



Forest Service
U.S. DEPARTMENT OF AGRICULTURE

Southwestern Region / Gila National Forest

MB-R3-06-16

July 2024

Gila National Forest Revised Forest Plan

Final Environmental Impact Statement

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

Volume 3: Appendices B through M



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

Volume 3: Appendices B through M

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

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Appendix B. Changes between Draft and Final Plan and Environmental Impact Statement

This appendix summarizes the changes made between the draft and final revised plan and its environmental impact statement.

Plan

Chapter 1. Introduction

Changes were made to the introductory chapter to reflect changes made elsewhere in the plan, based on stakeholder comment and dialogue between planning staff and leadership. The table below displays the final chapter's first-level headings that correspond to draft first-level headings, a summary of the changes made and the reason(s) for those changes. Editorial reasons include changes based on plain language principles or those that otherwise improve clarity and flow but do not change the substance of the content.

Final Heading(s)	Draft Heading(s)	Summary of Changes	Reason(s) for Change
Purpose of a Forest Plan	Purpose of this Document Forest Plans and the 2012 Planning Rule	Content was refined to reflect the final nature of the document.	Editorial
Content of a Forest Plan	Plan Components, Management/Geographic Areas, Suitability of Lands and Other Content Key Plan Concepts	Contains the same substance but is reorganized and revised for clarity. Added a subsection on best available scientific information.	Editorial and documentation of best available scientific information
Implementation of a Forest Plan	Plan Consistency Transition in the Implementation of the Forest Plan Plan Implementation An Integrated Approach Monitoring and Evaluation Collaboration and Public Involvement Appendix A – Consistency with Plan Components	Contains the same substance but is reorganized and revised for clarity. A notable exception is the content under the draft heading Collaboration and Public Involvement. This section was revised to reference final EIS Appendix C which describes in detail the public engagement efforts associated with plan revision, and to describe public engagement during plan implementation.	Editorial
Setting the Stage	A Description of the Gila National Forest	This section was reorganized and revised to clarify and improve contextual information, distinctive roles and contributions, and the vision. Summaries of the assessment and needs for change were further condensed.	Response to comment, staff and leadership discussion, editorial

Chapter 2. Forestwide Plan Content

Introduction

This section contains editorial changes for clarity and some additions to explain abbreviations used to refer to plan components and better explain objective development.

Plan Management Approaches

This section contains major revisions and additions based on further review by planning staff and in response to stakeholder comments on climate change, restoration tools, ecosystem services, relationships and military training flights.

Ecological Sustainability and Biodiversity

This heading was changed from “Ecosystems and Watersheds” to be more inclusive and descriptive of the resources and intent of the direction contained in this section. This change was not made to diminish the importance of watersheds. Watersheds and water resources are a critical element of ecological sustainability. The background information section contains editorial changes for clarity and in response to comments. The narratives and tables below summarize the changes made in this section’s subsections and the reason(s) for those changes. Editorial reasons include changes based on plain language principles or those that otherwise improve clarity and flow but do not change the substance of the content.

All Upland Ecological Response Units

Plan Content	Summary of Changes	Reason(s) for Change
Landscape Scale Desired Conditions	Minor editorial changes and additional language to DC8	Editorial and response to comment
Standards	S4 was expanded to include direction for pushing and chaining. Ss2–4 now include an exception for fire incident management with a requirement for additional suppression rehabilitation.	Correction of oversight in the draft and response to comment
Guidelines	G1 was expanded to strengthen provisions for old growth in response to comment and further internal review; minor editorial changes to G2	Editorial and response to comment
Management Approaches	Ecosystem Services was removed and replaced with the plan-wide management approach of the same title. Restoration, Adaptation and Relationships and Ranges of Values and Application of Science were expanded to create more direct links to climate adaptation. Old Growth and Seral State Diversity management approaches added.	Staff identified room more meaningful content and response to comment
Glossary	The draft glossary and key concepts section were combined. Definitions were removed for words that were replaced by plain language.	Editorial

Individual Ecological Response Unit Subheadings

Changes to plan content for Spruce-Fir Forest, Mixed Conifer with Aspen, Mixed Conifer-Frequent Fire, Ponderosa Pine Forest, Ponderosa Pine-Evergreen Oak, Madrean Pinyon-Oak Woodland, Pinyon Juniper Woodland, Pinyon Juniper Grass, and Juniper Grass, Mountain Mahogany Mixed Shrubland and the grassland ecological response units contain editorial changes or corrections only. The most notable changes are associated with moving the list of at-risk species that are associated with each ecological response unit from a separate list into the background information sections and clarifying information

added to the Spruce-Fir Forest and Mixed Conifer with Aspen management approaches. The at-risk species associated with each ecological response unit were updated to reflect an additional round of review and changes made to list because of new information and stakeholder comment.

Soils

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	Minor editorial changes to DC1	Editorial
Objectives	No change	
Standards	S1 was removed. S2 is now S1. S3 was removed.	S1 was removed because it was redundant with the more specific All Upland Ecological Response Units Ss 2–4 related to mechanical thinning treatments. The part applicable to fire was overly prescriptive and in conflict with desired conditions for restoring fire's role on the landscape. Fire practitioners have the expertise to choose the appropriate tactics to achieve desired outcomes for the site, weather and fuel conditions that exist and need the flexibility to do so to meet the integrated desired conditions of the plan. S3 was removed because it was unnecessary. Projects and activities will be designed to move toward desired conditions for soils and other natural resources, activities and uses. That's how the plan works.
Guidelines	No change	
Management Approaches	Ecosystem Services was removed and replaced with the plan-wide management approach of the same title.	Staff identified room more meaningful content
Related Plan Content	Minor editorial changes	Editorial
Glossary	The draft glossary and key concepts section were combined.	Editorial

Water Quality

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	DC1 was refined for clarity and to specifically incorporate beneficial uses.	Editorial and response to comments
Objectives	No change	
Standards	No changes	
Guidelines	No changes	
Management Approaches	Ecosystem Services was removed and replaced with the plan-wide management approach of the same title. Restoration and Relationships discussion expanded to include Total Maximum Daily Load determinations and more on watershed-based plans.	Staff identified room for more meaningful content and response to comment
Glossary	This section was added to allow the reader to quickly find the definition of terms that were not replaced by plain language.	Editorial and response to comment

Watersheds

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	No change	
Objectives	No change	
Standards	No change	
Guidelines	A guideline related to groundwater quality was added as G2, which bumped the numbers of the subsequent guidelines.	Response to comment
Management Approaches	Ecosystem Services was removed and replaced with the plan-wide management approach of the same title.	Staff identified room for more meaningful content
Glossary	This section was added to allow the reader to quickly find the definition of terms that were not replaced by plain language.	Editorial and response to comment

Riparian and Aquatic Ecosystems

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
All Desired Conditions	This section was completely reworked to better align with the Southwestern Region's Riparian and Aquatic Ecosystem Strategy's desired conditions and stakeholder comment.	Southwestern Region's Riparian and Aquatic Ecosystem Strategy desired conditions, staff and leadership discussions and response to comment
4 th and 5 th Level Watershed Scale Desired Conditions	DCs 1–6 align with the regional desired conditions at this scale. DC7 was brought forward from the draft desired conditions for 4 th , 5 th , and 6 th level watersheds.	Southwestern Region's Riparian and Aquatic Ecosystem Strategy desired conditions, staff and leadership discussions and response to comment

Final Environmental Impact Statement for the Revised Forest Plan, Volume 3
Appendix B. Changes between Draft and Final Plan and Environmental Impact Statement

Plan Content	Summary of Changes	Reason(s) for Change
6 th Level Watershed Scale Desired Conditions	These DCs are a blend of the regional desired conditions at this scale and what was contained at draft for 4th, 5th, and 6th level watersheds.	Southwestern Region's Riparian and Aquatic Ecosystem Strategy desired conditions, staff and leadership discussions and response to comment
Fine-Scale Desired Conditions	No change	
Objectives	No changes	
Standards	The clause in S1 stating that compliance with the law is required was unnecessary and removed. Draft S1 and S3 were combined to preserve the intent of S1 but clarify compliance. Condition trends are not always apparent. Draft Ss 4 and 5 were combined and clarified into final S3 and an accompanying management approach titled "Water Projects."	Regional staff and forest-level staff and leadership discussions and response to comment
Guidelines	No change	
Management Approaches	Ecosystem Services was removed and replaced with the plan-wide management approach of the same title. Inventory, Monitoring and Relationships contains minor editorial changes. Restoration and Relationships was expanded.	Staff identified room for more meaningful content, response to comment and new supporting information
Glossary	This section was added to allow the reader to quickly find the definition of terms that were not replaced by plain language.	Editorial and response to comment

Cliffs and Rocky Features

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	DC1 was split into two desired conditions with editorial changes.	Editorial
Objectives	No changes	
Standards	No change	
Guidelines	Draft G5 combined with Draft G3 and specific reference to bats added to G3. Draft G6 bumped to G5 as a result. Minor editorial changes to others.	Editorial and response to comment
Management Approaches	Minor editorial changes	Editorial

Caves and Abandoned Mine Lands

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Expanded with editorial changes for clarity	Editorial and response to comment
Desired Conditions	Editorial changes for clarity	Editorial
Objectives	No changes	
Standards	Editorial changes for clarity. Draft G3 is now S3. Scientific name of the fungus that causes white-nose syndrome was removed.	Editorial and response to comment
Guidelines	Guidelines reconfigured to reduce repetition and for clarity. Nothing substantive was removed or added.	Editorial and response to comment
Management Approaches	Editorial changes	Editorial, response to comment and new information

Wildlife, Fish, and Plants

This section now contains revised content from the draft Wildlife, Fish, and Plants, Rare and Endemic Plant and Animal Species and Habitats, and the draft management area Rare and Endemic Vegetation Management Areas. These sections were combined based on comments and discussions between leadership and staff.

