 26, 2012, in response to a Court decision that reinstated the 2001 Roadless Rule, thus changing the environmental baseline for analysis.

The Forest Service administers approximately 14,520,000 acres of public lands in Colorado, which are distributed among eight national forests and two national grasslands. These national forests and grasslands provide a diverse array of landscapes, ecosystems, natural resources, and land use activities. Management of each national forest and grassland is directed by a forest plan, along with numerous applicable laws, regulations, policies, and agency directives. Laws and regulations take precedence over management direction in the forest plans, if discrepancies exist.

There are currently approximately 4.24 million acres of Inventoried Roadless Areas (IRAs) in Colorado. The proposal would make some adjustments to the inventory of roadless areas, establishing approximately 4.19 million acres as Colorado Roadless Areas (CRAs), distributed among 363 separate roadless areas on the national forests. There are no roadless areas within the two national grasslands in Colorado.

Section 7(a)(1) of the Endangered Species Act (ESA) requires federal agencies to use their authorities to further the conservation and recovery of listed species. Section 7(a)(2) requires that federal agencies ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of federally-listed species, or destroy or adversely modify designated critical habitat. The purpose of this biological assessment is to identify federally listed species and designated critical habitat that may be affected by the proposed Colorado Roadless Rule (FEIS preferred alternative); analyze and document the likely effects of implementing the Rule on those listed species and critical habitats; and determine the need for consultation with the U.S. Fish and Wildlife Service.

II. Description of the Federal Action

History of the 2001 Roadless Rule and State Petition

In January 2001, the Roadless Area Conservation Rule (2001 Roadless Rule) was adopted into regulations at Title 36 of the Code of Federal Regulations Part 294 (36 CFR 294), Subpart B (66 FR 3244). The 2001 Roadless Rule identified a national total of about 49.2 million acres of National Forest System (NFS) lands (about 30%) as IRAs, including about 4.43 million acres (31 percent) of NFS lands in Colorado. The stated intention of the 2001 Roadless Rule was to provide “lasting protection for IRAs within the context of multiple-use management” (Fed. Reg. Vol. 66, No.9, pp. 3243-3273).

The IRAs are generally undeveloped areas, typically 5,000 acres or greater in size. They could be smaller if they are adjacent to congressionally designated wilderness. In Colorado, inventories for four national forests were conducted in 1979. The other four national forest inventories were updated and finalized in 1996, 1997, 1998, and 2002, when forest plans were revised. (Maps are available on the Internet at www.fs.usda.gov/goto/coroadlessrule). The 2001 Roadless Rule prohibits road construction and reconstruction and timber cutting, sale, or removal in IRAs, with certain exceptions.

Since its promulgation, the 2001 Roadless Rule has been through extensive litigation. In response to a Court ruling, the State Petitions Rule was promulgated in May 2005, wherein Governors had until November 13, 2006 to petition the Secretary of Agriculture to propose state-specific direction for managing roadless areas within their state. Ongoing uncertainty about the future of the 2001 Roadless Rule was a key factor that influenced Colorado Governor Bill Owens to initiate a state-specific petition to manage roadless areas in Colorado in 2005. The Colorado State Legislature passed Senate Bill 05-243 (C.R.S. 36-7-302) to form a 13-person, bipartisan task force to recommend management direction of roadless areas in Colorado. This task force was informed by a comprehensive public participation process that included nine public meetings throughout Colorado. The task force received more than 40,000 comments regarding development of a formal petition to the Secretary of Agriculture for a state-specific roadless rule.

On September 20, 2006, the United States District Court for the Northern District of California set aside the 2005 State Petition Rule and reinstated the 2001 Roadless Rule. However, the Forest Service determined that new regulations based on state petitions could be developed under the Administrative Procedures Act. In November 2006, Colorado Governor Bill Owens used the task force's recommendations as the basis for petitioning the Secretary of Agriculture to undertake state-specific roadless rulemaking for Colorado. The State's petition was considered for rulemaking by the Secretary of Agriculture, in accordance with the Administrative Procedures Act, section 553(e) and the U.S. Department of Agriculture's (Department) rulemaking procedures in 7 CFR 1.28.

After Governor Bill Owens submitted the State's petition to the Department, Bill Ritter, Jr. was elected Governor of Colorado. In April 2007, Governor Ritter resubmitted the petition with minor modifications. The State's petition requested that:

- roadless area boundaries be updated to include additional areas that are roadless;
- Congressionally designated lands and private lands be excluded from the inventory;
- and
- roadless acres that have been substantially altered be excluded.

In June 2007, the State and the Forest Service presented this petition to the Department's Roadless Area Conservation National Advisory Committee (RACNAC). Based on the advisory committee's review and report (USDA RACNAC 2007a), the Secretary of Agriculture accepted the State's petition in August 2007. The Secretary of Agriculture directed the Forest Service to work in cooperation with the State of Colorado to initiate rulemaking. In January 2008, the Forest Service granted cooperating agency status to the State of Colorado. The Forest Service published a proposed rule and Draft Environmental Impact Statement (DEIS) to establish direction for conserving roadless areas on NFS land in Colorado on July 25, 2008 (73 FR 43544). The no-action alternative considered in that DEIS assumed the 2001 Roadless Rule would remain in effect in Colorado if a state-specific rule was not adopted.

However, in August 2008, after the DEIS was released, the Wyoming District Court set aside and enjoined the 2001 Roadless Rule. Thus, the assumption that the 2001 Roadless Rule would remain in effect in Colorado absent a state-specific rule changed. Accordingly, the

February 2011 Revised DEIS (RDEIS) evaluated continued management under existing forest plans as the likely scenario in the event that no state-specific rule was adopted. Thus, management direction in the existing forest became the “no action” alternative and the environmental baseline for ESA Section 7 consultation.

Based on the public comments on the DEIS, the State asked the USDA to postpone further rulemaking efforts until the State considered revision of its petition. The State modified their petition and held a comment period from August 3 to October 3, 2009, receiving approximately 22,000 comments. The result was a revised petition submitted to the Secretary of Agriculture on April 6, 2010. Based on the April 6, 2010 petition, the State and the Forest Service developed regulatory language for a proposed Colorado Roadless Rule that would govern management of roadless areas on NFS lands in Colorado. The revised proposed Colorado Roadless Rule and a Revised DEIS were published on April 15, 2011. About 56,000 comments were received. All of the comments received were considered in the development of a Final EIS.

On Sept. 29, 2011, a Biological Assessment (BA) analyzing the effects of the preferred alternative on listed species and designated critical habitat was submitted to the Colorado Field Office, U.S. Fish and Wildlife Service (FWS) for concurrence. Subsequently, however, additional adjustments were made to the proposal. An amended BA was prepared and submitted for concurrence on January 30, 2012; a letter of concurrence from FWS was received on Feb. 8, 2012.

Meanwhile, the legal status quo was once again changed. On October 21, 2011, the Tenth Circuit Court of Appeals had reversed the District Court’s decision on the 2001 Roadless Rule and remanded the case back to the District Court to vacate the permanent injunction. The State of Wyoming and Colorado Mining Association filed a petition requesting the 10th Circuit to reconsider its October 2011 ruling. Their petition was denied on Feb. 16, 2012, and a mandate was issued on Feb. 24, 2012 effectuating the October 21, 2011 opinion and requiring the injunction to be vacated.

Proposed Action: Colorado Roadless Rule

The proposed action is for the Secretary of Agriculture, in cooperation with the State of Colorado, to promulgate a state-specific rule known as the Colorado Roadless Rule. It would identify roadless areas on national forests in Colorado, and establish management direction for these areas. (There are no roadless areas within the two national grasslands (Pawnee and Comanche) that are located in Colorado.)

The Colorado Roadless Rule would establish general prohibitions on road construction and reconstruction; tree cutting, sale, or removal; and linear construction zones within CRAs. Certain exceptions to those prohibitions would be allowed to address needs specific to Colorado.

The proposed action for Section 7 consultation is Alternative 2 in the Final EIS.

Colorado Roadless Area Inventory

Roadless areas identified in the original inventory and incorporated into the 2001 Roadless Rule are referred to as Inventoried Roadless Areas (IRAs), while the updated inventory developed through the State’s petition and this rulemaking process are referred to as Colorado



Amended Biological Assessment - Rulemaking for Colorado Roadless Areas

Roadless Areas (CRAs). A comparison of the acreage of IRAs and CRAs by National Forest is shown in Table 1.

The proposed CRAs encompass about 4.19 million acres of NFS land in Colorado, distributed among 363 separate roadless areas. A detailed map with a key identifying each roadless area is available on the web at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5291688.pdf

Table 1. Acres and percent of National Forest System (NFS) lands in Colorado that are in roadless areas under the 2001 Roadless Rule/Forest Plans (IRAs) and the Colorado Roadless Rule (CRAs).

National Forest administrative unit	NFS acres in Colorado	Inventoried Roadless Areas (2001 Rule)		Colorado Roadless Areas (Proposed Colorado Rule)	
		IRA Acres ³	Percent of NFS acres in IRAs	CRA Acres	Percent of NFS acres in CRAs
Arapaho and Roosevelt	1,537,000	352,500	23	347,100	23
Grand Mesa, Uncompahgre, and Gunnison	2,974,000	1,058,300	36	901,900	30
Manti – La Sal ¹	27,000	11,000	41% of CO portion	7,700	29
Pike and San Isabel	2,230,000	667,300	30	774,600	35
Rio Grande	1,823,000	529,000	29	518,600	28
Routt	1,125,000	442,300	39	433,600	39
San Juan	1,879,000	543,600	29	566,100	30
White River	2,286,000	639,500	28	636,700	28
Total²	13,881,000	4,243,600	31	4,185,600	30

¹ The Manti-La Sal is a 1.4-million-acre National Forest located mostly in Utah, with only 2 percent of those acres located in Colorado.

² Totals rounded to nearest 100 acre.

³ The acres used for the rulemaking analysis differ from the acres reported in the RACR FEIS because some wilderness, private, and special areas were included in the 2001 roadless inventory. These acres will not be included in this rulemaking analysis as acres to be managed under a Colorado Rule because Congress has already set out specific management for those acres. Excluded acres are miscellaneous private and wilderness acres that have been found as mapping errors in the 2001 Rule IRA acres, as well as those acres in the James Peak and Spanish Peak Wildernesses, the Indian Peaks Wilderness, Bowen Gulch and James Peak Protection Areas, Roubideau and Tabeguache Special Areas, Fossil Ridge Recreation Management Area, and the Piedra Special Management Unit, all designated by Congress, but were not excluded from the 2001 RACR inventory.

The CRAs exclude areas that have been Congressionally-designated as Wilderness or special protection areas. The CRA inventory was also updated by eliminating mapping errors on the four national forests in Colorado that completed roadless inventories from 1996 – 2002 as part of their revised land management plans (Arapaho-Roosevelt, Rio Grande, Routt, and White River). The other four forests (Grand Mesa, Uncompahgre, and Gunnison, Manti-La Sal, Pike-San Isabel and San Juan) updated their CRA inventory based on forest plan analysis and public comments received on a DEIS.



The CRAs exclude 467,400 acres that were part of some IRAs. This includes 459,100 acres of substantially altered land and 8,300 acres within existing ski permits or ski area development allocations in the forest plans. Substantially altered lands are those that are roaded and do not have roadless area characteristics. These areas may have been included in the inventory due to mapping errors, or they may originally have been roadless but subsequently had road construction and other activities allowed under the forest plan. Except for non-system roads which include user-created roads, CRAs are entirely roadless. The 8,300 acres of ski area terrain not included in CRAs include 6,600 acres in ski areas under existing permits and 1,700 acres outside permit boundaries but within forest plan allocations allowing future ski area development.

About 409,500 acres of unroaded NFS lands that were not included in the inventory of IRAs under the 2001 Roadless Rule have been added to the inventory of CRAs. Public comments and Forest staff knowledge helped to create an improved portfolio of roadless areas. The addition of these areas more-or-less offsets the acreage of substantially altered areas that were removed from the CRA inventory.

About 1,219,200 acres of CRAs would be identified as *upper tier* roadless areas. The CRAs selected for upper tier provide outstanding roadless resource characteristics, do not have existing oil and gas leases within them, and provide high-quality fish and wildlife habitat.

Management Direction That Would Apply to CRAs

The language of the proposed Rule, which would be issued under 36 CFR 294, is provided in Attachment 1. The Colorado Roadless Rule is based on the provisions of the 2001 Roadless Rule, but provides prohibitions and specific exceptions relevant to the State of Colorado. The Colorado Roadless Rule would supersede existing Forest Plan direction for Colorado Roadless Areas, *except* where Forest Plan direction is more restrictive of human uses and development.

The Colorado Roadless Rule would prohibit road construction and reconstruction, tree cutting, sale, or removal, and linear construction zones (see Table 2 for definitions of terms) while providing for specific exceptions to the prohibitions, as described below.

Table 2. Definitions: Forest Road, Temporary Road, and Linear Construction Zone.

Term	Definition
Forest road	Generally refers to a road determined to be necessary for the long term protection, administration, and utilization of national forest system land or resources, and managed as part of the national forest's transportation system. Previously called a "system" or permanent road.
Temporary road	A road necessary for emergency operations or authorized by contract, permit, or other authorization, that is not a forest road and that is not included on the forest transportation atlas.
Linear construction zone	A temporary linear area of surface disturbance over 50-inches wide that is used for motorized transport by vehicles or construction equipment to install or maintain a linear facility. It is not used as a motor vehicle route and is not engineered to road specifications. Linear facilities include pipelines, electrical power lines, telecommunication lines, ditches, and canals.

The Colorado Roadless Rule would manage CRAs in two different categories: (1) upper tier and (2) non-upper tier roadless area acres. Non-upper tier includes the North Fork coal mining



area. Management of these two tiers would differ in the exceptions that would be allowed, with upper tier having the least number of exceptions that would be allowed.

Upper Tier

Upper tier acres are portions of CRAs that have limited exceptions to provide the highest level of natural resource protection. Alternative 2 (the proposed action) in the Revised DEIS (RDEIS) designated 562,200 acres as upper tier. These were selected based on roadless areas that have existing forest plan direction prohibiting road construction and reconstruction for all national forests except for the GMUG and San Juan National Forests. For the GMUG and San Juan National Forests, upper tier acres were defined by applying their *proposed* forest plan direction that prohibits road construction and reconstruction within roadless areas. This approach was used to take advantage of previous analyses and collaborative public input processes used in forest planning, which provided a sound basis for identifying high value roadless acres to include in the upper tier.

Based on public comments on the RDEIS, upper tier acreage was increased to a total of 1,219,200 acres in the FEIS (Table 3). Community Protection Zones (CPZs, areas within 1/2 mile of a community at risk) were excluded from the upper tier to provide more opportunity to protect communities from potential wildfire. After CPZs were removed, additional acres were added to upper tier based on existing forest plan direction, draft plan direction for the GMUG and San Juan NFs, consideration of upper tier acres identified in Alternative 4, consideration of upper tier proposals received from comments on the RDEIS, and evaluation of potential conflicts such as existing oil/gas leases and existing water structures.

Table 3. CRA Upper Tier Acres by Forest.

Forest	Revision Completed- Year of Forest Plan	Total CRA Acres ¹	Upper Tier Acres ¹	% of CRA Acres in Upper Tier
Arapaho-Roosevelt	Yes-1997	347,100	134,800	39%
GMUG ²	No-1983	901,100	130,300	14%
Manti-La Sal	No-1986	7,700	7,700	100%
Pike-San Isabel	No-1984	774,700	149,900	19%
Rio Grande	Yes-1996	518,600	340,300	66%
Routt	Yes-1998	433,600	172,100	40%
San Juan ³	No-1983	566,100	153,200	27%
White River	Yes-2002	636,700	131,000	21%
Total		4,185,600	1,219,200	29%

¹ Numbers may not add due to rounding.

² GMUG draft Revised Forest Plan – 2007

³ San Juan draft Revised Forest Plan – 2007



A “No Surface Occupancy” stipulation on any future oil and gas leases would be required in the upper tier portion of CRAs. Upper tier exceptions to the prohibitions on road construction and reconstruction, tree-cutting, sale, or removal, and linear construction zones are very limited. The exceptions are listed below:

Upper Tier exceptions for tree cutting, sale or removal:

- Tree cutting, sale or removal is incidental to the implementation of a management activity not otherwise prohibited by the rule.
- Tree cutting, sale or removal is needed and appropriate for personal or administrative use, as provided for in 36 CFR 223.

Upper Tier exceptions for road construction and reconstruction:

- A road is needed pursuant to reserved or outstanding rights, or as provided for by statutes or treaties.
- A temporary road is needed for public health and safety in cases of imminent threat of flood, fire, or other potentially catastrophic events that without intervention, would cause the loss of life or property.

Non-Upper Tier

Following are the exceptions that would apply to non-upper tier acres:

Non-upper Tier exceptions for tree cutting, sale or removal:

- Tree cutting is needed to reduce the wildfire hazard to an at-risk community or municipal water supply system within the first ½ mile of the community protection zone or within the next one-mile of the community protection zone where proposed projects are within an area identified in a Community Wildfire Protection Plan (CWPP). For the CPZ to extend beyond the first ½ mile and up to an additional one-mile, the land must exhibit one of the following characteristics: a sustained steep slope that creates the potential for wildfire behavior endangering the at-risk community; has a geographic feature that aids in creating an effective fire break, such as a road or a ridge top; or is in condition class 3 as defined by Healthy Forest Restoration Act (Pub. L. 108–148). If ground conditions warrant the CPZ to extend the additional mile, a CWPP must exist before a tree cutting project would be proposed beyond the first half-mile. Projects would focus on small diameter trees to create strategic fuel breaks that modify fire behavior while retaining large trees to the maximum extent practical as appropriate to the forest type.
- Where the Regional Forester determines there is a significant risk that a wildland fire disturbance event could adversely affect a municipal water supply system or the maintenance of the system. A significant risk exists where the history of fire occurrence and fire hazard indicate a serious likelihood that a wildland fire event would have adverse effects to a municipal water supply system.
- Where needed to maintain or restore the characteristics of ecosystem composition, structure and function.
- Where needed to improve threatened, endangered, proposed, or sensitive species habitat, in coordination with the Colorado Department of Natural Resources including the Colorado Division of Parks and Wildlife.

- Where incidental to implementation of a management activity not otherwise prohibited by the rule.
- Where needed and appropriate for personal or administrative use (36 CFR 223).

Non-upper Tier exceptions for road construction and reconstruction:

- Where a road is needed pursuant to reserved or outstanding rights, or as provided for by statute or treaty.
- Where road realignment is needed to prevent irreparable resource damage that arises from the design, location, use, or deterioration of a NFS road that cannot be mitigated by road maintenance. Road realignment may occur only if the road is deemed essential for administrative or public access, public health and safety, or other authorized use.
- Where road reconstruction is needed to implement a road safety improvement project on a forest road determined to be hazardous on the basis of accident experience or accident potential on that road.
- Where the Regional Forester determines a road is needed to allow for the construction, reconstruction, or maintenance of an authorized water conveyance structures which is operated pursuant to a pre-existing water court decree with the use of a road limited to that use associated with the water right identified in the pre-existing water court decree.
- Where a temporary road is needed for public health and safety in cases of imminent threat of flood, fire, or other potential catastrophic event that, without intervention, would cause the loss of life or property.
- Where the Regional Forester determines a temporary road is needed to facilitate tree cutting, sale or removal within the first one-half mile of a community protection zone to reduce the wildfire hazard to an at-risk community or municipal water supply system.
- Where the Regional Forester determines a temporary road is needed to facilitate tree cutting sale, or removal within the first one-half mile of the community protection zone to maintain or restore characteristics of ecosystem composition, structure and processes.
- Where a temporary road is needed in conjunction with exploration or development of an existing oil and gas lease that otherwise does not prohibit road construction or reconstruction, including construction of infrastructure necessary to transport the product on NFS lands, under an existing lease as of the effective date of this rule. The Forest Service shall not authorize the Bureau of Land Management to grant any request for a waiver, exception, or modification to any oil or gas lease if doing so would result in any road construction within a Colorado Roadless Area beyond that which was authorized by the terms and conditions of the lease at the time of issuance.
- Where a temporary road is needed for coal exploration and coal-related surface activities for certain lands within Colorado Roadless Areas in the 19,100 acre North Fork coal mining area of the Grand Mesa, Uncompahgre, and Gunnison National Forests as defined by the North Fork coal mining map displayed on the final Colorado Roadless Areas map. Such roads may also be used for collecting and transporting coal mine methane. Any buried infrastructure, including pipelines, needed for the capture, collection, and use of coal mine methane will be located within the rights-of-ways of

temporary roads that are otherwise necessary for coal-related surface activities including the installation and operation of methane venting wells.

Linear Construction Zones (LCZs)

The proposed action generally prohibits LCZs within CRAs, but it does provide for limited exceptions to this prohibition. There are required findings prior to the use of an LCZ. These exceptions are applicable to the CRA upper tier and non-upper tier acres:

- The construction, reconstruction, or maintenance of an authorized water conveyance structure which is operated pursuant to a pre-existing water court decree.
- The construction, reconstruction, or maintenance of existing or future authorized electrical power lines or telecommunication lines. Authorize electrical power lines or telecommunication lines within CRAs only if there is no opportunity for the project to be implemented outside of a CRA without causing substantially greater environmental damage.
- The construction or reconstruction of a pipeline associated with an oil and gas lease that allows surface use within a CRA or the construction or reconstruction of a pipeline needed to connect to infrastructure within a CRA from outside a CRA where such a connection would cause substantially less environmental damage than alternative routes. The construction of pipelines for the purposes of transporting oil or natural gas through a CRA where the source(s) and destination(s) of the pipeline are located exclusively outside of a CRA shall not be authorized.

Required Findings Related to Roads LCZs in Upper Tier and Non-upper Tier

Prior to any decision allowing construction or reconstruction of any type of road or development of an LCZ under any of the exceptions in a CRA, the following findings must be made, through a site-specific project analysis, before the activity is allowed:

- the action is consistent with forest plan direction;
- motorized access for the project without road construction or an LCZ is not feasible;
- within a native cutthroat trout catchment or identified recovery watershed, road construction will not diminish over the long-term, conditions within the water influence zone and the native cutthroat trout habitat;
- for a proposed forest road, a temporary road would not provide reasonable access.

Road Construction/Reconstruction and LCZ Considerations

- In all road construction/reconstruction exceptions on all CRA acres, if the decision is to construct a road, the type of road constructed would be that which meets the purpose and has the shortest duration on the land. For example, a temporary road would be constructed if it could provide reasonable access even if exceptions allow construction of a forest road. Except as allowed in the Colorado Roadless Rule, a temporary road shall not change designation to a forest road. Road maintenance is allowed within CRAs.
- All road construction in a CRA must be conducted in a manner that reduces, to the extent practicable, effects on surface resources and prevents unnecessary or unreasonable surface disturbance.

- All roads constructed in CRAs under all exceptions would prohibit public motor vehicle use (including off-highway vehicles) unless specifically allowed for the purpose for which the road was established (e.g. federal highways). Nothing in the rule would prohibit:
 - the use of motor vehicles for administrative use by the Forest Service;
 - motor vehicle use that is specifically authorized under a written authorization issued under Federal law or regulation; or
 - motor vehicle use by any fire, emergency, or law enforcement personnel.
- When a road is no longer needed for the established purpose, or upon termination or expiration of a contract, authorization, or permit, whichever is sooner, all roads shall be decommissioned and the affected landscape restored. A road decommissioning provision shall be required in all such contracts or permits. Decommissioning would be designed to stabilize, restore, and revegetate unneeded roads to a more natural state to protect resources and enhance roadless area characteristics.
- When an LCZ is constructed in a CRA, installation of the linear facility would be done in a manner that minimizes ground disturbance, including placement within existing rights-of-way where feasible. When the LCZ is no longer needed for the installation of the linear facility, any ground disturbance associated with the LCZ and the affected landscape would be restored. A restoration provision is required in all LCZ contracts or permits and would not be waived.



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Ski Area Management and Development

The 8,300 acres of ski area terrain excluded from CRAs include 6,600 acres in ski areas under existing permits and 1,700 acres outside current permit boundaries (Table 4).

Table 4. Ski area acres excluded from CRAs.

<i>National Forest permitted ski areas</i>	<i>Colorado roadless area(s)</i>	<i>Ski area permitted acres</i>	<i>Additional ski area allocation¹ acres</i>	<i>Total ski area acres not included in CRAs</i>
<i>Arapaho-Roosevelt National Forest</i>				
Loveland	Bard Creek, Mount Sniktau	1,370	1,620	2,990
Winter Park	Vasquez Adjacent Area	30	0	30
<i>Grand Mesa, Uncompahgre and Gunnison National Forests</i>				
Crested Butte	Gothic	900	0	900
<i>Pike-San Isabel National Forest</i>				
Ski Cooper	Mad Creek DB & DB1	560	0	560
<i>Routt National Forest</i>				
Steamboat Springs	Long Park	180	0	180
<i>San Juan National Forest (Draft Revised Forest Plan)</i>				
Durango Mountain Resort	San Miguel	0	90 ²	90
<i>White River National Forest</i>				
Arapahoe Basin	Porcupine Peak	1,050	0	1,050
Aspen Mountain	MacFarlane	50	0	50
Beaver Creek	Meadow Mountain A & B	510	0	510
Breckenridge	Tenmile	150	0	150
Buttermilk	Burnt Mountain	50	0	50
Copper Mountain	Ptarmigan Hill	720	0	720
Snowmass	Burnt Mountain	80	0	80
Vail	Game Creek	900	0	900
Total		6,600	1,700	8,300

Ski area acres rounded to nearest 10 acres and total acres rounded to nearest 100 acres.

Ski areas not listed here do not contain roadless acres within their permit or allocation boundary.

¹ *Acres allocated in Forest plans to ski area management but are not within the current permitted area.*

² *Expansion of Durango Mountain Resort is included within the San Juan's Forest plan revision, draft preferred alternative.*



Oil and Gas Leasing

Each environmental analysis for oil and gas leasing shall consider the eight items listed below in determining conditions to be included in approved Surface Use Plans of Operation. These considerations apply to both existing oil and gas leases under which some roads would be allowed, and future oil and gas leases under which no roads would be allowed. These eight items are:

- (1) Locate roads, well sites, and facilities on pre-existing areas of surface disturbance and minimize the amount of necessary temporary road construction or reconstruction;
- (2) Include an alternative for proposed operations that addresses directional drilling on multi-well sites on pre-existing disturbance;
- (3) Restrict road construction for leases partially within CRAs to portions of the lease outside of CRAs except when doing so would be substantially more environmentally damaging, compromise safety standards, or is unfeasible due to topography or surface conditions;
- (4) Perform reclamation of surface disturbances incrementally to minimize the total area of disturbance at any given point in time during the exploration or development of a lease;
- (5) Design temporary roads and facilities to blend with the terrain to minimize visual impacts and to facilitate restoration when the road is no longer needed;
- (6) Co-locate power lines, flow lines and pipelines within the right-of-way of roads to minimize the area of surface disturbance;
- (7) Consider new and developing low impact techniques and technologies and either dismiss or apply with justification; and
- (8) Consider the best available technology, to the extent possible, to minimize noise and air emissions.

Motorized Access

The Colorado Roadless Rule would not affect current or future management of existing motorized or non-motorized trails in CRAs. Decisions concerning the future management or status of existing trails within CRAs under this rule would be made through forest travel management planning.

The Colorado Roadless Rule would not limit the authority to maintain existing or approve future motorized access, which does not require road construction or reconstruction, and that may occur in CRAs associated with special use authorizations or grazing permits.

Livestock Grazing

The Colorado Roadless Rule would not limit the authority of the Forest Service to issue grazing permits on lands within a CRA. Classification as a CRA would not, by itself, be reason to not authorize livestock grazing.

Existing Land Use Authorizations

“Authorizations” refer to land uses authorized under a permit, contract, or similar legal instrument. Numerous existing special use permits, along with a variety of contracts and



leases, allow occupancy and use of NFS lands for grazing, recreation, private land access and other uses. The Colorado Roadless Rule would allow for the continuation, transfer, or renewal of land use authorizations existing at the time the Rule becomes effective. For clarification, “existing” authorizations would be those that currently exist or are issued prior to adoption of the final rule. Authorized activities remain subject to limitations imposed by forest plans, project-level decisions, and applicable law, regulation, and policy.

III. Listed Species and Critical Habitat in the Action Area

Available information was assembled about known occurrences of threatened or endangered species, and/or presence of potential habitat in each of the roadless areas (IRAs and CRAs). Several sources of information were accessed, including Forest Service species occurrence matrices (available at the Rocky Mountain and Intermountain Regional Offices), comments provided by the Colorado Division of Wildlife (available online at <http://wildlife.state.co.us/Land/Water/Roadless>), and information available from the U.S. Fish and Wildlife Service (FWS), Colorado Natural Heritage Program databases, and professional knowledge of Forest Service staff.

On March 26, 2008, a list of threatened and endangered species that are known or likely to be present in one or more roadless areas in Colorado was submitted to the FWS’ Colorado Field Office for concurrence. The FWS concurred with the species list on June 26, 2008. Subsequently there was a change in status of two plant species that are known to occur or have suitable habitat on NFS lands in Colorado: DeBeque phacelia (*Phacelia submutica*), listed as Threatened on 7/27/2011; and Pagosa skyrocket (*Ipomopsis polyantha*), listed as Endangered on 7/27/2011. Critical habitat was proposed at the same time.

On Sept. 20, 2011, the Forest Service sent a letter to FWS requesting confirmation of the updated list of species that are known or likely to be present in one or more roadless areas in Colorado.

Species Evaluated in this BA

Three federally-listed terrestrial wildlife species (whooping crane, piping plover, and least tern) are known to occur in Colorado, but there is no habitat for them within the roadless areas, nor will management within the roadless areas affect them or their habitat. There will be “no effect” from the action on these species and they are not analyzed further in this BA.

Five federally-listed fish species (humpback chub, bonytail chub, Colorado pikeminnow, pallid sturgeon, and razorback sucker) occur in the Colorado River downstream of NFS lands in the Rocky Mountain Region; they do not occur within the roadless areas, nor will management within the roadless areas affect them or their habitat. There will be “no effect” from the action on these species and they are not analyzed further in this BA.

Six of the federally-listed plant species that occur in Colorado (*Astragalus osterhoutii*, *Penstemon penlandii*, *Phacelia formosula*, *Gaura neomexicana* ssp. *coloradensis*, *Spiranthes diluvialis*, and *Ipomopsis polyantha*) are not known or likely to occur in roadless areas, or to be affected by their management. Osterhout milkvetch (*Astragalus osterhoutii*) initially was

thought to possibly occur in a roadless area (Kelly Creek), but Forest Service personnel familiar with the area determined that it does not have the type of soil required by this plant species. There will be “no effect” from the action on these species and they are not analyzed further in this BA.

Three federally-listed threatened or endangered terrestrial wildlife species (grizzly bear, gray wolf and black-footed ferret) are extirpated from National Forest System lands in Colorado. There will be “no effect” from the action on these species and they are not analyzed further in this BA. If populations of these species become re-established on National Forest System lands in Colorado in the future, effects of land management activities on them will be evaluated at that time.

The yellow fin cutthroat trout was historically found in the Arkansas River basin on the Pike-San Isabel National Forest, but is now presumed extinct. It will not be analyzed further in this BA.

Table 5 identifies those threatened and endangered species known or likely to occur on National Forest system lands within roadless areas in Colorado.



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Table 5. Endangered (E) and Threatened (T) Species and Colorado Roadless Areas.

<i>Species Name (Status)</i>	<i>Key Habitat Requirements</i>	<i>National Forest where Known or Suspected</i>	<i>Recovery Plan/Outline, 5-year Review & References¹</i>
BIRDS			
Southwestern willow flycatcher (E) <i>Empidonax trailii extimus</i>	Dense riparian thickets of willow, cottonwood and other deciduous shrubs and trees about 13-23 ft. or more in height.	Manti-La Sal (CO portion) Rio Grande	http://ecos.fws.gov/speciesProfile/SpeciesReport.do?scode=B094
Mexican spotted owl (T) <i>Strix occidentalis lucida</i>	Nests and roosts in closed-canopy forests and rocky canyons containing dense, uneven-aged mixed-conifer forests. In CO, most nests are in canyon habitats. A wider variety of habitats are used for foraging.	Arapaho-Roosevelt GMUG (Grand Mesa, Uncompahgre, Gunnison) Manti-La Sal (CO portion) Pike-San Isabel Rio Grande San Juan White River	http://ecos.fws.gov/speciesProfile/SpeciesReport.do?scode=B074
INVERTEBRATES			
Pawnee montane skipper (T) <i>Hesperia leonardus montana</i>	South Platte River drainage in CO; dry open ponderosa pine at 6,000-7,500 ft; sparse understory with blue grama (larval food) and prairie gayfeather (nectar).	Pike-San Isabel	http://ecos.fws.gov/speciesProfile/SpeciesReport.do?scode=I01E
Uncompahgre fritillary (E) <i>Boloria acrocneuma</i>	Above timberline in patches of its larval host plant, snow willow. Most often found on cool, moist, north and east-facing slopes.	GMUG Pike-San Isabel Rio Grande White River	http://ecos.fws.gov/speciesProfile/SpeciesReport.do?scode=I01O
MAMMALS			
Canada lynx (T) <i>Lynx canadensis</i>	Boreal forest in the spruce-fir zone with cold winters, deep snow and an adequate prey base of snowshoe hare. Cover types may include spruce, subalpine fir, lodgepole pine, Douglas-fir, and aspen mix.	Arapaho-Roosevelt GMUG Pike-San Isabel Rio Grande Routt San Juan White River	http://ecos.fws.gov/speciesProfile/SpeciesReport.do?scode=A073



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<i>Species Name (Status)</i>	<i>Key Habitat Requirements</i>	<i>National Forest where Known or Suspected</i>	<i>Recovery Plan/Outline, 5-year Review & References¹</i>
Preble's meadow jumping mouse (T) <i>Zapus hudsonius preblei</i>	Riparian vegetation and adjacent uplands up to ~7600 ft. elevation. Lush undergrowth of grasses or forbs along streams and in meadows, often with tree and shrub cover.	Arapaho-Roosevelt Pike-San Isabel	http://ecos.fws.gov/speciesProfile/SpeciesReport.do?scode=40C2
FISHES			
Greenback cutthroat (T) <i>Oncorhynchus clarki stomias</i>	Headwaters of South Platte and Arkansas River drainages. Cold water streams and lakes with spawning habitat.	Arapaho-Roosevelt GMUG Routt Pike-San Isabel San Juan White River	http://ecos.fws.gov/docs/recovery_plan/980301.pdf
PLANTS			
Penland's alpine fen mustard (T) <i>Eutrema penlandii</i>	Stream banks and wetlands in alpine areas (11,900 to 13,280 feet elevation) in the Mosquito Range.	Pike-San Isabel White River	http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=Q1WG
Colorado hookless cactus (T) <i>Sclerocactus glaucus</i>	Shrub communities on rocky hills, mesa slopes, and alluvial benches at 4,500 to 6,000 ft. elev.	GMUG	http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=Q2II
De Beque phacelia (T) <i>Phacelia submutica</i>	Sparsely vegetated, steep slopes; on specific types of clay soils in the Piceance Basin at 4,700 to 6,200 ft. elev.	GMUG White River	http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=Q1G6

¹ All links are from the U.S. Fish and Wildlife Service's "Environmental Conservation Online System (ECOS)" website.