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Major editorial changes to facilitate the combination of previously separate sections. This includes a subheading specific to Important Plant Areas.	Editorial and response to comment
Desired Conditions (DC)	Major editorial and organizational changes.	Editorial and response to comment
	DC1 retains the intent of the draft by describing the desired status of species populations and was reworked to better describe the link between species persistence, the condition and connectivity of their habitats, and the plan direction that provides for species persistence by addressing their habitats. Some of the language was adapted from other draft forest plans and some was suggested by commenters. Draft DCs 7, 8 and 9 are addressed by the plan direction referred to in DC1 and were removed.	
	DC2 retains the intent of draft DCs 2, 3 and 4 by describing the desired status of habitat conditions and connectivity. It was reworked for the same reasons DC1 was reworked. Some of the language was adapted from other draft forest plans and some was suggested by commenters. What was incorrectly labeled as DC 4a in the draft is DC7 in the final. It should have been labeled DC5.	
	DC3 retains the intent of the first sentence of draft DC6, which was to describe the desired outcome of managing toward the desired conditions for habitat and habitat elements would contribute to the recovery and delisting of species under the Endangered Species Act. Language was revised to include all species and prevent new listings.	
	DC4 was draft Rare and Endemic Plant and Animal Species and Habitats DC1. DCs 5 was added to provide additional detail on habitat connectivity and distribution, and how it supports species persistence and biodiversity.	

Final Environmental Impact Statement for the Revised Forest Plan, Volume 3
Appendix B. Changes between Draft and Final Plan and Environmental Impact Statement

Plan Content	Summary of Changes	Reason(s) for Change
Desired Conditions (DC) (continued)	<p>DC6 was added to provide additional detail on habitat configuration and availability and genetic diversity allow species to adapt or move in response to climate change. In incorporates draft DC10 which described barriers to movement with clarifications recommended by commenters.</p> <p>DC8 was adapted from draft Rare and Endemic Plant Management Area DCs 1 and 2, reworded to include all Important Plant Areas. DC9 was draft DC11. DC10 is the second sentence of draft DC6, reworded to provide greater specificity. DC11 was added to specifically address the prey base for resident and migratory species that depend on riparian and aquatic habitats. DC12 is draft DC12, incorporating additional detail. DC13 was added to provide the basis for other plan direction related to protecting bighorn sheep from disease.</p>	
Objectives	No changes	
Standards (S)	Draft S1 was retained with minor editorial changes. S2 is draft Rare and Endemic Plant Management Area S1 with additional detail providing for exceptions for legal access to private property and requirements temporary routes to include appropriate avoidance or mitigation measures. S3 is draft Rare and Endemic Plant Management Area S2 with additional requirements. Draft G3 is now S4 with editorial changes for clarity around allowances provided for in the consultation process.	Editorial and response to comment
Guidelines (G)	Draft G3 was moved to S4. G3 and 4 were draft Rare and Endemic Plant and Animal Species and Habitats G1 and 2. Draft Wildlife, Fish, and Plants G4 and 5 contain minor editorial changes for clarity and are now Gs5 and 6. G7 and 10 were draft Rare and Endemic Plant Management Area G1 and 2. G8 was added based on stakeholder comment. G9 is draft G6. G11 and 12 were draft G7 and 8. G13 and 14 were draft G9 and 11 with minor editorial changes. Draft G10 was removed because the issue is addressed by final Sustainable Recreation S5 and final Livestock Grazing S4.	Editorial and response to comment
Management Approaches	At draft, this section addressed multiple topics under a single heading of Relationships. Final management approaches retain the substance of what was contained here, but the content was broken out into multiple themes and modified into a narrative format more consistent with the management approaches for other ecological sections of the plan. Some discussions were expanded.	Editorial and response to comment
Glossary	This section was added to allow the reader to quickly find the definition of terms that cannot be replaced by plain language.	Editorial and response to comment

Non-Native Invasive Species

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	No change	
Objectives	No change	
Standards	Minor editorial changes and additions to footnotes. S7 was modified to prohibit the use of goats and sheep for weed control entirely. Final S2 was G5. Draft S2, now S3 and G1, was reworded for clarity. Draft S4 was moved to a guideline in response to the 2021 certified weed-free hay shortage. Draft S14 was moved to a guideline and minimum buffer distance removed. These buffers were determined better developed at the project level. Removal of this standard bumps Draft Ss 15–17 to Ss14–16. Draft S9 was determined not to be implementable as written and was revised to provide for situations when hazard quotients exceeded the threshold. Draft S18 was moved to a guideline, bumping draft S19 to S17. Draft S20 was moved to a guideline and reworded for clarity. Draft S21 was removed for compliance with agency directives on plan standards. Final monitoring question 15 will provide the desired transparency and accountability measure. Draft S22 was moved to a guideline. Minor editorial changes to other standards.	Editorial, discussion between regional and forest planning staff, and response to comments
Guidelines	Minor editorial changes to draft guidelines. G1 was part of draft S2 and has revised language requiring the use of a decision matrix to define least impact to ecosystem and human health. G3 was S20. G4 was S14. G5 was S18. G8 was S4. G9 was S22. Draft G5 is now S2.	Editorial and discussion between regional and forest planning staff
Management Approaches	Editorial changes	Editorial
Glossary	This section was added to allow the reader to quickly find the definition of terms that were not replaced by plain language.	Editorial and response to comment

Air Quality

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	Minor editorial changes	Editorial
Standards	S1 was removed as unnecessary. This direction is provided by the law. S2 was expanded to more clearly express intent and moved to G1.	Discussions between regional and forest planning staff
Guidelines	G1 was S2. Minor editorial changes to remaining guidelines.	Editorial and discussions between regional and forest planning staff
Management Approaches	Minor editorial changes	Editorial
Glossary	This section was added to allow the reader to quickly find the definition of terms that cannot be replaced by plain language.	Editorial and response to comment

Wildland Fire and Fuels Management

This section was relocated from the Multiple Uses and Social, Cultural and Economic Sustainability section based on planning staff discussions and comments received prior to the official comment period on the draft.

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes with examples added.	Editorial and response to comment.
Desired Conditions	Minor editorial changes	Editorial
Standards	Minor editorial changes	Editorial
Guidelines	No change	
Management Approaches	Minor editorial changes and additional science incorporated	Editorial and new information
Glossary	This section was added to allow the reader to quickly find the definition of terms that cannot be replaced by plain language.	Editorial and response to comment

Community Relationships

This heading contains the revised Community Relationships and Tribal Importance and Use sections that were under the Multiple Uses and Social, Cultural and Economic Sustainability heading at draft based on planning staff's discretion and a desire to draw more attention to this content.

Community Relationships

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	Minor editorial changes	Editorial
Guidelines	Minor editorial changes	Editorial and response to comments
Management Approaches	Added Environmental Justice and Equity. Content under Outreach and Education was parsed out to Sustainable Recreation or moved to final management approaches for Youth Engagement and Supporting Local Businesses. The Outreach and Education management approach now contains new material. Some restructuring of content and editorial changes in the remaining content.	Editorial and response to comments
Glossary	This section was added to allow the reader to quickly find the definition of terms that cannot be replaced by plain language.	Editorial and response to comment

Tribal Relationships and Co-Stewardship

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Updated information and language	New information in the Strengthening Tribal Consultations and Nation-to-Nation Relationships: A USDA Forest Service Action Plan.
Desired Conditions	Editorial changes	Editorial and new information
Standards	Editorial changes	
Guidelines	Editorial changes	Editorial and new information
Management Approaches	Editorial changes	Editorial and new information
Glossary	This section was added to allow the reader to quickly find the definition of terms that cannot be replaced by plain language.	Editorial and response to comment

Multiple Uses and Social, Cultural and Economic Sustainability

Cultural Resources and Archeology

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	Minor editorial changes	Editorial
Guidelines	G5 was removed because it addressed an illegal activity and compelled action, which is not compliant with agency directives. Illegal activities were inappropriately addressed in the plan. These are an implementation and enforcement issues. Minor editorial changes in remaining guidelines.	Editorial and compliance with agency directive requirements for plan components
Management Approaches	Minor editorial changes	Editorial

Water Uses

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	Minor editorial changes	Editorial
Guideline	Minor editorial changes	Editorial
Management Approaches	Minor editorial changes	Editorial

Lands and Realty

This section combines the Lands and Special Uses (Lands) sections of the draft plan.

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	Minor editorial changes	Editorial
Objectives	Revised based on comments and input from the regional land surveyor as all survey staff are now regional employees not forest-level resources	Response to comment

Plan Content	Summary of Changes	Reason(s) for Change
Standards	Lands draft S1 was removed as direction is provided by the law. Special Uses (Lands) draft S1 was deemed unnecessary and removed. Minor editorial changes in the remaining standard.	Editorial and response to comment
Guideline	Lands draft G6 was removed as direction is provided by law. Special Uses (Lands) draft Gs 1 and 4 were combined into G8. Draft Gs 2 and 3 were removed because they are addressed by policy direction. Draft G5 was removed as it is redundant with direction for Scenic Character. Minor editorial changes in the remaining guidelines. Final G6 was added to address vegetation management concerns.	Editorial, discussions between regional and forest planning staff and response to comment
Management Approaches	Minor editorial changes	Editorial

Minerals

This section consolidates the plan content that was under the draft headings Minerals, Locatable Minerals, and Salable Minerals.

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial and response to comments
Desired Conditions	Editorial changes for clarity. Draft Locatable Minerals DC1 was expanded to include geothermal development. Draft Salable Minerals DCs 1 and 2 were combined into DC4.	Editorial and response to comments
Standards	Consolidates locatable and salable minerals standards. Edits and deletions to better align with law and policy direction. Draft Locatable Mineral Ss 3 and 5 were deleted. S3 provided protection for operator not natural resources or other uses. S5 did not add anything beyond S1, law and policy direction. Final S6 added to address geothermal leasing.	Editorial and discussions amongst agency geologist, regional and forest planning staff
Guideline	Consolidates locatable and salable minerals guidelines. Draft Locatable Minerals G9 was removed based on archeologist recommendation, Designated Research Natural Areas S1, Proposed Research Natural Areas S1, Facilities S6 and in the new Mineral Entry in Wilderness. Draft Locatable Minerals G10 was removed because it duplicated direction found under the Caves and Abandoned Mine Lands heading. Draft Salable Minerals G5 was removed because it was repetitive of and in conflict with final S5. Editorial changes for clarity throughout.	Editorial and discussions amongst agency geologist, archeologist, regional and forest planning staff
Management Approaches	Reorganization of ideas and editorial changes. Discussions related to bats removed because all of those are addressed in the Caves and Abandoned Mine Lands section.	Editorial changes and response to comments.
Glossary	This section was added to allow the reader to quickly find the definition of terms that cannot be replaced by plain language.	Editorial and response to comment

Renewable Energy

We added this entirely new section to provide baseline guidance in the event a proposal is made to develop wind or solar energy on the forest. It contains background information, desired conditions, and standards.

Livestock Grazing

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	Minor editorial changes	Editorial
Objectives	No change	
Standards	Editorial changes for clarity. S1 was reworded and moved to a guideline. S4 revised to clarify intent and considerations.	Editorial, discussions between regional and forest planning staff, and response to comment
Guideline	Editorial changes for clarity and to reduce redundancy with plan direction in other sections of the plan. Draft S1 was reworded and is now G1. G2 was moved from the recommended wilderness section to make a more immediate connection to final S5. Draft G1 is final G3 with editorial changes. Draft G2 is final G4 with additional provisions for buffer distances and flexibility. Draft G3 is final G4. Draft G4 was removed because it compelled action rather than imposing a constraint on an activity as the directives require. Livestock grazing will be managed to maintain or move toward desired conditions. Draft Gs 5 through 8 are final Gs 6 through 9 with editorial changes.	Editorial, discussions between regional and forest planning staff, and response to comment
Management Approaches	Major organizational and content changes. Working with Other Entities and Rangeland Monitoring combined into Collaboration, Adaptation and Monitoring. Range Infrastructure and Relationships re-titled. Restoration and Relationships re-title Adaptation and Forage Reserves with clarifying language and additional detail. Drought Plan replaced with Drought, Forecasting Services and Adaptation. Riparian Critical Habitat added. Editorial changes to remaining management approaches.	Editorial, response to comment and new information

Timber, Forest, and Botanical Products

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	Minor editorial changes	Editorial
Standards	Minor editorial changes. G5a moved to S11 for consistency with direction provided in Wildlife, Fish, and Plants.	Editorial
Guideline	Minor editorial changes. G7 expanded to include provisions for carbon storage.	Editorial and response to comment
Management Approaches	Minor editorial changes	Editorial

Plan Content	Summary of Changes	Reason(s) for Change
Glossary	This section was added to allow the reader to quickly find the definition of terms that cannot be replaced by plain language.	Editorial and response to comment

Roads

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	Minor editorial changes. D6 added to address climate change.	Editorial and response to comment
Objectives	Revised	Response to comments
Standards	Minor editorial changes to Ss1 and 2. S3 added in response to comment.	Editorial and response to comment
Guideline	G3 expanded to include engineering specification for side-casting. Gs 4 and 5 added in response to comment. Draft G4 was bumped to G6 to accommodate these additions. Other editorial changes.	Editorial and response to comment
Management Approaches	Organizational and editorial changes	Editorial

Facilities

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	Minor editorial changes	Editorial
Standards	No change	
Guideline	G5 and G6 added in response to comment.	Response to comment
Management Approaches	Editorial changes with some expanded discussion.	Editorial and response to comment.

Sustainable Recreation

This section contains the draft Developed Recreation, Dispersed Recreation, Trails, Motorized Trails, Non-Motorized Trails, and Special Uses (Recreation) sections as well as the content that was under the draft Sustainable Recreation heading. These sections were combined and condensed to improve flow and clarity and reduce repetition.

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes and structural changes to facilitate grouping.	Editorial
Desired Conditions	Concepts were reorganized and condensed but all were preserved. DC 2 now provides more on environmental justice. DC 5 was added to emphasize relationships and DC 7 to cover human disturbance effects on recreation experiences. Draft Non-Motorized Trails DCs 1 through 6 were removed because their concepts were repetitive of final DCs for all trails. DC 16 was from the preliminary draft plan. DC 18 was added to describe the desired experience of the authorization process.	
Objectives	Revised	Response to comment, new information and changed conditions

Plan Content	Summary of Changes	Reason(s) for Change
Standards	Concepts were reorganized and condensed. Draft Sustainable Recreation Ss 1 and 2 were removed because they prescribe analysis tools, were repetitive of policy direction, and are not constraints on activities. Draft Special Uses (Recreation) S1 was removed because it is repetitive of law and policy. Other edits for clarity and to reduce repetition. The standard establishing length of stay limits	Editorial and response to comment.
Guidelines	Draft Sustainable Recreation G1 was removed in response to comment. Draft Sustainable Recreation G4 was removed because it is covered by final S2. G4 was added. Non-Motorized Trails G4 and Special Uses (Recreation) DCs 1-3 were moved into the management area direction for Designated Wilderness. Draft Motorized Trails G4 is final G14 modified to include all trails and to more accurately describe areas that should be avoided or mitigated due to elevated erosion concerns. Draft Motorized Trails G9 was removed because it did not specifically relate to trails or recreation and is addressed as needed at the project level. Other guidelines were edited for clarity or removed to reduce repetition. For example, draft Non-Motorized Trails G1 was repetitive of draft Trails G1 which is final G9.	Editorial and response to comment.
Management Approaches	Major organizational changes based on consolidation. Editorial changes. Major content changes in the final Collaborative Sustainable Recreation Strategy and Relationships management approach.	Editorial and response to comment.

Scenic Character

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Editorial changes and additional discussion of the Scenery Management System and how it is used.	Editorial and response to comment.
Desired Conditions	Minor editorial changes. DC4 added for climate change. DC5 added for Scenic Integrity Objectives.	Editorial and response to comment.
Standards	Removed S1	Repetitive of policy, covered in background information and desired conditions.
Guideline	Minor editorial changes	Editorial
Management Approaches	Minor editorial changes	Editorial

Chapter 3. Management Areas

Changes include removal of the document's structural distinction between designated areas and management areas and supporting explanation. The background information section contains editorial changes. The narratives and tables below summarize the changes made in this section's subsections and the reason(s) for those changes. Editorial reasons include changes based on plain language principles or those that otherwise improve clarity and flow but do not change the substance of the content.