Critical Habitat Evaluated in this BA

Designated critical habitat for the Preble’s meadow jumping mouse (*Zapus hudsonius preblei*) and Mexican spotted owl (*Strix occidentalis lucida*) occurs within roadless areas on two National Forests in Colorado. Critical habitat has been proposed for De Beque phacelia (*Phacelia submutica*) including one unit on the Grand Mesa and White River National Forests. Table 6 shows the overlap of critical habitat with roadless areas in Colorado.

Table 6. Designated and proposed critical habitat in roadless areas in Colorado

Species Scientific Name/ Common Name	National Forest with Critical Habitat	IRA/CRA where Critical Habitat Occurs
<i>Strix occidentalis lucida</i> Mexican spotted owl	Pike-San Isabel	Green Mountain
	Pike-San Isabel	Hardscrabble
	Pike-San Isabel	Highline
	Pike-San Isabel	East Pikes Peak IRA /Pikes Peak East CRA
	Pike-San Isabel	Front Range IRA/ Rampart East CRA
	Pike-San Isabel	Rampart West
	Pike-San Isabel	Scrappy Peaks
	Pike-San Isabel	St. Charles Peak
	Pike-San Isabel	Tanner Peak
	Pike-San Isabel	Thunder Butte
<i>Zapus hudsonius preblei</i> Preble’s meadow jumping mouse	Arapaho-Roosevelt	Cache La Poudre Adjacent Area
	Arapaho-Roosevelt	Comanche Peak Adjacent Area
	Arapaho-Roosevelt	Grey Rock
	Arapaho-Roosevelt	North Lone Pine
	Pike-San Isabel	Gunbarrel
	Pike-San Isabel	Rampart West
<i>Phacelia submutica</i> De Beque phacelia	GMUG/White River	Sunnyside/Housetop Mountain



IV. Consultation History

Programmatic Plans

A national consultation was conducted for the 2001 Roadless Rule. The overall determinations of effect for the 2001 Roadless Rule were the same for all threatened, endangered and proposed species: “may affect, not likely to adversely affect T&E species or adversely modify designated critical habitat”, with anticipation of beneficial effects due to the restrictions on activities as compared to existing forest plans.

Existing forest plans, along with any plan amendments, have previously undergone ESA Section 7 consultation with FWS. The dates of approval of the current forest plans are shown in Table 7.

The National Forest Management Act provides for revising or amending the plans when needed. In August 2008, the Forest Service completed a formal consultation with FWS on the Southern Rockies Lynx Amendment, which amended all forest plans in Colorado (except the Manti-La Sal NF), as well as the Medicine Bow NF in southern Wyoming.

Table 7. National Forest administrative units in Colorado and Forest Plan approval date.

National Forests in Colorado	Date of Approved Forest Plan
Arapaho-Roosevelt National Forests and Pawnee National Grassland	1997
Grand Mesa, Uncompahgre, and Gunnison National Forests	1983
Manti-La Sal National Forest	1986
Pike-San Isabel National Forests and Cimarron-Comanche National Grasslands	1984
Rio Grande National Forest	1996
Routt National Forest	1998
San Juan National Forest ¹	1983
White River National Forest	2002

¹ Revision in progress; draft revised plan issued in 2007

Environmental Baseline: 2001 Roadless Rule

As described previously, the 2001 Roadless Rule established general prohibitions on two main types of activities within IRAs: tree cutting, sale, and removal, and road construction/reconstruction, with some of those activities permitted under certain exceptions. Any areas that have roadless characteristics but are not included within the IRAs would be managed according to their respective forest plans.



Tree cutting, Sale, or Removal

The 2001 Roadless rule generally prohibits tree cutting, but provides five exceptions:

- The cutting, sale, or removal of generally small-diameter timber may occur in IRAs where it is needed to maintain or improve threatened, endangered, proposed, or sensitive species habitat, consistent with maintaining or improving roadless area characteristics defined in the definitions section of the proposed rule.
- The cutting, sale, or removal of generally small-diameter timber may occur in IRAs where it is needed to maintain or restore the characteristics of ecosystem composition and structure, such as reducing the risk of uncharacteristic wildland fire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period, and consistent with maintaining or improving roadless area characteristics defined in the definitions section of the proposed rule.
- The cutting, sale, or removal of timber may occur in IRAs where it is incidental to implementing a management activity not otherwise prohibited.
- The cutting, sale, or removal of timber may occur in IRAs where it is needed for personal or administrative uses provided for in 36 CFR 223.
- The cutting, sale, or removal of timber may occur within portions of IRAs where roadless area characteristics have been substantially altered by the construction of a NFS road and subsequent timber harvest. Both the road construction and timber harvest must have occurred after the IRAs were designated and before the effective date of rulemaking.

Road Construction and Reconstruction

The 2001 Roadless Rule generally prohibits road construction and reconstruction, but provides seven exceptions to this prohibition. This alternative does not distinguish between forest (permanent) and temporary roads. Road maintenance is permissible within IRAs. Road maintenance refers to the ongoing upkeep of a road necessary to retain or restore the road to the approved road management objectives (see Forest Service Manual 7705). The following exceptions would allow road construction and reconstruction in the IRAs:

- Where a road is needed to protect public health and safety in cases of imminent threat of flood, fire, or other catastrophic event that, without intervention, would cause the loss of life or property.
- Where a road is needed to conduct a response action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or to conduct a natural resource restoration action under CERCLA, Section 311 of the Clean Water Act, or the Oil Pollution Act.
- Where a road is needed pursuant to reserved or outstanding rights, or as provided by statute or treaty.
- Where road realignment is needed to prevent irreparable resource damage that arises from the design, location, use, or deterioration of a NFS road that cannot be mitigated by road maintenance. Road realignment may occur only if the road is deemed essential for administrative or public access, public health and safety, or other authorized use.
- Where road reconstruction is needed to implement a road-safety improvement project on a forest road determined to be hazardous on the basis of accident experience or accident potential on that road.

- Where the Secretary of Agriculture determines that a Federal Aid Highway project, authorized pursuant to Title 23 of the United States Code, is in the public interest or is consistent with the purposes for which the land was reserved or acquired, and no other reasonable and prudent alternative exists.
- Where a road is needed in conjunction with the continuation, extension, or renewal of a mineral lease issued before the effective date of rulemaking, and includes any new lease issued immediately upon expiration of an existing lease. Such road construction or reconstruction must be conducted in a manner that minimizes effects on surface resources, prevents unnecessary or unreasonable surface disturbance, and complies with all applicable forest plan direction, regulations, and laws. These roads must be obliterated when no longer needed for the purposes of the lease or upon termination or expiration of the lease, whichever is sooner.

Linear Construction Zones (LCZs)

The 2001 Roadless Rule has no specific restrictions regarding construction or use of LCZs.

V. Background and Assumptions for the Effects Analysis

Relationship to other Management Direction and Decisions

Management of National Forest System lands is governed by a variety of federal land management statutes (laws), regulations, Executive Orders, and the Forest Service Directive System (Forest Service Manual (FSM) and Handbooks (FSH)). These would remain in effect. This state-specific rule would supersede the 2001 Roadless Rule and would have precedence over any less-protective Forest Plan direction.

The programmatic decision to establish the Colorado Roadless Rule would not authorize any individual ground-disturbing actions nor would it have direct effects on listed species or critical habitats. The indirect effects of implementing the regulation later in time are estimated based on projections of probable actions, and are evaluated primarily in qualitative and comparative terms.

Future projects would be subject to their own site-specific analysis, ESA Section 7 consultation, and decision-making procedures. Site-specific design criteria or mitigation measures would be incorporated into project planning and implementation to avoid or minimize adverse effects to threatened and endangered species or adverse modification of their critical habitats to the extent possible.

Effects of Climate Change

Climate change is affecting terrestrial and aquatic species and habitats across Colorado and the U.S. Some of these changes are unlikely to occur to a measurable extent over the next 15 years, but other changes have already been documented. For example, earlier snowmelt near

Crested Butte, Colorado, has been found to result in earlier flowering of some subalpine plants (Inouye 2008).

Climate change can be expected to alter the distribution of plants and other species (Hansen et al. 2001; Intergovernmental Panel on Climate Change 2007). Some species will be more vulnerable to the effects of climate change than others (Millar et al. 2007).

Alpine species may be among those in the most precarious situations. With climate change, tree lines will move higher in elevation. Alpine habitats will contract in size and mountain-top patches will become increasingly isolated. Alpine plants and animals will have little opportunity to migrate to higher terrain; some are already on the highest peaks in Colorado and are isolated from other potentially suitable habitat. This will result in a decline and possibly even loss of alpine-associated species such as the Uncompahgre fritillary butterfly and Penland's cutrema.

Average annual temperature increases due to increased greenhouse gases such as carbon dioxide will likely lead to reduced spring snowpack, more precipitation falling as rain rather than as snow, and earlier spring peak runoff (Backlund et al. 2008). For species such as white-tailed ptarmigan, lynx, and wolverine that rely on cold, snowy environments, warmer temperatures could lead to significant decreases in available habitat and lowered reproduction and survival. More variable flows and temperatures in streams and rivers will profoundly affect aquatic species such as the greenback cutthroat trout.

Climate change is affecting phenology (the timing of biological events), involving aspects such as pollination, flowering, and migration. For example, pollinators may be capable of shifting northward, but may leave some plant species incapable of producing viable seeds. Earlier flowering dates subject the plants to frost, resulting in significantly lower seed production (Inouye 2008). This reduced seed production can then lead to changes in plant community composition, which may alter habitat suitability for some plants, their pollinators, and animals. Bird migration, which formerly was synchronized with maximum food availability, may now occur too late, resulting in lowered reproductive success and survival.

Climate change is likely to exaggerate the scale and intensity of natural disturbances such as wildfire and bark beetle epidemics. Larger and more intense fires and insect outbreaks can be expected in Colorado in the future. This may affect the ability of individuals, such as Preble's meadow jumping mice or Pawnee montane skipper larvae, to survive the direct effects of fire. While many adult animals are mobile enough to flee burning areas or seek refuge, the young of the year are often most vulnerable to injury and mortality from fire (Smith 2000). Colorado forests currently are experiencing significant mortality as a result of severe mountain pine beetle and spruce beetle outbreaks. As the dead trees fall, this may contribute to larger, more severe wildland fires occurring in and around roadless areas in the future.

Additional stressors such as competition from invasive species or changes in land use will further challenge the ability of plants and animals to adapt to climate change (USDA Global Change Program Office 2001).

Tree-cutting, Sale or Removal

Under the 2001 Roadless Rule, tree cutting is allowed where needed to maintain or restore the characteristics of ecosystem composition and structure. This would apply primarily in the ponderosa pine/Douglas-fir and pinyon-juniper forest-cover types. Lodgepole-pine cover types rarely fit this exception. No associated road construction is allowed. Tree-cutting is allowed in IRAs to improve habitat for threatened, endangered or sensitive species.

Under the Colorado Roadless Rule, there are more conditions under which tree cutting, sale or removal would be allowed as compared to the 2001 Rule, except in upper tier acres. Most tree cutting, sale, or removal would occur for hazardous fuel reduction within 0.5 mile of at-risk communities or to protect municipal water supplies. Temporary roads could only be constructed within the first 0.5 mile of the CPZ. Merchantable logs would primarily be skidded (dragged) to nearby roads using conventional ground-based systems, although cable or helicopter yarding equipment may also be used to transport logs (partially or fully suspended off the ground) to a landing site or clearing along a road. Fuels reduction projects within CRAs are projected to occur in lodgepole pine, ponderosa pine/Douglas-fir, and pinyon-juniper forest cover types. Extensive areas of lodgepole pine have been killed by bark beetles, and removal of dead trees would likely include commercial timber harvest. Tree-cutting in the pinyon-juniper and ponderosa pine/Douglas-fir cover types for fuel reduction purposes would focus on mostly smaller-size trees rather than larger, commercial-size trees. Tree-cutting treatments without wood product removal may involve masticating (using machines that shred standing trees), chipping, or slashing methods. Wood product removals may also be for non-commercial purposes, such as for personal use firewood or fence posts.

Under the Colorado Roadless Rule, tree cutting to maintain or restore ecosystem characteristics would include projects that are designed to reduce tree mortality from the spread of insects and diseases. Temporary roads are allowed for these treatments when they are within 0.5 mile of an at-risk community.

Prescribed fire is allowed both in IRAs under the 2001 Roadless Rule and in CRAs under the Colorado Roadless Rule. Tree-cutting in roadless areas would most often be followed by prescribed burning, to reduce slash accumulations from the thinning treatments and restore favorable conditions for seeds to germinate. Prescribed burning could in some situations occur without first thinning the trees, and could also occur in shrublands or grasslands. Prescribed fire projects may also include cutting trees for a fire break, which is considered "incidental" to the prescribed fire. Examples of other types of incidental tree cutting that would be allowed in association with an otherwise permitted purpose include removal of hazard trees for public health and safety reasons; fire line construction for wildland fire suppression; maintenance of property boundaries; mining operations; maintenance of power or water lines; and trail maintenance or construction.

Tree cutting and removal for personal or administrative use would be allowed and would likely continue at historical levels in IRAs and CRAs. Personal use includes activities such as cutting Christmas trees and firewood. Administrative use includes activities such as construction of fences or footbridges.

All tree-cutting and removal treatments in roadless areas would incorporate applicable forest plan standards and guidelines and other environmental protection requirements. For example, ground-disturbing activities would not likely take place in wetlands, riparian areas, rare plant populations, heritage resource sites, or on very steep erodible slopes. In addition, tree-cutting and removal activities would be specifically designed to minimize impacts on roadless characteristics.

The low market value of small-diameter trees is expected to limit the amount of tree-cutting treatments in roadless areas. The steep, rugged terrain within many roadless areas and the high costs associated with either helicopter logging or road building further limit the amount of tree-cutting activity that would be economically feasible.

Table 8 presents the estimate of total tree-cutting acres foreseeable in the next 15 years in roadless areas. All estimates shown are annual averages and would be expected to vary from

year to year. Under the Colorado Roadless Rule, the acres of tree-cutting would be about twice the acres allowed under the 2001 Roadless Rule, and less than half of the allowable acres under the existing forest plans.

Table 8. Estimated Average Annual Tree Cutting, Sale, or Removal Projections by Purpose in Roadless Areas under the 2001 Roadless Rule, the Colorado Roadless Rule, and Forest Plans (thousands of acres).

Projected Tree Cutting, Sale, or Removal	2001 Roadless Rule		Colorado Roadless Rule		Forest Plans All roadless acres
	IRA Roadless	Other roadless	CRA Roadless	Substantially altered acres	
Hazardous fuels reduction treatments	30	860	4,900	610	13,350
Restore and maintain ecosystem	1,410	250	930	700	3,690
TEPS habitat improvement	50	0	60	0	80
Other ¹	20	40	90	40	260
<i>Acres of Total Tree Cutting, Sale, or Removal²</i>	<i>1,520</i>	<i>1,150</i>	<i>5,970</i>	<i>1,350</i>	<i>17,380</i>

Data source: Forest Service Region 2, August 2011

1) Other includes tree cutting that is incidental to the implementation of a management activity and tree cutting for personal or administrative use

2) Totals might not add due to rounding

Road Construction and Reconstruction

Currently, according to the Forest Service’s INFRA-GIS roads databases (August 2011), there are approximately 1,200 miles of forest roads and 42 miles of other authorized roads (state, county, local and private roads) that occur within substantially altered portions of IRAs. There are no authorized roads that occur in CRAs. Inventories indicate that at least 45 miles of unauthorized roads exist in IRAs and CRAs, although this may be an underestimate. It is anticipated that, in most cases, the unauthorized roads, as well as some of the authorized roads, within the analysis area would be decommissioned as budgets allow.

The estimated future miles of road construction and reconstruction within IRAs, CRAs and under existing forest plan direction for all unroaded areas, are compared in Table 9. The Colorado Roadless Rule would allow more road construction/reconstruction in CRAs than would be allowed in IRAs under the 2011 Roadless Rule, for the purposes of tree cutting and removal (fuels treatment and ecosystem restoration/maintenance) and coal mining. Roads built to support mineral and energy developments—such as for oil, gas, and coal development—are temporary roads that must be maintained during their life. As with all roads constructed in CRAs, these mineral and energy development roads would be closed to the public, and decommissioned after they are no longer needed for that specific authorized use.

All roads authorized to be constructed on NFS lands are designed in accordance with road engineering design standards in FSH 7709.59, along with applicable forest plan standards and guidelines and road standards, which include requirements for environmental protection.



Table 9. Projected average annual miles of road construction and reconstruction.

<i>Purpose for road construction or reconstruction</i>	<i>Miles in IRAs</i>	<i>Miles in other roadless</i>	<i>Miles in CRAs</i>	<i>Miles in substantially altered areas</i>	<i>Miles under forest plans</i>
Hazardous fuels reduction	0	0.8	1.8*	0.6	4.5
Maintain and restore ecosystems	0	0.1	0.8*	0.7	2.3
Recreation special uses (ski areas, rec residences, etc.)	0.1	0	0.1	0.3	0.4
Water conveyances	0.6	0	0.5	0.2	0.7
Utility special uses (power lines, etc.)	0.2	0	0.1	0.1	0.2
Hard rock minerals	0.3	0	0.3	0.0	0.3
Other roads (health and safety, federal highway, CERCLA)	0.2	0	0.3	0.1	0.6
Oil and gas	9.5	0.9	9.7*	0.7	11.9
Coal mining	0.5	0.6	3.3*	0.1	4.9
Total	11.4	2.4	16.9	2.8	25.8

- Temporary roads only and would be restored after use

Minerals

Saleable minerals include common mineral materials, such as sand, gravel, stone, cinders, and clay, that are used primarily for construction, building, or landscaping materials. They are generally of low value, depending on market factors, quality of the material, and transportation costs. Neither the 2001 Roadless Rule nor the Colorado Roadless Rule withdraw the roadless areas from development of mineral material sites. However, both prohibit road construction or reconstruction for this purpose which effectively precludes development of new sites. It is possible that new mineral material sites or expansion of existing sites could occur within IRAs or CRAs to provide material for new road construction or reconstruction associated with the exceptions, in instances where it is not economically feasible or environmentally preferable to obtain material from a source outside of an IRA or CRA.

Locatable minerals include base and precious metals such as gold, silver, lead, zinc and molybdenum. Valuable deposits of locatable mineral resources potentially exist in Colorado's roadless areas. Approximately 75 percent of the roadless areas (IRA and CRA combined) in Colorado do not contain active mining claims. Of the remaining 25 percent, an estimated 2,000 active mining claims exist. This is 21 percent of the total 9,445 active mining claims in Colorado in 2005. Acres of interest where these mining claims occur represent only 2.2 percent of the total combined IRA and CRA area (102,000 acres out of 4,653,100 acres). Of those 2,000 active mining claims, about 30 percent occur within the Whetstone IRA (Whetstone CRA) on the GMUG, 17 percent in the Hoosier Ridge IRA (Hoosier Ridge CRA)



on the White River, and 11 percent in the Hermosa IRA (Hermosa CRA) on the San Juan National Forest. The remaining 42 percent of active mining claims in roadless areas are less concentrated. These minerals are appropriated through the location of mining claims under the General Mining Law of 1872, as amended. This law and its amendments provide United States citizens a possessory right to these minerals, use of the surface for purposes reasonably incident to mining, and a right to reasonable access to these minerals across Federal land. As these rights are granted by statute, they are not subject to the prohibitions of either the 2001 Roadless Rule or the Colorado Roadless Rule.

Oil and Gas

All national forests in Colorado have some areas with at least minimal geologic potential for natural gas and/or oil occurrence. However, only three forests have sizable areas in proven, natural-gas-producing geologic basins, and consequently, have high potential for development. Most areas that have potential for oil and gas occurrence are available for leasing under existing leasing decisions and forest plans. Overall, out of 4.24 million acres in 327 IRAs, 305,780 acres in 14 IRAs have high potential for oil and gas development to occur somewhere in an IRA. Out of 4.19 million acres in 363 CRAs, 277,600 acres in 16 CRAs have high potential for oil and gas development to occur somewhere in a CRA. 337 of the proposed CRAs do not have existing oil and gas leases, and were assumed to have low to moderate potential for oil and gas occurrence and low to no potential for development.

Table 10 identifies the acres currently leased within 27 CRAs, and the acres leased with No Surface Occupancy stipulations. The 27 proposed CRAs contain 157,760 leased acres on the Grand Mesa, Uncompahgre and Gunnison (GMUG), White River, San Juan, Manti-La Sal, Routt, and Pike-San Isabel National Forests. Roads would be allowed in conjunction with leases covering 134,003 acres, and roads would be prohibited in conjunction with leases covering 23,757 acres.

Eight CRAs (Roc Creek on the Manti-La Sal, Electric Mountain, Kannah Creek, Salt Creek on the GMUG, Pagoda Peak on the Routt, South San Juan Adjacent, Winter Hills/Serviceberry Mountain on the San Juan, and Rampart East on the Pike-San Isabel National Forests) are leased but considered to have low development potential. Oil and gas wells and roads are not projected in these CRAs, although there is some uncertainty in this projection. Three of the CRAs – Battlements and Sunnyside on the GMUG National Forest and Housetop Mountain on the White River National Forest – have high development potential based on geologic factors, high level of leasing, and proximity to development. However, No Surface Occupancy lease stipulations will prohibit future development in these CRAs.

Sixteen of the proposed CRAs (Table 11, CRAs in boldface) are considered to have high potential for oil and gas roads and development activity in the next 15 years. On existing leases in CRAs with high oil and gas occurrence and development potential on the GMUG, San Juan, and White River National Forests, a total of up to 715 wells on 162 pads (600 acres) with about 146 miles of road access are projected to be built.

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Table 11. Acres leased in proposed CRAs as of June 2011. Leased acres with terms allowing surface occupancy and road construction or reconstruction somewhere on lease and leased acres with terms prohibiting surface occupancy or road construction or reconstruction over entire lease. CRAs in boldface are considered most likely to have oil and gas development and roads associated with existing leases issued prior to the Colorado Roadless Rule.

Forest	Proposed CRA ¹	Acres leased	Leased acres with terms allowing surface occupancy	Leased acres with terms prohibiting surface occupancy
GMUG	Battlements ³	4,601	0	4,601
	Clear Fork	13,386	13,386	0
	Currant Creek	791	791	0
	Electric Mountain ²	59	59	0
	Flat Tops/Elk Park	1,339	1,339	0
	Hightower	1,347	1,347	0
	Horsefly Canyon	1,365	1,365	0
	Huntsman Ridge	5,162	5,162	0
	Kannah Creek ²	146	146	0
	Pilot Knob	17,230	17,230	0
	Salt Creek ²	160	160	0
	Sunnyside ³	4,036	0	4,036
	Tomahawk	2,135	2,135	0
Turner Creek	6,883	6,883	0	
Manti-LaSal	Roc Creek ⁴	3,722	1,922	1,800
Routt	Pagoda Peak ²	214	214	0
Pike-San Isabel	Rampart East ⁴	10,368	10,368	0
San Juan	HD Mountains	22,066	18,918	3,148
	South San Juan Adjacent ²	85	85	0
	Winter Hills/Serviceberry Mountain ²	425	425	0
White River	Baldy Mountain	6,123	6,123	0
	East Divide/Four Mile Park	8,637	8,637	0
	East Willow	4,657	4,657	0
	Housetop Mountain ³	7,021	0	7,021
	Mamm Peak	12,314	9,163	3,151
	Reno Mountain	9,233	9,233	0
	Thompson Creek	14,255	14,255	0
Totals		157,760	134,003	23,757

1) Leased acres with terms allowing surface occupancy and road construction or reconstruction somewhere on lease and leased acres with terms prohibiting surface occupancy or road construction or reconstruction over entire lease. CRAs in boldface are considered most likely to have oil and gas development and roads associated with existing leases issued prior to the Colorado Roadless Rule.

2) CRAs with fewer than 640 acres under lease are considered to have such a small percentage of the roadless area leased that there would be essentially no potential for development and associated roads in the CRA.

3) CRAs have low development potential due to No Surface Occupancy stipulations on leases.

4) CRAs have low development potential due to less favorable positions in oil and gas basins, relatively small lease areas, distance from proven production, and/or unsuccessful attempts at establishing production in or near the IRAs.



Coal Mines

New roads in roadless areas that are reasonably foreseeable in the next 15 years to support coal operations (exploration and development) would be limited to the North Fork coal mining area on the Grand Mesa, Uncompahgre, and Gunnison National Forests. Forest plans acknowledge the presence of coal resources in other locations on those National Forests, as well as on four other National Forests; however, no coal activity would be expected to occur on those Forests during the planning period.

New roads in roadless areas for underground coal mining would likely be needed to support surface facilities such as ventilation shafts, methane drainage wells, and monitoring facilities. New roads in roadless areas for coal operations would be limited to areas where surface use is consistent with lease stipulations and road building is allowed. Road building projections for roadless areas were made by estimating that about four exploration holes per 640-acre section would be needed, based on recent experience with coal lease developments on NFS land. In addition, it was estimated that over the next 15 years, approximately six or seven coal exploration licenses may be brought forward into the North Fork coal mining areas that overlap roadless areas, and four new coal leases may be issued for those areas.

No geothermal or other energy resource developments are anticipated to occur in the roadless areas over the next 15 years.

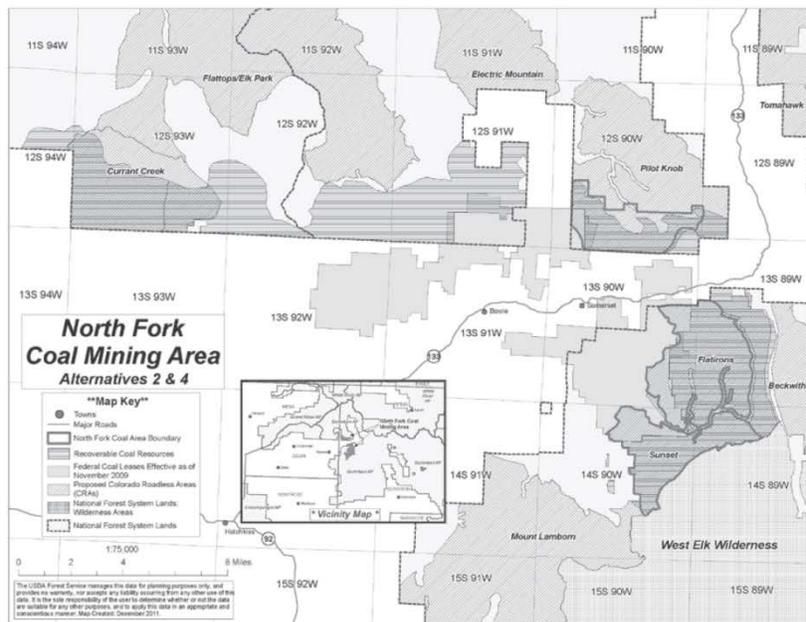


Figure 2. North Fork coal mining area on the Grand Mesa, Uncompahgre and Gunnison National Forests.



Livestock Grazing

Livestock grazing is managed in portions of many of the roadless areas, as displayed in Table 12. In addition to actively grazed allotments, there are a number of vacant allotments where there is no current grazing permit in effect but which could be permitted in the future. Permitted livestock may include cattle, sheep, horses or other kinds of livestock. The Colorado Roadless Rule would not change current grazing permits or practices.

Table 12. Livestock grazing allotment acres (active and vacant) within roadless areas.

<i>National Forest</i>	<i>Acres of Allotments in IRAs</i>	<i>Acres of Allotments in CRAs</i>
Arapaho and Roosevelt	136,00	126,000
Grand Mesa, Uncompahgre and Gunnison	1,068,000	794,000
Manti-La Sal	11,000	8,000
Pike and San Isabel	238,000	225,000
Rio Grande	434,000	424,000
Routt	421,000	412,000
San Juan	591,000	539,000
White River	502,000	500,000
Total	3,400,000	3,028,000

Totals may not add due to rounding.

VI. Effects on Federally-listed Terrestrial Wildlife Species

Under the Colorado Roadless Rule, about 4.19 million acres would be managed to maintain roadless characteristics. About 1.29 million of these would be identified and managed as upper tier roadless acres. CRAs range in elevation from approximately 7,000 to 14,000 feet above sea level. Compositionally, the predominant vegetation cover types are spruce-fir, aspen, lodgepole pine, and Douglas-fir, with smaller amounts of ponderosa pine, pinyon-juniper woodlands and oak brush at lower elevations. Habitat structural stages ranging from grass/forb and shrub/sapling through late successional forest are represented. Mature and old forest conditions are currently predominant in spruce-fir forests. Extensive stands of mature lodgepole pine are now dead due to a recent mountain pine beetle epidemic and are converting to an early successional stage.



Summary of the Proposed Action and General Effects on Wildlife

Road construction and vehicular travel removes and fragments habitat, may reduce habitat effectiveness due to avoidance behavior, may increase fish and wildlife mortality, and creates opportunities for invasive species introduction, establishment and spread. Under this alternative, most roads within CRAs would be temporary, used only for the permitted activity, and decommissioned immediately after completion of the activity. However, temporary roads would be available to foot traffic, bicycles, horseback riding, and other activities which can have negative effects on wildlife and introduce weeds. In addition, unauthorized use of closed or restricted roads has historically been difficult to control and may continue for some period of time following decommissioning. This may increase the duration of effects on wildlife.

The estimated amount of new road construction within CRAs under the Colorado Roadless Rule is about 16.9 miles/year. An additional 2.8 miles/year would occur in other roadless areas (not included in the CRA inventory, i.e. substantially altered areas) that would be managed according to their respective forest plan. Most of these would be temporary roads. The purpose for the majority of the roads that may be constructed within CRAs would be to access existing oil and gas leases or for coal mining operations. The amount of road construction and reconstruction within CRAs is slightly higher than under the 2001 Rule, and substantially lower than under the existing forest plans.

Tree cutting would be allowed to reduce hazardous fuels, to maintain or restore ecosystem structure and function, and to improve habitat for threatened, endangered and sensitive species in non-upper tier acres; these exceptions would not be allowed in upper tier acres. Tree cutting would be allowed in upper tier only for incidental removal and personal/administrative use. The overall estimated acreage to be treated within the CRAs would be about 4,900 acres/year to reduce hazardous fuels, about 930 acres/year for ecosystem restoration and maintenance, and about 60 acres/year for threatened, endangered and sensitive species habitat improvement. Other roadless areas that were included in IRAs but removed from CRAs (substantially altered acres), tree-cutting projections are about 1,350 acres/year, mostly to reduce hazardous fuels and for ecosystem restoration and maintenance.

Vegetation management involving tree-cutting could be beneficial for species that inhabit lower elevation forests with frequent low-intensity fire regimes. Removal of diseased, dead, and down materials could have negative impacts on primary cavity nesters, although Forest Plan requirements for retention of snags and down logs would help limit negative effects.

Prescribed fire is the most common method currently used for wildlife habitat improvement. The Colorado Roadless Rule would not restrict its use within CRAs. Prescribed fire would likely continue to be the primary tool used to improve terrestrial wildlife habitat.

The Colorado Roadless Rule would prohibit linear construction zones (LCZs) within CRAs, subject to limited exceptions. In all of the exceptions, the decision as to the type of road constructed or the use of an LCZ will be that which meets the purpose and has the shortest duration on the land. The rule would require that LCZs be co-located within road rights-of-way where possible and would require decommissioning when no longer needed. Annual miles of LCZs projected to occur would be about 3.3 miles in CRAs and about 1.4 miles in substantially altered acres. This prohibition would be beneficial for aquatic and terrestrial wildlife, and any adverse effects related to the exceptions would be local and minor.

Southwestern Willow Flycatcher

Summary of FWS' 5-factor analysis in the listing decision for this species.

Listing Rule	Factor A (Habitat)	Factor B (Overutilization)	Factor C (Disease)	Factor D (Regulatory)	Factor E (Other)
02/27/1995	Habitat loss and modification due to urban and agricultural development, water diversion, impoundment, channelization, excessive livestock grazing, off-road vehicle and recreational uses, invasion by nonnative plants (e.g., tamarisk), and hydrological changes	N/A	Predation may be a threat where habitat is fragmented	MBTA and state listings do not ensure habitat protection	Disjunct habitats and small, isolated populations increase risk; brood parasitism by expanding populations of brown-headed cowbirds reduces nest success; direct mortality by livestock

- A – Present or threatened destruction, modification, or curtailment of its habitat or range
- B – Overutilization for commercial, recreational, scientific or educational purposes
- C – Disease or predation.
- D – Inadequacy of regulatory mechanisms
- E – Other natural or manmade factors

The southwestern willow flycatcher breeds in dense riparian habitats within its range in the southwestern United States, and winters in southern Mexico, Central America, and northern South America (U.S. Fish and Wildlife Service 2002). The exact placement of the boundary between the endangered southwestern subspecies (*Empidonax trailii extimus*) and the more northern and non-endangered subspecies (*E. t. adastus*) is uncertain, because genetic analysis has shown evidence of intergradations and the boundary region is sparsely populated (Paxton et al. 2008). The boundary has been approximated as running through southern Colorado and Utah. Latitudinal and elevational gradients have likely contributed to subspeciation.

No critical habitat is designated in Colorado (Federal Register vol. 70, no. 201, pp. 60886-61009, Oct. 19, 2005).

The breeding range of the southwestern willow flycatcher is characterized by riparian habitats in the lower elevation desert habitats. Known occurrences in Colorado to date are at elevations below about 8,500 ft.

The southwestern willow flycatcher feeds primarily on flying insects. Adults arrive on breeding grounds in late April to early May, with fledging of young from late June to mid-August. Typically only one brood is raised per year. (Life history information from FWS' online species profile.)

Effects of the Federal Action

Fifteen CRAs on the Rio Grande and Manti-La Sal National Forests provide potential habitat for the southwestern willow flycatcher. Thirteen of these CRAs have acres in upper tier.

Development within any of these CRAs is unlikely. In all but one of the CRAs containing habitat for the southwestern willow flycatcher, no road construction or tree cutting are



projected to occur during the planning horizon. The one exception could be tree cutting to allow for fuels treatments within a community protection zone in a CRA, although such treatments would be unlikely to impact the riparian willow habitat used by this species.

Determination of Effect and Rationale

Based on the very limited level of vegetation management and water development activities that would be allowed and projected to occur in CRAs, there could be some local direct or indirect effects, but these would be minor. I conclude that implementation of the Colorado Roadless Rule is “not likely to adversely affect” the southwestern willow flycatcher.

Mexican Spotted Owl

Summary of FWS’ 5-factor analysis in the listing decision for this species.

Listing Rule	Factor A (Habitat)	Factor B (overutilization)	Factor C (Disease)	Factor D (Regulatory)	Factor E (Other)
03/16/1993	Even-aged timber harvest; wildfire; loss of lower to middle elevation riparian habitat; recreational development; fragmentation	N/A	Predation by great horned owls where forest management fragments habitat	Policies that have been developed are not uniformly implemented	Wildfires; expansion of barred owl range

- A – Present or threatened destruction, modification, or curtailment of its habitat or range
- B – Overutilization for commercial, recreational, scientific or educational purposes
- C – Disease or predation.
- D – Inadequacy of regulatory mechanisms
- E – Other natural or manmade factors

The majority of the Mexican Spotted Owl population is in New Mexico and Arizona, with smaller numbers in Colorado and Utah (U.S. Fish and Wildlife Service 2011). A total of about 263,000 acres in Colorado were designated as critical habitat in 2004 (Federal Register vol. 69, no. 168, pp. 53182-53298).