Designated Wilderness

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	Draft DC1 is final DC6 with edits to reduce repetitiveness with other desired conditions. Draft DCs 2, 3, 5, 6, 7, and 8 were combined and condensed into final DC1a-d. Draft DC4 is final DC2 with edits to reduce redundancy. Draft DC9 is final DC3 with edits for clarity. Draft DC10 is final DC4 with minor editorial changes. Draft DC11 is final DC5 with minor editorial changes.	Editorial
Objectives	Minor editorial changes for clarity	Editorial
Standards	Most management requirements for wilderness are already decided by law, regulation and policy direction. Draft Ss 1, 3, 4, 7, 8, 11, 12, 13, and 14 were removed in response to comments and because they were repetitive of law, regulation and policy and confused that direction for some readers. S6 was removed because it was repetitive of forestwide direction for length of stay limits. Final S2 was added based on a similar requirement in the Recommended Wilderness section. Final S3 combines draft S2 and S9. Final Ss 2 through 4 are repetitive of law, regulation and policy but were retained to promote awareness amongst forest staff. Editorial changes for clarity throughout.	Editorial and response to comment
Guidelines	Much of what was draft G3 was removed in response to comment and because it was repetitive of agency policy direction. The remaining substance was combined with draft G7 into final G3. Draft G5 and 6 were removed because they were deemed to be overly prescriptive. Management will address downward trends and negative impacts as a matter of policy direction using whatever tools and techniques are appropriate for the circumstances. Draft G8 was removed because law, policy and final DC1a and S2 cover the issue it was intended to address. Draft G10 was removed because it is covered by final G5 and S2. Draft G11 was removed in response to comment and because it is repetitive of law, regulation and policy. G13 was removed because it was deemed unnecessary and more appropriately discussed in a management approach. Editorial changes for clarity throughout.	Editorial and response to comment
Management Approaches	Editorial changes and some reorganization. Recreation Special Uses incorporates the outfitter-guide capacity study that was formerly under the Special Uses (Recreation) heading. Overflights was moved to a plan-wide management approach because it is more than a wilderness issue.	Editorial and response to comment

Wilderness Study Areas

This section contains minor editorial changes.

Recommended Wilderness

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Explanatory content added to help the reader understand changes between draft and final recommendations. Other minor editorial changes and updated acreages of recommended areas.	Editorial and response to comment
Desired Conditions	Draft DCs 1 and 2 were combined to final DC1 to reduce redundancy. Final DCs 2 and 3 were draft standards 2 and 3.	Editorial and discussions between regional and forest planning staff.
Standards	Ss1 through 3 were removed and are covered by final desired conditions. Draft S4 is final S1. Draft S5 is now final S2, contains more explicit exceptions based on forest supervisor's intent, which was not clear at draft. Draft Ss 6 and 9 are final Ss 3 and 4. To improve clarity, draft Ss 7, 8, and 11 were combined to final S5 and supporting management approach. Draft S10 establishing length of stay limits was removed as it is redundant with forestwide direction. Draft S12 was removed because it was redundant with law, regulation, and policy. Editorial changes throughout.	Editorial, corrections, response to comment, and discussions between regional and forest planning staff.
Guideline	Draft G1 was removed because this decision is already made by law, regulation, policy direction and the final suite of desired conditions. G2 was removed because it is covered by final S2. Draft G3 was removed because it is redundant with final Sustainable Recreation S6. Draft G4 was removed based on the recommendation of regional planning staff. Draft G5 was removed as unnecessary. This is covered by final DCs. Draft Gs 6 through 8 were removed because the topics are addressed by the final suite of desired conditions and standards. Draft Gs 9-11 are final Gs1 through 3. Draft G12 was removed because it is redundant with final S2. Draft Gs 13 and 14 were combined to final G4 with edits for clarity. Minor editorial changes throughout.	Editorial and response to comment
Management Approaches	Editorial changes and reorganization	Editorial and response to comments

Inventoried Roadless Areas

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	No change	
Standards	Ss 2 and 3 were removed. This is already decided by law, regulation, and policy direction.	Discussions with regional and forest planning staff
Guideline	Minor editorial changes	
Management Approaches	Minor editorial changes	Editorial and response to comment

Research Natural Areas

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	Minor editorial changes	Editorial
Objective	Draft S1 was converted to an objective	Discussions between regional and forest planning staff
Standards	Draft S1 was moved to an objective. Final S1 was added to cover salable minerals. Minor editorial changes	Editorial and discussions between regional and forest planning staff and agency geologist
Guideline	Minor editorial changes	Editorial
Management Approaches	Minor editorial changes	Editorial

Proposed Research Natural Areas

This section was removed to reflect the Forest Supervisor's proposals to the Regional Forester.

Eligible Wild and Scenic Rivers

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes	Editorial
Desired Conditions	No changes	
Standards	Draft S4 was deleted because it was unnecessary to state the most restrictive management applies. Draft S7 was removed because management is dictated by law and a summary reiteration of that law may contribute to misunderstanding as evidenced by comments. Other standards contain minor editorial changes for clarity	Editorial and response to comment
Guideline	G2 was added. Minor editorial changes to the other guidelines.	Editorial and response to comment
Management Approaches	Minor editorial changes. New content under the heading "Restoration of Native Fishes" added in response to comment.	Editorial and response to comment

Continental Divide National Scenic Trail

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes and expanded discussion.	Editorial
Desired Conditions	DC3 was added. Minor editorial changes for clarity and specificity.	Editorial
Objectives	Revised for clarity	Editorial and response to comments
Standards	Draft S3 was split into final S3 and 4 with edits for clarity	Editorial and response to comments
Guideline	Draft G4 was removed because it was repetitive of draft G8. Editorial changes throughout remaining guidelines.	Editorial
Management Approaches	Editorial and organizational changes	Editorial

National Recreation Trails

Plan Content	Summary of Changes	Reason(s) for Change
Background Information	Minor editorial changes and expanded discussion.	Editorial
Desired Conditions	Minor editorial changes and expanded discussion.	Editorial
Guideline	Draft Gs 1 and 8 were combined with edits for clarity.	Editorial
Management Approaches	Minor editorial changes.	Editorial

National Scenic Byways

This section contains minor editorial changes and organizational changes in the management approaches subsection.

Utilities Management Area

This section contains minor editorial changes and an additional desired condition based on comments.

Wildland-Urban Interface

This section contains minor editorial changes with added content in the management approaches to respond to comment and provide consideration for environmental and climate justice issues.

Chapter 4. Suitability and Estimated Vegetation Management Practices

Editorial changes for clarity. Updated table 4 and figure 6 to reflect recommended wilderness decision. Acres suitable for timber production increased from alternative 2 by 157 acres.

Chapter 5. Monitoring Program

This section contains formatting and other editorial changes and response to comments. Some monitoring questions and indicators were revised or replaced based on comments or new information. Capacity-dependent monitoring prioritization exercise was reviewed based on to comments with some corrections

resulting from that review. A monitoring question and indicator for stream temperature was added to capacity-dependent monitoring in response to comment.

Appendix A. Proposed and Possible Management Practices

This appendix was completely reworked because it was essentially a repetition of management approaches. Now, it contains an explanation of how the requirements for proposed and possible management practices are met within the plan.

Appendix B. Maps

All maps were updated based on comments and to reflect the Forest Supervisor's decisions.

Appendix C. Focal Species Rationale

The focal species rationale has been revised for content and clarity in response to comments.

Appendix D. Relevant Law, Regulations and Policies

This appendix was added to respond to comments.

Environmental Impact Statement

The separate herbicide use proposal and analysis were removed from the environmental impact statement in its entirety. The individual sections that were removed are not listed or described further in this appendix.

Chapter 1: Purpose and Need for Action

Background

No changes were made to this section.

Document Structure

Changes were made to this section to reflect the final structure of the document.

A Description of the Gila National Forest and Vicinity

No changes were made to this section.

Purpose and Need for Change

No changes were made to this section.

Alternatives and the Decision-Making Framework

This section replaces the draft section titled "Proposed Action" to provide the context for all the alternatives and provide an overview of the decision-making process the forest supervisor will use. The description of the Proposed Action and its alternatives are the topic of chapter 2.

Public Involvement

This section was condensed. Public involvement is discussed in detail in appendix C, which is referenced in the narrative.

Issue Identification

This section was updated to include issues raised during the comment period on the draft documents that informed the final range of alternatives. It also contains editorial changes.

Chapter 2: Description of the Alternatives

Introduction

Includes editorial changes for clarity.

Alternative Development

This section was added to provide better clarity on how the range of alternatives was developed.

Alternatives Considered in Detail

This section was updated to reflect the final alternatives. Changes based on issues raised by comments were made to alternatives 2, 3, 4, and 5. There are some editorial changes for clarity.

Alternatives and Alternative Elements Considered but Eliminated from Detailed Study

Alternatives and alternative elements suggested by commenters but not incorporated into the final alternatives have been added. This section also includes reordering of subheadings and editorial changes. Discussions were expanded or edited for clarity in response to comments. Length-of-stay limits in wilderness was removed from this section to correct an error. Length-of-stay limits are discussed as part of issue identification.

Comparison of Alternatives

This section was updated to include one section for the differences amongst alternatives in terms of plan content and another for the differences in expected outcomes. This was done in response to comments and for clarity.

Chapter 3: Affected Environment and Environmental Consequences

Introduction

Contains editorial changes.

Environmental Consequences

Additional description added for clarification.

Cumulative Effects

No changes were made to this section.

Changed Circumstances

This section was added to describe how the changed conditions resulting from the 2022 Black Fire and record-breaking monsoon season that occurred between draft and final documents were considered.

Climate Change

This section was added to describe the ways in which climate change is considered throughout the environmental impact statement.

Assumptions Common to All Analyses

This section was revised for precision and accuracy. At draft, this section characterized some things as analysis assumptions that are better described in other ways. For example, the statement related to no direct effects is not an assumption, it is a characteristic of a programmatic analysis which is described in the introductory section of this chapter under the subheading “Environmental Consequences”. Similarly, monitoring to support adaptive management is not an assumption, it is a requirement of the 2012 Planning Rule and directives. Further, we do not assume plan components are compliant with law, regulation, and policy; it is our responsibility to ensure that they are.

Upland Vegetation, Fire Ecology and Fuels

Affected Environment

This section includes editorial changes and updates to include additional years of fire-related data that are now available. A table describing the distribution of the wildland-urban interface across the forest’s upland vegetation types was added in response to comments. Tables and narratives were updated to be inclusive of changed conditions since the draft was published, including the 2022 Black Fire.

Environmental Consequences

Editorial changes based on plain language principles or to otherwise provide clarification are present throughout this section.

Analysis Methodology

Old trees were added to the old growth attributes analyzed based on protocol developed in 2022 by the Southwestern Regional Office. Language intended to clarify how the analysis considers climate change adaptation and climate change impacts was added in response to comment and to align with the newly adopted climate adaptation spectrum analysis framework. A section was added to describe how the changed circumstances resulting from the 2022 Black Fire are considered and analyzed.

Effects Common to All Vegetation Types and Alternatives

Editorial changes based on plain language principles or to otherwise provide clarification are present throughout this section, some in response to comment. Additional detail provided about vegetation treatments in woodlands based on recent published literature we were previously unaware of and in response to comments. Additional detail about fire-grazing interactions and invasive and noxious weeds added in response to comment. Climate change adaptation spectrum discussion added in response to new information and response to comment.

Effects Common to All Vegetation Types and Alternative 1

Editorial changes based on plain language principles or to otherwise provide clarification are present throughout this section. Additional detail provided about vegetation treatments in woodlands based on recent published literature we were previously unaware of and in response to comments.

Effects Common to All Vegetation Types and Alternative 2

Editorial changes based on plain language principles or to otherwise provide clarification are present throughout this section.

Effects Common to All Vegetation Types and Alternatives 3 and 4

Editorial changes based on plain language principles or to otherwise provide clarification are present throughout this section, some in response to comment.

Effects Common to All Vegetation Types and Alternative 5

Editorial changes based on plain language principles or to otherwise provide clarification are present throughout this section.

Effects Common to All Vegetation Types and Alternatives 2, 3, 4, and 5

Editorial changes based on plain language principles or to otherwise provide clarification are present throughout this section. Additional detail provided about vegetation treatments in woodlands based on recent published literature we were previously unaware of and in response to comments. Climate change adaptation spectrum discussion added in response to new information and response to comment.

Individual Ecological Response Unit Sections

At draft, some of these sections were missing information describing the status of some key ecosystem characteristics from the assessment and there were inconsistencies in which characteristics were discussed in the effects sections. Missing information was filled in. A table summarizing the trend for each key ecosystem characteristic for each ERU was added to help guide the narrative. The changed conditions from the 2022 Black Fire have been added to each discussion and the climate adaptation spectrum discussions were reframed and expanded to reflect the new analysis framework for climate adaptation. Editorial changes based on plain language principles or to otherwise provide clarification are present throughout these sections.

Effects to the Wildland-Urban Interface

Editorial changes. Climate adaptation discussion added.

Effects of Proposed Research Natural Areas

Editorial changes.

Effects of Recommended Wilderness Common to All Action Alternatives and Vegetation Types

Editorial changes.

Cumulative Effects

This discussion was expanded in response to comments and to incorporate new information. Editorial changes throughout.

Climate and Carbon

Affected Environment

This section contains editorial changes, additional discussion in response to comment and incorporates scientific literature published after the draft environmental impact statement was released for public review and comment.

Environmental Consequences

Analysis Methodology

Editorial changes. Sections added to address changed circumstances related to the 2022 Black Fire and to describe the livestock methane emissions analysis that was added in response to comment. Language was added to clarify how the analysis addresses climate change impacts and mitigation.

Effects Common to All Alternatives

Methane analysis discussion added in response to comment. Additional discussion related to natural climate solutions added in response to comment. Additional discussion about the role of soil organic carbon in mitigating climate change was added based on scientific literature published after the draft environmental impact statement was released for public review and comment. Editorial changes throughout.

Effects Common to Alternatives 1, 3, and 4

Minor editorial changes.

Effects Specific to Alternative 2

Minor editorial changes.

Effects Specific to Alternative 5

Minor editorial changes.

Effects Common to Grasslands

Minor editorial changes.

Effects Common to Mountain Mahogany Mixed Shrubland

Minor editorial changes.

Effects Common to Woodlands

Minor editorial changes.

Effects Common to Warm, Dry Forests

Minor editorial changes.

Effects Common to Cold, Wet Forests

Minor editorial changes.

Effects Resulting from Proposed Research Natural Areas

Minor editorial changes.

Effects Common to Recommended Wilderness

Minor editorial changes.

Cumulative Effects

Additional discussion added to incorporate new information, including the New Mexico Climate Strategy, which was released in 2020, and recently published scientific literature.

Air Quality

Affected Environment

Added language intended to clarify that compliance with the state's smoke management program applies to criteria and hazardous air pollutant emissions and impacts to air quality and visibility, including class I sensitive areas identified in 40 CFR Part 81, Subpart D in response to comment.

Environmental Consequences

Analysis Methodology

Minor editorial changes.

Effects Common to All Alternatives

Minor editorial changes. Added language intended to clarify that compliance with the state's smoke management program applies to criteria and hazardous air pollutant emissions and impacts to air quality and visibility, including class I sensitive areas identified in 40 CFR Part 81, Subpart D in response to comment.

Effects Common to Alternatives 1, 3, and 4

Minor editorial changes.

Effects of Alternative 2

Minor editorial changes.

Effects of Alternative 5

Minor editorial changes.

Cumulative Effects

Additional discussion added about aviation emissions in response to comment and minor editorial changes.

Soil and Watershed Resources

Affected Environment

Editorial changes based on plain language principles and to improve clarity. Incorporated new technical guidance for soil condition assessments. Added clarification about the temperature impairments of Outstanding National Resource Waters in response to comment. Added a section discussing changed circumstances resulting from the 2022 Black Fire.

Environmental Consequences

Analysis Methodology

Language intended to clarify how the analysis considers climate change adaptation and climate change impacts was added in response to comment and to align with the newly adopted climate adaptation spectrum analysis framework. Revised analysis assumptions based on response to comments and the revision of the assumptions common to all analyses in response to comment.

Effects Common to All Alternatives

Editorial changes based on plain language principles and to improve clarity. Climate change adaptation discussion expanded to align with the new analysis framework and in response to new information and response to comment. Added a paragraph related to herbicide use and expanded the discussion of wildfire reburning previously burned areas based on the 2013 Silver Fire and 2022 Black Fire. Specifically incorporated the 2014 travel management analysis and decision. Clarified the discussion about range condition and its relationship to soil and watershed resource conditions. Added a discussion on the effects of livestock grazing on water availability for other uses.

Effects of Alternative 1

Editorial changes based on plain language principles and to improve clarity.

Effects Common to All Action Alternatives

Editorial changes to improve clarity and better align with the new climate adaptation spectrum framework.

Effects Common to Alternatives 2, 3, and 4

Section added to address effects common to these alternatives related to herbicide use.

Effects of Alternative 2

Added discussion related to herbicide use and establishing a small system of swing allotments, or forage reserves from vacant allotments as opportunities arise. Editorial changes.

Effects Common to Alternatives 3 and 4

This section was added to discuss the effects of approaching vacant allotments differently than alternative 2.

Effects of Alternative 3

Editorial changes.

Effects of Alternative 4

Editorial changes.

Effects of Alternative 5

Editorial changes. Added discussion related to herbicide use and vacant allotments.

Effects Resulting from Proposed Research Natural Areas

Description of the alternatives removed to reduce repetition and length. Editorial changes.

Effects Resulting from Recommended Wilderness

This section was mostly repetitive of the subsection Effects Common to All Vegetation Types Resulting From Recommended Wilderness Under All Action Alternatives in the Upland Vegetation, Fire Ecology and Fuels section of the environmental impact statement. It was deleted and that section referenced instead. Further discussion related to climate change adaptation in response to comments and to align with the new climate adaptation spectrum framework.

Cumulative Effects

Editorial changes based on plain language principles to improve clarity. Support for statements made regarding elk populations was strengthened in response to comments. Discussion was expanded based on new information and response to comment. Expanded topics include mining activities, climate change, climate change adaptation, and partnerships.