In Colorado, Mexican Spotted Owls are found in canyon habitats dominated by vertical-walled rocky cliffs within complex watersheds, including tributary side canyons (Johnson 1997). Rock walls with caves, ledges, and other areas provide protected nest and roost sites. Canyon habitat may include small isolated patches or stringers of forested vegetation including stands of mixed-conifer, ponderosa pine, pine-oak, pinyon-juniper, or riparian vegetation in which owls regularly roost and forage. Owls are usually found in areas with some type of water source (i.e., perennial streams, springs, ephemeral water, small pools from runoff, reservoirs).

Mated pairs are territorial. Most adults remain on the same territory year after year. Protected Activity Centers (PACs) are defined in the 1995 Recovery Plan as the area of concentrated use by a single owl or pair of owls and provide a focus for management. The minimum PAC area is 600 ac, with a smaller core area (100 ac) within PACs that include the most frequently used roosting sites and nest locations. Habitat used for nesting and roosting within PACs is emphasized because the owls are most selective for such habitat (Ganey and Dick 1995).



Juvenile owls disperse into a variety of habitats ranging from high-elevation forests to pinyon-juniper woodlands and riparian areas surrounded by desert grasslands. Observations of long-distance dispersal by juveniles provide evidence that they use widely spaced islands of suitable habitat which are connected at lower elevations by pinyon-juniper and riparian forests.

Owl foraging habitat includes a wide variety of forest conditions, canyon bottoms, cliff faces, tops of canyon rims, and riparian areas. Owls feed mostly at night, and primarily prey on small mammals, particularly mice, voles, and woodrats. (Life history information from FWS' online species profile.)

Effects of the Federal Action

The 1995 recovery plan for the Mexican spotted owl recognized that treatment of fuels to reduce the threat of uncharacteristically severe wildfires is very important to sustaining owl habitat over time. Climate change, which may intensify natural drought cycles and the ensuing stress placed upon overstocked forested habitats, may result in even larger and more severe fires in owl habitat and increase the negative effects (U.S. Fish and Wildlife Service 2011).

At least 29 CRAs across six national forests have known occurrences or potential habitat for the Mexican spotted owl. Ten CRAs on the Pike-San Isabel National Forests contain critical habitat.

Under both the 2001 Roadless Rule and the Colorado Roadless Rule, tree cutting is allowed for the purposes of treating hazardous fuels, restoring ecosystems, and improving threatened, endangered and sensitive species habitats, although these exceptions are not permitted in upper tier CRAs. There is no restriction on the use of prescribed fire under either rule.

Fuels treatment and ecosystem restoration are projected to occur within the next 15 years in about 1/3 of the CRAs that have Mexican spotted owl habitat. Several of the CRAs that contain critical habitat are projected to have tree cutting and road development during the planning horizon. Where properly designed to maintain or restore owl habitat, vegetation management in accordance with the rule could have beneficial effects on this species and its critical habitat.

Temporary road construction and oil, gas or coal development could remove some habitat and cause habitat fragmentation and displacement of owls. These effects are most likely to occur in the HD Mountains CRA on the San Juan NF. Site-specific analysis would be required and project design may be able to reduce the potential impacts.

Determination of Effect and Rationale

Based on the activities allowed and projected to occur in roadless areas, there may be some local effects, both beneficial and adverse, on the Mexican spotted owl and its designated critical habitat. Treatment of fuels to prevent uncharacteristically severe wildfires, one of the threats to this species, is allowed under the 2001 Roadless Rule as well as the Colorado Roadless Rule, although mechanical treatment is restricted in the upper tier. The exceptions for road construction and oil, gas and coal development under the Colorado Roadless Rule could result in some local adverse effects on the Mexican spotted owl. I conclude that the Colorado Roadless Rule is "not likely to adversely affect" the Mexican spotted owl and "not likely to adversely modify" its critical habitat.

Pawnee Montane Skipper

Summary of FWS' 5-factor analysis in the listing decision for this species.

Listing Rule	Factor A (Habitat)	Factor B (overutilization)	Factor C (Disease)	Factor D (Regulatory)	Factor E (Other)
09/25/1987	Construction of Cheesman reservoir and proposed Two Forks Dam and Reservoir, roads, housing, ORVs, recreation	Over-collection is possibly increasing	N/A	Not protected	Aerial application of insecticides such as used for bark beetles (possible)

A – Present or threatened destruction, modification, or curtailment of its habitat or range

B – Overutilization for commercial, recreational, scientific or educational purposes

C – Disease or predation.

D – Inadequacy of regulatory mechanisms

E – Other natural or manmade factors

The Pawnee montane skipper occurs within a very restricted range of about 38 square miles of the South Platte River system. This subspecies occurs in dry, open, ponderosa pine woodlands with sparse understory and on moderately steep slopes with soils derived from the Pikes Peak granite formation. No critical habitat is designated because it was determined to be not prudent (Federal Register vol. 52, no. 186, pp. 36176-36180, Sept. 25, 1987).

The Pawnee montane skipper completes its life cycle (egg to larva to pupa to adult butterfly to egg) annually. Adults emerge as adult butterflies as early as late July and probably fly until a major killing frost occurs. Adult females deposit eggs singly on leaves of blue grama grass (*Bouteloua gracilis*), the larval food plant. The species overwinters as larvae. Pupation is generally short (13-23 days), as in most butterflies. The phenology of prairie gayfeather (*Liatris punctata*), the primary nectar plant, and the presence of the skipper are highly synchronous. Other plants, such as musk thistle (*Carduus nutans*) have also been noted as nectar sources (U.S. Fish and Wildlife Service 1998).

The open ponderosa pine habitat of the Pawnee montane skipper is characterized by frequent, low intensity fires, and both prairie gayfeather and Pawnee montane skippers have been found to respond positively to thinning treatments (Drummond 2008).

Effects of the Federal Action

This species and its habitat have been identified within four CRAs, none of which are in upper tier. A small (150 ac) fuels treatment project and a special use road are projected to occur in CRAs with skipper habitat during the next 15 years.

As with the 2001 Roadless Rule, tree cutting is allowed under the Colorado Roadless Rule to treat hazardous fuels, restore ecosystems, and to improve T&E and sensitive species habitats. Fuels treatments can be designed to benefit this species by restoring the open-canopy structure to its ponderosa pine habitat.

The Colorado Roadless Rule allows more temporary road construction than is allowed under the 2001 Roadless Rule. Thus there is some potential in the four CRAs where this species occurs for trampling of individuals or damage to their larval or nectar plants.



Determination of Effect and Rationale

The provisions of the Colorado Roadless Rule would provide a similar level of protection to the skipper as the 2001 Roadless Rule except that there could be more impact from temporary roads. Based on the activities allowed and projected to occur in roadless areas, there could be some local, short-term adverse effects from vegetation management but it is likely that such activities would result in a long-term improvement in habitat conditions. I conclude that the Colorado Roadless Rule is “not likely to adversely affect” the Pawnee montane skipper.

Uncompahgre Fritillary Butterfly

Summary of FWS’ 5-factor analysis in the listing decision for this species.

Listing Rule	Factor A (Habitat)	Factor B (overutilization)	Factor C (Disease)	Factor D (Regulatory)	Factor E (Other)
08/05/1991 Status review 01/05/2010	Possibly trampling	Over-collection	N/A	Mostly occurs in wilderness but protections are discretionary	Small population size and limited genetic variability, climatic stress (e.g., drought)

- A – Present or threatened destruction, modification, or curtailment of its habitat or range
- B – Overutilization for commercial, recreational, scientific or educational purposes
- C – Disease or predation.
- D – Inadequacy of regulatory mechanisms
- E – Other natural or manmade factors

The Uncompahgre fritillary is a small butterfly that exists above tree line in patches of its larval host plant, snow willow (*Salix nivalis*) (U.S. Fish and Wildlife Service 1994). Only two populations were known to exist at the time of its listing, but 11 colonies are now known (U.S. Fish and Wildlife Service 2009). Populations fluctuate annually but appear to be relatively stable overall (Alexander and Keck 2007). No critical habitat was designated when the species was listed (Federal Register vol. 56, p. 28712, June 24, 1991).

The species is believed to have a biennial life history, which means that it requires two years to complete its life cycle. The butterflies live as adults for only 1-2 weeks. Females lay their eggs on snow willow. Adults take nectar from a wide range of flowering alpine plants (U.S. Fish and Wildlife Service 1994).

The core populations and potential habitat for the Uncompahgre fritillary on the San Juan National Forest are located within designated Wilderness Areas. Fourteen CRAs on the GMUG, Pike-San Isabel, Rio Grande, and White River National Forests contain known or historical occurrences and/or potential habitat for this species.

Since its listing, some threats have been addressed, for example by issuing collecting closures, re-routing hiking trails, and not allowing sheep grazing in Uncompahgre fritillary habitat. Currently, the only observable impacts are caused by relatively minor habitat degradation from hiking trails on the edge of colonies at Mt. Uncompahgre and Redcloud Peak and short-term impacts from rapid sheep trailing/grazing through Mt. Uncompahgre. None of these actions are occurring at a level considered to be a threat to the species.



Climate change could reduce the extent of habitat and increase its isolation, as well as reduce population size and genetic variability. Although these effects have not been observed to date, climate change remains a potential future threat (U.S. Fish and Wildlife Service 2009).

Effects of the Federal Action

Fourteen CRAs contain habitat or known populations of the Uncompahgre fritillary butterfly. These high-elevation areas would have similar levels of protection under the 2001 Roadless Rule and the Colorado Roadless Rule. Almost all of the CRAs would have a greater degree of protection as compared with the current forest plan.

Road construction or tree-cutting are not projected to occur except in three CRAs, where a fuels treatment, a watershed restoration project, and road access to a private land inholding are possible developments. However, these activities are unlikely to occur at the very high elevations where habitat for the Uncompahgre fritillary butterfly exists.

Determination of Effect and Rationale

Very few developmental activities are projected to occur in CRAs that support populations of the Uncompahgre fritillary and would only have short term or local effects. I conclude that implementation of the Colorado Roadless Rule is “not likely to adversely affect” the Uncompahgre fritillary butterfly.

Canada Lynx

Summary of FWS’ 5-factor analysis in the listing decision for this species.

Listing Rule	Factor A (Habitat)	Factor B (overutilization)	Factor C (Disease)	Factor D (Regulatory)	Factor E (Other)
07/03/2003 (remanded rule)	Some timber harvest activities, such as precommercial thinning, may reduce habitat quality; fire suppression likely has had little effect; fuels treatment could reduce the quality of snowshoe hare habitat in local areas	Incidental mortality may occur from trapping; illegal harvesting is low	N/A	Federal agency land management plans need to be amended to include measures to conserve lynx	Loss of habitat connectivity due to highways and other development

A – Present or threatened destruction, modification, or curtailment of its habitat or range

B – Overutilization for commercial, recreational, scientific or educational purposes

C – Disease or predation.

D – Inadequacy of regulatory mechanisms

E – Other natural or manmade factors

The Canada lynx is a medium-sized cat that is a specialized predator of snowshoe hares. The contiguous United States distinct population segment of the Canada lynx is listed as threatened. No critical habitat is designated in the state of Colorado (Federal Register vol. 74, no. 36, pp. 8616-8702, Feb. 25, 2009).



In the contiguous United States, lynx are distributed at low densities across subalpine coniferous forests in the West and mixed coniferous/ deciduous forest in the East. Lynx habitat in Colorado and southeastern Wyoming is separated from southern boreal forests in Utah and northwestern Wyoming by the Green River Valley and the Wyoming Basin. At its southern margins, the boreal forest becomes naturally fragmented into small patches compared to the extensive northern boreal forest of Canada and Alaska. Colorado is at the southern edge of the range of the species (McKelvey et al. 2000).

Lynx habitat in Colorado is typically between 8,700 and 11,700 feet in elevation, on spruce-fir potential vegetation types. Dominant cover types include subalpine fir and Engelmann spruce, lodgepole pine, aspen-conifer mix, mixed conifer stands, as well as white spruce in the San Juan Mountains and Sangre de Cristo Range. Riparian willow communities provide important prey resources during the fall. Den sites are located at higher elevations (average 11,000 ft.), on steeper slopes (average 30 degrees), with more northerly aspects, and with larger amounts of coarse woody debris in the understory than other habitat (Shenk 2009).

The long-term success of the lynx reintroduction effort in Colorado hinges, at least in part, on maintaining adequate densities and distribution of snowshoe hares. Snowshoe hare densities were found to be highest in high-elevation, mature uneven-aged spruce-fir forests and in young, densely stocked conifer forests that have attained sufficient height above the characteristically deep snowpack to provide habitat for snowshoe hares. Both stand types develop dense horizontal cover that provides hares with both browse and protection from the elements and predators (Ivan 2011).

Effects of the Federal Action

Most of the CRAs provide lynx habitat. There is at least a low likelihood that some road construction and tree-cutting activities could occur in a number of those CRAs, primarily for the purpose of fuels treatments. However, fire suppression likely has had little effect on lynx habitat, which occurs at the higher elevations in spruce-fir forests where the fire regime is typified by infrequent stand-replacing fires. Therefore fuels treatments are not likely to be focused on lynx habitat except in community protection zones adjacent to at-risk communities.

Vegetation management activities such as fuels treatments in the spruce-fir habitats used by lynx would reduce habitat quality for lynx by removing horizontal cover needed to support its primary prey, snowshoe hares. Under the Southern Rockies Lynx Amendment, which amended the Forest Plans in Colorado, there is a cap by national forest on the overall amount of lynx habitat that can be affected by fuels treatment in the wildland urban interface (WUI). The analysis for the Southern Rockies Lynx Amendment stated that the cap should be sufficient to allow for all needed treatments to proceed. Nevertheless, there is a possibility that the cap could constrain treatments that otherwise would be allowed within CRAs, since forest plan guidance that is more restrictive than the Colorado Roadless Rule would take precedence.

Some of the CRAs overlap with landscape linkages identified for the Canada lynx. The Colorado Roadless Rule would limit development within these areas. However, about 8,300 acres of ski area terrain was excluded from CRAs, including 6,600 acres under existing permits and 1,700 acres outside permit boundaries but within forest plan allocations for future ski area development. These acres removed from the CRAs would be managed according to their respective forest plans. Three areas are of concern for lynx habitat connectivity: Williams Fork Ptarmigan Adjacent (Loveland Ski Resort on Arapaho-Roosevelt NF), Game Creek (Vail Ski Resort on White River NF), and Porcupine Creek (Arapaho Basin Ski Resort on White River NF). Williams Fork provides a land bridge for large carnivores and other wide-ranging

species across I-70 between the north and south parts of the state. Game Creek on the west side of Vail is a lynx linkage area (Dowd Junction), deer migration corridor, and elk winter range. The Porcupine Creek roadless area provides for wildlife movement between the Arapaho Basin and Keystone ski areas and is identified as a lynx linkage area (Loveland Pass linkage). Any future development within these areas will be subject to the Southern Rockies Lynx Amendment management direction and project-level analysis that will carefully consider impacts on habitat connectivity.

Lynx do not appear to avoid roads (except for highways with high traffic volume). It is possible that construction of new roads could potentially have a local negative effect on lynx if the amount of snow compaction were increased and if this led to increased competition with other predators. However snow compaction leading to possible increased competition with other predators is not believed to have a population-level effect on lynx (FWS remanded rule). Adverse effects would also be unlikely since any roads within CRAs would not be open to public use, and must be decommissioned when no longer needed.

Determination of Effect and Rationale

The primary factor that led to the decision to list the lynx was the lack of guidance in federal land management plan to conserve the lynx and its habitat. The forest plans in Colorado were amended by the Southern Rockies Lynx Amendment and now contain management direction to conserve the lynx. Whichever direction is more restrictive, either the forest plan or the Colorado Roadless Rule, will take precedence. Given the low level of development allowed and projected to occur in CRAs, and the protections existing in the current forest plans, I conclude that implementation of the Colorado Roadless Rule is “not likely to adversely affect” the Canada lynx.

Preble’s Meadow Jumping Mouse

Summary of FWS’ 5-factor analysis in the listing decision for this species.

Listing Rule	Factor A (Habitat)	Factor B (overutilization)	Factor C (Disease)	Factor D (Regulatory)	Factor E (Other)
08/05/2011 (reinstated 1998 rule)	Habitat loss, degradation, and fragmentation due to residential, commercial, and water development, and agricultural and livestock grazing land uses; threats also posed by hazardous materials, mining, and highway and bridge construction.	N/A	N/A	Few regional or local laws, regulations or ordinances exist that effectively protect the species or its habitat.	N/A

- A – Present or threatened destruction, modification, or curtailment of its habitat or range
- B – Overutilization for commercial, recreational, scientific or educational purposes
- C – Disease or predation.
- D – Inadequacy of regulatory mechanisms
- E – Other natural or manmade factors



Preble's meadow jumping mouse is a small mammal that inhabits riparian habitats along the Front Range of Colorado and the Laramie Mountains of southern Wyoming (Armstrong et al. 1997). About 12,400 acres of federal lands in Colorado have been designated as critical habitat (Federal Register vol. 75, no. 240, pp. 78430-78483, Dec. 15, 2010).

The Preble's meadow jumping mouse inhabits well developed riparian habitat with adjacent, relatively undisturbed grassland communities, and a nearby water source (Armstrong et al. 1997). Riparian habitat includes a dense combination of grasses, forbs and shrubs; a taller shrub and tree canopy may be present. Day nests are composed of grasses, forbs, sedges, rushes, and other available plant material. Hibernation nests are located underground both within and outside of the 100-year floodplain.

Hibernation nests are typically entered between September and October with emergence the following May (Armstrong et al 1997). Fat stores are accumulated prior to hibernation. The diet of the Preble's meadow jumping mouse shifts seasonally; it consists primarily of insects and fungi after emerging from hibernation in May, shifts to fungi, moss, and pollen during mid-summer (July and August), with insects again added in September. The Preble's meadow jumping mouse usually has two litters per year, with an average of five young born per litter. (Life history information from the online species profile at <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A0C2#recovery>.)

Effects of the Federal Action

This species is vulnerable to habitat alteration and disturbance during the short period during summer when it is not hibernating. Protective measures are also needed to minimize mortality caused by wildfire or other human activity during hibernation. The low-elevation areas inhabited by this species historically were characterized by high-frequency, low-intensity ground fires in which the riparian areas would not burn or would burn lightly.

Fifteen CRAs have known occurrences or provide suitable habitat for Preble's meadow jumping mouse. Fuels treatments are projected to occur in almost all of the CRAs with habitat for this species, with associated temporary road construction in a few CRAs. This is similar to the 2001 Roadless Rule, except that road construction is not allowed. Fuels reduction treatments (low to moderate intensity prescribed fire and mechanical treatments) could be beneficial for this species in the long term by reducing the risk of uncharacteristically severe wildfires. It is expected that project design would seek to avoid or minimize impacts to the low-elevation riparian habitat of this species, and to arrange the timing of activities to avoid harming individuals, although there could be some local short-term impacts from those activities.

Determination of Effect and Rationale

Based on the activities allowed and projected to occur in roadless areas, there could be some local short-term impacts related to fuels treatments, but it is expected that projects would be designed to minimize those effects. Overall, I conclude that the Colorado Roadless Rule is "not likely to adversely affect" the Preble's meadow jumping mouse, and is "not likely to adversely modify" designated critical habitat.



VII. Effects on Federally-listed Aquatic Species

Greenback Cutthroat Trout

Summary of FWS' 5-factor analysis in the listing decision for this species.

Listing Notice	Factor A (Habitat)	Factor B (overutilization)	Factor C (Disease)	Factor D (Regulatory)	Factor E (Other)
04/18/1978-downlisted 03/11/1967-listing	Competition and hybridization with introduced trouts, and habitat loss and degradation from mining, logging, grazing, and irrigation projects, excessive sedimentation	N/A	Whirling disease, predation from non-native salmonids	N/A	Introduction of nonnative trout, impoundments, water diversion, cumulative effects from multiple activities

A – Present or threatened destruction, modification, or curtailment of its habitat or range

B – Overutilization for commercial, recreational, scientific or educational purposes

C – Disease or predation.

D – Inadequacy of regulatory mechanisms

E – Other natural or manmade factors

The greenback cutthroat trout was thought to be distributed historically only on the Front Range of Colorado and a small adjoining area in Wyoming. By the early 1900s, it was extirpated throughout most of its range. Causes of the decline include land and water exploitation, mining, agriculture, logging, unregulated fishing, and especially the introduction of non-native salmonids that hybridized and competed with the native fish.

Recently, new genetic analysis techniques have revealed that the greenback subspecies also occurs in several streams on the western side of the Continental Divide. It remains unclear whether the natural distribution was wider than previously thought, or whether the subspecies may have been either knowingly or inadvertently transported to the western slope.

Most extant populations of greenback cutthroat trout are considered "precarious" because they are in small streams, often in headwater situations. These small streams accumulate and intensify the effects of management actions, and small fragmented populations are especially vulnerable to local extirpation.

Effects of the Federal Action

Road construction/reconstruction, use and maintenance of roads, and even the presence of roads in a watershed can have adverse effects to aquatic ecosystems and the species they support. Effects can include increasing sediment loads, modifying watershed hydrology and stream flows, altering stream channel morphology, increasing habitat fragmentation and loss of connectivity, and increasing susceptibility to disease and predation (Furniss et al. 1991, USDA Forest Service 2000). Temporary roads present most of the same risks as permanent roads. In addition, many of these roads are designed to lower standards and therefore may produce more sediment and other risks. Road construction and timber harvest have been



identified as important factors in the decline and loss of populations of some inland cutthroat trout populations (Duff 1996, Young 1995).

The initial projections by forest staff of future road construction within CRAs overlapped strongly with watersheds where greenback cutthroat trout occur. However, these projections did not factor in the presence of greenback cutthroat trout populations. It is highly likely that projects would be designed to avoid road construction within the catchment surrounding the specific streams and stream segments where greenback cutthroat trout populations exist, thereby avoiding impacts to these small, vulnerable populations.

Mining can affect aquatic ecosystems in a number of ways, including addition of sediment and contaminants, removal of riparian vegetation, and acceleration of erosion (Lee et al. 1997). However, commercial hardrock mining that produces toxic water quality conditions has been highly regulated for decades.

Determination of Effect and Rationale

The primary factor that led to the decision to list the greenback cutthroat trout (*Oncorhynchus clarki stomias*) was the introduction of non-native trout into their historic streams. Several other factors, including dewatering, habitat degradation and dramatic impacts to water quality also contributed. The greenback cutthroat trout Recovery Team, comprised of state and federal fishery biologists, oversees the restoration efforts and protection of this native trout. Forest Plans typically address the greenback recovery plan and identify the greenback cutthroat trout as a Management Indicator Species as well. Whichever direction is more restrictive, either the Forest Plans or the Colorado Roadless Rule will take precedence.

The Colorado Roadless Rule is somewhat less protective than the 2001 Roadless Rule because it allows more exceptions for road construction and minerals development. However, projects are likely to be designed to avoid or minimize impacts on greenback cutthroat trout and its habitat. Given the low level of development projected to occur in CRA's (especially upper tier), and current state and federal protections, I conclude that implementation of the Colorado Rule is "not likely to adversely affect" the greenback cutthroat trout.

VIII. Effects on Federally-listed Plant Species

Penland's Alpine Fen Mustard

Summary of FWS' 5-factor analysis in the listing decision for this species.

Listing Notice	Factor A (Habitat)	Factor B (overutilization)	Factor C (Disease)	Factor D (Regulatory)	Factor E (Other)
07/28/1993	A rare species with restricted range in specialized and uncommon habitat is vulnerable to surface disturbances (ditches, dikes, roads, trails, mines)	N/A	N/A	No existing protections	Subject to local environmental catastrophes such as fungal blight, drought, insect infestations, climate change

A – Present or threatened destruction, modification, or curtailment of its habitat or range

B – Overutilization for commercial, recreational, scientific or educational purposes

C – Disease or predation.

D – Inadequacy of regulatory mechanisms

E – Other natural or manmade factors

Penland's alpine fen mustard (*Eutrema penlandii*) is a small, herbaceous, perennial, white-flowered plant in the mustard family. It is a narrow endemic restricted to alpine habitats in the Mosquito Range. It is found only in the alpine, where it grows in seeps or along small waterways on soils that tend to remain wet year-round. It depends on melting snow banks for water. Little is known about the species' requirements for pollination, seed dispersal, or the establishment of new individuals. Additional information can be found in the FWS species profile at: <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q1WG>

Effects of the Federal Action

Based on projections of foreseeable activities in Colorado roadless areas, there is no likely potential for new roads, tree cutting, or oil, gas or coal development to occur in habitat of this species.

Penland's alpine fen mustard within roadless areas is unlikely to be subject to any impacts associated with activities allowed under the exceptions in the Colorado Roadless Rule. However, as a result of allowed activities, there may be a risk of indirect effects from invasive plants that could spread into the roadless areas which provide habitat for this species.

Determination of Effect and Rationale

I conclude that implementation of the Colorado Roadless Rule may affect but is "not likely to adversely affect" Penland's alpine fen mustard because none of the activities under consideration are anticipated to occur in roadless areas that are known or likely to support this species.



Colorado Hookless Cactus

Summary of FWS' 5-factor analysis in the listing decision for this species.

Listing Notice	Factor A (Habitat)	Factor B (overutilization)	Factor C (Disease)	Factor D (Regulatory)	Factor E (Other)
10/11/1979	Oil shale development, mining, off road vehicles (possible)	Commercial collection	N/A	No existing protections	N/A

A – Present or threatened destruction, modification, or curtailment of its habitat or range

B – Overutilization for commercial, recreational, scientific or educational purposes

C – Disease or predation.

D – Inadequacy of regulatory mechanisms

E – Other natural or manmade factors

Colorado hookless cactus (*Sclerocactus glaucus*) is a small cylindrical cactus usually one to four inches tall, with pink flowers one to two inches in diameter. It is endemic to an area between Grand Junction and Montrose and south of Parachute, Colorado, where it grows in sagebrush shrub communities and pinyon-juniper woodlands on the gravelly or rocky surfaces of river terrace deposits and lower mesa slopes. Additional information can be found in the FWS species profile at:

<http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q21I>.

The species was formerly called the Uinta Basin hookless cactus, but taxonomic revision made this a misnomer. An account of the taxonomic issues and the splitting of *Sclerocactus glaucus* into three separate species, including a detailed description of the morphological differences between them can be found at: <http://www.gpo.gov/fdsys/pkg/FR-2009-09-15/pdf/E9-22125.pdf#page=1>

Colorado hookless cactus (referred to as “Uinta Basin hookless cactus” at the time) was listed as threatened in part because of the potential for energy development and mining activities (among other actions) that could adversely impact the species. The cactus is known to occur in dry shrub communities in the southwestern portion of one roadless area, but its habitat is outside the acreage under lease for oil and gas development.

Effects of the Federal Action

Based on projections of foreseeable activities, there is no likely potential for new roads, tree cutting, or oil, gas or coal development to occur in the habitat of the Colorado hookless cactus in Colorado roadless areas. However, as a result of activities allowed, there may be a risk of indirect effects from invasive plants that could spread into the habitat for this species.

Determination of Effect and Rationale

I conclude that implementation of the Colorado Roadless Rule may affect but is “not likely to adversely affect” Colorado hookless cactus because none of the activities under consideration are anticipated to occur in roadless areas that are known or likely to support this species.



De Beque Phacelia

Listing Notice	Factor A (Habitat)	Factor B (overutilization)	Factor C (Disease)	Factor D (Regulatory)	Factor E (Other)
7/27/2011	Oil and natural gas development, Westwide Energy Corridor, ORV use, soil and seed disturbance by livestock and wild ungulates, and proposed water reservoir projects	N/A	N/A	Existing regulatory mechanisms do not address the primary threats	Climate change (drying trend)

- A – Present or threatened destruction, modification, or curtailment of its habitat or range
- B – Overutilization for commercial, recreational, scientific or educational purposes
- C – Disease or predation.
- D – Inadequacy of regulatory mechanisms
- E – Other natural or manmade factors

De Beque phacelia (*Phacelia submutica*, a.k.a., *Phacelia scopulina* var. *submutica*) is a very small herbaceous annual plant with a small rosette of hairy elliptic (often reddish) leaves and cream colored flowers. It flowers in April through June, sets seed in May through June, then shrivels and disappears from the landscape. It is endemic to Colorado (Garfield and Mesa counties), where it grows on sparsely vegetated, brown or dark gray clays soils of the Wasatch Formation. Detailed information can be found at:

<http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q1G6>

The species is known to occur in the southwestern portion of a CRA on the Grand Mesa NF and the adjoining CRA on the White River NF. The habitat on the Grand Mesa NF falls within Management Area 5A – Big game winter range in non-forested areas. The White River NF proposed a Research Natural Area that encompasses the known occurrences of the species.

Critical habitat was proposed for this species on July 27, 2011 (Federal Register vol. 76, pp. 45078-45128). Proposed Unit 8 overlaps with two CRAs. The portion of proposed critical habitat Unit 8 that is within the Sunnyside and Housetop Mountain CRAs have low oil and gas development potential due to No Surface Occupancy stipulations on the leases, as shown in Table 11. Portions of the proposed critical habitat Unit 8 may be subject to oil and gas development on NFS lands outside of CRAs. None of the critical habitat unit is currently under permit for livestock grazing.

Effects of the Federal Action

Based on projections of foreseeable activities in Colorado roadless areas, there is no likely potential for new roads, tree cutting, or oil, gas or coal development to impact the populations or habitat of De Beque phacelia. However, as a result of activities allowed, there may be a risk of indirect effects from invasive plants that could spread into the roadless areas which provide habitat for this species.

The proposed critical habitat unit may be indirectly affected by oil and gas developments on adjoining lands that may facilitate the spread of invasive plants.



Determination of Effect and Rationale

I conclude that implementation of the Colorado Roadless Rule may affect but is “not likely to adversely affect” De Beque phacelia because none of the activities under consideration are anticipated to occur in roadless areas that are known or likely to support this species. Additionally, the action is “not likely to adversely modify” proposed critical habitat.

Summary of Determinations of Effect

The provisions of the Colorado Roadless Rule would generally provide a high level of protection for the 4.19 million acres of CRAs. The Colorado Roadless Rule would be somewhat less protective than the 2001 Roadless Rule because it would have more exceptions that allow temporary roads and certain other developments, except in the upper tier where it would be more protective. Road construction, tree cutting, oil and gas development, and Linear Construction Zone development could occur at a low level and intensity within CRAs. Activities such as the use of prescribed fire, motorized use of trails, and livestock grazing would continue unchanged.

Species	Determination	Summary of rationale
Whooping crane, piping plover, least tern, humpback chub, bonytail chub, Colorado pikeminnow, pallid sturgeon, razorback sucker, <i>Astragalus osterhoutii</i> , <i>Penstemon penlandii</i> , <i>Phacelia formosula</i> , <i>Gaura neomexicana</i> ssp. <i>coloradensis</i> , <i>Spiranthes diluvialis</i> , and <i>Ipomopsis ployantha</i>	No effect	Not known or likely to occur in CRAs, no suitable habitat exists within CRAs, nor will management of CRAs affect them or their habitat
Grizzly bear, gray wolf, black-footed ferret, and yellow fin cutthroat trout	No effect	Extirpated from NFS lands in the state of Colorado
Southwestern willow flycatcher, Mexican spotted owl, Pawnee montane skipper, Uncompahgre fritillary butterfly, Canada lynx, Preble’s meadow jumping mouse , and greenback cutthroat trout	Not likely to adversely affect	Overall high level of protection within CRAs; exceptions for road construction, oil and gas development, coal mining, and tree cutting could have local short term impacts but project design is likely to minimize the effects
Critical habitat for the Mexican spotted owl and Preble’s meadow jumping mouse	Not likely to adversely modify	Overall high level of protection within CRAs; limited development could have local short term impacts but project design is likely to minimize the effects
Penland alpine fen mustard, Colorado hookless	Not likely to	No new roads, tree cutting, or oil,



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cactus, and De Beque phacelia	adversely affect	gas or coal developments are likely, but there may be a risk of indirect effects, especially from activities that may facilitate the spread of invasive plants.
Proposed critical habitat for De Beque phacelia	Not likely to adversely modify	No new developments are likely, but there may be a risk of indirect effects, especially from activities that may facilitate the spread of invasive plants.

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Appendix H Response to Comments

This document briefly describes the comments received on the Rulemaking for Colorado Roadless Areas Revised Draft Environmental Impact Statement (RDEIS) and the revised proposed Colorado Roadless Rule. Comments included in this document are those determined to be relevant to the decision to be made, as described in the Decision Framework section of this Final Environmental Impact Statement (FEIS) and were considered in the development of the Rulemaking for Colorado Roadless Areas FEIS. Comments were consolidated and paraphrased for brevity in this Response to Comments document.

The following sections in this appendix describe the public involvement and content analysis process in greater detail. A more detailed public comment summary report and database were used to develop this document are in the FEIS record at the Forest Service Rocky Mountain Regional Office in Golden, Colorado.

Background and Public Involvement

A notice of intent to prepare an RDEIS on “Roadless Area Conservation; National Forest System Lands in Colorado” was published in the Federal Register, April 15, 2011. The public comment period ended on July 14, 2011. During that period, the Forest Service received 56, 051 comments, of which 55, 202 were form letters. The remaining letters consisted of original comments or form letters with additional original text. Additional information about the history of public involvement can be found in Chapter 1 of this FEIS.

Content Analysis Process

The Forest Service used a content analysis process to process the public responses received on the revised preferred alternative and RDEIS. The content analysis process has the following goals:

- ◆ Ensure that every response is considered.
- ◆ Identify the concerns raised.
- ◆ Represent the breadth and depth of the public’s viewpoints and concerns as fairly as possible.
- ◆ Present those concerns in a way that facilitates the Forest Service’s consideration of comments.

A public response is defined as a single, whole submission that can take the form of a letter, email, fax, transcribed oral comments, or presentations from a public meeting. Responses were sorted to identify all unique responses. Responses with identical content are called “form letters”, and one example of each form letter was analyzed as a unique response. Form letters with added information are called “form plus letters”, and the added information was analyzed as a unique response.

The comments in each unique response were analyzed, categorized, and entered verbatim into a database, as part of this content analysis process. The comments entered into the database were used to write a Summary of Public Comments document. The Summary of Comments document includes public concern statements, accompanied by one or more sample excerpts from original responses.

This content analysis process and resulting documents do not replace responses in their original form. Rather, they provide a map to the responses. It is important to recognize that the consideration of



public comment is not a vote-counting process in which the outcome is determined by the majority opinion. Relative depth of feeling and interest among the public can serve to provide a general context for decision-making. However, it is the appropriateness, specificity, and factual accuracy of comment content that provide the basis for modifications to planning documents and decisions. Further, because respondents are self-selected, they do not constitute a random or representative public sample. The Forest Service encourages all interested parties to submit comment as often as they wish, regardless of age, citizenship, or eligibility to vote. Respondents include federal, state, local, and tribal governments; organizations or public interest groups; businesses; people from other countries; and people who submitted multiple responses. Therefore, caution should be used when interpreting comparative terms in the Summary of Public Comments document. Every substantive comment and suggestion has value, whether expressed by one respondent or many. All unique input was read and evaluated, and the analysis team attempted to capture all relevant public concerns in this analysis process.

People Who Commented

The following total number of responses was received on the revised preferred alternative and RDEIS:

- ◆ 56, 051 total responses comprised of 849 original responses (from 925 respondents)
- ◆ 55, 202 form letter responses from organized campaigns.

Of the 925 respondents who provided original responses, 436 were from Colorado.

Forest Service Response Process

Comments submitted regarding procedural, administrative, or budgetary concerns that do not have a direct bearing on the decision to be made by the Secretary of Agriculture are not included in this document. However, they are included in the Summary of Comments document previously discussed. The Forest Service and Department of Agriculture followed all laws, regulations, and policies applicable to the preferred alternative-making action, as evidenced by files in the EIS record. This included requirements for public involvement, notifications, comment periods, and other legal requirements.

Comments about Forest Service management plans or actions that would not be affected by the roadless area management alternatives analyzed in the FEIS are also not discussed in this document. Chapter 1 of the FEIS describes the federal actions analyzed and considered to be within the scope of the FEIS (see Proposed Action, Purpose and Need, Decision Framework, Scope of the FEIS, and Issues sections in the FEIS). Comments about management actions outside Forest Service authority or covered by existing laws or regulations are not in the scope of the analysis, such as maintaining existing motorized access associated with private lands, utilities, locatable minerals claims, grazing allotments, and other uses where the use is allowed pursuant to existing authorizations. In addition, this includes comments about how to implement the preferred alternative, such as what type of tree-cutting prescriptions should be used, how to design salvage logging operations, how to maintain roads or trails, how to mitigate impacts, and others. Those are considerations appropriate for project-level planning, after a site-specific action is proposed, rather than for a rulemaking decision.

Comments asking for analysis of site-specific areas or actions are not included in this document because the preferred alternative and associated analysis are programmatic and cover broad

geographic areas. The scope of the effects analysis in the FEIS is commensurate to the broad scope of the proposal, as required by National Environmental Policy Act (NEPA) regulations.

Purpose and Need

Public comments were received about the purpose and need for the proposed action. Chapter 1 of this FEIS presents the purpose and need of the proposed Colorado Roadless Rule.

Comment: The EIS should acknowledge that Inventoried Roadless Areas (IRAs) were not always a stand-alone management designation.

Response:

The FEIS has been modified to acknowledge that IRAs were originally identified as part of the wilderness inventory process, not as stand-alone management units.

Comment: The Forest Service should preserve roadless areas in Colorado.

Response:

The Forest Service, working in cooperation with the State of Colorado identified the need to conserve roadless areas through the development of the proposed action identified in the FEIS. The purpose and need reflects a broad consensus for action to conserve roadless areas in National Forests in Colorado for the use and enjoyment of current and future generations of Coloradans and citizens of the United States.

Comment: The Purpose and Need should provide a wider range of alternatives to comply with NEPA.

Response:

The purpose of the preferred alternative is to provide state-specific direction for the conservation and management of roadless areas within Colorado. Alternatives were developed in the FEIS to meet that purpose and need. The range of alternatives provides clear management options by establishing a continuum of prohibitions for road construction/reconstruction, tree cutting, and the use of linear construction zones (LCZs) to meet the intent of the purpose and need for action. The alternatives provide a wide range of options, including provisions of forest plans (Alternative 3), the 2001 Roadless Rule (Alternative 1), the proposed Colorado Roadless Rule (Alternative 2) with 1,219,200 acres of upper tier, and Alternative 4 with 2,600,000 acres of upper tier. Additional alternatives were carefully considered but not carried forward for detailed analysis. These alternatives, and reasons for not bringing them forward in detail, are discussed in Chapter 2 of the FEIS

Comment: The Forest Service should clarify the intent of the proposed Colorado Roadless Rule.

Response:

The intent of the proposed Colorado Roadless Rule at Code of Federal Regulations (CFR) section 294.40 and is contained in the FEIS Purpose and Need for Action section in Chapter 1. The Department of Agriculture, the Forest Service, and the State of Colorado agreed that there is a need to



provide management direction for the conservation of roadless area values and characteristics within Colorado Roadless Areas (CRAs).

Public Involvement

Public comments were received regarding the duration, scope, and other aspects of the 90-day public comment period on the RDEIS and revised preferred alternative.

Comment: The Forest Service should coordinate with Tribal governments.

Response:

Coordination and consultation with tribes has been on-going since 2007 and will continue throughout the decision-making process.

Comment: The Forest Service should extend the comment period.

Response:

A comment period of 90 days was provided for the preferred alternative; this is the period required by regulation. This length of time is sufficient, particularly because opportunities for comments have been previously provided. For example, a 90-day comment period was provided for the proposed Colorado Roadless Rule published in 2008; the State of Colorado revised its petition based on comments received.

Outreach efforts included public meetings in the following locations in Colorado: Golden, Pueblo, Steamboat Springs, Fort Collins, Monte Vista, Durango, Montrose, and Glenwood Springs. A public meeting was also held in Washington, D.C. Additional outreach included use of the website, news releases, and informational meetings with local governments. Extending the comment period would delay the decision and increase costs to the federal government.

Comment: The Forest Service should provide more complete information in their request for public comments.

Response:

Sufficient information has been provided on the proposed action. The Forest Service provided information to the public in the form of briefing papers, maps, and roadless area profiles through numerous public meetings held across the state and on the Forest Service website. In addition, the proposed Colorado Roadless Rule, the DEIS, and RDEIS have been made available to the public.

Alternatives

Public comments were received regarding the selection and content of the four alternatives that were considered in detail for the FEIS.

Comment: Many comments were received supporting the selection of each of the four alternatives analyzed in the RDEIS.

Response:

As part of the decision-making process, the Secretary of Agriculture will consider the purpose and need of the proposed action and weigh the consequences of each alternative. Alternative 2 represents



a balanced approach to roadless area management that considers multiple perspectives on public lands management, including forest health and wildfire protection, as well as economic concerns unique to Colorado, while offering greater protections in designated upper tier acres.

Protection of roadless area characteristics and responsiveness to other management needs will be considered during the decision-making process. The rationale for the decision will be included in the publication of the final rule and its preamble, which will be published 30 days after the publication of the notice of availability for the FEIS.

Comment: Modify Alternative 2 to restrict or expand exceptions for tree cutting, road construction, reconstruction, and LCZs.

Response:

Alternative 2 has been modified in the FEIS to further clarify the circumstances that may allow tree cutting, road construction, road reconstruction, and the use of LCZs. Public comment indicates interest on both sides of this issue. Alternative 2 strikes a balance between need for roads and LCZs for community protection, existing rights, and economic interests, and the need to protect roadless area characteristics. The FEIS articulates several specific conditions that must be met before these activities could be formally considered.

The preferred alternative does not authorize any road construction, road reconstruction, or the use of LCZs. These projects would still be subject to site-specific analysis and public comment required under the NEPA and to direction from the appropriate Forest Plan.

Comment: Comments were received supporting the modification of Alternative 2 to expand, reduce, or eliminate upper tier designations.

Response:

The Forest Service appreciates that some respondents feel Alternative 2 is close to what Colorado needs to adequately manage roadless areas in Colorado. Although not all suggestions or preferences could be accommodated, many comments and suggestions were incorporated into the current Alternative 2.

Respondents either favor the designation of upper tier acres, or oppose the designation of any upper tier acres in the Alternative 2. Some comments suggested substantially increasing the number of acres within the upper tier, while others consider the upper tier *de facto* wilderness “and therefore inappropriate”. Some comments suggested provisions that would allow for expansion of the upper tier in the future.

Respondents in favor of the upper tier often had specific suggestions on CRAs to be included in upper tier. Some suggested the entire roadless inventory should be included in the upper tier. Yet, other comments suggested removing all upper tier from the proposed Colorado Roadless Rule.

Upper tier acres are a subset of the CRAs, which have limited exceptions to provide a high-level of protection. Upper tier acres in the rule represent areas with the highest-quality roadless area characteristics where there are limited known conflicts, such as existing oil and gas leases, existing or future coal leases, known water conveyance structures, or the high likelihood of future development needs for water development. A common theme heard from the public was to allow tree cutting and

minimal road construction to reduce the risk of a high-severity wildfire threatening Colorado's at-risk communities within upper tier acres. Therefore, upper tier acres were removed from Community Protection Zones (CPZs) in Alternative 2. Other than the Manti-La Sal with its 7,700 acres of CRA, the designation of upper tier is distributed among all of the forests in Alternative 2.

The final rule increases the number of upper tier to about 1,219,200 acres (29% of CRAs) for the final rule, which is about 657,000 acres more than was proposed action in the RDEIS. The Department, Forest Service and State of Colorado agreed that an increase in the number of upper tier acres from the RDEIS preferred alternative was warranted to offset the greater flexibility provided for the state-specific concerns in non-upper tier acres. Having substantially more upper tier acres than has been designated for the FEIS Alternative 2 could hinder the Forest Service's ability to provide for state-specific concerns. Having substantially fewer upper tier acres than has been proposed in the RDEIS would not offset the flexibility the current preferred alternative provides for the state-specific concerns.

Comment: Modify the proposed Colorado Roadless Rule to be as restrictive as the 2001 Roadless Area Conservation Rule.

Response:

The FEIS includes Alternative 1, the 2001 Roadless Rule, as the No Action Alternative. The purpose of Alternative 2, the preferred alternative, is to provide State-specific direction for the conservation of roadless area values on the National Forests in Colorado. Alternative 2 contains over 1,219,200 acres designated as upper tier, which have more restrictions than the 2001 Roadless Rule. State-specific situations and concerns are addressed within the FEIS. Details on how the four alternatives compare can be found in the *Comparison of Alternatives Table* within Chapter 2 of the FEIS.

Comment: The Forest Service should modify Alternative 4 to include the Pike-San Isabel National Forest for upper tier.

Response:

After consideration of public comments and a hard look at environmental consequences, the Forest Service has modified Alternative 2 in the FEIS. Currently, about 19% of designated upper tier acres are on the Pike-San Isabel National Forests in Alternative 2. Acreages for upper tier designations were not changed in Alternative 4 from the RDEIS because Alternative 4 reflects public input received as an alternative to be considered. Approximately 40% of the Pike-San Isabel CRA acres are designated as upper tier in Alternative 4 of the FEIS.

Comment: The Forest Service should proceed with the roadless area boundaries in the proposed action over those in Alternative 1 because the IRAs in Alternative 1 have changed in character and have unclear boundaries.

Response:

Alternative 2 was selected as the preferred alternative because it resolves important issues related to the roadless inventory in Colorado. IRA boundaries used for the 2001 Roadless Rule (Alternative 1) include "substantially altered" acres with existing roads, previous tree cutting, or other activities that substantially altered the roadless area characteristics. The improved boundaries in the preferred

alternative were drawn to correct errors in mapping, as well as to reflect additional improved on-the-ground field verification of roadless area characteristics.

Comment: The Forest Service should accurately disclose the non-conforming uses allowed in roadless areas.

Response:

The rule defines permitted uses. Therefore, any uses not allowed by the rule would be considered non-conforming, but these activities are generally limited to tree cutting, road construction and reconstruction, and the use of linear construction zones. The FEIS, for each alternative, fully describes uses that would be permitted

Comment: The Forest Service should modify the proposed action to grandfather in the research and educational activities of the Rocky Mountain Biological Laboratory.

Response:

The Forest Service is a strong supporter of the valuable scientific research that is conducted by the Rocky Mountain Biological Laboratory. Alternative 2 in this FEIS does not prescribe more stringent NEPA requirements. It does not invoke wilderness management protocols, limit or shut down scientific research. As long as research activities can be completed without road construction or tree cutting, they can continue. Therefore, there is no need to forego the important roadless conservation and grandfather in any specific activities.

Comment: The Forest Service should fully protect Roadless Areas.

Response:

The preferred alternative prohibits road construction, reconstruction, tree cutting, and the use of LCZs, with some exceptions. It was carefully crafted after an extensive review of roadless area characteristics by agency staff, a hard look at the environmental consequences of implementing Alternative 2, and a careful review of thousands of public and agency comments received during the comment periods for the DEIS and RDEIS.

Comment: The Forest Service should retain the proposed language related to road decommissioning.

Response:

Many provisions of Alternative 2 were developed in response to public comments and concerns. This includes measures that protect resources and roadless area characteristics in decommissioning plans. These measures have been subjected to the environmental analysis disclosed in the FEIS. Additional information about road decommissioning can be found in Appendix F of the FEIS.



Comment: The Forest Service should be commended for tightening the Bull Mountain loophole that would have allowed a natural gas pipeline.

Response:

The preferred alternative reflects careful consideration of detailed comments submitted by the public, agencies and local governments on a wide variety of roadless-related issues, including pipelines. A hard look was given to the environmental consequences of every feature included in all alternatives. Natural gas pipelines and LCZs are allowed only under certain conditions in the preferred alternative.

Comment: Develop an alternative that does not allow road or well-pad construction on gap leases.

Response:

The RDEIS considered a reasonable range of alternatives. An alternative to consider no road construction or well pads on existing leases was not considered in detail in the FEIS because this would require retroactively imposing restrictions on leases issued before the effective date of the Colorado Roadless Rule. This approach is consistent with the 2001 Roadless Rule, which did not apply retroactively to leases already in existence.

The rule does not distinguish whether existing oil and gas leases were issued before or after the 2001 Roadless Rule. Once a lease has been issued by the BLM, they grant the exclusive right to drill for, extract, remove, and dispose of all the oil and gas from the lease, subject to terms and stipulations made as part of the lease. For purposes of the FEIS, all existing oil and gas leases within roadless areas, including post-2001 leases, are considered to be “existing authorizations”. All alternatives in the FEIS do not restrict or prohibit activities associated with existing authorizations, including the construction of temporary roads and pipelines reasonably necessary to exercise lease rights. The final rule cannot unilaterally change the development rights of existing leases as it would give rise to regulatory taking claims under the Fifth Amendment.

Comment: Develop an alternative that meets the purpose and need without prohibiting road construction and timber activities.

Response:

The purpose and need of the Colorado Roadless Rule is to provide management direction for the conservation of roadless area characteristics within CRAs. The preferred alternative recognizes that road construction, reconstruction, tree cutting, and the use of LCZs are activities with the greatest likelihood of altering and fragmenting roadless landscapes. Not providing prohibitions on those activities would not meet the purpose and need.

Comment: Develop a conservation alternative that is more protective than 2001 Roadless Rule.

Response:

Alternative 4 is the most restrictive, designating about 2,600,000 acres as upper tier. Upper tier designations have strict prohibitions on road construction, reconstruction, tree cutting, and the use of



LCZs. Alternative 2 designates about 1,219,000 acres as upper tier. Upper tier designations are more restrictive than the 2001 Roadless Rule (Alternative 1).

Comment: The Forest Service should correctly identify the No Action alternative as the 2001 Roadless Rule.

Response:

In the FEIS, the 2001 Roadless Rule has been identified as the No Action Alternative because the Tenth Circuit Court of Appeals issued a mandate requiring that the nation-wide injunction of the 2001 Roadless Rule be vacated. When the RDEIS was published, Alternative 3, the Forest Plan Alternative, was correctly identified as the No Action Alternative because an injunction by the District Court of Wyoming prohibited the implementation of the 2001 Roadless Rule.

Upper Tier Designations

Public comments were received regarding upper tier designations for certain areas of the CRA inventory in Alternative 2 and Alternative 4.

Comment: There should be a table that clearly defines the management direction for upper tier acres.

Response:

Chapter 2 of the FEIS has tables and figures describing tree cutting exceptions, road construction exceptions and LCZs exceptions allowed within the preferred alternative. At the end of Chapter 2 of the FEIS is a comparison table that outlines what exceptions apply to CRAs and upper tier acres.

Comment: Alternative 2 should include an exception in the upper tier to allow road building for the operation, maintenance or development of water supply systems.

Response:

Alternative 2 prohibits road construction the use of an LCZ for all future water supply systems in upper tier acres, unless the development is associated with an existing water court decree. Use of an LCZ within upper tier may be allowed for authorized water conveyance structures operated pursuant to existing water court decrees. In addition, areas with known potential for future water development projects were excluded from the areas designated as upper tier, reducing the potential limitations on future water supply projects.

Comment: Existing access in upper tier that is not a road should be allowed to be widened and improved to transport necessary equipment and materials to maintain existing dams, headgates and other water conveyance structures.

Response:

A road construction exception has been added to upper tier in Alternatives 2 and 4 of the FEIS to accommodate public health and safety concerns, which would include necessary maintenance of water conveyance structures in cases of emergency situations that threaten life or property.



The preferred alternative also includes language specific for decommissioning of temporary roads and LCZ after their use to prevent any ‘permanent’ use.

Comment: Alternative 2 should include a tree cutting exception in upper tier acres to treat hazardous fuel loads in areas that supply municipal water systems.

Response:

Tree cutting for hazardous fuel treatment is prohibited in upper tier acres in the preferred alternative. However, fuel reduction may be accomplished through the use of prescribed fire, limbing to reduce ladder fuels, and piling and burning. Tree cutting for fireline construction would be allowed in conjunction with prescribed burning.

Comment: Electrical and telecommunication lines do not belong in roadless areas, especially in the upper tier.

Response:

There are currently electrical power lines and telecommunication lines within roadless areas in Colorado. Eliminating all roadless areas that contain electrical and telecommunication lines would eliminate the additional protection to roadless area characteristics and resources provided by the roadless rule. All alternatives in the FEIS acknowledge that, as new energy sources are identified and developed, they will need to be connected to the electrical grid. The preferred alternative limits these lines from being within CRAs if there is an opportunity for the lines to be located outside of CRAs, without causing substantially greater environmental damage and prohibits construction of new lines within upper tier acres.

Comment: The Forest Service should require no surface occupancy (NSO) in upper tier acres.

Response:

As a result of a careful analysis of public comments and a hard look at environmental consequences, provisions for eliminating surface occupancy in upper tier acres have been added to the FEIS.

Comment: The Forest Service should prohibit LCZs in the upper tier.

Response:

LCZs in the upper tier are limited to two specific conditions under the preferred alternative, and require a determination by the Regional Forester. These LCZ exceptions are allowed for water development, which is critical to Colorado and many other western states, and where the Forest Service is obligated to recognize reserved or outstanding rights and existing authorizations. Installations of LCZs generally require minimal ground disturbance and subsequent decommissioning.



Comment: An exception needs to be added to all roadless acres to allow for post-fire recovery efforts.

Response:

Alternatives 2 and 4 in the RDEIS included an exception in non-upper tier to protect public health and safety in cases of an imminent threat that, without intervention, would cause the loss of life or property. In Alternative 2 and 4 in this FEIS this exception has been added to upper tier acres so that all CRAs now include this exception. Burned area emergency rehabilitation activities to protect roads, private property or municipal water supply systems would be an appropriate use under the public health and safety exception. An example of this could be the need for a temporary road to construct sediment traps and check dams to control debris flows that could block culverts or jam bridges or damage reservoir capacity after a fire.

Comment: The Forest Service should allow timber removal to minimize fire hazard in upper tier acres adjacent to ski areas. The Forest Service should allow wildlife habitat improvements and fire lines in the upper tier. The rule should clarify whether chain saws can be used in upper tier acres.

Response:

In Alternative 2, tree cutting for hazardous fuels treatment and wildlife habitat improvements are prohibited in upper tier acres. However, prescribed fire could be used for minimizing the fire hazard near ski areas, as well as for wildlife habitat improvement. There is no prohibition on the use of chain saws, or construction of fire lines in CRAs, including the upper tier.

Comment: The Forest Service should eliminate the sale of common variety minerals in upper tier acres.

Response:

The intent of the preferred alternative is to protect roadless area characteristics by regulating only those activities that represent the greatest impact to those characteristics (e.g., road construction, reconstruction, tree cutting, and use of LCZs), and not to prohibit specific less impacting activities, such as mineral material sales.

Comment: The Forest Service should ensure there is sufficient area adjacent to I-70 for a rapid-transit advanced guideway system.

Response:

A right-of way for a future advanced guideway system along I -70 would be provided for through the exception in the preferred alternative provided for by statute or treaty.



Comment: Upper tier acres were not a part of the Roadless Area Task Force recommendations or part of the original Colorado Roadless Rule proposal. The upper tier acres on the Grand Mesa, Uncompahgre, and Gunnison (GMUG) National Forests were from a draft forest plan the public never commented on.

Response:

The 2008 Proposed Colorado Roadless Rule released for comment in 2008 had one set of management prohibitions and exceptions for all roadless acres. The Roadless Area Conservation National Advisory Committee (RACNAC) reviewed the preferred alternative and made recommendations to the Secretary of Agriculture to make permanent, through the rule, existing forest plan prohibitions that were more restrictive than the 2008 preferred alternative.

Public comments received during the comment period for the 2008 preferred alternative expressed concerns that exceptions could be allowed throughout roadless areas. In response, the Governor's 2010 Petition contained an upper tier of all the acres in existing forest plans (257,000) that had more protections than the petition. It also eliminated some exceptions for road construction and tree cutting in those areas.

In addition to the acres proposed in the 2010 Petition, acres in existing draft plans (the San Juan and GMUG National Forests) were added that had been previously proposed for higher levels of protection than the 2011 preferred alternative. The San Juan, but not the GMUG, has been through a formal forest plan comment period on these management prescriptions. One reason the Forest Service had a Revised DEIS with a 90-day public comment period was to allow the public to comment on both the acres proposed for upper tier designation, as well as the exceptions allowed within these acres.

Comment: Every CRA with recreational resources should be designated as upper tier. Outstanding recreational resources should be placed in upper tier. Important wildlife habitat should be designated as upper tier.

Response:

All CRAs have roadless area characteristics that are described in the FEIS. This includes primitive, semi-primitive non-motorized, and semi-primitive motorized classes of recreation and habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land. Upper tier acres were not proposed by considering just one of the characteristics described in the FEIS, but rather by considering all nine characteristics.

Comment: Upper tier acres have been delineated on too limited of a basis and will allow too much fragmentation of habitat to occur.

Response:

The preferred alternative prohibits road construction, reconstruction, tree cutting, and the use of LCZs, with certain exceptions. Fragmentation will be minimized because of these restrictions. A discussion of the effects of fragmentation due to road construction and tree cutting is included in the FEIS, as well as in the Biological Assessment prepared for the FEIS. For any project that would be

proposed in any CRA, the appropriate level of site-specific effects analysis would be conducted and impacts on habitat connectivity would be evaluated for projects proposed within CRAs.

Comment: Eliminate upper tier designations because roads are needed for the recreation economy.

Response:

The preferred alternative prohibits road construction and reconstruction in all CRA acres, with limited exceptions, to conserve roadless area characteristics. In general, roadless areas serve as a niche for primitive, semi-primitive non-motorized, and semi-primitive motorized recreation. Mechanized, motorized, and non-motorized trails all exist within roadless areas, including upper tier acres. Decisions to open or close trails to specific public use are determined by forest travel management decisions. The effect to recreation and the economy is further discussed in the FEIS.

Comment: The Forest Service should include specific suggestions for upper tier designations, noting areas on the Pike-San Isabel and GMUG National Forests, as well as others.

Response:

In response to public comment, the preferred alternative includes additional upper tier designations on the Pike-San Isabel and GMUG National Forests. Some areas on other forests were also included as part of a comprehensive review of the upper tier inventory. Other areas were excluded because of potential conflicts, such as overlap with a CPZ, or existing oil and gas leases.

Upper tier acres are a subset of the CRA acres with the purpose of providing a more restrictive set of exceptions to road construction and tree cutting than the 2001 Roadless Rule, which is represented by Alternative 1 in the FEIS. The RDEIS set of upper tier acres focused on acres where the forest plans or the draft forest plans had more restrictive direction than Alternative 2 in the RDEIS (the preferred alternative).

Upper tier acres in Alternative 2 of the FEIS represent the highest-quality roadless area characteristics with limited known conflicts. Known conflicts that are not included in the upper tier acres of the preferred alternative include, but are not limited to, current oil and gas leases or current and allowed future coal leases, known water conveyance structures or a high likelihood of future development needs for water development.

In addition, a common theme heard from the public was to allow tree cutting and minimal road construction to reduce the risk of a high-severity wildfire threatening Colorado's at-risk communities within upper tier acres. The Forest Service decided to not allow this exception for upper tier acres but instead decided to remove all known CPZs from the upper tier acres. Upper tier designation is spread among all of the forests in the preferred alternative. These upper tier acres represent some of the highest quality roadless area acres to be maintained into the future.



Comment: Roadless areas and in particular upper tier acres are a de-facto wilderness and in violation of the Wilderness Act.

Response:

It is not the intent of the Colorado Roadless Rule to establish *de facto* wilderness designations. The U.S. Congress has the sole authority to add areas to wilderness. While management direction for upper tier acres limits the potential for road construction/reconstruction and tree cutting, upper tier designation does not imply wilderness management direction. Wilderness management direction is much more restrictive regarding the types of activities that can occur within designated areas, including prohibitions on motorized equipment and mechanical transport, commercial activities, structures, improvements, and types of primitive recreation activities. The preferred alternative does not provide direction for these other activities, which would continue to be managed under the forest plan and other policies and regulations.

Comment: There is no Congressionally approved authority for designation of upper tier acres. There is only a letter from the Secretary of the USDA authorizing upper tier. What is there to prevent a future Secretary from approving activities in roadless that this rule would prohibit.

Response:

The Constitution provides the fundamental basis for control, acquisition, disposition, use, and management of all federally owned lands, including NFS lands. Article IV, Section 3, paragraph 2 of the Constitution states: 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. Federal Courts have repeatedly interpreted this clause to mean that Congress has exclusive jurisdiction over Federal lands.

Congress has authorized the Secretary of Agriculture to manage NFS lands under conditions described in various acts, including the Organic Administration Act of 1897 and the Multiple-Use Sustained Yield Act of 1960. The Organic Administration Act of 1897 provides the Secretary of Agriculture with the authority to make “rules and regulations” that will provide protection from fire and depredation, regulate occupancy and use, and preserve the forest from destruction. The current Secretary of Agriculture has the authority to make rules and regulations such as the Colorado Roadless Rule and future Secretaries will also have the authority to make, or change, such rules.

Comment: The Forest Service should not designate upper tier acres within Pikes Peak West and East CRAs that are protected under Congressional Watershed Reserve Land Grants.

Response:

These areas are not designated as upper tier in the preferred alternative (Alternative 2).

Comment: The Forest Service should reconsider upper-tier restrictions including their overlap with CPZs to ensure that options are available for fuels and forest health treatments.

Response:

In response to public comments and to better respond to the purpose and need for the rule, the first half-mile of most CPZs were excluded from upper tier designation in Alternative 2. This change provides for increased opportunities for fuel treatments within CPZs for Alternative 2. In Alternative 4, CPZs do overlap with upper tier designation.

The effects of the roadless and upper tier designations on the ability of the agency to conduct fuels treatments adjacent to communities are discussed in Chapter 3 of the FEIS in the Fire and Fuels section.

Comment: The Forest Service should provide upper tier protection for roadless areas that support native cutthroat trout.

Response:

Upper tier acres in Alternative 2 represent high quality roadless area characteristics, while minimizing potential conflicts, such as existing oil and gas leasing.

Restrictions in Alternative 2 provide protection for cutthroat trout because projects involving road construction may not diminish, over the long term, occupied native cutthroat trout habitat. Please refer to Chapter 3 of the FEIS for additional information regarding this species.

Comment: The Forest Service should establish standards for protection of native cutthroat trout within upper tier acres.

Response:

Alternative 2 prohibits road construction and reconstruction in upper tier roadless areas with two exceptions. For both exceptions, the responsible official must determine "[w]ithin a native cutthroat trout catchment or identified recovery watershed, whether road construction will diminish, over the long term, conditions in the water influence zone and in occupied native cutthroat trout habitat".

Comment: The Forest Service should allow avalanche control efforts in CRAs adjacent to public rights-of-way.

Response:

Avalanche control efforts would be allowed under Alternative 2. Typically, avalanche control work does not require road construction. In these cases, the preferred alternative does not affect this activity. In response to public comment, a provision to allow construction or a temporary road to protect public health and safety in cases of imminent threat has been added to the non-upper and upper tier acres.



Comment: Clarify the differences between upper tier and non-upper tier.

Response:

Upper tier acres provide additional restrictions compared to non-upper tier acres. Chapter 2 of the FEIS which describes the preferred alternative, has been modified to more clearly state the differences in prohibitions on road construction, reconstruction, tree cutting, and the use of LCZs in the upper tier and non-upper tier.

Comment: Tree cutting and road construction and reconstruction exceptions should be the same in the upper tier and non-upper tier.

Response:

The Forest Service recognizes the need to manage large expanses of roadless areas as whole systems; however, the Agency also recognizes differences among the roadless areas, resource needs, and public opinion. These factors warranted creating a subset of the CRA acres that would be managed with more restrictive road construction and tree cutting exceptions. The preferred alternative has 1,219,200 of the 4.2 million acres of roadless, or 29%, designated as upper tier.

Comment: The Forest Service should modify the Rule to allow public nomination of roadless areas for upper tier designation.

Response:

The 90-day public comment period from April to July 2011 allowed for public input on roadless area designation and upper tier considerations. The Forest Service acknowledges all public input from this comment period and has taken it into consideration in revising designations of the preferred alternative.

Roadless Inventory and Boundaries

Public comments were received regarding the roadless inventory and boundaries of upper tier and non-upper tier acres

Comment: The Forest Service should coordinate with water utilities and remove acres from the CRAs where infrastructure or access to water projects is needed.

Response:

Throughout this roadless process, the Forest Service has recognized the importance of NFS lands, including the CRAs, in providing clean and abundant water for the people and communities of Colorado and downstream states. After careful review of public concerns and consideration of environmental consequences, Alternative 2 in the FEIS has been enhanced by providing for water conveyance structures where water rights have been filed and adjudicated.

Comment: Roadless area boundaries should be adjusted to include adjacent lands that are also roadless, to return to the old boundaries from the 2001 inventory, to exclude private lands, mining claims, utility corridors, to provide for the I-70 right-of-way, and to provide for additional ski area expansion.

Response:

After careful consideration of public comments and improved data and analysis, a number of adjustments have been made to individual CRAs. These adjustments were primarily administrative corrections based on better mapping technology.

The roadless area profiles found on the roadless web site include notes on improved inventory changes since 2001 for each CRA. Appendix A of the FEIS displays changes in acreage and has a cross-walk of CRA names to the old IRA names. All private land has been excluded from roadless areas.

CRAs contain hundreds of mining claims. Access to these claims is granted based on the 1872 Mining Law. Utility corridors are not excluded from roadless areas. Alternative 2 has an exception to allow for the future construction, reconstruction, or maintenance of these linear features using a LCZ. The highway I-70 right-of-way is excluded from CRAs and, in the future, a Federal Aid Highway project can be authorized pursuant to Title 23 of the United States Code.

Alternative 2 provides for administrative correction of boundaries to remedy errors such as clerical, or typographical errors, or changes based on an improvement in mapping technology; public notice and a 30-day comment period is required. Modifications of CRA boundaries, and addition of new CRAs, require public notice and a 90-day comment period. Corrections and modifications must be approved by the Chief of the Forest Service.

Comment: The proposed action should be based on the most accurate inventory of roadless areas. Substantial improvements were made in the 2011 version. However, even more roadless acreage exists on the Forests in Colorado. Any modification of boundaries should be limited, but should include consideration of decommissioned roads.

Response:

The roadless inventory used to identify CRAs was updated between the 2008 DEIS and the 2011 RDEIS to include approximately 155,000 additional acres due to public comment and work with the Colorado Division of Parks and Wildlife. After the RDEIS was published, the inventory was again slightly adjusted both adding and subtracting acreage for a net reduction of 400 acres.

Because of the continual improvement in mapping technology, Alternative 2 in the FEIS includes a provision to administratively correct CRA boundaries. Also included is a provision to modify boundaries, which can be done during forest plan revision or any other time there is a substantial update to a boundary or the identification of new roadless areas. The modification language in preferred alternative uses “changed circumstance” because any number of circumstances will present themselves in the future, including a reduction in road miles that could cause a roadless boundary to be adjusted.



Both types of boundary changes require public comment; the decision is reserved to the Chief of the Forest Service.

Comment: The Forest Service and the State of Colorado should work with stakeholders to further modify roadless area boundaries.

Response:

The Forest Service and the State of Colorado received over 300,000 comments during multiple public comment periods. Comments included changes to CRA boundaries and many were incorporated particularly between the 2008 DEIS and the 2011 RDEIS. Alternative 2 in this FEIS contains provisions allowing a continuous update of the inventory both using administrative corrections and modification of boundaries. Both of these require a public comment period; the decision is reserved to the Chief of the Forest Service.

Comment: Current wording for boundary modifications and administrative corrections is awkward.

Response:

In order to clarify Alternative 2 and ensure that the public and decision makers are fully informed, the wording in the preferred alternative has been modified.

Effects Analysis and Cumulative Effects

Public comments were received regarding the effects analysis and cumulative effects contained in the RDEIS.

Comment: The FEIS should clarify the definitions of “less” and “greater” environmental damage.

Response:

The significance of environmental impacts is determined through long-standing environmental analysis procedures identified in the CEQ and Forest Service NEPA regulations. The proposed action for the Colorado Roadless Rule does not modify the CEQ or Forest Service NEPA regulations. Those regulations provide the proper guidance for the conduct of NEPA analysis on all NFS lands, including roadless areas in Colorado.

The Colorado Roadless Rule is a proposal to develop programmatic regulations across 4.2 million acres of widely varying environments, communities and situations. Therefore, it is difficult to quantify many of the impacts, and many of the analyses relied on qualitative descriptions to characterize the effects. Using terms, such as “less” and “greater”, are used to qualitatively compare the relative differences between the alternatives.

Comment: The Forest Service should include an analysis of the effects of individual roadless areas.

Response:

Because the preferred alternative-making and its alternatives are broad, programmatic, and do not involve any proposed site-specific actions, the consequences are appropriately broad and qualitative

rather than quantitative. Before authorizing a land use activity in roadless areas, the Forest Service must complete a more detailed and site-specific environmental analysis pursuant to the NEPA and its implementing regulations (FEIS Chapter 1, Scope of the EIS).

Forest Plans

Public comments were received regarding the interaction between forest plans that provide management direction for each National Forest, and the revised proposed Colorado Roadless Rule.

Comment: The Forest Service should ensure that the proposed Colorado Roadless Rule is consistent with existing forest plans to comply with the National Forest Management Act (NFMA).

Response:

Forest plans provide guidance for management activities on a National Forest; including establishing forest-wide management requirements and direction applicable to the entire forest, or to specific management areas. As stated in the FEIS, Forest Plans section of Chapter 2, when guidance in a forest plan is more restrictive than direction described under the alternatives, actions must be consistent with the more restrictive direction.

None of the alternatives compel the Forest Service to amend or revise any forest plan. In addition, none of the alternatives limit the authority of a responsible official to amend or revise a forest plan.

Regional Forester Determination

Public comments were received regarding the proposed Colorado Roadless Rule and certain exceptions requiring review by the Regional Forester.

Comment: The Forest Service should limit discretionary authority granted to line officers, especially concerning road construction and reconstruction in upper tier acres.

Response:

Further restricting line officer authority would adversely affect on-the-ground implementation of this rule. It is impossible to anticipate every possible nuance of how this rule would be implemented on the ground across the entire State of Colorado. Some flexibility is needed for realistic implementation. Line Officer discretion is a limited decision authority for a narrow range of activities that are necessary for forest health and management. The upper tier road construction or reconstruction exceptions are subject to strict criteria that the responsible official must determine are met before a project can proceed. Any use of LCZ within upper tier requires a Regional Forester determination before the project can proceed.

Comment: The Rule should eliminate Regional Forester determination within the CPZ because it is unnecessary and excessively burdensome.

Response:

Regional Forester determination provides an appropriate level of scrutiny and consistency to tree cutting projects with the CPZ in roadless areas within Colorado.



Comment: Regional Forester should not have determination in LCZ decisions.

Response:

The preferred alternative has included Regional Forester determination for LCZs to ensure a level of consistency. Regional Forester determination is a review process designed to be separate from the NEPA process. The Regional Forester would be required to review the project but would not be the "responsible official" in the NEPA context.

Access and Rights-of-Way

Public comments were received about the proposed Colorado Roadless Rule could impact public access and rights-of-way.