Riparian and Aquatic Ecosystems

Affected Environment

Editorial changes for clarity. Incorporation of new information from the Aquatic-Riparian Climate Change Vulnerability analysis that was completed after the draft documents were released. Added a section for changed circumstances resulting from the 2022 Black Fire.

Environmental Consequences

Analysis Methodology

Language intended to clarify how the analysis considers climate change adaptation and climate change impacts was added in response to comment and to align with the newly adopted climate adaptation spectrum analysis framework. Revised analysis assumptions based on response to comments and the revision of the assumptions common to all analyses in response to comment. Editorial changes.

Effects Common to All Alternatives

Editorial changes based on plain language principles and to improve clarity throughout. Removed discussion of effects related to illegal activities. That is an implementation and enforcement issue, not a planning issues per the revised analysis assumptions common to all analyses in the environmental impact statement. Added discussion related to how the alternative provide support for the new climate adaptation spectrum analysis framework.

Effects of Alternative 1

Substantial changes based on discussion between regional and forest-level planning staff about compliance with policy direction for plan components under the 2012 Planning Rule.

Effects Common to All Action Alternatives

Substantial changes based on discussion between regional and forest-level planning staff about compliance with policy direction for plan components under the 2012 Planning Rule. Changes reflect final plan components.

Effects of Alternatives 2, 3, and 4

Editorial changes. Added analysis for herbicide use.

Effects of Alternative 2

Editorial changes.

Effects of Alternative 3

Editorial changes.

Effects of Alternative 4

Editorial changes.

Effects of Alternative 5

Editorial changes. Added analysis for herbicide use.

Effects Resulting from Proposed Research Natural Areas

Editorial changes

Effects Resulting from Recommended Wilderness

Editorial changes

Cumulative Effects

Editorial changes based on plain language principles and to improve clarity throughout. Additional discussion added based on new information and emerging issues, including climate change. Removed discussion related to illegal activities because this is an implementation and enforcement issue, not a planning issue.

Wildlife, Fish, and Plants

This section contains extensive revisions based on response to comment, to reduce complexity, improve flow and clarity, and to better align with the programmatic nature of the analysis and requirements of the 2012 Planning Rule and Forest Service directives. The organizational structure of the draft analysis led to unnecessary and repetitive content.

Affected Environment

Editorial and organizational changes. Changes to Species of Conservation Concern discussion to reflect updated list. Added a section on invasive species.

Environmental Consequences

Analysis Methodology

Revised to improve clarity and more explicitly describe how climate change is analyzed. Content related to area designations was removed as part of response to comment or because it was not descriptive of the analysis methodology.

Effects Common to All Alternatives

Most of the analysis for federally listed species is now under this heading because management for their persistence and recovery is already determined by the Endangered Species Act and through consultation with the U.S. Fish and Wildlife Service. Description of each species, their habitats, ecological conditions, and threats are in appendix G and the Affected Environment subsection, or the assessment report. There are aspects of management that vary between alternatives, which are now discussed under appropriate subheadings. The final analysis includes similar restructuring of the content under the draft heading Environmental Consequences for Species of Conservation Concern. Analysis of Regional Forester's sensitive species is removed because it was unnecessary and confusing. The 2012 Planning Rule replaces the regional forester's sensitive species with species of conservation concern. Similarly, the content under the draft Migratory Birds and Golden and Bald Eagles because those species were considered during development of the species of conservation concern list and the content under this draft heading is redundant with the analysis of the alternatives.

Other Effects Headings

Effects groupings were changed to reflect the streamlined organization of the analysis and the similarities and differences in the effects of the alternatives. Other revisions were made in response to comments.

Timber, Forest, and Botanical Products

Affected Environment

Editorial changes.

Environmental Consequences

Analysis Methodology

Editorial changes. Language intended to clarify how the analysis considers climate change adaptation and climate change impacts was added in response to comment and to align with the newly adopted climate adaptation spectrum analysis framework. Added discussion regarding changed circumstances resulting from the 2022 Black Fire based on the evaluation of those circumstances in the Upland Vegetation, Fire Ecology, and Fuels section.

Effects Sections for the Alternatives

All these sections contain minor editorial changes.

Cumulative Effects

Editorial changes.

Livestock Grazing

Affected Environment

Editorial changes. Additional information added in response to comment.

Environmental Consequences

Analysis Methodology

Editorial changes. Language intended to clarify how the analysis considers climate change adaptation and climate change impacts was added in response to comment and to align with the newly adopted climate adaptation spectrum analysis framework. Added discussion regarding changed circumstances resulting from the 2022 Black Fire.

Effects Sections for Alternatives

Editorial changes. Added discussion about invasive and noxious species management. Removed a paragraph from Effects of Alternative 2 because it was repetitive of information disclosed in Effects Common to Alternatives 2, 3, and 4.

Cumulative Effects

Editorial changes. Expanded discussion about climate adaptation.

Sustainable Recreation

This section contains substantial organizational and formatting changes to improve flow and clarity and reduce repetition throughout. It also incorporates portions of the Trails and Special Uses (recreation) section of the draft environmental impact statement to reduce redundancy, except for the content specific to designated national scenic and recreational trails. National scenic and recreational trails have their own dedicated section. It also contains new information and additional analysis that was overlooked at draft, and many changes in response to comments.

Affected Environment

The affected environment section contained some information that was more appropriately framed in the environmental consequences section. That content was removed from the Affected Environment and reframed in terms of environmental consequences in the Effects Common to All Alternatives. Other content in the Affected Environment was condensed to reduce length. Content in Recreation Issues and

Trends was updated to reflect new information and respond to comments. The subsection Recreation Opportunity Spectrum was moved to the Analysis Methodology Section and contains formatting and editorial changes to improve clarity and alignment with the analysis methodology used by other national forests.

Analysis Methodology

This section was revised to align with the analysis methodology used by other forests in the Southwestern Region and the intent of the recreation opportunity spectrum, and to reduce confusion about what aspects of the recreation program plan decisions might affect. None of the assumptions listed for the Special Uses (recreation) analysis were necessary as they referred to following law, regulation, and policy, or were statements of trends that could impact administration of the special uses program, which is outside the scope of the plan's environmental analysis.

Effects Sections

At draft, these sections contained a substantial amount of discussion about aspects of the recreation program that are already determined by policy direction, were not affected by plan decisions and were more related to funding issues. This content was more appropriately described in detail in the assessment report and briefly as an aspect of the affected environment in the environmental impact statement. This section also contained analysis that was repetitive of or redundant with analysis under for scenic resources and wilderness headings. This content was removed. Analysis for scenic resources and wilderness topics are housed under their own headings. Analysis conclusions that were drawn based on analyses for ecosystems and watersheds were revised to more clearly align with the conclusions drawn about ecosystems and watersheds. The cumulative effects section was reorganized and condensed to improve flow and readability.

Scenic Resources

This section contains substantial organizational and formatting changes to reduce redundancy and improve flow and clarity. Some material was removed to reduce redundancy, remove unnecessary detail to reduce confusion, and to better reflect differences between alternatives. The analysis and its associated assumptions were reframed for accuracy and to align with the use of scenic integrity objectives in the analysis. Conclusions regarding the effects of administrative designations and management areas now include some additional clarifying discussion.

Roads

This section contains editorial and minor formatting changes. It also contains more analysis related to climate change, in part to respond to comments.

Facilities

This section contains editorial and minor formatting changes. It also contains more analysis related to climate change.

Lands

This section contains editorial and minor formatting changes.

Minerals

This section contains editorial and minor formatting changes. In the effects discussed as common to all action alternatives, a paragraph discussing eligible Wild and Scenic Rivers was moved to common to all alternatives. The plan revision eligibility study replaces the 2002 study. Some detail not relevant to the plan's environmental analysis was condensed. In the common to all action alternatives section, a few

sentences were added to address the Renewable Energy section that was added to the final plan. Acres of recommended wilderness for the alternatives were in error, and so were corrected. The narrative about mineral potential in all recommended areas for all alternatives was condensed to preserve only the relevant details.

Wilderness

This section combines the draft sections for designated wilderness, wilderness study areas, and recommended wilderness to paint a clearer picture of how these areas related to one another and the laws establishing them and associated management requirements, and to otherwise improve clarity and to reduce redundancy.

Affected Environment

These combined sections include editorial changes and some factual corrections. Some additional information was moved from the Effects Common to All Alternatives section because it is more descriptive of the affected environment and emerging issues and trends than it is a description of the environmental consequences of the alternatives.

Environmental Consequences

Analysis Methodology

The assumptions were condensed and simplified. Many were removed because they were unnecessary, repetitive of legal requirements, or irrelevant to what the analysis needs to accomplish.

Effects Common to All Alternatives

These sections were heavily condensed as they contained information that was more appropriately presented as part of the affected environment or emerging issues and trends, or were detailed descriptions of management mandated, directed or guided by law, regulation or policy.

Effects Common to All Action Alternatives

Discussion related to group size limits was removed as they are not common to all alternatives. Alternatives 2 and 5 are the same regarding group size limit, but different than alternatives 3 and 4, which do not specify a group size limit. Most, but not all the draft discussion of effects common to all action alternatives under the Recommended Wilderness heading was not carried into the final combined wilderness sections because the conclusions that were drawn are dependent on area-specific conditions, are not broadly applicable to all areas and are more succinctly discussed as they apply to specific alternatives or areas.

Tribal Relationships and Co-Stewardship

This section contains editorial changes to improve clarity, readability, and to incorporate new information from the Strengthening Tribal Consultations and Nation-to-Nation Relationships: A USDA Forest Service Action Plan. Climate change discussion and analysis was added.

Cultural Resources and Archaeology

This section contains editorial changes to improve clarity and readability. Some content was condensed or removed to reduce repetition. Some substantive changes were made to better align with the conclusions of other analyses referenced in the effects subsections and reduce internal conflict within the document. Additional analysis related to climate change was added. Cumulative effects contain substantive changes because they were more project-level cumulative effects at draft. The final section contains content more aligned with the expectations and intent of programmatic cumulative effects.

Appendices

Appendices were re-ordered:

Appendix A: Response to Comments is all new content.

Appendix B: Changes between Draft and Final Plan and Environmental Impact Statement is all new content.

Appendix C: Documentation of Public Engagement Process contains some revisions for clarity and additions reflecting engagement that happened during the comment period.

Appendix D: Coordination with Other Public Planning Efforts is now its own appendix; it had been combined with the public engagement process appendix at draft. Appendix D contains some revisions based on comments from the Grant Soil and Water Conservation District and has been updated to include plans developed or revised since the draft was published.

Appendix E: State and Transition Modeling Process contains minor editorial changes.

Appendix F: Timber Production Suitability, Estimated Vegetation Practices and Projected Harvest Levels Methodology contains minor editorial changes.

Appendix G: Documentation of the Analyses of At-Risk Species contains substantial revisions in response to comment.

Appendix H: Documentation of the Wilderness Process contains revisions in response to comment and improve readability.

Appendix I: Documentation of the Wild and Scenic River Eligibility Study contains substantial revisions in response to comment and to improve readability.

Appendix J: Documentation of the Research Natural Area Evaluation was revised to include final proposals to the Regional Forester. It also contains a few editorial changes.

Appendix K: Documentation of the Botanical Area Evaluation contains additional information in response to comment.

Appendix L: Crosswalk between the 1986 Forest Plan and Revised Plan Content is all new information.

Appendix M: Letters from Government Agencies is also new content and contains the comment letters submitted by government agency representatives and elected officials verbatim.

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Appendix C. Documentation of Public Engagement Process

Public Engagement Process

The 2012 Planning Rule places great emphasis on collaboration and public involvement during the planning process and the plan's implementation. The Gila National Forest leadership and staff have conducted public engagement throughout each phase of the planning process. Following the guidance in the 2012 Planning Rule, this engagement has included collaboration with tribes, cooperating agencies, youth, underrepresented populations including those considered low-income and minority, private landowners, local, state and federal government agencies, non-governmental organizations, and coordination with local governments and Soil and Water Conservation Districts.

Leadership and staff's vision of robust public engagement initially came from a series of community conversations before the revision process began in March of 2015. From those conversations, several themes emerged.

- Many people want to work with the Gila National Forest, engaging early and often.
- Relationships and trust need attention.
- Stakeholders desire a clear understanding of their role in the decision-making process, especially concerning their influence in the process and how their comments are addressed.
- Create safe opportunities for shared learning among diverse stakeholders by using a third-party professional facilitator, being inclusive and having meeting with a clear focus and purpose.
- Local culture and customs are important.
- Good communication is essential; be open and transparent, timely, speak plainly, and use multiple communication methods including emails, letters, phone calls, social media, local media, website, field trips, and provide meeting materials and summaries for those who could not attend.

Since these initial conversations, public engagement has included over 50 events including community conversations, technical meetings, open houses, surveys, symposia, workshops, and field trips (see Table C-1 at the end of this section). Most meetings have been community conversations, typically a couple hours long on weekday evenings, which provided opportunities to exchange information and share knowledge. Technical meetings have typically been scheduled for an extended period during the day to encourage participation by interested local governments, state and federal agencies, non-governmental organizations, and members of the public with more time for discussion on topics and to get into the details more. Open houses at Forest Service offices provided opportunities for anyone with questions or ideas about plan revision to stop by and visit with forest staff. In addition to in-person public meetings and open houses, a web-based interactive map-based application provided opportunities for forest staff to gather public input on the Wild and Scenic River eligibility study, and wilderness inventory, evaluation, and analysis process steps. These web-based opportunities were open and receiving public comment through the duration of both processes.

Workshops, including field trips, focused on frequent-fire forest vegetation types that helped build shared understanding of desired conditions and an opportunity to learn about and discuss the science supporting desired conditions, management activities, opportunities, and challenges. Partners that helped make this workshop possible included the New Mexico Forest and Watershed Restoration Institute at New Mexico Highlands University, Forest Service Southwestern Regional Office, Rocky Mountain Research Station, Earth Systems Ecology Lab at University of New Mexico, and the U.S. Fish and Wildlife Service.

On-line and interactive classroom sessions conducted by Dr. Kathy Whiteman of Western New Mexico University gathered assessment input from youth and educators about existing designated areas, at-risk species, air, soil, water, ecosystems and ecosystem processes. Forest staff have engaged specifically with youth, leading two field days with the Surveys Student Wildland Adventure Program, which is a program focusing on low income, minority community college students. These field days were opportunities to get these young people out in the woods to learn about natural resource management.

In addition, the Gila National Forest has engaged in 15 outreach tabling events at special events such as county fairs to raise awareness, answer questions, and add a wide variety of individuals and groups to the plan revision mailing list. The mailing list, which now has nearly 1,000 people on it, includes officials representing federal, state, and local government; federally recognized tribes; rural historic communities; non-profit organizations; and private citizens.

Gila National Forest leadership maintains governmental relationships with 10 federally recognized Indian tribes. All these tribes, including specific bands that live closer to the forest, have been contacted by mail and by phone regarding plan revision. Face-to-face consultation has occurred with 6 of the 10 tribes. The Gila National Forest also participated in multiple regional tribal roundtables held by the Southwest Regional Forester. These discussions brought together all the national forests in the region to discuss, learn, and collaborate with tribes around forest plan revision.

Cooperating agencies have and will hopefully continue to contribute their knowledge and understanding of the concerns and needs of local communities. Especially at technical meetings, but also at community meetings cooperating agencies have engaged in discussions and provided input regarding pre-draft and draft work products. More information about cooperating agencies is provided later in this appendix. Forest staff also discussed the plan revision process and plan development at the invitation of specific local governments, user groups or other interested parties.

There were additional opportunities for public involvement in the National Environmental Policy Act review and plan revision processes. Concurrent with the release of the draft environmental analysis, a notice of availability published in the Federal Register initiated the formal 90-day comment period on the draft analysis revised forest plan as required by National Forest Management Act regulations at 36 Code of Federal Regulations (CFR) 219. Only those individuals and entities who have submitted substantive formal comments related to this plan revision during the opportunities provided for public comment will be eligible to file an objection (36 CFR 219.53 (a)).

Public outreach meeting notes and additional information can be found in the planning record or on the [web](#). Comments received since the publication of the Notice of Intent to begin plan revision can be found in the project record.

Table C-1. Most of the public participation events related to forest plan revision for the Gila National Forest

Date	Revision Phase	Meeting Type	Location(s)
03/09/2015	Introduction to Forest Plan Revision	Community Conversations	Quemado
03/10/2015	Introduction to Forest Plan Revision	Community Conversations	Glenwood
03/10/2015	Introduction to Forest Plan Revision	Community Conversations	Reserve
03/11/2015	Introduction to Forest Plan Revision	Community Conversations	Silver City
03/12/2015	Introduction to Forest Plan Revision	Community Conversations	Mimbres Valley
03/12/2015	Introduction to Forest Plan Revision	Community Conversations	Truth or Consequences
08/03/2015	Assessment	Community Conversations	Quemado
08/04/2015	Assessment	Community Conversations	Glenwood
08/04/2015	Assessment	Community Conversations	Reserve
08/05/2015	Assessment	Community Conversations	Silver City
08/06/2015	Assessment	Community Conversations	Mimbres Valley
08/06/2015	Assessment	Community Conversations	Truth or Consequences
11/04/2015	Assessment	Youth Outreach Event	Silver City
02/26/2015	Assessment	Gila Natural History Symposium	Silver City
06/16/2016	Assessment	Southwestern Regional Forester's Intertribal Roundtable & Consultation Meeting	Flagstaff, AZ
10/24/2016	Assessment/Needs for Change	Community Conversations	Mimbres Valley
10/25/2016	Assessment/Needs for Change	Community Conversations	Quemado
10/26/2018	Assessment/Needs for Change	Community Conversations	Glenwood
10/27/2016	Assessment/Needs for Change	Community Conversations	Reserve
11/01/2016	Assessment/Needs for Change	Community Conversations	Truth or Consequences
11/02/2016	Assessment/Needs for Change	Community Conversations	Silver City
11/03/2016	Assessment/Needs for Change	Community Conversations	Las Cruces
06/12/2017	Plan Development & Wilderness Process	Community Conversations	Quemado
06/13/2017	Plan Development & Wilderness Process	Community Conversations	Reserve
06/14/2017	Plan Development & Wilderness Process	Community Conversations	Silver City
06/15/2017	Plan Development & Wilderness Process	Community Conversations	Truth or Consequences
06/16/2017	Plan Development & Wilderness Process	Community Conversations	Las Cruces