Comment: The Forest Service should preserve access to private properties and mining claims within roadless areas.

Response:

The proposed Colorado Roadless Rule does not affect reasonable exercise of reserved or outstanding rights for access, occupancy and use of NFS lands within roadless areas. These rights include those that exist by law, treaty, or other authority, including private property and mining claims for locatable minerals under the 1872 Mining Law.

Comment: Boundaries of CRAs should be adjusted to exclude electrical transmission and telecommunication lines and communication sites; access to these facilities in CRAs must be ensured to allow construction and maintenance.

Response:

CRAs were mapped in accordance with the Land Management Plan Handbook (FSH 1909.12, Chapter 70). Areas mapped as roadless may contain electrical power and telecommunication lines. Adjusting CRA boundaries to exclude roadless areas that contain electrical and telecommunication lines would eliminate the additional protection to roadless area characteristics and resources provided by the roadless rule.

The preferred alternative in the FEIS provides for exceptions whereby electrical power and telecommunication lines may be constructed, reconstructed, and maintained within non-upper tier acres of CRAs, but would prohibit the same within upper tier acres. All alternatives would allow for the continuation, transfer, and reissuance of valid existing land use authorizations for activities in roadless areas, including telecommunication sites.

Comment: The Forest Service should modify the special-use permit language for transmission language.

Response:

The FEIS has been clarified regarding special use permit language and access to transmission lines. All projects within roadless areas will remain subject to existing NEPA procedures, including



transmission lines. Please refer to the Forest Service NEPA regulations for examples of “substantial alteration” (36 CFR 220.5).

Comment: The Forest Service should allow grazing permit holders to enter roadless areas with their vehicles.

Response:

The preferred alternative allows motorized and non-motorized access into CRAs. It prohibits new road construction, with certain limited exceptions. Permit holders would be allowed to use existing access, usually by overland travel, or motorized trails.

Comment: The Forest Service should ensure that some areas remain publicly accessible, especially in terms of natural resource and timber development.

Response:

The preferred alternative does not restrict motorized or non motorized access to CRAs. It does prohibit road construction, reconstruction, tree cutting, and the use of LCZs, with certain exceptions on 4.2 million acres to conserve roadless area characteristics. These areas will still be accessible to the public via trails as provided in individual forests’ travel management plans, but resource development and timber harvest will be restricted. Other non-roadless areas of the NFS lands will focus on resource development and timber management.

Comment: The Forest Service should restrict motorized access in CRAs.

Response:

The preferred alternative does not restrict motorized or non-motorized access to CRAs. It prohibits future road construction, reconstruction, tree cutting, and LCZs, with certain exceptions. Individual forests’ travel management plans facilitate the balance of motorized and non-motorized use across NFS lands.

Comment: The proposed Colorado Roadless Rule would prohibit certain activities and access to private land.

Response:

The preferred alternative only affects certain lands administered by the Forest Service. It does not prohibit, regulate, or impact activities on private lands, nor does it restrict existing authorizations for access to private lands.

Maps with the FEIS could contain errors, or could be generalized for scale. This could give the false impression that private lands overlap with CRA designations.

The preferred alternative does not close any existing roads or trails. It does prohibit the construction of future roads, with certain exceptions. One of those exceptions is for reserved or outstanding rights for access. The reasonable exercise of reserved or outstanding rights for access, occupancy, and use of Forest Service lands within roadless areas would not be affected. The rights include those that exist by law, treaty, or other authority. They include, but are not limited to, the right to construct roads or

provide other reasonable access across Forest Service lands for the purpose of access to private property (FEIS, Chapter 2, Reserved and Outstanding Rights; Existing Land Use Authorizations).

Vegetation, Timber, and Forest Health

Public comments were received regarding prohibitions contained in the proposed Colorado Roadless Rule that could impact vegetation, timber, and forest health concerns.

Comment: The Forest Service should expand the design criteria for temporary road construction to address erosion and concerns related to tree cutting and fuels treatments.

Response:

Additional design criteria are inappropriate for inclusion in a rule that does not authorize any actions; actions that design criteria are intended to mitigate. In addition, appropriate resource and erosion protection is already provided by the Forest Plan standards and guidelines applicable to potential future projects that could possibly be proposed.

Comment: The Forest Service should provide more information on the implementation of prescribed burns, including whether tree cutting and road construction will result in more prescribed burns.

Response:

The FEIS includes an appropriately detailed discussion of prescribed fire. As clearly stated in the EIS, this proposed action protects Colorado's roadless areas. It does not authorize any prescribed burning projects. Consequently, it would be premature to engage in detailed speculation about the potential for future projects that could potentially affect air quality. Furthermore, appropriate protections are currently in place to ensure conformance with air quality standards in case any future prescribed burn projects would be authorized in potential future decisions in any roadless areas.

Comment: The Forest Service should allow temporary road construction and timber harvest for forest health in terms of resource development, forest management, and because sufficient restrictions exist already.

Response:

Alternative 2 prohibits construction or reconstruction; tree cutting, sale or removal; and LCZs, with certain exceptions. These prohibitions are for the purpose of maintaining roadless area characteristics in CRAs. The exceptions provide for certain development, maintenance, and hazard reduction activities important to the State of Colorado, and for public health and safety.

Comment: The proposed Colorado Roadless Rule should give tree cutting authority to the Regional Forester.

Response:

Alternative 2 requires Regional Forester review of tree cutting for hazardous fuel reduction projects within the CPZ.



Comment: The Forest Service should acknowledge the proposed Colorado Roadless Rule would restrict forest and watershed health projects to areas outside of roadless areas and will limit the Forest Service’s ability to engage in active forest management treat for insects and diseases and general forest and watershed health.

Response:

The Colorado Roadless Rule prohibits tree cutting, and therefore, limits the ability of the Forest Service to cut trees for specific forest or watershed health objectives. Tree cutting in the non-upper tier is allowed to promote ecosystem composition and structure. This exception is not allowed in the upper tier. The Forest Service also uses other tools, such as prescribed fire, to promote regeneration and improvement of forest and watershed health.

Wildfire and Community Protection

Public comments were received about the prohibitions and provisions in the proposed Colorado Roadless Rule regarding wildfire and community protection.

Comment: The Forest Service should clarify the relationship between the CPZ and transmission lines.

Response:

The FEIS (Fire and Fuels section) explains the relationship between CPZs and infrastructure. The Energy Policy Act of 2005 gave Federal Energy Regulatory Commission (FERC), the responsibility to protect the reliability of the high voltage interstate transmission system through mandatory reliability standards.

Transmission lines are often designated as critical infrastructure in a CWPP. Trees could be cut because the preferred alternative includes an exception for tree cutting that is incidental to a management activity that is not otherwise prohibited. This applies to non-upper tier acres and upper tier acres.

Comment: The Forest Service should clarify the definition of an at-risk community.

Response:

The rule defines an at-risk community according to the Healthy Forests Restoration Act (HFRA), which defines the term as a community listed in the notice entitled, ‘‘Wildland Urban Interface Communities Within the Vicinity of Federal Lands That Are at High Risk From Wildfire’’ (66 FR 751); or as a group of homes and other structures with basic infrastructure and services, such as utilities and collectively maintained transportation routes, within or adjacent to Federal land; in which conditions are conducive to a large-scale wildland fire disturbance event; and for which a significant threat to human life or property exists as a result of a wildland fire disturbance event.



Comment: Communities should have the right to engage in fuel treatment programs, regardless of whether or not they have a community wildfire protection plan (CWPP).

Response:

The FEIS, Fire and Fuels section, discusses the effects of all four alternatives on the agency's ability to implement fuels treatments. The preferred alternative does not restrict the ability of a community to implement fuels treatments on non-federal lands nor does it require a community to have a CWPP for the agency to plan and implement fuels treatments in the 0.5mile CPZ adjacent to the at-risk-community.

Comment: The Forest Service should revisit the limitations on tree size within the CPZs.

Response:

The preferred alternative directs tree cutting project to focus on cutting and removing generally small diameter trees. In compliance with NEPA, prior to any activity being implemented on the ground, a site-specific, project-level analysis would be completed for direct, indirect, and cumulative effects, including potential effects of vegetation treatment on large tree retention.

Comment: The Forest Service should reconsider, or broaden the buffer to at-risk communities.

Response:

The FEIS, Fire and Fuels section, discusses the effects of all four alternatives on wildfire suppression. The proposed Colorado Roadless Rule allows communities to treat fuels reduction one-half mile from the boundary of an at-risk community, or up to 1.5 miles under certain conditions.

Comment: The Forest Service should ensure that tree cutting will be permitted for fire suppression, emergencies, and public safety.

Response:

The Forest Service is allowed to cut trees for fire suppression, public safety, and other emergency situations. The proposed Colorado Roadless Rule allows tree cutting for activities not otherwise prohibited. Emergency situations fall into this category.

Comment: The proposed Colorado Roadless Rule should not further restrict tree cutting and road construction to protect communities from wildfire.

Response:

The proposed Colorado Roadless Rule recognizes the need for tree cutting to reduce the risk of wildfire to communities. It allows tree cutting within one-half mile from the boundary of an at-risk community, or up to 1.5 miles if certain conditions exist. A temporary road may be constructed to facilitate hazardous fuel reduction within one-half mile of the boundary of an at-risk community.

The FEIS discusses the effectiveness of fuels treatments in reducing fire hazard. The analysis was conducted by a group of regional fuels and fire specialists, based upon peer-reviewed scientific

publications and information from past experience and trends on Colorado forests. The FEIS discusses the effectiveness of fuel treatments on fire behavior and severity, including consideration of variables such as weather, wind, humidity, and topography (as quoted from literature from Finney and Cohen (2003), Deeming (1990), Finney (2000), and Graham et al. (1999). The conclusion in the publication by Graham et al. (1999) states that, “[T]he Forest Service can reduce the probability of a large-scale high-intensity crown fire and its undesirable impacts, while improving firefighter and public safety during wildfire suppression efforts.” The FEIS further discusses the effectiveness of fuel treatments in wildland urban interface areas, using information as cited from Finney (2001) and Finney and Cohen (2003) and discusses the reasons why fuels treatments may need to be implemented at a range of distances from communities.

Comment: The proposed Colorado Roadless Rule should allow road construction within one-half mile and tree cutting to reduce the risk of wildfire to communities.

Response:

This statement supports the Forest Service's recognition for limited tree cutting and road construction to protect at-risk communities from wildfire in the proposed Colorado Roadless Rule.

Comment: The Forest Service should not limit tree cutting or road construction within CPZs.

Response:

The proposed Colorado Roadless Rule strikes a balance between providing adequate protection of at-risk communities and protection of roadless areas by restricting tree cutting and road construction. Tree cutting and road construction for hazardous fuel reduction projects can take place within the CPZ under certain conditions.

Comment: The proposed Colorado Roadless Rule should not allow tree cutting and road building deep into the backcountry to reduce hazardous fuels.

Response:

The proposed Colorado Roadless Rule prohibits road construction and tree cutting, with limited exceptions. The proposed Colorado Roadless Rule recognizes the need for tree cutting to reduce the risk of wildfire to communities. It allows tree cutting within one-half mile from the boundary of an at-risk community, or up to 1.5 miles if certain conditions exist. A temporary road may be constructed to facilitate hazardous fuel reduction only within one-half mile of the boundary of an at-risk community.

Locatable and Saleable Minerals

Public comments were received about the proposed Colorado Roadless Rule and the ability to explore, mine, and transport locatable and saleable minerals.

Comment: The Forest Service should reconsider the roadless area boundary around the Henderson Mine and other mining claims within the State.

Response:

Some respondents suggest modifying the roadless area boundaries to exclude the Henderson Mine and other mining interests, because it may prevent their ability to develop future potential sites and respond in the case of emergencies.

Any person prospecting, locating, and developing mineral resources in NFS lands under the 1872 mining law has a statutory right of reasonable access for those purposes. Such persons need not have located a mining claim to exercise that right. Roads that are reasonably necessary for an activity conducted under the Mining Law are provided for by statute and therefore exempt from the road construction/ reconstruction prohibitions of Alternatives 1, 2, and 4 in the FEIS.

With the right of access preserved under these alternatives, it was not necessary to exclude any unpatented mining claims from designated roadless areas. Furthermore, lacking specific information on the mineral potential and development potential of any mining claims in roadless areas, there would be the appearance of a bias by excluding some, but not all, of the estimated 2000 active mining claims in roadless areas.

Road construction and reconstruction are allowed under the proposed Colorado Roadless Rule for emergency situations that threaten human life and property.

Comment: The Forest Service should allow mineral development on public lands.

Response:

Some respondents are concerned that the proposed Colorado Roadless Rule will prohibit mineral extraction, such as quarries to build roads and highways. The preferred alternative does not prohibit mineral extraction or the development of mineral material sites within roadless areas. Quarry sites could be developed within a CRA, as long as the development is done adjacent to an existing road or in association with an activity not otherwise prohibited within a roadless area.

Comment: The Forest Service should prohibit removal of mineral materials from roadless areas.

Response:

The rule does not prohibit mineral extraction or the development of mineral material sites. The proposed action is intended to address prohibitions and exceptions for road construction and reconstruction, linear construction zones, and tree-cutting, sale, and removal within roadless areas; those activities that have the greatest likelihood of impacting roadless values. Under the preferred alternative, mineral material disposals within upper tier acres would be limited to only those associated with an activity not otherwise prohibited in upper tier acres.



Comment: The Forest Service should not restrict mining for rare earth and other strategic minerals.

Response:

Strategic minerals, which include rare earth elements, are commodities subject to location under the 1872 Mining Law. Under all alternatives, the exercise of outstanding rights for access, occupancy, and use of NFS lands within designated roadless areas would not be affected. This includes access rights provided for by law, such as that provided under the 1872 Mining Law. Accordingly, roads necessary for reasonable access to prospect for, explore, and develop areas with potential for rare earth elements and other strategic minerals would be exempt from the alternatives with a prohibition on road construction and reconstruction.

Leasable Minerals

Public comments were received regarding the proposed Colorado Roadless Rule and the ability to explore, develop, and transport leasable minerals. Oil, gas, and coal are the most common leasable minerals on NFS lands within Colorado.

Comment: The EIS should identify where in roadless areas there is consent for mineral leasing.

Response:

The Forest Service recognizes that all Federal leases convey the right to remove the particular resource for which the land is leased. For the alternatives analyzed in detail, the FEIS lists roadless areas that have existing oil and gas leases and the total acreage where surface occupancy is allowed.

Comment: To avoid opportunity loss, the EIS should retain provisions allowing pipeline construction for oil and gas resources. In addition to the oil and gas pipeline exceptions, the proposed action should also allow pipelines to be installed in existing LCZs.

Response:

Alternatives 1 and 3 do not restrict oil and gas pipeline construction within roadless areas and would allow for their installation within existing utility corridors as suggested by the commenter.

Alternatives 2 and 4 prohibit LCZs within CRAs, but contain exceptions for oil and gas pipelines associated with: 1) certain existing leases within roadless areas; and 2) connecting to existing infrastructure within non-upper tier acres of a CRA if such a connection will minimize environmental impacts. The exceptions do not provide for new hydrocarbon pipelines from a source outside of a CRA to merely pass through a CRA, even if it were to be installed within an existing utility corridor. Recognizing that projections are uncertain estimates, the oil and gas pipeline restrictions are estimated to result in an average 36 percent fewer pipeline miles annually (0.4 miles per year) than the alternatives without restrictions. There is no estimate of the impact, if any, the pipeline restrictions would have on opportunities to extract and transport oil and gas resources, but the impact should be tempered by the proposed exceptions and the fact that none of the proposed energy corridors under Section 368 of the Energy Policy Act of 2005 are within CRAs.

Comment: The EIS should exclude additional areas with high oil and gas potential from roadless designation in order to contribute to the limited lands available for mineral development without significantly reducing roadless character.

Response:

Nearly 62 percent of the eleven roadless areas identified by the commenter have already been leased for oil and gas, with about 84 percent of the leased total allowing surface occupancy. Another 31 percent of these roadless areas is available for leasing, but would require stipulations that would prohibit surface occupancy per existing Forest leasing decisions. This leaves only about 7 percent of the remaining lands available to be leased where surface occupancy would be allowed. Since Alternative 2 provides an exception to the road prohibition for existing leases where surface occupancy is allowed, the majority of the oil and gas potential of these roadless areas could still be developed under the proposed Colorado Roadless Rule. Accordingly, the availability of the oil and gas resource in these lands would not be significantly affected by Alternative 2.

Comment: The EIS should allow pipeline construction in roadless areas if it will result in less environmental damage than alternate routes because rerouting through non-roadless areas may cause greater disturbance.

Response:

The commenter's suggestion is considered in varying degrees in the FEIS. Alternatives 1 and 3 do not contain restrictions on oil and gas pipeline construction, which would allow the Forest Service to consider the least impacting route, irrespective of the presence of a roadless area. Alternatives 2 and 4 prohibit LCZs within CRAs, but contain exceptions for oil and gas pipelines: 1) associated with certain existing leases within Roadless Areas; and 2) connecting to existing infrastructure within non-upper tier acres of a CRA, if such connection minimizes environmental impacts. In addition, the pipeline exceptions of Alternatives 2 and 4 must be installed in a manner that minimizes ground disturbance, including placement within existing right-of-way where feasible.

Comment: Requirements for responsible official and Regional Forester determinations nullify flexibility for the construction of Roads in the North Fork Valley. The restrictions are arbitrary and not pursuant to 36CFR Part 219.

Response:

The North Fork coal mining area exists under exception (c)(ix) of 294.43, prohibition on road construction and reconstruction. Regional Forester determination is not required for temporary road construction regarding coal exploration and coal related surface activities within certain lands of CRAs that are designated in the North Fork coal mining area on the Grand Mesa, Uncompahgre and Gunnison National Forests as displayed by the area on the FEIS Colorado Roadless Area map.

Comment: The EIS should clarify the standards that will be applied to LCZs for oil and gas pipelines, and prohibit LCZs for leases issued after 2001.

Response:

The standards for LCZs for oil and gas pipelines are described for each of the alternatives in Chapter 2 of the FEIS. In order to honor its commitments to existing authorizations and act in good faith, the Forest Service is proposing a reasonable balance that accommodates pipeline construction for all current oil and gas leases while minimizing impacts to roadless area characteristics. Oil and gas leases issued after the effective date of the rule would be subject to the LCZ prohibitions and exceptions contained in the final rule.

Comment: The Forest Service should remove CRAs that have high potential for oil and gas development from roadless area protection.

Response:

Roadless inventory procedures follow Forest Service Handbook 1909.12 Land Management Handbook procedures. Whether or not an area is identified as high mineral potential is not an inventory criterion. Many CRAs with high oil and gas development potential are already under lease and under all alternatives; existing oil and gas leases as of the date of the final rule can continue to operate under their lease stipulations.

Comment: The Forest Service should cancel, rescind, revise, or otherwise reconsider the treatment of gap leases.

Response:

In analyzing the impacts of oil and gas lease activity under the four alternatives, the FEIS does not distinguish between existing oil and gas leases that were issued before or after the 2001 Roadless Rule. In the years following promulgation of the 2001 Roadless Rule, the Forest Service was obligated under law, regulation, and policy to process requests from the Bureau of Land Management for consent to lease NFS lands, notwithstanding the legal status of the 2001 Roadless Rule at any given point in time.

In responding to BLM, the Forest Service relied upon individual Forest leasing decisions to determine whether lands were available, and if so, what surface resource stipulations to apply. Stipulations to protect roadless values became a condition of the leasing consent provided to BLM only if the forest plan and/or oil and gas leasing decision required it. Since leases are issued subject to applicable regulations in effect at the time of lease issuance, the road prohibitions of the 2001 regulations applied when the rule was in effect, and they did not apply when they were not in effect.

The 2001 Roadless Rule did not compel the amendment of any forest plan nor did it require stipulations restricting road or occupancy to be added to any leases. The BLM carried out its statutory authority and issued leases containing roadless lands subject to the applicable lease stipulations and notices required by the Forest Service consent. Once issued, the leases grant the exclusive right to drill for, extract, remove, and dispose of all the oil and gas within the lease area, subject to terms and stipulations made a part of the lease.



For purposes of the FEIS, all existing oil and gas leases within roadless areas, including post-2001 leases, are considered to be “existing authorizations”. None of the alternatives in the FEIS restrict or prohibit activities associated with existing authorizations, including the construction of temporary roads and pipelines reasonably necessary to exercise lease rights. Accordingly, commenter suggestions to: invalidate gap leases, add stipulations restricting surface occupancy to gap leases, develop a new FEIS alternative specifically addressing gap leases, prohibit linear construction zone activities for gap leases, or to make gap leases subject to requirements of an enacted Colorado Roadless Rule, are all beyond the scope of the FEIS as decisions regarding these leases have already been made.

Comment: The Forest Service should prohibit oil and gas leasing, or exceptions for roads for leasing, within CRAs.

Response:

In response to public comment, the rule has been modified to include stipulations for NSO for oil and gas leases within the upper tier. Under the preferred alternative, leases could still happen; however, the surface cannot be occupied with roads, well pads, or other infrastructure within the upper tier.

Surface occupancy would still be allowed for new oil and gas leases issued in non-upper tier acres. The 2001 Roadless Rule, No Action Alternative, prohibits road construction/reconstruction for any new leases issued in roadless areas, but it does not prohibit surface occupancy. Alternatives 2 and 4 provide a greater level of protection than the 2001 Roadless Rule by prohibiting surface occupancy on any new oil and gas leases issued in upper tier acres.

A feature common to all FEIS alternatives is allowance for the continuation, transfer, or renewal of valid and existing land use authorizations for activities in roadless areas. This is consistent with the approach taken in the 2001 Roadless Rule, which provides for roads needed “...in conjunction with the continuation, extension, or renewal of a mineral lease...or for a new lease issued immediately upon expiration of an existing lease.” (See 2001 Roadless Rule at 36 CFR 294.12(b)(7)). Regardless, this provision would not apply to oil and gas leases whose primary term may be extended, but cannot be renewed once they expire or terminate.

Comment: The Forest Service should prohibit road construction on all oil and gas leases.

Response:

The stated scope of the FEIS is the prohibitions and exceptions for road construction and reconstruction, the use of LCZs and tree-cutting, sale or removal activities within roadless areas. It is not within the scope of the FEIS to suspend, revoke, or modify land use permits, contracts, or other legal instruments issued prior to the effective date of the rule. For alternatives with road prohibitions, the projected miles of road for oil and gas activities are associated with existing leases, which are legal instruments issued prior to the effective date of the rule. The Forest Service cannot unilaterally modify existing leases to restrict road construction or surface occupancy when those leases were issued without such restrictions. This would constitute a regulatory taking of lease rights and would require compensating lessees for loss of use of their leases.

Comment: The Forest Service should prohibit road construction in the Thompson Divide area.

Response:

The proposed Colorado Roadless Rule prohibits road construction and reconstruction with certain limited exceptions. However, existing oil and gas leases that allow road construction and reconstruction would not be prohibited from exercising their lease rights. Once a lease is issued by the BLM, the lease grants the exclusive right to drill for, extract, remove, and dispose of all the oil and gas from the lease, subject to terms and stipulations made as part of the lease. None of the alternatives in the FEIS restrict or prohibit activities associated with existing authorizations, including the construction of temporary roads and pipelines reasonably necessary to exercise lease rights. The final rule cannot unilaterally change the development rights of existing leases as it would give rise to regulatory taking claims under the Fifth Amendment.

Comment: The Forest Service should reconsider road construction restrictions for oil and gas leases to avoid negative economic effects.

Response:

The FEIS acknowledges that road prohibitions would forego opportunities to develop oil and gas on unleased lands within roadless areas after the effective date of the proposed Colorado Roadless Rule. However, the FEIS also states that the recent trend of Forest plan revisions has been to allocate more roadless areas to management prescriptions that protect roadless area characteristics. This trend would indicate that even in the absence of Alternative 2, oil and gas development potential in roadless areas would experience increased restrictions.

Comment: The Forest Service should require directional drilling.

Response:

The specifics of how leases are to be developed are beyond the scope of the FEIS and best decided at the Forest level when lands are analyzed for leasing. Rather than requiring directional drilling to be used, the Forest Service employs a more performance-based approach to resource protection by specifying lease stipulations that restrict timing or surface use. The operator then decides if directional drilling is a feasible option after considering geologic factors and surface use restrictions.

Recognizing the increased prevalence of directional drilling and its potential to reduce impacts to roadless area characteristics, FEIS Alternatives 2 and 4, contain a provision that each environmental analysis for oil and gas proposals in roadless must consider an alternative that addresses directional drilling from pre-existing disturbance. Such an alternative can then be dismissed from detailed analysis if there is clear justification that directional drilling is not feasible for the proposal.

Comment: The Forest Service should require NSO stipulations for all mineral and oil and gas leases in roadless areas.

Response:

The Secretary of the Interior has the authority to withdraw lands from oil and gas leasing. The decision to apply no surface occupancy stipulations to oil and gas leases is typically made when lands



are analyzed for leasing. However, recognizing the higher level of protection desired for upper tier acres, the FEIS proposed action will require a no surface occupancy for all new leases issued in upper tier acres.

Commenter requests to apply NSO stipulations to all existing oil and gas leases are beyond the scope of the proposed action. Operators of existing leases where surface occupancy is allowed may use as much of the surface as is really necessary to conduct operations. A feature common to all alternatives in the FEIS is to continue existing land use authorizations for activities in roadless areas, which would include oil and gas leases issued by the BLM prior to the effective date of the rule. This feature recognizes that the proposed action cannot retroactively apply requirements that are inconsistent with the rights conveyed by an existing lease contract.

The commenter request to apply NSO stipulations to oil and gas leases outside of roadless areas in order to protect roadless values within roadless areas is also beyond the scope of Alternative 2. Such a restriction does not meet the purpose and need for Alternative 2 which is to provide management direction for the conservation of roadless area values and characteristics within roadless areas in Colorado. Creating a protective buffer zone around roadless areas goes beyond this stated purpose.

Comment: The Forest Service should acknowledge that lands more valuable for minerals should not be set aside for other uses.

Response:

The purpose of Alternative 2 is to provide lasting protection for roadless areas within the context of multiple-use management. The range of alternatives considered in the FEIS represents a reasonable balance of resource management that acknowledges both mineral values and roadless values.

None of the alternatives would affect the statutory right of access under the US Mining Laws nor would they affect access for existing coal and oil and gas leases (with lease terms that otherwise do not prohibit access). In addition, Alternatives 2 and 4 would provide an exception to the road prohibitions for coal exploration and other coal-related activities in the 19,100 acre North Fork coal mining area. Lastly, all of the alternatives allow mineral leasing in roadless areas, albeit with restrictions that would likely limit any development to that which can be accomplished via directional drilling from adjacent lands outside of roadless areas.

Comment: The Forest Service should prohibit fracking or permit only non-toxic fracking chemicals, to avoid negative impacts to water, fish, wildlife, and humans.

Response:

The purpose and need for the FEIS is to provide management direction for the conservation of roadless area values and characteristics within roadless areas in Colorado by limiting timber harvest and road building. Specific technical measures for oil and gas projects are beyond the scope of the FEIS analysis and are more appropriately considered in the environmental reviews conducted when an actual lease proposal is being considered.



Comment: The Forest Service should require pre-leasing site-specific analysis for oil and gas leases.

Response:

Alternative 2 is primarily focused on the prohibitions and exceptions for road construction and reconstruction, the use of LCZs, and tree-cutting, sale or removal activities within roadless areas. It is beyond the scope of the FEIS to address additional measures specific to the Forest Service's pre-lease process. The regulations at 36 CFR 228.102 provide the Forest Service guidance on leasing analysis and decisions. This established process would not preclude consideration of the commenter's concerns.

Comment: The Forest Service should consider prohibitions on extending, renewing, or reissuing existing oil and gas leases.

Response:

Alternative 2 does not affect the authority or the discretion of the responsible official to reissue a permit, contract, or other legal instrument upon its expiration or termination. Leases would be subject to this provision if they contain terms that allow them to be reissued or renewed. Oil and gas leases have provisions by which they are extended, but they cannot be reissued when they expire or terminate. The Bureau of Land Management may also suspend the tolling of the primary term of oil and gas leases in the interest of conservation of natural resources. BLM may only approve a suspension in cases where the lessee is prevented from operating on the lease, despite the exercise of due care and diligence, by matters beyond the reasonable control of the lessee.

Comment: The Forest Service should acknowledge that it is illegal to impose stipulations that are inconsistent with existing lease rights.

Response:

The description for Alternative 2 in the Oil and Gas Leasing section in Chapter 2 identifies eight additional provisions that the Forest Service must consider in each environmental analysis for surface use plans of operation for oil and gas. The use of the word "leasing" in the introductory language of this table in the RDEIS was in error and has been corrected in the FEIS to reflect that these provisions apply to post-lease activities. Consideration of these provisions is consistent with existing, contractual lease rights which require operators to conduct operations on a lease in a manner that minimizes effects on resources, and prevents unnecessary or unreasonable surface resource disturbance.

Comment: The Forest Service should eliminate the 600-foot setback around existing roads to ensure those areas are not released to non-roadless management and to not available for drilling.

Response:

Where developed parking sites are not provided within areas closed to off-road motor vehicle use, many forests have authorized direct access to a suitable parking site within 300 feet of an open road. Eliminating this parking access adjacent to open roads that extend into roadless areas would negatively affect all public users and not just potential oil and gas lessees. Also, some existing oil and gas leases within CRAs do not restrict surface occupancy, which would allow wells at any reasonable



location on leased lands, not just within the designated 600-foot wide parking area that straddles the road. A feature common to all alternatives in the FEIS is to allow for the continuation of existing land and recreation-related use authorizations in roadless areas. Such authorizations include the use of existing roads and trails and existing oil and gas leases. Accordingly, the commenter's suggestion was not adopted.

Comment: The Forest Service should reconsider the restriction on tree cutting around oil and gas facilities.

Response:

Alternative 2 provides an exception from the tree-cutting prohibition in roadless areas if the responsible official determines that the activity is consistent with the applicable land management plan and the tree-cutting, sale, or removal that is incidental to the implementation of a management activity not otherwise prohibited in roadless areas. Since Alternative 2 also allows for the continuation of existing land use authorizations for activities in roadless areas, the circumstances described by the commenter are covered by the aforementioned exception

Comment: The Forest Service should prohibit drilling in the Thompson Divide Area.

Response:

The scope of the FEIS is to provide management direction for roadless areas in Colorado through prohibitions and exceptions for road construction and reconstruction, the use of LCZs, and tree-cutting, sale or removal activities within roadless areas. Withdrawal of any roadless area from future oil and gas leasing is beyond the scope of the FEIS.

The Secretary of Interior has delegated authority to withdraw lands from mineral leasing through the process outlined in regulations found at 43 CFR Part 2300. In response to public comments for additional protective measures for upper tier, Alternative 2 would require future oil and gas leases within upper tier acres to have no surface occupancy stipulations. Restrictions on surface occupancy would not be required of future oil and gas leases in non-upper tier. CRAs with existing oil and gas leases were not designated as upper tier in Alternative 2.

Comment: The Forest Service should revise the estimates of reasonably foreseeable oil and gas development in CRAs.

Response:

Based on this and other public comments and additional updated information, projections of wells, production, and surface disturbance have been improved in the FEIS.

Please note that while development scenarios for programmatic analyses such as this FEIS need to be reasonable; they are still projections and subject to a great degree of uncertainty. The projections of wells and production made for the FEIS are reasonable and adequate to make a reasoned choice among the alternatives being considered, particularly given that none of the alternatives authorize any development, well drilling, production, leasing, or surface disturbance.

The FEIS acknowledges that many roadless areas have potential for the occurrence of hydrocarbon resources, but assumes that alternatives with road prohibitions would preclude that potential from being realized. Only under Alternative 3 (Forest Plan Alternative), where roadless areas would be managed according to provisions in the forest plan, would there be likely be development on new leases that might be issued in roadless areas.

Comment: The Forest Service should describe the plan for reclamation of expired oil and gas sites.

Response:

Prescribing specific reclamation requirements for oil and gas lease sites and roads is best decided on a project by project basis and therefore beyond the scope of the FEIS. General reclamation standards for oil and gas activities on NFS lands are provided for in the Forest Service oil and gas regulations at 36 CFR 228.108(g), which specifies how and when oil and gas surface disturbance is to be reclaimed.

Site-specific reclamations standards are then developed and approved locally at the time the Forest Service receives a surface use plan of operation for approval from an operator. As an integral step to ensure reclamation, the Forest Service ensures that the operator has sufficient bond coverage either through a bond held by the Bureau of Land Management or through a bond posted directly with the Forest Service before approving a surface use plan of operations.

Comment: The Forest Service should acknowledge the Memorandum of Understanding (MOU) among Department of Interior, Department of Agriculture and the Environmental Protection Agency regarding air quality and oil and gas decisions.

Response:

This rulemaking does not fall under the intent of the MOU as it is not a decision about oil and gas development on lands managed by the Forest Service, rather it is a rule for how the Forest Service will consider future proposed actions in roadless areas. This MOU is not more or less important than the hundreds of MOUs with a multitude of Federal, State, and local entities that apply to the Forest Service. Adding all of these MOUs that could potentially apply to a future activity in any roadless area throughout Colorado to this FEIS would be contrary to the regulations established by the President's Council on Environmental Quality. Specifically it would violate 40 CFR 1500.4(b) "Agencies shall reduce excessive paperwork by preparing analytic rather than encyclopedic environmental impact statements."

Comment: The Forest Service should analyze an alternative that precludes development on gap leases because there are no significant cumulative effects on oil and gas development analyzed in the RDEIS.

Response:

The RDEIS incorrectly stated that there would be no significant cumulative effect to the development of oil and gas resources from any of the alternatives analyzed in detail. Language will be changed in the cumulative effects discussion for all leasable mineral resources to reflect this in the FEIS. Direct, indirect and cumulative effects to oil and gas development due to restrictions in roadless areas would



be substantial and the incremental addition of reasonably foreseeable future restrictions will add to those effects.

The road prohibitions of Alternatives 1, 2, and 4 would substantially and adversely impact the ability of industry to explore and develop both known and yet to be discovered oil and gas resources on unleased lands in CRAs. Application of road prohibitions to any valid existing lease where surface occupancy is allowed would add to the adverse cumulative effects.

Comment: The Forest Service should ensure that authorizations do not include oil, gas, or coal.

Response:

Including oil, gas, and coal leases within the description of the term “authorizations” is done so only for ease of reference in the FEIS and is not intended to diminish any rights conferred by those leases. The Forest Service recognizes existing oil and gas leases have extractive rights subject to lease terms and stipulations. Those rights will be honored under all alternatives analyzed.

Comment: The Forest Service should document the effects of roadless restrictions on the development of the mineral estate.

Response:

In Chapter 3 of the FEIS, the Affected Environment and Environmental Consequences section for oil and gas identifies those roadless areas with high oil and gas development potential. The section acknowledges that hydrocarbon development opportunities will be foregone on unleased lands within roadless areas under alternatives which have prohibitions on road construction/reconstruction.

Exploration and development of existing leases with stipulations that allow surface occupancy would not be subject to the road or timber cutting prohibitions of Alternatives 1, 2, and 4, allowing resources associated with those lands to be developed. Specifically in the GMUG National Forest, there are 53,500 acres of existing oil and gas leases in IRAs (51,000 acres of existing leases in proposed CRAs) where surface occupancy is allowed and roads may be constructed to explore and develop any oil and gas potential. Using BLM Reasonable Foreseeable Development Scenarios as a basis, the FEIS also contains a projection of numbers of wells drilled and volumes of gas and oil recovered under each of the alternatives. The FEIS includes analysis of the effects of no surface occupancy in the upper tier.

Comment: The Forest Service should identify the mineral resource potential that may be affected by CRAs, specifically in the North Fork of the Gunnison River.

Response:

Leasable mineral analyses (coal, and oil and gas) relied on mineral resource data specific to the individual forest units. The oil and gas analysis used resource potential interpretations from BLM-prepared Reasonably Foreseeable Development Scenarios. For the portion of the GMUG National Forest that overlaps with BLM Uncompahgre Field Office administrative boundaries, data from the applicable Reasonably Foreseeable Development Scenarios (BLM, 2004, revised 2006) were revised between the RDEIS and FEIS via direct communication with the BLM Uncompahgre Field Office.



The analysis recognizes the high coal potential in the North Fork Valley. With respect to coal, about 45,350 acres of roadless and non-roadless NFS lands on the GMUG National Forest that overlap with BLM Uncompahgre Field Office administrative boundaries in the North Fork valley and vicinity are projected to contain recoverable coal resources (GMUG, 2006). About 39,100 of these acres are part of the FEIS analysis area, which contains both lands in IRAs and CRAs. In Alternative 2, about 19,100 of these acres in CRAs are part of the North Fork coal mining area that allow temporary road construction for coal development activities.

Comment: The Forest Service should prohibit road construction for coal mining.

Response:

The proposed Colorado Roadless Rule includes an exception to prohibitions for roads associated with coal mining only in the North Fork coal mining area. Coal mining is a valuable economic consideration to the State of Colorado and to many communities around the North Fork coal mining area. Roads are necessary for exploration and other coal related activities. Road construction is acknowledged as part of rights granted by a coal lease. Some of the areas within the North Fork coal mining area are under lease and others are not. Coal-related roads are used only by the coal operator and agency personnel, and are not open to the general public.

Experience in the West Elk IRA on the GMUG National Forests demonstrates that decommissioning roads through obliteration, along with land reclamation, effectively restores these underground mined areas. Forest Service policy and Forest Plan direction provide standards for road obliteration.

Comment: The Forest Service acknowledges that restricting development of coal resources on National Forests System lands could negatively affect future energy development and employment.

Response:

The proposed Colorado Roadless Rule provides exceptions that allow road construction for coal related activities within the North Fork coal mining area. The FEIS discloses the estimated amounts of coal resource that would likely be inaccessible under each alternative. The Economics section of the FEIS discloses projected effects to employment.

Comment: The Forest Service should ensure that Oxbow can continue to mine their lease within the Spring House Park roadless area.

Response:

All alternatives in the FEIS would allow road construction on existing coal leases. Alternatives 2 and 4, also allows road construction on future coal leases in the North Fork coal mining area.

Comment: The Forest Service should disclose the effects from methane drainage vents associated with coal mining.

Response:

Based on careful consideration of this and other comments, a projection of methane drainage wells and associated surface disturbance has been added to the FEIS.



Comment: The Forest Service should reconsider allowing methane collection pipelines and other buried infrastructure within temporary roads for coal related activities.

Response:

The proposed Colorado Roadless Rule allows for the possible capture and transmission of methane along existing temporary coal roads. Please refer to Chapter 3 in the FEIS for a more detailed discussion.

Comment: The FEIS should include a discussion of wastewater discharges associated with coal production.

Response:

This type of analysis is conducted during subsequent NEPA for a site-specific decision. The Colorado Roadless Rule does not authorize any coal mining or related activity.

Comment: The proposed Colorado Roadless Rule should exclude Currant Creek and not expand the North Fork coal mining area or the proposed Colorado Roadless Rule should include Currant Creek in the North Fork coal mining area.

Response:

The Forest Service consulted with BLM and State agencies, and carefully considered information on the presence and ability to mine coal resources in Currant Creek CRA and adjacent areas. The Forest Service also weighed public input and economic factors, information on wildlife resources, and the best available geologic information from the USGS, Colorado Geological Survey and BLM when making determinations on the boundaries of the North Fork coal mining area. A complete discussion can be found in the FEIS in Chapter 3.

After careful deliberation the Colorado Roadless Rule excludes Currant Creek CRA from the North Fork coal mining area. Therefore, no roads will be constructed in this area related to coal mining activities. The North Fork coal mining area includes 19, 100 acres where temporary roads can be constructed for coal related activities.

Comment: The proposed Colorado Roadless Rule should not jeopardize future mining activities because it is vital to the State's economy.

Response:

Coal mining is an important part of the State's economy and was considered in development of the final rule. A complete discussion of the project economic impacts to the coal production as a result of the proposed Colorado Roadless Rule can be found in Chapter 3 of the FEIS.

Comment: The proposed Colorado Roadless Rule should revise road construction provisions related to the North Fork coal mining area.

Response:

Some changes were made to the criteria to construct a temporary road for coal related activities within the North Fork coal mining area. In particular, the words “technically feasible” have been changed to "feasible". The criterion now reads "that motorized access, without road construction is not feasible."

Comment: The proposed Colorado Roadless Rule should not reduce the size of the North Fork coal mining area.

Response:

The proposed Colorado Roadless Rule includes 19,100 acres in the North Fork coal mining area. This number reflects the removal of Currant Creek CRA between the RDEIS and the FEIS, and some other minor boundary modifications. The Forest Service supports this revision and recognizes the balance between economic interest associated with coal mining, and the protection of roadless area characteristics. A complete discussion of coal mining in the North Fork area, including current boundaries, can be found in the FIES in Chapter 3.

Comment: The Forest Service should revise map 13 to clearly show boundaries of the North Fork coal mining area.

Response:

Based on this and other comments, revisions have been made to the map in the FEIS. Approximately 500 acres have been removed in T13S, R89W where there were no recoverable coal resources. This and other changes reflect a more accurate boundary.

Comment: Revise and clarify Table 3-18 relating to coal resources.

Response:

The Forest Service reviewed Table 3-18, and made some revisions as a result of changing the boundaries of the North Fork coal mining area. The variations noted in acreages are a result of each alternative’s applicable roadless areas. For example, the applicable roadless areas for Alternative 1 are the 2001 Roadless Rule IRAs, for Alternative 2 they are CRAs, and for Alternative 3, they are 2001 Roadless Rule IRAs. For the purposes of disclosure, the analyses in the FEIS also include effects to roadless lands that are not part of the particular alternative’s roadless areas, so each alternative considers the same acres, but not all the acres would be roadless.

For example, in Alternative 1, the ‘estimated accessible recoverable coal resources in analysis area not within 2001 Roadless Rule IRAs are coal resources within newly identified CRA acres, that would also be accessible under that alternative since those lands would be unaffected by prohibitions of Alternative 1. Similarly, under Alternative 2, where the applicable roadless areas are CRAs, the ‘estimated accessible recoverable coal resources in analysis area not within alternative’s roadless areas’ are those occurring in substantially altered areas of IRAs, which are not considered as roadless

in Alternative 2. Then, under Alternative 3, where the applicable roadless areas are IRAs, there are also lands in newly identified CRA acres that would also be accessible.

Comment: The Federal Register notice misstates the effects of the proposed Colorado Roadless Rule on the San Juan National Forest gas reserves.

Response:

The referenced statement in the Federal Register Notice for the preferred alternative-making is accurate. Rather than inferring that the San Juan National Forest did not have any natural gas production and reserves, the statement was meant to convey that there was no change in its projected natural gas activity and production among the four alternatives analyzed when the combined IRA/CRA boundary was considered. This is reflected in the Minerals Specialist Report which provides the projected wells and production for the San Juan across each of the alternatives, as it does for each of the other two National Forests with expected oil and gas activity in the foreseeable future.

Comment: The Forest Service should add oil and gas development to the list of State-specific concerns.

Response:

Access to existing oil and gas leases and related product transportation were national concerns articulated in the 2001 Roadless Rule and therefore, not just a State-specific concern. The final rule provides an exception from the roadless prohibitions when a temporary road is needed pursuant to explore and develop an existing oil and gas lease that does not prohibit road construction/reconstruction, including the construction of infrastructure necessary to transport the product.

Comment: The Forest Service should reconsider requiring the viability of directional drilling be included for oil and gas projects.

Response:

Alternatives 2 and 4 require the Forest Service, when reviewing oil and gas surface use plans of operation, to consider an alternative of directional drilling of the proposed wells from areas of existing surface disturbance. However, it also provides that such an alternative can be dismissed from detailed analysis with clear justification.

The American Petroleum Institute reports that 74 percent of wells drilled in the United States in 2009 were either directional or horizontal; therefore, it is reasonable to consider deviated drilling as an alternative under NEPA. Alternatives 2 and 4 recognize there are technical, logistical, and economic limitations that can make its use unreasonable in certain circumstances. Given the prevalence of directional and horizontal drilling, it appears that operators commonly decide if directional drilling is feasible well before alternatives for a proposed project are considered by the Forest Service.

Comment: The Forest Service should clarify different oil and gas leased acres in different alternatives.

Response:

The differences between the acreages portrayed in Tables 3-19 and 3-20 are due to difference in how the boundaries of IRAs and CRAs intersect existing leases. The column in the tables showing acres



where surface occupancy is allowed reflects those leases with lease terms and stipulations that allow surface occupancy somewhere on the lease. Alternately, the column showing acreage where surface occupancy is prohibited reflects those leases with a lease stipulation that prohibits surface occupancy over the entire lease.

None of the alternatives would change any term or stipulation of existing leases. The FEIS Leasable Minerals-Oil and Gas Environmental Consequences section states that road prohibitions of Alternatives 1, 2, and 4 will preclude development opportunities of oil and gas potential on roadless lands not under lease as of the effective date of the Colorado Roadless Rule. This consequence is based on the assumption that roads are necessary for a lessee to exercise lease rights. Table 3-22 in the FEIS lists those roadless areas with no existing leases; have varying degrees of occurrence potential for oil and gas; but are not expected to have development in the foreseeable future. Language has been added in the FEIS to clarify the information contained in and distinction between the tables referenced by the commenter.

Comment: The Forest Service should correct table 3-21 to reflect acres currently under lease.

Response:

In order to clarify the proposal and provide full information to the public and decision makers, Table 3-21 has been updated in the FEIS to reflect the availability of oil and gas leasing for those roadless areas with existing leasing decisions.

Road Construction and Reconstruction

Public comments were received about road construction and reconstruction prohibitions and exceptions in the proposed Colorado Roadless Rule. Some comments and responses regarding roads are contained in other sections of this document.

Comment: The proposal should avoid constructing new roads in roadless areas because they are costly, insufficiently maintained, and affect water quality and natural values. Exceptions should be narrow and not be used to accommodate water or oil and gas development.

Response:

Roads may not be constructed or reconstructed in a roadless area in a non-upper tier or upper tier unless a responsible official determines the road construction or reconstruction meet limited exceptions. These limited exceptions are appropriate and include narrow circumstances related to water and oil and gas development. Please refer to the Rule §294.43 for a specific list of these narrow circumstances. Any new roads would be constructed in a cost efficient manner, would be subject to appropriate required maintenance and would avoid or limit impacts to water quality and natural values pursuant to existing forest plan standards and guidelines.

Comment: The EIS should acknowledge the importance of the I-70 Mountain Corridor as it affects roadless areas.

Response:

The I-70 corridor is very important to the state and national transportation infrastructure. The FEIS has been modified to more appropriately address this issue.

Comment: The Proposed action should allow exemptions to road construction restrictions for regional transportation projects to ensure that Colorado can provide a safe and reliable transportation system.

Response:

Alternatives 2 and 4 recognize the importance, and provides for Federal Aid Highway projects and federal railroad projects. The preferred alternative allows for temporary road construction in emergency situations that threaten life or property.

Comment: The Proposed Action should eliminate redundant NEPA analysis for temporary road construction.

Response:

No redundant NEPA analysis requirements are included in the proposal. Alternatives 2 and 4 in this FEIS do not modify the CEQ or Forest Service NEPA regulations.

Comment: The proposal should avoid closing any roads particularly RS2477 roads.

Response:

None of the alternatives close or decommission any existing roads. The preferred alternative only prohibits the construction and reconstruction of new roads with a limited set of exceptions.

Comment: The proposed action should not upgrade roads for safety reasons because safety is not sufficiently defined.

Response:

Based on careful consideration of this and other public comments, the FEIS has been revised to include a more appropriate definition for road reconstruction for public safety is allowed.

Comment: The EIS should clearly define what constitutes a road. Definitions of primitive road, motorized trail, non-mechanized trail are vague and open to interpretation by individuals.

Response:

Please refer to Appendix F of the FEIS. The purpose of Appendix F is to ensure needed temporary roads are planned, located, designed, constructed, and ultimately decommissioned in a manner that provides needed access and subsequent removal from the landscape in an environmentally sensitive manner. It is not intended to define what constitutes a road. The Forest Service definitions cited are



necessarily broad due to the variety of access needs that National Forest System Roads and Trails provide across landscapes around the country. These definitions provide appropriate flexibility to ensure appropriate resource protection and access needs are met.

Comment: It's unclear whether trail maintenance is affected by the rule. This needs to be clarified as well as road construction and road reconstruction.

Response:

Trail construction, reconstruction and maintenance is unaffected by this preferred alternative or any of the alternatives.

Comment: The term temporary road needs to be defined. Temporary roads cause just as much environmental and stream damage and rarely are steps taken to protect silt and other debris from entering streams from temporary roads.

Response:

Please refer to Appendix F, which clarifies that temporary roads are necessary for emergency operations or authorized by contract, permit, lease, or other written authorization. Further restricting this definition would limit the flexibility needed to address specific and possibly unique purposes for temporary roads in a variety of landscapes. Appendix F provides for site and condition specific access in a safe, environmentally sensitive manner. Most importantly, any temporary roads would be subject to existing Forest Plan standards and guidelines that protect ecosystem conditions, including water quality.

Comment: No new OHV trails should be added. Existing trails should be used at a minimum.

Response:

OHV trail management is outside the scope of this decision.

Linear Construction Zones

Public comments were received regarding the proposed Colorado Roadless Rule and its prohibitions and exceptions for LCZs.

Comment: The Forest Service should reconsider the prohibitions on LCZs specifically in reference to water and oil and gas development.

Response:

Linear construction zones are prohibited under Alternatives 2 and 4 with certain exceptions. However to be constructed a responsible official must determine that the LCZ fits one of the exceptions. If an activity for a water conveyance structure fits the exceptions, all water rights filed prior to the final date of the rule and then eventually adjudicated are recognized. For an oil or gas pipeline, all existing oil and gas leases are deemed valid unless proven otherwise in a court ruling. The Forest Service and the State of Colorado seek a balance that protects roadless area characteristics and accommodates State-specific concerns. Please refer to §294.44 of the rule for further details on exceptions and prohibitions to LCZs.

Comment: The proposed action should require LCZ to be located within rights-of-way for new oil and gas pipelines in order to minimize damage and abuse.

Response:

The provision to provide appropriate flexibility in the location of LCZs was carefully crafted to both minimize environmental impacts and to provide for feasibility. Locations of pipelines are best determined at the project level and in some cases, co-locating a pipeline within a road right-of-way may not be feasible or least environmentally damaging.

Comment: The proposed action should ensure that maintenance on oil and gas pipelines will be permitted in LCZs.

Response:

Language was added to the exception for LCZs involving oil and gas pipelines to clarify that maintenance would be allowed under the rule.

Comment: The proposed action should limit the LCZ exception for oil and gas pipelines to existing rights.

Response:

The oil and gas pipeline exceptions described in the proposed action represent a reasonable balance between providing for existing and future lease rights while minimizing impacts to roadless area characteristics. An LCZ could be authorized for future lease interests only if it can be demonstrated to comply with the strict exception criteria of the proposed action.

Comment: All LCZs should be eliminated from the proposed action. Alternatively, there should be unrestricted use of LCZs in the proposed action.

Response:

The Forest Service has carefully considered public comments throughout this process regarding LCZs. This consideration has led to a balanced approach in Alternative 2 that protects roadless areas by prohibiting LCZs from CRAs with limited exceptions to reduce the impact to the roadless area characteristics. It balances this protective emphasis by providing exceptions for both upper tier and non-upper tier acres, based on existing rights and State-specific resource needs. These include consideration of the potential for the greater environmental damage that could be done to NFS lands outside of roadless areas if inflexible prohibitions would be imposed.

The appropriate venue for analysis of these exceptions is at the site-specific level. This site specific environmental analysis would occur to determine if any of the exceptions could be implemented. The analysis would appropriately consider impacts to resources within CRAs, as well as the effect to resources for alternative locations outside of the CRA.

Comment: The proposed action should limit LCZs to existing rights-of-way.

Response:

To the extent possible allowed by law, regulation and policy, LCZs may be limited to the authorized right-of-way width and location. However, often a greater width is needed for construction of facilities than is needed for operation and maintenance. Site-specific analysis on a project will determine the placement and width of the LCZs, limiting impact to resources including the roadless area characteristics.

Comment: The EIS should clarify the meaning of LCZ management terms “less environmental damage” and “substantially greater environmental damage”, and should provide clear standards for the decommissioning and restoration of LCZs.

Response:

These terms are self explanatory. Adding further restrictive language to these terms would limit on-the-ground flexibility needed to limit environmental impacts and provided for needed facilities. Their precise application for specific projects is best determined on an individual case-by-case basis when the full implications of these projects are available. The placement of the linear feature and the use of an LCZ to construct or maintain these features will be analyzed when projects are proposed, taking into account the ground conditions, the alternative placement of the features outside of CRAs, as well as the effect to the resources present in the CRAs.

Water Rights and Reservoirs

Public comments were received regarding the proposed Colorado Roadless Rule and possible impacts to water rights and reservoirs within CRAs.

Comment: The Forest Service should modify the rule to allow maintenance, development and expansion of reservoirs.

Response:

The proposed Colorado Roadless Rule accommodates the development and expansion of reservoirs by the use of road construction (non-upper tier acres) or LCZs (non-upper tier and upper tier) where the water right has been filed prior to the effective date of the rule.

Comment: The Forest Service should ensure the expansion of reservoirs would be allowed under the proposed Colorado Roadless Rule.

Response:

The proposed Colorado Roadless Rule does not prohibit the expansion of reservoirs. Alternatives 2 and 4 contain a road building exception for maintenance of an authorized water conveyance structure associated with a pre-existing water court decree in roadless areas outside of upper tier acres. In upper tier acres, a LCZ can be used for access to authorized water conveyance structures.

Comment: Exceptions for road construction should not be allowed for undeveloped water facilities.

Response:

The exception for constructing, reconstructing or maintaining water conveyance structures has been modified in the FEIS to clearly articulate that a water court filing must have occurred prior to the rule's effective date, and the water right must be adjudicated for the road construction exception or the linear construction zone exception to be applied.

Comment: The Forest Service should allow for the construction and maintenance of existing and future water conveyance structures; clarify how they will address water right issues; and clarify impacts to future and pre-existing water rights.

Response:

The proposed Colorado Roadless Rule does not confer any right to existing or future use of water or occupancy of NFS land within the State of Colorado. Such right must be acquired in accordance with applicable State and Federal laws. The preferred alternative recognizes both conditional and absolute water rights decreed by the Colorado Water Courts prior to promulgation of a final Colorado Roadless Rule. As such, it recognizes the ability to subsequently perfect conditional water rights decreed prior to promulgation of the Rule.

Additionally, in response to public comment, the rule has been modified to recognize pending water right applications submitted to Colorado Water Courts prior to promulgation of the preferred

alternative and accordingly, will recognize subsequent decrees associated with conditional and absolute water rights that may result from these pending applications.

Terrestrial Species and Habitat

Public comments were received regarding the proposed Colorado Roadless Rule and prohibitions and exceptions that may impact big game, threatened and endangered, and other species' habitat.

Comment: The Forest Service should limit road construction to protect big game habitat.

Response:

The proposed Colorado Roadless Rule prohibits the construction and reconstruction of roads, with limited exceptions. Please refer to the Terrestrial Wildlife section of the FEIS, which discusses the values of roadless areas to various species of wildlife including endanger, threatened, sensitive, management indicator, and big game species.

Comment: The Forest Service should ensure that the proposed Colorado Roadless Rule requires projects to maintain the viability of fish and wildlife populations throughout the duration of permitted projects.

Response:

Please refer to the Terrestrial Wildlife and Aquatic Habitat sections of the FEIS, which present the effects of the alternatives being considered on various species of fish and wildlife. The possible effects of the alternatives in both the near term and longer term were evaluated. Project level analysis will apply applicable Agency and Forest Plan direction to assure appropriate protection to fish and wildlife.

Comment: The Forest Service should expand the tree cutting exception from federally threatened, endangered, proposed, or sensitive species, to cover all wildlife habitat.

Response:

Broader language about "management and improvement of wildlife and plant species" was dropped from the proposed Colorado Roadless Rule of 2008 so that it would more closely resemble the 2001 Roadless Rule for this tree cutting circumstance. The Forest Service believes it is still appropriate to limit tree cutting to purposes focused on needs of federally or agency-designated species.



Fisheries and Aquatic Species

Public comments were received regarding the prohibitions and exceptions in the proposed Colorado Roadless Rule and possible impacts to fish and other aquatic species.

Comment: The Forest Service should allow water conveyance LCZs with reasonable mitigation, even if native cutthroat trout habitat is diminished over the long term.

Response:

Alternatives 2 and 4 allow for water conveyance structures associated with a pre-existing water court decree to be constructed or maintained with a linear construction zone (LCZ). It must be determined, that the LCZ will not diminish, over the long-term, occupied native cutthroat habitat. Please note that “native cutthroat trout habitat” has been modified to “occupied native cutthroat trout habitat.” Site-specific NEPA analysis would be conducted before a decision is made regarding the use of an LCZ.

Comment: The Forest Service should correct the elevation range for aquatic habitats and species

Response:

Thank you for this suggestion. The elevation range for aquatic habitats and species in roadless areas in Colorado has been corrected in the FEIS to identify a range of approximately 7,000 to 14,000 feet.

Comment: The Forest Service should remove language related to cutthroat trout because the species is already protected under NEPA and ESA.

Response:

Colorado Roadless Areas contain important populations of cutthroat and other native fish species. Alternatives 2 and 4 provide special provisions for cutthroat populations as a result of substantial public input.

Comment: Cutthroat trout should not be given special consideration

Response:

The FEIS analyzes the effects of the alternatives many species of plants and animals in addition to cutthroat trout. Native cutthroat trout are listed species under the ESA or considered sensitive by Region 2 of the Forest Service and receive additional consideration as such. During scoping and development of the DEIS and the RDEIS, native cutthroat trout and their habitat was of particular interest and concern to the public. This is due to the rarity of these species, the disjunctive and fragmented condition of occupied habitat and the substantial benefit resulting from large areas of roadless conditions to native cutthroat and their habitat.

Comment: The Forest Service should eliminate loopholes that threaten cutthroat trout and other native fish and further protect habitat.

Response:

The proposed Colorado Roadless Rule prohibits road construction, reconstruction, tree cutting, and the use of LCZs, with limited exceptions. The prohibition of these activities will not threaten trout and other native fish. The exceptions to the road and linear construction zone prohibitions have criteria that these activities not harm occupied cutthroat trout habitat. Any project that would implement these exceptions would go through a site-specific NEPA analysis.

Native cutthroat trout populations and associated habitat are currently protected and managed under existing state and federal laws and policy. Alternatives 1, 2 and 4 provide direction that would limit potential impacts related to road construction.

Comment: The Forest Service should reconsider requiring that road construction for mining not affect native cutthroat habitat.

Response:

The language of the rule requires that the responsible official must make the determinations that proposed road construction meet the exception requirement of §294.43(b)(1). A change in the FEIS requires that native cutthroat trout habitat be occupied by this species. This was in response to many public comments that were concerned that "habitat" alone, was too broad and would include areas without the presence of the native cutthroat.

While the preferred alternative requires the responsible official to determine if a road will diminish, over the long term, conditions in the water influence zone and in occupied native cutthroat habitat, it does not require the responsible official to take a specific action in making that determination. The determination made under the subject section is to highlight consideration of this resource in the overall decision-making process and is not intended to contravene the statutory right to reasonable access under the 1872 Mining Law or the requirements of other applicable regulations. The Forest Service mining regulations found at 36 CFR 228 Subpart A would continue to apply to the review and approval of mining proposals in roadless areas. The environmental protection requirements of Subpart A found at §228.8 require operators to conduct operations so as, where feasible, to minimize adverse environmental impacts on National Forest surface resources.

However, the comment did bring to our attention an inconsistency between the wording of §294.43(b)(2) and §294.43(c)(2). Language has been added in the final rule to §294(b)(2) to make it consistent with §294.43(c)(2) and reflects that the determinations made by the responsible official under both paragraphs is subject to the rights pursuant to reserved or outstanding rights, or as provided for by statute or treaty. This change underscores that the right of reasonable access to locatable mineral exploration and development is not affected by the final rule or any of the alternatives analyzed in the FEIS, regardless of roadless designation as upper tier acres or non-upper tier acres.

Water Quality

Public comments were received regarding prohibitions and exceptions in the proposed Colorado Roadless Rule and potential impacts to water quality.

Comment: The Forest Service should provide baseline water quality data to allow for future monitoring of effects.

Response:

Baseline water quality data is important for monitoring the impacts of potential future projects that could adversely affect water quality. Such data would be most significant and relevant to the public and decision makers when an actual project is proposed. Since this proposed action does not authorize any specific action that could adversely affect water quality, amassing detailed water quality data in this FEIS would be contrary to the President's Council on Environmental Quality regulations at 1500.1(b) "Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail." [emphasis added]

Comment: Comments were received regarding protection of Colorado's cold water resources, including wetlands, for protection of water quality for a variety of beneficial uses including but not limited drinking water, agricultural water supplies, recreational opportunities and fish and wildlife habitat.

Response:

NFS lands are managed for multiple uses under the National Forest Management Act, the Multiple Use and Sustained Yield Act and other federal laws. In administering multiple use activities on NFS lands, the Forest Service protects water quality by implementing federal and state requirements of the Clean Water Act (CWA) and other federal and state laws and regulations.

The purpose of the Colorado Roadless Rule is to conserve the roadless character of CRAs. Two of the nine characteristics used to identify these areas was the presence high quality or undisturbed soil, water or air resources or the presence of a source of public drinking water. The conservation of Colorado's water resources for beneficial uses under the Clean Water Act is integral to the purpose and need for this rule.

Comment: The Forest Service should expand the discussion of water resources to include a characterization of aquatic resources, disclosure of effects, summary of wetlands and a description of wetland effects and compliance with E.O. 11990, Protection of Wetlands. The Forest Service should consider excluding tree cutting, road construction, and LCZs in wetland areas.

Response:

The comment is asking for a level of specificity on water resources and impacts that are inappropriate and/or unavailable at the programmatic scale of this FEIS analysis. The best available data at the appropriate scale was used in the analysis. For example, the RDEIS estimates there are 5,400 to

5,700+ miles of streams within the 4.4 million acres of IRA/CRA. This was based on GIS analysis using the Forest Service's stream layer.

The best summary of available water quality monitoring data for baseline conditions at this scale is the State of Colorado Integrated Water Quality Monitoring and Assessment Report, with the 303(d) list and Monitoring and Evaluation (M&E) List. This report was used in the FEIS analysis. If a waterbody is not specifically listed on the 303(d) list or M&E list, it is assumed that water quality is meeting the standards and classified uses are supported or the water body has not been assessed. Wetlands are described qualitatively in the FEIS analysis. With regard to disclosing specific impacts on baseline conditions of streams and wetlands, it is impossible to do at the programmatic scale of this FEIS. The specific locations of projected road building, tree cutting, ski area developments or other activities that could occur in any of the alternatives is unknown at this time, and therefore also unknown is which specific streams or wetlands would be impacted. These will all be analyzed at the project level. However, a reference to Forest Plan standards and guidelines has been added to the FEIS. Site-specific measures to protect wetlands and fens are determined during project design and environmental analysis. Forest Service policy is to use Best Management Practices (BMPs) at the project level to avoid, minimize or mitigate wetland impacts consistent with Executive Order 11990 (Protection of Wetlands) and other federal and state regulations. Forest Service Region 2 Watershed Conservation Practices (WCPs) contain specific direction to maintain ecological function of wetlands and fens, and to limit activity within the water influence zone to those actions that maintain or improve long-term health.

Comment: The Forest Service should restrict road construction exceptions to prevent damage to water quality, watershed stability, habitat, and other ecological damage.

Response:

The FEIS discloses the relative impacts to soils, watershed health, wildlife habitat, and other environmental parameters as part of the Environmental Consequences portion of the document. It also discloses the relative potential impact to the establishment and spread of invasive species that may be expected to occur under the various resources. The document explains that once a temporary or long-term temporary road is no longer needed, the road must be decommissioned and the affected landscape restored.

Although the analysis considers various roadless area alternatives, the FEIS does not analyze site-specific decisions regarding activities or projects which may or may not occur in the future. Site-specific NEPA analysis and public comment will occur to consider the effects of future activities. During that process the public will have the opportunity to comment on any proposed activities in accordance with NEPA requirements.

Comment: The Forest Service should acknowledge that temporary roads will not significantly reduce impacts to water quality, watershed stability, habitat and roadless character.

Response:

Chapter 3 of the FEIS describes the potential risks of adverse consequences to natural resources and roadless area characteristics that can be expected under the alternatives. Chapter Three of the FEIS recognizes that road construction can adversely affect watersheds, hydrologic processes, sedimentation, and chemical pollution. (Gucinski, et al. 2000; MacDonald and Stednick, 2003).

The FEIS recognizes that during the period of use, temporary roads would result in a loss of roadless area characteristics. Although temporary, these roads will be constructed to adequate standards so that resource conditions are protected during construction, maintenance, and decommissioning phases.

As stated in the FEIS, “all things being equal, a well designed and located temporary road that is decommissioned after use would have less long-term adverse effects” on these parameters than a permanent forest road that remains open and requires periodic maintenance.

The Rocky Mountain Region follows the guidance of the Watershed Conservation Practices Handbook (FSH 2509.25) to minimize watershed impacts which can result from road construction, maintenance and decommissioning work.

Forest plans for the national forests in Colorado contain numerous standards and guidelines designed specifically to maintain fish and wildlife habitat quality, especially for threatened, endangered, proposed, and sensitive species. Additional requirements in laws, regulations, and agency policies are aimed at conservation of these species or their habitats. Site-specific mitigation measures to conserve those resources are developed during project-level planning. Thus, potential adverse effects from roads are expected to be either avoided or minimized during project planning and implementation.

Road construction under Alternatives 2 or 4 would require that road construction or reconstruction in CRAs may occur only when the responsible official determines: (a) there is no opportunity to avoid the CRA without significantly greater environmental impact; (b) the project is not feasible without new road construction or reconstruction; and (c) road construction activity is consistent with law, regulation, and forest plan direction. All road construction in a CRA must be conducted in a manner that minimizes effects on surface resources and prevents unnecessary or unreasonable surface disturbances.



Air Quality

Public comments were received regarding prohibitions and exceptions in the proposed Colorado Roadless Rule and potential impacts to air quality.

Comment: The Forest Service should provide a quantitative analysis of potential green house gas emissions associated with coal resources.

Response:

Additional analysis of greenhouse gas issues has been included in the FEIS. However, none of the alternatives authorizes any coal development. A detailed analysis of greenhouse gas emissions should be considered for federal actions that authorize such development, rather than this FEIS, which analyzes the effects of protecting roadless areas.

Comment: The Forest Service should revise the DEIS to acknowledge that alternatives will result in varying degrees of carbon emissions.

Response:

The FEIS has been updated with a qualitative analysis that recognizes that carbon emissions would vary by alternative, depending on future leasing decisions.

Comment: The Forest Service should eliminate the requirement to use "best available technology" to control air and noise emissions.

Response:

The FEIS has been updated to clarify statements on air and noise emissions.

Comment: The Forest Service should provide additional baseline air quality data to ensure that future projects do not adversely affect National Ambient Air Quality Standards.

Response:

The preferred alternative provides for the protection of roadless areas, it does not authorize any activity that would adversely affect any air quality standards. Consequently an encyclopedic presentation of detailed air quality information will not be included in this FEIS. Amassing such a compilation of data in the FEIS would be contrary to the President's Council on Environmental Quality regulations. Specifically it would violate 40 CFR 1500 4(b) "Agencies shall reduce excessive paperwork by preparing analytic, rather than encyclopedic environmental impact statements."

Comment: The Forest Service should include an emissions inventory for emissions by alternative; revise analysis because it underestimates effects; analyze to comply with NEPA and other Federal laws; and analyze effects of the North Fork coal mining area volatile organic compounds (VOCs), particulate matter, etc.

Response:

The preferred alternative protects roadless areas and does not authorize any activities or actions that cause emissions. Therefore, any potential future actions that initiate surface disturbance, development of roads or pipelines, coal mining expansion or drainage wells, oil and gas development not already authorized, tree cutting, prescribed fire, or any other potentially air-pollution-emitting action, are speculative at best. They are speculative not just in terms of timing, location, scale, and many other factors, but also speculative as to whether the action would even occur.

A future action or a proposal for future action may be made more or less likely by one alternative or another. It is not possible to say that a potential future proposal for action has a given percentage increase in likelihood in one alternative compared to another. What can be estimated at this time is the relative likelihood of potential future actions from one alternative compared to another. It does not follow that an alternative perceived as decreasing the likelihood of a future proposal for action equates to a certainty that the action will not be proposed or ultimately initiated. The reverse conclusion would be equally flawed: that under an alternative perceived as less restrictive, any given activity will occur. Nor can we conclude anything about the conditions, constraints, timing, scale, extent, or scope of such an action should it occur at some point in the future. In short, there are many potential future actions that may (or may not) be proposed on lands managed by the Forest Service. Alternative 2 and alternatives may affect the likelihood or form of some of these and, so will a multitude of other factors such as economic conditions, competition, innovative technologies that allow for development without new roads, budgets, and politics to name just a few.

For this rulemaking, it is not feasible or appropriate to conduct emission inventories for air pollution, including visibility impairing pollutants, greenhouse gases, ozone precursors, and other air pollutants. A qualitative analysis comparing relative potential air pollution impacts by alternative is fully disclosed in the air quality section of the FEIS. This qualitative analysis rests on a series of compounded assumptions, none of which are guaranteed to be true. These assumptions are listed in the FEIS. A quantitative analysis of emissions and air pollution impacts would necessarily rely on these assumptions and many others – such an analysis would be so wrought with speculation that it would offer little if any value to the rulemaking and is contrary to NEPA and its implementing regulations.

Any future activities or actions will undergo the appropriate level of additional NEPA review and may require estimates of air pollution emissions including visibility impairing pollutants, greenhouse gases, ozone precursors, and other air pollutants. Such actions may also require additional analysis of air quality impacts. Individual projects will receive consideration for more detailed analysis during project-level planning. In compliance with the NEPA, prior to any activity being implemented on the ground, a site specific, project-level analysis would be completed to determine direct, indirect, and cumulative effects, including, if relevant, effects on air quality. Appropriate air quality protection measures may be applied at the project-level.

Additional information about air quality, existing air quality conditions, visibility protection, and the Clean Air Act, has been added to the air quality section of the EIS.

Comment: The Forest Service should analyze North Fork coal mining area for effects on visibility.

Response:

Additional information regarding the protection of Class I airsheds and visibility conditions was added to the air quality section of the FEIS.

Comment: The Forest Service should protect Class 1 areas from the effects of oil and gas leasing.

Response:

The proposed Colorado Roadless Rule prohibits road construction and reconstruction within CRAs, with certain exceptions. Additional information regarding the protection of Class 1 airsheds and visibility conditions have been added to the air quality section of the FEIS.

Ski Areas

Public comments were received regarding boundaries of CRAs and upper tier acres and potential impacts to ski areas. Comments also reflected concerns about ski area development and potential impacts to CRAs.

Comment: The Forest Service should include ski areas in the roadless inventory or the Forest Service should exclude ski areas in the roadless area inventory.

Response:

The proposed Colorado Roadless Rule recognizes the importance of the ski industry to the economy of Colorado. The current proposal removes 8,300 acres from CRAs. Most of these acres (6,600 acres) are under existing ski area permits. Therefore, potential development is allowed under these permits. The remaining 1,700 acres are included as part of draft or current Forest Plans for the primary purpose of ski area expansion.

Even though these areas are removed from the roadless inventory, site-specific NEPA would be required for potential development. These is both prior to development within permitted acres (6,600 acres) and before any acres are added to a ski area permit that are not currently within the permit (1,700 acres).

Comment: The Forest Service should not remove potential ski areas from roadless area designation, because ski terrain may be expanded without roads.

Response:

Ski area expansion may or may not involve road construction. All ski area expansion would require site-specific analysis and have to be consistent with the Forest Plan, both processes involve public



participation. Ski areas and potential areas of future development were removed from the roadless inventory because the 8,300 acres is a very small percentage of the overall inventory, and the ski industry's importance to the State.

Comment: The Forest Service should not remove potential ski areas from roadless area designation, because of potential lynx habitat, and other ecological functions.

Response:

The impacts of ski area development on lynx habitat and other ecological functions would be considered in detail during the development, amendment, or revision of Forest Plan. Site specific NEPA analysis would also consider any potential impact. Both processes involve reviewing scientific information, mapping, and public participation. The FEIS adequately addresses these issues given the programmatic nature of the proposed Colorado Roadless Rule.

Comment: The Forest Service should include an assessment of ski area development on wetlands, streams, riparian areas, water quality, and other ecological concerns.

Response:

All of the alternatives, including Alternative 3 (Forest Plan Alternative), protect roadless areas, and do not authorize ski areas or any other development. Consequently a quantified assessment of potential impacts from potential future projects would be speculative. Furthermore, all NFS lands in Colorado are currently managed under Forest Plan standards and guidelines which protect water quality and other ecological concerns.

Comment: The Forest Service should correct the definition of developed ski areas.

Response:

Thank you for your comment. The FES has been revised to correct this definition.

Comment: The Forest Service should correct the description of the 2001 Roadless Rule as it relates to ski areas to reflect that the 2001 Roadless Rule allows some tree cutting in ski areas.

Response:

Alternative 1, the 2001 Roadless Rule, does allow tree cutting for some activities associated with ski areas. Corrections to the text in the FEIS reflect this. Thank you for your comment.

The Forest Service should correct the boundary of the West Needles CRA to exclude the areas for the special use permit for the Durango Mountain Resort.

Response:

The Forest Service reviewed the activities authorized under the current Durango Mountain Resort ski area permit against the boundary of the West Needles CRA. Authorized activities on the east side of



Highway 550 include a proposed sleigh/accessible trail, a Nordic ski trail system, and a trailhead. The trailhead and associated parking are outside of the West Needles CRA. Portions of the proposed sleigh/accessible trail and Nordic ski trail system are within the West Needles CRA. Construction and maintenance of the proposed sleigh/accessible trail and Nordic trail system as authorized by the September 2008 Record of Decision for the Durango Mountain Resorts 2008 Improvement Plan are not prohibited under Alternative 2, the Colorado Roadless Rule. Future tree cutting needed to construct or maintain these trails could occur under the exception for tree cutting incidental to the implementation of a management activity not otherwise prohibited. For these reasons, the Forest Service did not see the need to change the boundary of the West Needles CRA.

Recreation

Public comments were received regarding prohibitions and exceptions in the proposed Colorado Roadless Rule and potential impacts to recreation. Many comments cited access to specific trails and roads that are more appropriately addressed through the travel management planning process. The proposed Colorado Roadless Rule does not make decisions about opening or closing existing roads or trails.

Comment: The Forest Service should provide additional access, restrict access, prohibit vehicles, restrict illegal off-road use, avoid closing existing roads, prohibit motorized access, describe impact to snowmobiles, bicycles, and other motorized or mechanized access.

Response:

The proposed Colorado Roadless Rule prohibits road construction, reconstruction, tree cutting, and the use of LCZs. It does not regulate existing access on roads, overland travel, motorized, or non motorized trails. It does not restrict existing access to private property. Motorized and mechanized access is allowed within CRAs, unless otherwise restricted by individual forest plans, travel management plans, or other site-specific decisions. Decisions about access routes are made during site-specific travel management or other decisions.

Comment: The Forest Service protects roadless areas for hunting and fishing opportunities.

Response:

The proposed Colorado Roadless Rule prohibits road construction, reconstruction, tree cutting, and the use of LCZs, with certain exceptions. These prohibitions offer increased protections for hunting and fishing areas because of the reduced impacts of habitat fragmentation in the future.

Comment: The Forest Service should ensure the rule addresses recreation and management of recreational areas and multiple use areas.

Response:

The agency mission is to manage multiple uses across NFS lands, including developed and dispersed recreation opportunities. The proposed Colorado Roadless Rule restricts only tree cutting, sale, and removal; road construction and reconstruction; and LCZs (with some exceptions) in CRAs. None of



the alternatives affect access or use of existing roads and trails, including motorized travel on roads and trails, nor do they affect recreational activities such as hunting, fishing, hiking, camping, mountain biking, summer/winter motorized recreation and skiing.

Comment: The Forest Service should avoid restricting road access and consequently discriminating against senior citizens and the disabled. The Forest Service should not enact the preferred alternative because it does not comply with the Americans with Disabilities Act.

Response:

The rule prohibits future roads, and does not affect existing access or recreational activities. It does not restrict or expand access to proposed CRAs for any user group, including persons with disabilities, or senior citizens.

Comment: The Forest Service should not close roads and continue to manage roads through the Travel Management Planning process.

Response:

Alternative 2 in this FEIS deals with prohibitions on future road construction and reconstruction, and does not affect current travel access and recreational activities. Proposals for travel management are not included in this FEIS because decisions about individual trail and road designations are beyond the scope of the proposed action.

Wilderness and Congressionally Designated Areas

Public comments were received regarding prohibitions and exceptions in the proposed Colorado Roadless Rule and potential impacts to wilderness areas. Comments also expressed concern that the development of roadless areas and upper tier acres are *de facto* wilderness areas. Additional public comments and responses in other sections of this appendix also address some related topics.

Comment: The EIS should recognize that activities on lands adjacent to Wilderness Areas can have direct effects on the wilderness character of those areas.

Response:

The Forest Service Manual direction states (, FSM 2300, 2320.3 Policy): Because wilderness does not exist in a vacuum, consider activities on both sides of wilderness boundaries during planning and articulate management goals and blending of diverse resources in forest plans. Do not maintain buffer strips of undeveloped wildland to provide an informal extension of wilderness. Do not maintain internal buffer strips that degrade wilderness values. Use the Recreation Opportunity Spectrum (FSM 2310) as a tool to plan adjacent land management.” A comprehensive wilderness analysis is provided in the FEIS that clarifies that Alternative 2 (Proposed Action) protects Roadless Areas adjacent to wilderness.

Comment: The EIS should acknowledge that the Rule is unlikely to reduce pressure to designate areas as Wilderness.

Response:

The FEIS has been modified to focus on direct, indirect, and cumulative effects in conformance to Council on Environmental Quality regulations. Speculation about potential pressure to designate wilderness has been deleted from the FEIS.

Comment: The EIS should acknowledge that management of roadless areas as Wilderness is illegal.

Response:

It is not the intent of the Colorado Roadless Rule to establish de facto wilderness designations. The U.S. Congress has the sole authority to add areas to wilderness. While management direction for upper tier acres limits the potential for road construction/reconstruction and tree cutting, upper tier designation does not imply wilderness management direction. Wilderness management direction is much more restrictive regarding the types of activities that can occur within designated areas, including prohibitions on motorized equipment and mechanical transport, commercial activities, structures, improvements, and types of primitive recreation activities. The preferred alternative does not provide direction for these other activities, which would continue to be managed under the forest plan and other policies and regulations.

Social and Economic

Public comments were received regarding prohibitions and exceptions in the proposed Colorado Roadless Rule and potential impacts to social and economic concerns.

Comment: The Forest Service should avoid limiting roadless-area access to mineral and oil and gas development.

Response:

Although striving to protect roadless values would undoubtedly limit aspects of developing mineral resources in roadless areas, fluid and solid minerals development would not be prohibited under any of the alternatives with road prohibitions. All of the alternatives would allow road construction and reconstruction that is reasonably needed to access and develop locatable minerals under the U.S. Mining Laws. Alternatives 1, 2, and 4 allow access to develop oil and gas from existing leases with surface occupancy provisions and allow access for coal development and associated surface uses from existing leases. Alternatives 2 and 4 provide access to additional unleased coal resources in the North Fork coal mining area. Should technological advances or national demands warrant, the FEIS describes a feature common to Alternatives 1, 2, and 4 for making administrative corrections and modifications.

Comment: The Forest Service should revise the Statement of Energy Effects of the preferred alternative because it must address the rule's effect on oil and gas distribution via pipelines.

Response:

Impacts of the alternatives on oil and gas are discussed in Chapter 3 of the FEIS. The FEIS takes a hard look of energy effects of the preferred alternative.

Comment: The Forest Service should revise its estimated economic output from mineral leasing to reflect upper tier restrictions to accurately compare Alternatives 2 and 4.

Response:

Economic output from leasable minerals in Alternative 4 is projected to be the same as Alternative 2. Economic output between the two alternatives is equal because upper tier acres do not contain any existing coal or oil and gas leases. The oil and gas economic output is based on the projected number of wells drilled and oil and gas produced, which are identical for Alternatives 2 and 4 because development would only occur on existing leases within non-upper tier CRA Acres. For all alternatives with road prohibitions, no new development is expected to occur on new leases issued within roadless areas. Accordingly, the additional constraints imposed on upper tier acres would have no effect on the projected wells, production, and economic output.

Comment: The Forest Service should consider impacts to the entire Colorado economy when managing roadless areas.

Response:

National forests play an important role in the Colorado economy. Visitors (tourism) and state residents who recreate, water sources for communities and agriculture, energy mineral extraction, hard rock mining activities, logging and fuel treatment, grazing, communication sites, and a myriad of other uses on NFS lands all provide substantial contributions to the state's economy. Many of these uses will not change measurably among the alternatives considered and analyzed. Recreation, grazing, hard rock mining and water yield are some of the uses with little or no change. Therefore, there is no impact to the tourism, ranching, and hard rock mining industries. Some uses of roadless acres will change, but cannot be quantified. These consequences of roadless area management, such as the impact of wildfire on communities, are likely to change, but only general conclusions can be drawn. In the same way, costs for some special use permittees, such as local governments or private firms, may be affected, but site-specific, quantifiable estimates are not available. Only energy mineral extraction estimates can be quantified with some confidence and analyzed for their impact to Colorado's economy. A statewide estimation of economic impacts over a 15-year period has been added to the FEIS.



Comment: The Forest Service should consider the non-extractive and environmental values when managing roadless areas.

Response:

Consequences of the alternatives on non-market values – such as water and air quality, watershed condition, scenic values, and wildlife habitat – are addressed throughout Chapter 3 of the FEIS. Some discussion is found in the resource sections, with additional discussions in the social and economics sections. The analyses are qualitative. A compendium of benefits and costs is presented in the companion report: “*Roadless Area Conservation: National Forest System Lands in Colorado, Final Rule Regulatory Impact Analysis and Cost-Benefit Analysis*”.

Comment: The Forest Service should consider impacts to local, dependent economies when managing roadless areas.

Response:

Rural counties and communities that are highly dependent on public lands have long been recognized by the Forest Service. Counties and communities differ in their dependence: some areas rely heavily on tourism or second homes, some on ranching and wood processing, and yet others on the energy industry. Based on quantifiable estimates of management and production for each alternative, economic impacts to Colorado counties are provided in the economics section of Chapter 3 of the FEIS.

Comment: The Forest Service should revise the economic analysis to delineate a more representative analysis area, to use better analytical techniques, and to specify a more appropriate time frame.

Response:

The local analysis area used for economic impact analysis was determined by several factors. First, counties with likely energy mineral exploration and production activity in roadless areas were included. Second, counties from the first step that were likely to experience identical levels of activity between alternatives were removed. Third, counties from which energy industry workers were known to commute were added. Fourth, counties with likely and substantial supporting industries to the energy industry were added. Finally, if a county contained the mineral activity, but all the economic activity associated with it was likely to occur in a neighboring county, then only the neighboring county with economic activity was included. Once these factors were considered, the final economic impact area was delineated as Delta, Garfield, Mesa, Montrose, and Rio Blanco Counties. Other counties with a vibrant energy industry, such as those in the southwest corner of Colorado, were removed from consideration because they did not meet the criteria stated above. For the FEIS, a separate statewide analysis was added.

The five-county model used to analyze energy mineral impacts was customized across all sectors to match employment estimates provided by the Colorado Department of Local Affairs-State Demography Office. Relationships among employment, production, prices and payrolls for oil, gas, and coal industries were customized using data from a variety of sources, including organizations such as the Colorado Oil and Gas Conservation Commission; Colorado Division of Reclamation, Mining, and Safety; Colorado Energy Research Institute (Colorado School of Mines); U.S.



Department of Energy – Energy Information Administration; and U.S. Department of Labor – Bureau of Labor Statistics. Where detailed industry information was not available, county-specific estimates provided by MIG, Inc. were used. The balance of Colorado was split into three regions. Detailed county definitions of each region are provided in the economics section of the FEIS. A model of each region was customized across all sectors to match employment estimates provided by the Colorado Department of Local Affairs-State Demography Office.

Economic impacts of employment, income, and production were estimated for the energy industry itself (direct), all local supporting businesses (indirect), and businesses affected by employee spending (induced). Impacts were estimated for both the five-county area and statewide.

The baseline for cumulative economic effects was established using the latest forecast from the Colorado Department of Local Affairs – State Demography Office.

Throughout the FEIS, a fifteen-year analysis period was used for estimating effects. In the economic section, the period was defined as beginning in 2012 and ending in 2026.

Comment: The Forest Service should not favor private business interests.

Response:

National Forests are managed to fulfill the purposes for which they were created and in accordance with the laws and regulations of the United States. Private industry has long been a partner of the American public in these purposes. Ranging from local outfitters and guides who assist citizens in the enjoyment of backcountry recreation to corporations that make domestic energy sources available to communities across the country, private industry plays an important role in providing benefits of the National Forest System to all Americans. Private industry will continue to be an important partner for managing lands in and around roadless areas in Colorado.

Comment: The Forest Service should account for the increased cost of providing municipal water supplies.

Response:

Impacts of increased cost of providing municipal water supplies are speculative. The proposed Colorado Roadless Rule prohibits road construction for future water conveyance structures, but allows the use of LCZs. Existing access to reservoirs or other water conveyance structures is not being changed.

Comment: The Forest Service should ensure that the effect of the Rule on the increased cost of natural gas pipelines is analyzed.

Response:

The FEIS includes a brief summary of the economic analysis completed for natural gas transmission pipelines. Compliance with Executive Order 13211 has been fulfilled and documented in a companion report to the FEIS: “*Roadless Area Conservation: National Forest System Lands in Colorado, Final Rule Regulatory Impact Analysis and Cost-Benefit Analysis*”. The report is available upon request.



Comment: The Forest Service should ensure that the effect of the Rule is analyzed in compliance with Executive Order 12866.

Response:

Compliance with Executive Order 12866 has been fulfilled and documented in a companion report to the FEIS: “*Roadless Area Conservation: National Forest System Lands in Colorado, Final Rule Regulatory Impact Analysis and Cost-Benefit Analysis*”. The report is available upon request.

Comment: The Forest Service should recognize that they are obligated to contribute to a reduction in greenhouse gases even in the absence of a global agreement to reduce emissions.

Response:

The FEIS has been updated with a qualitative analysis that recognizes that carbon emissions would vary by alternative, depending on future leasing decisions.

Comment: The preferred alternative would severely damage local economies and have environmental justice issues.

Response:

The FEIS includes a table with the percentages of counties in Colorado that are minority and the percent of individuals living below the poverty level, as well as the percentages of homes that heat with wood as their primary source of heat. The sources and methodology used for the analysis of counties is described. The Environmental Justice analysis by alternative has been consolidated in the FEIS.

CEQ guidance requires consideration of populations, not communities, so the FEIS analysis of this programmatic document remains at the county level highlight areas within the state that may be of concern for project-level analysis when an activity in a specific area is being considered. Such project-level documents are also the appropriate place to consider any direct, indirect, and cumulative effects. Much of the information requested within the comment would be considered speculative at the programmatic level and without a reasonable or foreseeable project or activity to be reviewed; a community level Environmental Justice analysis is not prudent at this scale of review.

The FEIS does include specific references to the potential for future availability of fire wood, and highlights those counties where fire wood access would be most important. Again, because no specific projects are being analyzed, it is difficult to determine if any community will have a decrease in the access to fire wood because the individual Ranger Districts can react to requests and operate in areas outside of roadless. Future projects that would allow access to fire wood is not known at this time and will need to be considered at the project level.

Legal and Regulatory Compliance

Public comments were received regarding legal and regulatory compliance with the proposed Colorado Roadless Rule.

Comment: The Memorandum of Understanding between the State of Colorado and the USDA is invalid because it enforces the 2001 Roadless Rule.

Response:

The January 8, 2008 Memorandum of Understanding (MOU) between the State of Colorado and the US Department of Agriculture was updated by another MOU issued in September of 2008 which revised efforts to coordinate activities within roadless areas between the Forest Service and the State. The MOU did not implement the 2001 Roadless Rule, but rather provides a framework to notify the State regarding projects proposed in roadless areas.

Comment: The Forest Service should coordinate the preferred alternative-making with local counties.

Response:

“Coordination” is a requirement of the Forest Service planning regulations and is applicable to Forest Plans, not rule making as identified in the purpose and need for this FEIS. Additional information regarding coordination with state and local agencies has been added to the FEIS. Please refer to Chapter 4, Preparers and EIS Distribution, for a discussion of the agencies and organizations that were coordinated and consulted with.

Comment: The proposed Colorado Roadless Rule is inconsistent with the mission of the Forest Service.

Response:

The intent of the Colorado Roadless Rule is to provide appropriate protections for CRAs. This remains consistent with the agency’s multiple use mission.

Some respondents suggest that roadless area designation is *de facto* wilderness and restricts citizens' access to these areas. The rule does not prohibit motorized and non-motorized recreation or public access. Rather, the proposed Colorado Roadless Rule prohibits road construction, reconstruction, LCZs, and tree cutting, with certain exceptions. Colorado Roadless Areas are not comparable to wilderness, because they do not restrict motorized or mechanized access. The proposal also provides certain exceptions to the prohibitions on road construction and tree-cutting.

Comment: The proposed Colorado Roadless Rule is inconsistent with the Administrative Procedure Act.

Response:

Some respondents suggest that this effort is based on the State Petitions Rule, which the courts have invalidated; therefore it does not comply with federal regulations. The September 20, 2006, court decision, by U.S. Magistrate Judge LaPorte of the Northern District of California, enjoined the 2005 State Petitions Rule process for assigning roadless area management. Following the injunction, the



State of Colorado accepted the Secretary of Agriculture's invitation to create a petition under the Administrative Procedures Act (APA). This act provides that petitions "by interested persons in accordance with 5 U.S.C. 553(e) for the issuance, amendment or repeal of a rule may be filed with the official that issued or is authorized to issue the rule."

A decision was made by the Secretary to accept the Colorado State Petition. Therefore, this preferred alternative was prepared and processed pursuant to the APA (section 553(e)) and Department of Agriculture regulations (7 CFR 1.28), and not under the 2005 State Petitions Rule process enjoined in 2006. The current Colorado petition process retains authority for the decision in the U.S. Department of Agriculture, with the Secretary of Agriculture as the responsible official with jurisdiction over the National Forest System. The preferred alternative and the process used to develop it were consistent with federal law, regulation, and policy.

Comment: The proposed Colorado Roadless Rule is inconsistent with the Americans with Disabilities Act and/or the Rehabilitation Act of 1973.

Response:

The Americans with Disabilities Act of 1990 does not cover the Executive Branch of Federal government. The Executive agencies are covered by Title V of the Rehabilitation Act of 1973. Under the Rehabilitation Act, the Forest Service and other Executive agencies are required to make their programs and activities accessible to people with disabilities. Consistent with this, wheelchairs and mobility devices, including those that are battery-powered that are designed solely for use by a mobility impaired person for locomotion and that are suitable for use in an indoor pedestrian area are allowed on all NFS lands that are in open to foot travel.

Because the proposed Colorado Roadless Rule would not change existing motorized access to the national forests, disabled individuals would continue to gain access to inventoried roadless areas in the same ways they do now. The preferred alternative does not provide management direction to close or decommission existing roads. Management direction related to recreation access would be developed by other existing planning and regulatory processes such as forest-level travel management planning. These other planning efforts would provide management direction and analyze the effects to access for persons with disabilities, pursuant to the Title V of the Rehabilitation Act of 1973.

Comment: The Forest Service should clarify whether actions inside a CRA will require preparation of an Environmental Impact Statement (EIS).

Response:

The proposed Colorado Roadless Rule does not require an EIS for projects within CRAs. An EIS would be prepared if significant effects are anticipated. NEPA requirements and Council on Environmental Quality (CEQ) regulations apply to projects within CRAs in the same manner as applied to projects outside of CRAs.



Comment: The Forest Service should ensure that the proposed Colorado Roadless Rule does not conflict with the Healthy Forests Restoration Act (HFRA).

Response:

The preferred alternative provides for fuel treatments around CPZs in non-upper tier. Alternative 2 has been modified in the FEIS to remove the majority of upper tier acres from the HFRA CPZ to minimize potential conflicts with tree cutting restrictions for fuel treatment projects. Within upper tier, fuel treatments could be conducted through the use of prescribed fire. It should also be noted that the definition of CPZ in the FEIS is the HFRA definition of WUI and the FEIS recognizes the HFRA Community Wildfire Protection Plans (CWPPs) in allowing treatments beyond the 0.5 mile CPZ guideline if identified in a CWPP.

It should be further noted that the intent of HFRA is to provide a means for identifying areas where fuel treatments can be performed within the framework of the forest plan and to expedite decision-making processes when that authority is used. HFRA did not set aside land use designations such as wilderness or roadless.

Comment: The Forest Service should acknowledge that the proposed Colorado Roadless Rule is in conflict with the National Forest Management Act (NFMA).

Response:

Some respondents are concerned that the proposed Colorado Roadless Rule violates the NFMA because it includes lands identified in Forest Plans as suitable for timber management (suitable base). The preferred alternative would reduce the lands suitable for timber management by 560,000 acres, or 20% of the suitable base of Forest Service lands within Colorado. The suitable base is generally scheduled to contribute to the allowable sale quantity (ASQ) yield. The ASQ for Forest Service lands in Colorado is 145.4 million board feet annually - averaged over a decade.

Tree cutting and road construction prohibitions in the proposed Colorado Roadless Rule are projected to decrease the ASQ by approximately 29.1 million board feet (MMBF) to 116.3 MMBF annually. However, the ASQ would still remain substantially higher than recent annual timber sale volume of 69.2 MMBF. The FEIS discloses that the proposed Colorado Roadless Rule will remove about 20% from the suitable timber base; however, this would still leave a suitable timber base in excess of recent annual timber sale volume.

The FEIS reflects revised and detailed information on impacts of each alternative to the suitable timber base and its relation to the ASQ. Please refer to the Forest Vegetation, Forest Health, and Timber Management section in Chapter 3 of the FEIS.

Comment: The Forest Service should suspend the process until court cases are finalized.

Response:

In conformance to the Administrative Procedures Act (APA), the Forest Service will not suspend the rule making process. The proposed Colorado Roadless Rule was prepared under the APA, unlike the



2001 Roadless Rule, which the comment refers to. APA provides that petitions “by interested persons in accordance with 5 U.S.C. 553(e) for the issuance, amendment or repeal of a rule may be filed with the official that issued or is authorized to issue the rule.”

A decision was made by the Secretary to accept a petition from the State of Colorado under this authority. Therefore, proposal was prepared and processed pursuant to the APA (section 553(e)) and the Code of Federal Regulations (7 CFR 1.28), not under the 2005 State Petitions Rule process that was enjoined in 2006.

Comment: The Forest Service should ensure the Rule complies with the Multiple Use Sustained Yield Act (MUSYA).

Response:

The proposed Colorado Roadless Rule is consistent with the MUSYA. Colorado Roadless Areas provide multiple use opportunities. The proposed Colorado Roadless Rule prohibits road construction, reconstruction, tree cutting, and the use of LCZs, with certain exceptions. Fewer exceptions to these prohibitions apply within the upper tier.

Mapping and Other Comments and Requests

Public comments were received regarding general and specific mapping concerns. This section also contains other comments and requests that do not fit in other sections.

Comment: The Forest Service should publish municipal water supply areas.

Response:

The Forest Service obtained the State’s electronic spatial information for the locations of the “Source Water Assessment Area” (SWAA) around surface water and groundwater sources for each public water supply in the state and used this information in the FEIS analysis. Nearly all of the CRAs have either surface water or groundwater SWAA, or both, within their boundaries. There are nearly 3.15 million acres in surface water SWAAs and 4.12 million acres in groundwater SWAAs in the CRAs. The Forest Service was asked by Colorado Department of Public Health and Environment to not publish maps with this information for Homeland Security reasons.

Locations of municipal water supply system components (intakes, reservoirs and other infrastructure) were not used in this analysis, as this information is protected for Homeland Security reasons. Community Protection Zones were mapped for analysis purposes only. The locations of CPZs and municipal water supply systems will be identified and analyzed at the project level.

Comment: The Forest Service should allow firewood gathering.

Response:

Firewood gathering is not prohibited by the proposed Colorado Roadless Rule. This rule does not impact existing access to gathering firewood.

Comment: The Forest Service should limit roads to protect against invasive species.

Response:

The FEIS acknowledges that roads and motorized vehicles are known to be significant contributors to the establishment and spread of invasive species. Specifically, seed and other propagules attached on mud to the undercarriage of vehicles are suspected to be a major cause of new populations on National Forest Lands. For this reason, Forests routinely monitor roadways, campgrounds and other areas with frequent vehicle use for new weed populations. Roads receiving priority attention are identified in R-2 Forest Invasive Species Action plans.

It is anticipated that the import and spread of both terrestrial and aquatic invasive species will continue through National Forest lands regardless of the outcome of the Colorado Roadless Area determinations. No alternative considered will have substantial difference with regard to the risk of invasive species spread and establishment. All activities in the future will be evaluated per NEPA and site-specific risks will be evaluated for each new activity when proposed. Ongoing monitoring to accommodate early detection, coupled with timely treatments of new populations will continue to be our first line of defense against invasive species introduction and spread.

Comment: The Forest Service should coordinate with the Colorado Division of Wildlife for tree cutting projects.

Response:

The proposed Colorado Roadless Rule requires coordination with the Colorado Department of Natural Resources, including the Colorado Division of Parks and Wildlife for tree cutting projects to improve wildlife habitat.

Comment: The Forest Service should consider the effect of predicted large fires on invasive plant species.

Response:

Wildfires commonly result in increases in invasive plants. Soil disturbance from fire suppression activities, removal of soil protective litter, reduction of native plants to outcompete invasives and other factors are reasons for this association. The Hayman, Fourmile, and other wildfires are examples of this.

Past histories of forest health management efforts and fire history have indicated a correlation between unmanaged landscapes and large scale fires. However, active forest management to retain or restore healthy forest conditions and natural fuel loading has not proven to guarantee a lower occurrence of future catastrophic fires.

Additionally, areas managed to enhance healthy forest condition and reduce fuel loading have more often than not shown a post-treatment increase in occurrence of invasive plant populations. Therefore it does not appear that roadless area designation which would limit forest management practices would necessarily lead to higher risk of invasive plant establishment.

Comment: Road construction should not be allowed in the backcountry.

Response:

The proposed Colorado Roadless Rule prohibits road construction, reconstruction, tree cutting, and the use of LCZs, with limited exceptions. Additional restrictions apply in upper tier acres.

Comment: The Forest Service should define roadless terms and use them consistently.

Response:

Based on this and other public comments, the FEIS reflects a more consistent use of terms, such as roadless areas, roadless area characteristics, etc.

Comment: The Forest Service should limit all tree cutting activities to those that protect or enhance roadless area characteristics.

Response:

In Alternative 2, exceptions for tree cutting must be designed to maintain or improve one or more of the nine roadless area characteristics. The majority of tree cutting that is projected to occur is within the CPZs 0.5 miles from the boundary of an at-risk community where a 0.5 mile temporary road can be constructed to assist with the removal of the fuel. Although a CPZ can extend an additional mile if the ground conditions warrant without road construction to remove the fuel loading, it is unlikely trees will be cut deep into this additional mile. The other provisions allowing tree cutting are expected to be infrequent for the same reason, access to remove material is not possible with the rule provisions.

Comment: The Forest Service should clarify the definition of "substantially alter" in the context of certain activities.

Response:

Forest Service regulations at 36 CFR 220.5 describe classes of actions normally requiring an EIS, including proposals that would substantially alter the undeveloped character of a roadless area. Among the examples provided are 1) constructing roads and harvesting timber in an inventoried roadless area where the proposed road and harvest unit impact a substantial part of the inventoried roadless area, and 2) approving a plan of operations for a mine that would cause considerable surface disturbance in a potential wilderness area. Using this regulation, proposals are evaluated on a case-by-case basis to determine the appropriate level of analysis.

Comment: The Forest Service should modify section 294.40 to limit the application of the proposed Colorado Rule to CRAs.

Response:

The application of the proposed Colorado Roadless Rule is only within designated CRAs. 294.40 states the purpose of the rule is to provide "State-specific direction for protection of roadless areas in Colorado." It also states that the intent is to "protect roadless values... within CRAs." Additionally,



Section 294.41 Definitions, states that CRAs “constitute an exclusive set of NFS lands within the State of Colorado.”

Comment: The proposed Colorado Roadless Rule will increase illegal behavior and distract from forest management because of a preoccupation with new enforcement issues.

Response:

The proposed Colorado Roadless Rule prohibits future road construction, reconstruction, tree cutting, and the use of LCZs, with certain exceptions. It does not close or restrict public access to these areas, but rather regulates future road building and tree cutting within CRAs. Illegal activities are more likely associated with site-specific, project level decisions, on-the-ground rules and orders, or state and federal law. This process is not expected to increase illegal activity that might distract from other management duties.

Comment: The Forest Service should include a map of at-risk communities and CPZs.

Response:

A map was developed for analysis purposes. It is available in the public record, but is not included in FEIS because it is a “snapshot” of current CPZs that will change over time as communities expand and contract.

Comment: The Forest Service should provide maps that accurately reflect all roads, trails, and other human impacts.

Response:

Maps for the FEIS are provided at a scale that is legible for the reader. Incorporating all of these features would crowd the maps and make them incomprehensible.

Comment: The Forest Service should be commended for removing language indicating that activities should not be prohibited based solely on their effects on roadless area characteristics. We are pleased to see the Forest Service modified the rule language to focus on the management and conservation of CRAs.

Response:

These changes were made after careful consideration of public comments and a hard look at environmental consequences. They reflect the Forest Service commitment to reasonable protection of roadless area characteristics and resource values.

Comment: The Forest Service should avoid selective use of scientific studies to avoid being arbitrary and capricious.

Response:

The scientific studies used in this analysis are listed in Chapter 5 of the FEIS, many of which come from peer-reviewed journals. This list of citations includes opposing views brought to the attention of the agency during scoping or the DEIS public comment. The use and consideration of scientific information is consistent with federal laws.

Comment: The Forest Service should suspend the process to correct mapping errors.

Response:

Many errors pointed out by the public have been corrected in the FEIS. The proposed Colorado Roadless Rule also provides a provision for future administrative corrections and boundary modifications.

Comment: The Forest Service should protect roadless areas to preserve roadless values for future generations, wildlife, quiet recreation, economy, tourism, carbon sequestration, resilience to climate change, clean water, etc.

Response:

The purpose of the specific direction in Alternative 2, the proposed Colorado Roadless Rule, is to protect these roadless values or characteristics by restricting tree cutting, road construction/reconstruction and LCZs with narrowly focused exceptions. These narrowly focused exceptions are important to the State of Colorado and people of the United States such as water development, reducing the risk of a high-severity wildfire to communities at risk and coal mining in a distinct area of Colorado. Activities that are allowed under the exceptions must be designed to conserve the roadless area characteristics although acknowledging the exceptions may have some effects to the roadless area characteristics.

Many of the exceptions that are allowed have further restrictions before they can be applied. The road construction exceptions and the linear construction zone exceptions are further restricted by adding additional determinations before a road can be constructed or a linear construction zone can be utilized by determining motorized access without either of these is not feasible and determine the effect to native cutthroat habitat if applicable. In the road construction exceptions, even if a forest road is allowed, a temporary road will be constructed if possible for the project. All roads and LCZs will be decommissioned and when they are being constructed, they are to be constructed considering the eventual decommissioning. There are eight considerations in the alternative to consider when reviewing an oil and gas surface use plans of operation application. All of these additional items in the rule are for the purpose of maintaining the roadless areas for future generation.

Comment: The Forest Service is obligated to reduce its greenhouse gas emissions per Executive Order 13514.

Response:

The Forest Service is actively engaged in reducing its greenhouse gas footprint through our sustainable operations program. This program reduces greenhouse gases associated with fleet and facilities and other aspects of day-to-day operations. More information this program can be found at www.fs.fed.us/sustainableoperations.

Comment: The Forest Service should allow use of lands by the energy industry.

Response:

Alternative 2 seeks to conserve roadless area values within the context of multiple-use management and does allow for a certain level of energy activity to occur within roadless areas. Road construction and associated infrastructure would be permitted in roadless areas on existing coal and oil and gas leases that have terms that do not otherwise prohibit roads or surface occupancy.

In addition, Alternative 2 would provide an exception to the road prohibitions for coal exploration and other coal-related activities in the 20,000 acre North Fork coal mining area. Lastly, Alternative 2 does not prohibit leasing for energy development in roadless areas, but the road construction restrictions would likely limit any development to that which can be accomplished via directional drilling from existing roads within or adjacent lands outside of roadless areas.

Comment: The Forest Service should use standard criteria for mapping roadless area boundaries, including set backs, banning buffers, banning user-created roads, banning cherry stems, and coordinating across Forest boundaries.

Response:

FSH 1909.12 Chapter 70 is the standard used to map roadless areas. The Region did develop some guidelines to use in conjunction with the handbook which set back the roadless boundaries 300 feet on each side of the center line of a system road. User-created roads are not used in the decision whether an area qualifies as a roadless area. Only Forest Service system roads exclude areas from the roadless designations. The decision to cherry-stem a road and include the area around the road into a roadless area is a site specific decision made by the Forest looking at the roadless area characteristics, use level of the road, purpose of the road as well as other factors on the land. Where the boundary of two National Forests come together, the Forests do work together to identify the adjoining roadless areas.

Comment: The Forest Service should consider the ability to adapt to climate change.

Response:

Chapter 3 in the FEIS includes a discussion of climate change. It covers greenhouse gas mitigation, as well as climate change adaptation. Alternative 2 designates over 1,219,200 acres as upper tier. Upper



tier has fewer exceptions for tree cutting and road construction and could provide a refugia fore species under changing conditions. Tree cutting in the non-upper tier can be done for the purposes of improving ecosystem composition and structure, and fuels treatments for wildfire protection around communities. This active management tool provides some options for actively adapting to climate change.

Comment: The Forest Service should protect roadless areas as carbon sinks.

Response:

Alternative 2 prohibits tree cutting, with certain exceptions. This prohibition passively protects terrestrial and soil carbon sinks. However, forest carbon sinks are not static over time. Currently, the mountain pine beetle epidemic is infecting millions of acres of forest lands in Colorado and Wyoming. As trees die, they typically become a carbon source instead of a carbon sink. Wildfire can emit large sources of carbon dioxide and methane from soils and vegetation. Chapter 3 in the FEIS includes a discussion on greenhouse gases and the four alternatives considered.

Comment: The Forest Service should support the development of renewable energy in CRAs.

Response:

All proposals for renewable energy testing and development on NFS lands come from third party entities and individuals. The proposed Colorado Roadless Rule prohibits road construction or reconstruction, and tree cutting. It does not prohibit an entity from proposing renewable site testing, or eventual development and production. As with all special use proposals, the Forest Service would go through the 36 CFR 251 screening process and look at many factors to determine if the proposed use was suitable for use and occupancy of NFS lands. Development of wind, solar, and other alternative energy sources is an appropriate use of NFS lands, but that development is still dependent on a third party.

The agency has not conducted an analysis of renewable potential on Forest Service lands for the purposes of this rule, just as the agency has not analyzed the potential of any other speculative use and occupancy in CRAs. The proposed Colorado Roadless Rule has provided exceptions for road construction and reconstruction for some authorized water transmission systems with pre-existing water court decrees and for existing oil and gas lease and pipeline development. This proposal has also provided for LCZs for certain linear facilities. All of these exceptions have criteria to assist the responsible official to weigh the use of the exceptions, and do not guarantee the use and occupancy or the ability to construct a road. The Forest Service and the State of Colorado did consider the use of exceptions similar to oil and gas exceptions for renewables, but concluded that existing oil and gas lease development is different from speculative wind and solar and other renewable development, and exceptions were not proposed.

The rule does not exclude the areas that the NREL has identified for solar and wind potential from the CRR, because of the speculative nature of renewable development. And as noted by the respondent, the NREL study did eliminate Inventoried Roadless Areas from their analysis. If an entity or individual proposes renewable testing in or around a CRA, the proposal will be screened

appropriately. When the Forest Service does accept a new application for either a change in an existing use or a new use, the agency will then conduct a thorough site specific NEPA analysis.



Appendix I 2001 and Colorado Roadless Rule Text

2001 Roadless Rule Text

The Roadless Area Conservation Rule (2001 Roadless Rule) was adopted into regulations at 36 CFR 294, Subpart B. Alternative 1 is based on the 2001 Roadless Rule Text.

Subpart B—Protection of Inventoried Roadless Areas

§ 294.10 Purpose.

The purpose of this subpart is to provide, within the context of multiple-use management, lasting protection for inventoried roadless areas within the National Forest System.

§ 294.11 Definitions.

The following terms and definitions apply to this subpart:

Inventoried roadless areas. Areas identified in a set of inventoried roadless area maps, contained in Forest Service Roadless Area Conservation, Final Environmental Impact Statement, Volume 2, dated November 2000, which are held at the National headquarters office of the Forest Service, or any subsequent update or revision of those maps.

Responsible official. The Forest Service line officer with the authority and responsibility to make decisions regarding protection and management of inventoried roadless areas pursuant to this subpart.

Road. A motor vehicle travelway over 50 inches wide, unless designated and managed as a trail. A road may be classified, unclassified, or temporary.

(1) *Classified road.* A road wholly or partially within or adjacent to National Forest System lands that is determined to be needed for long-term motor vehicle access, including State roads, county roads, privately owned roads, National Forest System roads, and other roads authorized by the Forest Service.

(2) *Unclassified road.* A road on National Forest System lands that is not managed as part of the forest transportation system, such as unplanned roads, abandoned travelways, and off-road vehicle tracks that have not been designated and managed as a trail; and those roads that were once under permit or other authorization and were not decommissioned upon the termination of the authorization.

(3) *Temporary road.* A road authorized by contract, permit, lease, other written authorization, or emergency operation, not intended to be part of the forest transportation system and not necessary for long-term resource management.

Road construction. Activity that results in the addition of forest classified or temporary road miles.

Road maintenance. The ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective.

Road reconstruction. Activity that results in improvement or realignment of an existing classified road defined as follows:



(1) *Road improvement.* Activity that results in an increase of an existing road's traffic service level, expansion of its capacity, or a change in its original design function.

(2) *Road realignment.* Activity that results in a new location of an existing road or portions of an existing road, and treatment of the old roadway.

Roadless area characteristics. Resources or features that are often present in and characterize inventoried roadless areas, including:

- (1) High quality or undisturbed soil, water, and air;
- (2) Sources of public drinking water;
- (3) Diversity of plant and animal communities;
- (4) Habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land;
- (5) Primitive, semi-primitive non-motorized and semi-primitive motorized classes of dispersed recreation;
- (6) Reference landscapes;
- (7) Natural appearing landscapes with high scenic quality;
- (8) Traditional cultural properties and sacred sites; and
- (9) Other locally identified unique characteristics.

§ 294.12 Prohibition on road construction and road reconstruction in inventoried roadless areas.

(a) A road may not be constructed or reconstructed in inventoried roadless areas of the National Forest System, except as provided in paragraph (b) of this section.

(b) Notwithstanding the prohibition in paragraph (a) of this section, a road may be constructed or reconstructed in an inventoried roadless area if the Responsible Official determines that one of the following circumstances exists:

- (1) A road is needed to protect public health and safety in cases of an imminent threat of flood, fire, or other catastrophic event that, without intervention, would cause the loss of life or property;
- (2) A road is needed to conduct a response action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to conduct a natural resource restoration action under CERCLA, Section 311 of the Clean Water Act, or the Oil Pollution Act;
- (3) A road is needed pursuant to reserved or outstanding rights, or as provided for by statute or treaty;
- (4) Road realignment is needed to prevent irreparable resource damage that arises from the design, location, use, or deterioration of a classified road and that cannot be mitigated by road maintenance. Road realignment may occur under this paragraph only if the road is deemed essential for public or private access, natural resource management, or public health and safety;



(5) Road reconstruction is needed to implement a road safety improvement project on a classified road determined to be hazardous on the basis of accident experience or accident potential on that road;

(6) The Secretary of Agriculture determines that a Federal Aid Highway project, authorized pursuant to Title 23 of the United States Code, is in the public interest or is consistent with the purposes for which the land was reserved or acquired and no other reasonable and prudent alternative exists; or

(7) A road is needed in conjunction with the continuation, extension, or renewal of a mineral lease on lands that are under lease by the Secretary of the Interior as of January 12, 2001 or for a new lease issued immediately upon expiration of an existing lease. Such road construction or reconstruction must be conducted in a manner that minimizes effects on surface resources, prevents unnecessary or unreasonable surface disturbance, and complies with all applicable lease requirements, land and resource management plan direction, regulations, and laws. Roads constructed or reconstructed pursuant to this paragraph must be obliterated when no longer needed for the purposes of the lease or upon termination or expiration of the lease, whichever is sooner.

(c) Maintenance of classified roads is permissible in inventoried roadless areas.

§ 294.13 Prohibition on timber cutting, sale, or removal in inventoried roadless areas.

(a) Timber may not be cut, sold, or removed in inventoried roadless areas of the National Forest System, except as provided in paragraph (b) of this section.

(b) Notwithstanding the prohibition in paragraph (a) of this section, timber may be cut, sold, or removed in inventoried roadless areas if the Responsible Official determines that one of the following circumstances exists. The cutting, sale, or removal of timber in these areas is expected to be infrequent.

(1) The cutting, sale, or removal of generally small diameter timber is needed for one of the following purposes and will maintain or improve one or more of the roadless area characteristics as defined in § 294.11.

(i) To improve threatened, endangered, proposed, or sensitive species habitat; or

(ii) To maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period;

(2) The cutting, sale, or removal of timber is incidental to the implementation of a management activity not otherwise prohibited by this subpart;

(3) The cutting, sale, or removal of timber is needed and appropriate for personal or administrative use, as provided for in 36 CFR part 223; or

(4) Roadless characteristics have been substantially altered in a portion of an inventoried roadless area due to the construction of a classified road and subsequent timber harvest. Both the road construction and subsequent timber harvest must have occurred after the area was designated an inventoried roadless area and prior to January 12, 2001. Timber may be cut, sold, or removed only in the substantially altered portion of the inventoried roadless area.



§ 294.14 Scope and applicability.

- (a) This subpart does not revoke, suspend, or modify any permit, contract, or other legal instrument authorizing the occupancy and use of National Forest System land issued prior to January 12, 2001.
- (b) This subpart does not compel the amendment or revision of any land and resource management plan.
- (c) This subpart does not revoke, suspend, or modify any project or activity decision made prior to January 12, 2001.
- (d) This subpart does not apply to road construction, reconstruction, or the cutting, sale, or removal of timber in inventoried roadless areas on the Tongass National Forest if a notice of availability of a draft environmental impact statement for such activities has been published in the Federal Register prior to January 12, 2001.
- (e) The prohibitions and restrictions established in this subpart are not subject to reconsideration, revision, or rescission in subsequent project decisions or land and resource management plan amendments or revisions undertaken pursuant to 36 CFR part 219.
- (f) If any provision of the rules in this subpart or its application to any person or to certain circumstances is held invalid, the remainder of the regulations in this subpart and their application remain in force.

Colorado Roadless Rule Text

The Colorado Roadless Rule text is based on the revised petition submitted by the State of Colorado with changes made based comments on the April 2011 proposed rule and RDEIS. Alternatives 2 and 4 are based on the Colorado Roadless Rule text.

Subpart D—Colorado Roadless Area Management

§ 294.40 Purpose.

The purpose of this subpart is to provide, within the context of multiple use management, State-specific direction for the protection of roadless areas on National Forest System lands in Colorado. The intent of this regulation is to protect roadless values by restricting tree cutting, sale, and removal; road construction and reconstruction; and linear construction zones within Colorado Roadless Areas (CRAs), with narrowly focused exceptions. Activities must be designed to conserve the roadless area characteristics listed in §294.41, although applying the exceptions in §294.42, §294.43, and §294.44 may have effects to some roadless area characteristics.

§ 294.41 Definitions.

The following terms and definitions apply to this subpart.

At-risk Community: As defined under section 101 of the Healthy Forests Restoration Act (HFRA).

Catchment: A watershed delineation beginning at the downstream point of occupation of native cutthroat trout and encompassing the upstream boundary of waters draining in the stream system.

Colorado Roadless Areas: Areas designated pursuant to this subpart and identified in a set of maps maintained at the national headquarters office of the Forest Service. Colorado Roadless Areas



established by this subpart shall constitute the exclusive set of National Forest System lands within the State of Colorado to which the provisions 36 CFR 220.5(a)(2) shall apply.

Colorado Roadless Areas Upper Tier Acres: A subset of Colorado Roadless Areas identified in a set of maps maintained at the national headquarters office of the Forest Service which have limited exceptions to provide a high-level of protection for these areas.

Community Protection Zone: An area extending one-half mile from the boundary of an at-risk community; or an area within one and a half miles from the boundary of an at-risk community, where any land:

- (1) Has a sustained steep slope that creates the potential for wildfire behavior endangering the at-risk community;
- (2) Has a geographic feature that aids in creating an effective fire break, such as a road or a ridge top; or
- (3) Is in condition class 3 as defined by HFRA.

Community Wildfire Protection Plan: As defined under section 101 of the HFRA, and used in this subpart, the term “community wildfire protection plan” means a plan for an at-risk community that:

- (1) Is developed within the context of the collaborative agreements and the guidance established by the Wildland Fire Leadership Council and agreed to by the applicable local government, local fire department, and State agency responsible for forest management, in consultation with interested parties and the Federal land management agencies managing land in the vicinity of the at-risk community;
- (2) Identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment on Federal and non-Federal land that will protect one or more at-risk communities and essential infrastructure; and
- (3) Recommends measures to reduce structural ignitability throughout the at-risk community.

Condition Class 3: As defined under section 101 of the HFRA the term “condition class 3” means an area of Federal land, under which:

- (1) Fire regimes on land have been significantly altered from historical ranges;
- (2) There exists a high risk of losing key ecosystem components from fire;
- (3) Fire frequencies have departed from historical frequencies by multiple return intervals, resulting in dramatic changes to:
 - (i) The size, frequency, intensity, or severity of fires; or
 - (ii) Landscape patterns; and
- (4) Vegetation attributes have been significantly altered from the historical range of the attributes.

Fire Hazard: A fuel complex defined by volume, type, condition, arrangement and location that determines the ease of ignition and the resistance to control; expresses the potential fire behavior for a fuel type, regardless of the fuel type’s weather influenced fuel moisture condition.

Fire Occurrence: One fire event occurring in a specific place within a specific period of time; a general term describing past or current wildland fire events.



Fire Risk: The probability or chance that a fire might start, as affected by the presence and activities of causative agents.

Forest Road: As defined at 36 CFR 212.1, the term means a road wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources.

Hazardous Fuels: Excessive live or dead wildland fuel accumulations that increase the potential for intense wildland fire and decrease the capability to protect life, property and natural resources.

Linear Construction Zone: A temporary linear area of surface disturbance over 50-inches wide that is used for construction equipment to install or maintain a linear facility. The sole purpose of the linear disturbance is to accommodate equipment needed to construct and transport supplies and personnel needed to install or maintain the linear facility. It is not a road, not used as a motor vehicle route, not open for public use, and is not engineered to road specifications.

Linear Facility: Linear facilities include pipelines, electrical power lines, telecommunications lines, ditches, canals, and dams.

Municipal Water Supply System: As defined under Section 101 of the HFRA, and used in this subpart, the term means the reservoirs, canals, ditches, flumes, laterals, pipes, pipelines, and other surface facilities and systems constructed or installed for the collection, impoundment, storage, transportation, or distribution of drinking water.

Native Cutthroat Trout: Collectively, all the native subspecies of cutthroat trout historically occurring in Colorado before European settlement which includes yellowfin, Rio Grande, Greenback, and Colorado River Trout.

Permanent Road: Roads that are either a forest road; private road (a road under private ownership authorized by an easement granted to a private party or a road that provides access pursuant to a reserved or outstanding right); or public road (a road under the jurisdiction of and maintained by a public road authority and open to public travel).

Pre-existing Water Court Decree: An adjudicated conditional or absolute decree issued by a Colorado Court, the initial application for which was filed prior to [final rule effective date].

Responsible Official: The Forest Service line officer with the authority and responsibility to make decisions about protection and management of Colorado Roadless Areas pursuant to this subpart.

Road: As defined at 36 CFR 212.1, the term means a motor vehicle route over 50 inches wide, unless identified and managed as a trail.

Roadless Area Characteristics: Resources or features that are often present in and characterize Colorado Roadless Areas, including:

- (1) High quality or undisturbed soil, water, and air;
- (2) Sources of public drinking water;
- (3) Diversity of plant and animal communities;
- (4) Habitat for threatened, endangered, proposed, candidate, and sensitive species, and for those species dependent on large, undisturbed areas of land;



- (5) Primitive, semi-primitive non-motorized and semi-primitive motorized classes of dispersed recreation;
- (6) Reference landscapes;
- (7) Natural-appearing landscapes with high scenic quality;
- (8) Traditional cultural properties and sacred sites; and
- (9) Other locally identified unique characteristics.

Temporary Road: As defined at 36 CFR 212.1, the term means a road necessary for emergency operations or authorized by contract, permit, lease, or other written authorization that is not a forest road and that is not included in a forest transportation atlas.

Watershed Conservation Practice: The watershed conservation practices are stewardship actions based upon scientific principles and legal requirements to protect soil, aquatic and riparian resources. Each watershed conservation practice consists of a management measure, a set of design criteria used to achieve the management measure, and guidance for monitoring and restoration. For specific information, refer to Forest Service Manual 2509.25.

Water Conveyance Structures: Facilities associated with the transmission, storage, impoundment, and diversion of water on and across National Forest System lands. Water conveyance structures include, but are not limited to: reservoirs and dams, diversion structures, headgates, pipelines, ditches, canals, and tunnels.

Water Influence Zone: The land next to water bodies where vegetation plays a major role in sustaining long-term integrity of aquatic systems. It includes the geomorphic floodplain (valley bottom), riparian ecosystem, and inner gorge. Its minimum horizontal width (from top of each bank) is 100 feet or the mean height of mature dominant late-seral vegetation, whichever is greater.

§ 294.42 Prohibition on tree cutting, sale, or removal.

(a) *General.* Trees may not be cut, sold, or removed in Colorado Roadless Areas, except as provided in paragraph (b) and (c) of this section.

(b) *Upper Tier Acres.* Notwithstanding the prohibition in paragraph (a) of this section, trees may be cut, sold, or removed in Colorado Roadless Areas upper tier acres if the responsible official determines the activity is consistent with the applicable land management plan, and:

- (1) Tree cutting, sale, or removal is incidental to the implementation of a management activity not otherwise prohibited by this subpart; or
- (2) Tree cutting, sale, or removal is needed and appropriate for personal or administrative use, as provided for in 36 CFR part 223, subpart A.

(c) *Non-Upper Tier Acres.* Notwithstanding the prohibition in paragraph (a) of this section, trees may be cut, sold, or removed in Colorado Roadless Areas outside upper tier acres if the responsible official, unless otherwise noted, determines the activity is consistent with the applicable land management plan, one or more of the roadless area characteristics will be maintained or improved over the long-term with the exception of paragraph (5) and (6) of this section, and one of the following circumstances exists:



(1) The Regional Forester determines tree cutting, sale, or removal is needed to reduce hazardous fuels to an at-risk community or municipal water supply system that is:

- (i) Within the first one-half mile of the community protection zone, or
- (ii) Within the next one-mile of the community protection zone, and is within an area identified in a Community Wildfire Protection Plan.
- (iii) Projects undertaken pursuant to subparagraphs (i) and (ii) will focus on cutting and removing generally small diameter trees to create fuel conditions that modify fire behavior while retaining large trees to the maximum extent practical as appropriate to the forest type.

(2) The Regional Forester determines tree cutting, sale, or removal is needed outside the community protection zone where there is a significant risk that a wildland fire disturbance event could adversely affect a municipal water supply system or the maintenance of that system. A significant risk exists where the history of fire occurrence, and fire hazard and risk indicate a serious likelihood that a wildland fire disturbance event would present a high risk of threat to a municipal water supply system.

- (i) Projects will focus on cutting and removing generally small diameter trees to create fuel conditions that modify fire behavior while retaining large trees to the maximum extent practical as appropriate to the forest type.
- (ii) Projects are expected to be infrequent.

(3) Tree cutting, sale, or removal is needed to maintain or restore the characteristics of ecosystem composition, structure and processes. These projects are expected to be infrequent.

(4) Tree cutting, sale, or removal is needed to improve habitat for federally threatened, endangered, proposed, or Agency designated sensitive species; in coordination with the Colorado Department of Natural Resources, including the Colorado Division of Parks and Wildlife.

(5) Tree cutting, sale, or removal is incidental to the implementation of a management activity not otherwise prohibited by this subpart.

(6) Tree cutting, sale, or removal is needed and appropriate for personal or administrative use, as provided for in 36 CFR part 223, subpart A.

§ 294.43 Prohibition on road construction and reconstruction.

(a) *General.* A road may not be constructed or reconstructed in a Colorado Roadless Area except as provided in paragraphs (b) and (c) of this section.

(b) *Upper Tier Acres.* Notwithstanding the prohibition in paragraph (a) of this section, a road may only be constructed or reconstructed in Colorado Roadless Area upper tier acres if the responsible official determines that the conditions in subsection 1 or 2 are met.

- (1) A road is needed pursuant to reserved or outstanding rights, or as provided for by statute or treaty, or
- (2) A road is needed to protect public health and safety in cases of an imminent threat of flood, fire or other catastrophic event that, without intervention, would cause the loss of life or property.
- (3) For any road construction/reconstruction authorized pursuant to this provision, subject to the legal rights identified in 36 CFR 294.43(b)(1), the responsible official must determine:



- (i) Motorized access, without road construction is not feasible;
- (ii) When proposing to construct a forest road, that a temporary road would not provide reasonable access;
- (iii) Road construction is consistent with the applicable land management plan direction;
- (iv) Within a native cutthroat trout catchment or identified recovery watershed, whether road construction will diminish, over the long-term, conditions in the water influence zone and in occupied native cutthroat trout habitat; and
- (v) That watershed conservation practices will be applied to all projects occurring in native cutthroat trout habitat.

(c) *Non-Upper Tier Acres.* Notwithstanding the prohibition in paragraph (a) of this section, a road or temporary road may only be constructed or reconstructed in Colorado Roadless Areas outside upper tier acres if the responsible official determines:

- (1) That one of the following exceptions exists:
 - (i) A road is needed pursuant to reserved or outstanding rights, or as provided for by statute or treaty;
 - (ii) Road realignment is needed to prevent irreparable resource damage that arises from the design, location, use, or deterioration of a forest road and that cannot be mitigated by road maintenance. Road realignment may occur under this paragraph only if the road is deemed essential for administrative or public access, public health and safety, or uses authorized under permit, easement or other legal instrument;
 - (iii) Road reconstruction is needed to implement a road safety improvement project on a forest road determined to be hazardous on the basis of accident experience or accident potential on that road;
 - (iv) The Regional Forester determines a road or temporary road is needed to allow for the construction, reconstruction, or maintenance of an authorized water conveyance structure which is operated pursuant to a pre-existing water court decree with the use of the road limited to the water right identified in the pre-existing water court decree (see also §294.44(b)(1));
 - (v) A temporary road is needed to protect public health and safety in cases of imminent threat of flood, fire, or other catastrophic event that, without intervention, would cause the loss of life or property;
 - (vi) The Regional Forester determines a temporary road is needed to facilitate tree cutting, sale, or removal (§294.42(c)(1)) within the first one-half mile of the community protection zone to reduce the wildfire hazard to an at-risk community or municipal water supply system;
 - (vii) The Regional Forester determines a temporary road is needed to facilitate tree cutting, sale, or removal (§294.42(c)(3)) within the first one-half mile of the community protection zone to maintain or restore characteristics of ecosystem composition, structure and processes;
 - (viii) A temporary road is needed within a Colorado Roadless Area pursuant to the exploration or development of an existing oil and gas lease that does not prohibit road

construction or reconstruction, including the construction of infrastructure necessary to transport the product, on National Forest System lands that are under lease issued by the Secretary of the Interior as of [final rule effective date]. The Forest Service shall not authorize the Bureau of Land Management to grant any request for a waiver, exception, or modification to any oil or gas lease if doing so would result in any road construction within a Colorado Roadless Area beyond that which was authorized by the terms and conditions of the lease at the time of issuance; or

(ix) A temporary road is needed for coal exploration and/or coal-related surface activities for certain lands within Colorado Roadless Areas in the North Fork coal mining area of the Grand Mesa, Uncompahgre, and Gunnison National Forests as defined by the North Fork coal mining area displayed on the final Colorado Roadless Areas map. Such roads may also be used for collecting and transporting coal mine methane. Any buried infrastructure, including pipelines, needed for the capture, collection, and use of coal mine methane, will be located within the rights-of-way of temporary roads that are otherwise necessary for coal-related surface activities including the installation and operation of methane venting wells.

(2) If proposed road construction/reconstruction meets one of the exceptions, subject to the legal rights identified in 36 CFR 294.43(c)(1), the responsible official must determine:

- (i) Motorized access, without road construction is not feasible;
- (ii) When proposing to construct a forest road, that a temporary road would not provide reasonable access;
- (iii) Road construction is consistent with the applicable land management plan direction;
- (iv) Within a native cutthroat trout catchment or identified recovery watershed, road construction will not diminish, over the long-term, conditions in the water influence zone and in occupied native cutthroat trout habitat; and
- (v) That watershed conservation practices will be applied to all projects occurring in native cutthroat trout habitat.

(d) *Road construction/reconstruction/decommissioning project implementation and management.* The following elements will be incorporated into any road construction/reconstruction projects implemented within Colorado Roadless Areas.

(1) *Road construction/reconstruction.* If it is determined that a road is authorized in a Colorado Roadless Area, conduct construction in a manner that reduces effects on surface resources, and prevents unnecessary or unreasonable surface disturbance.

(2) *Road decommissioning.* Decommission any road and restore the affected landscape when it is determined that the road is no longer needed for the established purpose prior to, or upon termination or expiration of a contract, authorization, or permit, if possible; or upon termination or expiration of a contract, authorization, or permit, whichever is sooner. Require the inclusion of a road decommissioning provision in all contracts or permits. Design decommissioning to stabilize, restore, and revegetate unneeded roads to a more natural state to protect resources and enhance roadless area characteristics. Examples include obliteration, denial of use, elimination of travelway functionality, and removal of the road prism (restoration of the road corridor to the original contour and hydrologic function).



(3) *Road designations.* The designation of a temporary road constructed or reconstructed pursuant to this subpart may not be changed to forest road except where a forest road is allowed under paragraphs (b) and (c) of this section.

(4) *Road use.* Use of motor vehicles for administrative purposes by the Forest Service and by fire, emergency, or law enforcement personnel is allowed. All roads constructed pursuant to paragraphs (b) and (c) of this section shall prohibit public motorized vehicles (including off-highway vehicles) except:

- (i) Where specifically used for the purpose for which the road was established; or
- (ii) Motor vehicle use that is specifically authorized under a Federal law or regulation.

(5) *Road maintenance.* Maintenance of roads is permissible in Colorado Roadless Areas.

§ 294.44 Prohibition on linear construction zones.

(a) *General.* A linear construction zone may not be authorized in Colorado Roadless Areas except as provided in paragraph (b) and (c) of this section and §294.48 (a).

(b) *Upper Tier Acres.* Notwithstanding the prohibition in paragraph (a) of this section, a linear construction zone may only be authorized within Colorado Roadless Area upper tier acres if the Regional Forester determines the LCZ is needed:

- (1) Pursuant to reserved or outstanding rights, or as provided for by statute or treaty.
- (2) For the construction, reconstruction, or maintenance of an authorized water conveyance structure which is operated pursuant to a pre-existing water court decree (see §294.43(c)(1)(iv));

(c) *Non-Upper Tier Acres.* Notwithstanding the prohibition in paragraph (a) of this section, a linear construction zone may only be authorized within Colorado Roadless Area non-upper tier acres if the Regional Forester determines the LCZ is needed:

- (1) Pursuant to reserved or outstanding rights, or as provided for by statute or treaty.
- (2) For the construction, reconstruction, or maintenance of an authorized water conveyance structure which is operated pursuant to a pre-existing water court decree (see §294.43(c)(1)(iv));
- (3) For the construction, reconstruction, or maintenance of existing or future authorized electrical power lines or telecommunication lines. Electrical power lines or telecommunication lines within Colorado Roadless Areas will only be authorized if there is no opportunity for the project to be implemented outside of a Colorado Roadless Area without causing substantially greater environmental damage; or
- (4) For the construction, reconstruction or maintenance of a pipeline associated with operation of an oil and gas lease that allows surface use within a Colorado Roadless Area or the construction, reconstruction or maintenance of a pipeline needed to connect to infrastructure within a Colorado Roadless Area from outside a Colorado Roadless Area where such a connection would cause substantially less environmental damage than alternative routes. The construction of pipelines for the purposes of transporting oil or natural gas through a Colorado Roadless Area, where the source(s) and destination(s) of the pipeline are located exclusively outside of a Colorado Roadless Area, shall not be authorized.

(d) *Proposed Linear Construction Zones.* If a proposed linear construction zone meets one of the above exceptions, then the following must be determined:

- (1) Motorized access, without a linear construction zone, is not feasible;
- (2) A linear construction zone is consistent with the applicable land management plan direction;
- (3) A linear construction zone is no wider than its intended use;
- (4) Within a native cutthroat trout catchment or identified recovery watershed, a linear construction zone will not diminish, over the long-term, conditions in the water influence zone and in occupied native cutthroat trout habitat;
- (5) Reclamation of a linear construction zone will not diminish, over the long-term, roadless area characteristics; and
- (6) That watershed conservation practices will be applied to all projects occurring in catchments with occupied native cutthroat trout habitat.

(e) *Linear construction zone decommissioning.* Where a linear construction zone is authorized in a Colorado Roadless Area, installation of the linear facility will be done in a manner that minimizes ground disturbance, including placement within existing right-of-ways where feasible. All authorizations approving the installation of linear facilities through the use of a linear construction zone shall include a responsible official approved reclamation plan for reclaiming the affected landscape while conserving roadless area characteristics over the long-term. Upon completion of the installation of a linear facility via the use of a linear construction zone, all areas of surface disturbance shall be reclaimed as prescribed in the authorization and the approved reclamation plan and may not be waived.

§ 294.45 Environmental documentation.

(a) Environmental documentation will be prepared pursuant to Section 102 of the National Environmental Policy Act, 40 CFR 1500, and 36 CFR 220 for any proposed action within a Colorado Roadless Area. Proposed actions that would significantly alter the undeveloped character of a Colorado Roadless Area require an Environmental Impact Statement (EIS).

(b) The Forest Service will offer cooperating agency status to the State of Colorado, for all proposed projects and planning activities subject to this rule that would be implemented on lands within Colorado Roadless Areas. Where the Forest Service does not have the authority to offer formal cooperating agency status, the Forest Service shall offer to coordinate with the State.

§ 294.46 Other activities.

(a) *Water Rights.* This subpart in no manner restricts any party from seeking modification of a pre-existing water court decree, but after **[final rule effective date]** any Forest Service authorization required for road construction, road reconstruction, tree cutting, or linear construction zones associated with a modified water court decree must conform to the requirements in this subpart; provided that road construction or reconstruction may be authorized where necessary to change the location of a headgate and associated ditch, pursuant to Colorado Revised Statute 2011 §37-86-111.

(b) *Oil and Gas Lease Stipulations.* Oil and gas leases issued within a Colorado Roadless Area after **[final rule effective date]** will prohibit road construction/reconstruction. The Forest Service shall not authorize the Bureau of Land Management to grant any request for a waiver, exception, or



modification to any oil or gas lease if doing so would result in any road construction within a Colorado Roadless Area. For oil and gas leases issued in a CO Roadless Area prior to **[final rule effective date]**, the rule preserves any existing leases, surface development rights, and limitations on surface development rights.

(c) *Oil and Gas Lease Stipulations on Upper Tier Acres.* Oil and gas leases issued within upper tier acres after **[final rule effective date]** will require a no surface occupancy stipulation. The Forest Service shall not authorize the Bureau of Land Management to grant any request for a waiver, exception, or modification to any oil or gas lease if doing so would result in surface occupancy within an upper tier area.

(d) *Oil and Gas Surface Use Plans of Operation.* Where applicable and consistent with lease rights, during the review of any application for a surface use plan of operations affecting lands within a Colorado Roadless Area, the responsible official will:

- (1) Locate, without compromising health and safety standards, roads, well sites, and facilities on pre-existing areas of surface disturbance. Project design shall minimize the amount of necessary temporary road construction or reconstruction.
- (2) Consider an alternative for proposed operations that addresses locating directional drilling of multi-well sites on pre-existing areas of surface disturbance. Such an alternative can be dismissed from detailed analysis with clear justification.
- (3) Restrict road construction for leases partially within Colorado Roadless Areas to portions of the lease outside of Colorado Roadless Areas except when doing so will be substantially more environmentally damaging, compromise safety standards, or is unfeasible due to surface and/or operational conditions.
- (4) Perform reclamation of surface disturbances incrementally, to minimize the total area of disturbance at any given point in time during the exploration or development of a lease.
- (5) Design temporary roads and facilities to blend with the terrain to minimize visual impacts and to facilitate restoration when the road is no longer needed.
- (6) Co-locate, consistent with health and safety standards, power lines, flow lines and pipelines within the right-of-way of roads or other LCZs to minimize the area of surface disturbance.
- (7) Consider new and developing low impact techniques and technologies and either apply or dismiss with justification.
- (8) Consider the best available technology to minimize noise and air emissions.

(e) *Trails.* Nothing in this subpart shall affect the current or future management of motorized and non-motorized trails in Colorado Roadless Areas. Decisions concerning the management or status of motorized and non-motorized trails within Colorado Roadless Areas under this subpart shall be made during the applicable forest travel management processes.

(f) *Motorized access.* Nothing in this subpart shall be construed as limiting the authority of the responsible official to approve existing and future motorized access not requiring road construction or reconstruction in Colorado Roadless Areas associated with grazing permits, special use authorizations, and other authorizations.



(g) *Livestock grazing.* The authority to issue livestock grazing permits on national forest system lands within a Colorado Roadless Area is not affected by this subpart; however, no new temporary or forest roads shall be authorized through grazing permits issued after **[final rule effective date]**.

§ 294.47 Modifications and administrative corrections.

Modifications and administrative corrections pursuant to this subpart, after coordination with the State, may be made under the following circumstances:

(a) *Modifications to boundaries.* The Chief of the Forest Service may modify the boundaries of any designated Colorado Roadless Area identified in §294.49 or add new Colorado Roadless Areas based on changed circumstances. Modifications and additions will be reflected in the set of maps maintained at the national headquarters office of the Forest Service. The construction or reconstruction of a temporary road or tree cutting, sale, or removal will not result in any boundary modification of a Colorado Roadless Area. Public notice with a minimum 90-day comment period will be provided for any proposed Colorado Roadless Area boundary modifications or additions.

(b) *Administrative corrections to boundaries.* The Chief of the Forest Service may issue administrative corrections after public notice and a 30-day comment period. Administrative corrections to the maps of any designated Colorado Roadless Areas identified in §294.49, including upper tier acres are adjustments to remedy errors such as clerical or improvements in mapping technology. Other than clerical errors, an administrative correction is based on improved field data due to updated imagery, global positioning system data, or other collected field data.

(c) *Amendments to rule language.* Any amendment of this subpart will include coordination with the State and the appropriate level of NEPA analysis. A minimum 90-day comment period will be provided.

§ 294.48 Scope and applicability.

(a) This subpart does not revoke, suspend, or modify any permit, contract, lease, or other legal instrument authorizing or granting rights to the occupancy and use of National Forest system land issued prior to **[final rule effective date]** nor does it affect the authority or the discretion of the responsible official to reissue any such permit, contract, or other legal instrument upon its expiration or termination.

(b) This subpart does not revoke, suspend, or modify any project or activity decision made prior to **[final rule effective date]**.

(c) The provisions set forth in this subpart provide the maximum level of tree cutting, sale and removal, and road construction and reconstruction activity allowed within Colorado Roadless Areas. Land management plan components can be more restrictive than this subpart and will continue to provide direction and guidance for projects and activities within Colorado Roadless Areas. Nothing in this subpart shall prohibit a responsible official from further restricting activities allowed within Colorado Roadless Areas. This subpart does not compel the amendment or revision of any land management plan.

(d) The prohibitions and restrictions established in this subpart are not subject to reconsideration, revision, or rescission in subsequent project decisions or land management plan amendments or revisions undertaken pursuant to 36 CFR 219.



(e) Nothing in this subpart waives any applicable requirements regarding site specific environmental analysis, public involvement, consultation with Tribes and other agencies, or compliance with applicable laws.

(f) If any provision in this subpart or its application to any person or to certain circumstances is held to be invalid, the remainder of the regulations in this subpart and their application remain in force.

(g) After [**final rule effective date**] the rule promulgated on January 12, 2001, (66 FR 3244) shall have no effect within the State of Colorado.