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Appendix C. Documentation of Public Engagement Process*

Date	Revision Phase	Meeting Type	Location(s)
06/20/2017	Assessment/Needs for Change & Plan Development	Southwestern Regional Forester's Intertribal Roundtable & Consultation Meeting	Albuquerque
08/01/2017 & 08/02/2017	Plan Development	Desired Conditions Workshop and Field Trip	Reserve
08/03/2017 & 08/04/2017	Plan Development	Desired Conditions Workshop and Field Trip	Silver City
08/09/2017	Plan Development	Technical Meeting	Silver City
08/10/2017	Plan Development	Open House	Silver City
08/21/2017	Plan Development	Open House	Silver City
08/22/2017	Plan Development, Wild and Scenic Rivers Eligibility Study & Wilderness Process	Technical Meeting	Silver City
09/11/2017	Plan Development	Open House	Silver City
09/12/2017	Plan Development	Technical Meeting	Silver City
09/25/2017	Plan Development	Open House	Silver City
09/29/2017	Plan Development	Technical Meeting	Silver City
12/13/2017	Plan Development	Technical Meeting	Silver City
02/23/2018	Plan Development	Gila Natural History Symposium	Silver City
03/19/2018	Plan Development, Wild and Scenic Rivers Eligibility Study & Wilderness Process	Community Conversations	Quemado
03/20/2018	Plan Development, Wild and Scenic Rivers Eligibility Study & Wilderness Process	Community Conversations	Glenwood
03/21/2018	Plan Development, Wild and Scenic Rivers Eligibility Study & Wilderness Process	Community Conversations	Silver City
03/22/2018	Plan Development, Wild and Scenic Rivers Eligibility Study & Wilderness Process	Community Conversations	Mimbres Valley
03/23/2018	Plan Development, Wild and Scenic Rivers Eligibility Study & Wilderness Process	Community Conversations	Las Cruces
03/23/2018	Plan Development, Wild and Scenic Rivers Eligibility Study & Wilderness Process	Community Conversations	Truth or Consequences
03/26/2018	Plan Development, Wild and Scenic Rivers Eligibility Study & Wilderness Process	Community Conversations	Reserve
07/16/2018	Plan Development	Technical Meeting	Silver City

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Appendix C. Documentation of Public Engagement Process

Date	Revision Phase	Meeting Type	Location(s)
08/30/2018	Plan Development	Technical Meeting	Silver City
09/24/2018	Alternative Development	Community Conversations	Quemado
09/25/2018	Alternative Development	Community Conversations	Reserve
09/26/2018	Alternative Development	Community Conversations	Silver City
09/27/2018	Alternative Development	Community Conversations	Truth or Consequences
09/28/2018	Alternative Development	Community Conversations	Las Cruces
07/20/2019	Plan Development	Youth Outreach Event	Mimbres Valley
07/22/2019	Plan Development	Youth Outreach Event	Mimbres Valley
01/21/2020	National Environmental Policy Act Review and Comment Period	Community Conversations	Quemado
01/22/2020	National Environmental Policy Act Review and Comment Period	Community Conversations	Glenwood
01/23/2020	National Environmental Policy Act Review and Comment Period	Community Conversations	Reserve
01/24/2020	National Environmental Policy Act Review and Comment Period	Community Conversations	San Lorenzo and Truth or Consequences
01/27/2020	National Environmental Policy Act Review and Comment Period	Community Conversations	Silver City
01/28/2020	National Environmental Policy Act Review and Comment Period	Community Conversations	Las Cruces

Cooperating Agencies

The National Environmental Policy Act of 1969 (42 U.S.C. 4231 et seq.) allows certain federal, state, local and tribal governmental organizations to be granted cooperating agency status when the agency has “jurisdiction by law and special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major federal action significantly affecting the quality of the human environment” (40 CFR 1508.5). Cooperating agencies lend technical assistance or other resources to the development of the draft forest plan and environmental analysis. All decision-making authority for management of the national forest is retained by the U.S. Department of Agriculture, Forest Service.

On June 2, 2017, the Gila National Forest supervisor solicited interest from 51 federal, state, local and tribal governments in cooperating agency status for the plan revision process. Three ultimately signed on as cooperating agencies. The cooperating agencies for the Gila National Forest’s plan revision process include:

- New Mexico Department of Agriculture
- New Mexico Department of Game and Fish
- San Francisco Soil and Water Conservation District

Cooperating agencies attended public meetings to engage in discussions and provide input regarding initial work products with the Gila National Forest, other cooperating agencies, nongovernmental organizations, and the public. They also provided feedback on pre-draft and draft products, technical expertise, information on the Gila National Forest’s draft forest plan’s consistency with their own management plans and represented the interests and needs of their constituents. Complementary to coordination efforts, involving cooperating agencies in the planning process provided additional opportunities to share perspectives, develop mutual understanding, improve relationships, and establish a strong foundation for the future.

Appendix D. Coordination with Other Public Planning Efforts

The 2012 Planning Rule requires a review of planning and land use policies of federally recognized Indian Tribes (43 U.S.C. 1712(b)), Alaska Native Corporations, other federal agencies, and state and local governments, where relevant to the plan area. In preparing the draft revised Gila National Forest plan, the planning team reviewed these plans and policies with consideration provided for:

- The goals, objectives, and implementation measures as expressed in their plans and policies
- The compatibility and interrelated impacts of these plans and policies and forest plan content
- Opportunities for the plan to address the impacts identified or contribute to joint goals, objectives and implementation measures
- Opportunities to resolve or reduce conflicts, within the context of plan content

The public engagement process helped identify shared goals and objectives, issues, and opportunities to reduce conflict and improve alignment between plans and policies. Cross-boundary issues include climate change, wildfire, habitat connectivity and managing for wide-ranging species. For the most part, the revised forest plan is compatible with the plans and policies of other governmental entities and there are many opportunities to contribute to the achievement of shared goals and objectives. While each governmental entity has a different mission, no conflicts requiring alternative development were identified. Management approach sections of the plan discuss issues and opportunities for coordinating with various partners across administrative boundaries, particularly state, local, tribal, and federal agencies. This appendix serves to summarize the primary plans and policies of others and how they influenced or were relevant to development of the revised plan.

Tribal

The Gila National Forest contains ancestral lands important to 13 federally recognized Tribes and Pueblos, although it does not share borders with reservation lands. These federally recognized Tribes and Pueblos include: the Pueblos of Acoma, Isleta, Laguna, Zuni, and Ysleta Del Sur; the Navajo Nation; the Hopi Tribe; Comanche Nation; Yavapai-Apache Nation; and the San Carlos, Ft. Sill, Mescalero, and the White Mountain Apache Tribes Government to government consultation on the forest plan is ongoing and the tribes have an expectation of privacy and sovereignty over their data, information and plans. No tribal plans were submitted to the Gila National Forest with permission to disclose or discuss the contents thereof with the general public.

Counties

The Gila National Forest lies in four southwestern New Mexico counties: Catron, Grant, Hidalgo, and Sierra. County-level plans include comprehensive plans, economic development plans, and community wildfire protection plans. All four counties have community wildfire protection plans that were developed in response to the Healthy Forests Restoration Act of 2003. Community wildfire protection plans identify and prioritize areas for hazardous fuel reduction treatments and provide recommendations on treatment types and methods. County comprehensive plans can be used as a source of information on the history of land use within the region, the patterns of development, desired conditions, and current county land use policies. Some counties also have an economic development plan that stands separately from their comprehensive plan but works in conjunction with it. Economic development plans, whether stand-alone or as part of a comprehensive plan, can be a source of information about how the community values the contributions that federal public lands provide to economic growth and prosperity. Each of these types of

plans are summarized in the following subsections by county. Comprehensive and economic development plans are considered together. Community wildfire protection plans are considered separately.

Comprehensive Plans

Catron County

Goals, Objectives, and Implementation Measures

The Catron County Comprehensive Plan and Capital Improvement Plan establishes the goals, objectives, strategies, and policies to protect ways of life, custom and culture of its residents into the future. It identifies six overarching planning topics, each with its own goals, objectives, and implementation measures. Objectives most pertinent to national forest management include economic growth and vitality; collaborative innovation to revive the wood product industry; development of visitor use areas within the Gila National Forest; implementation of the Catron County Community Wildfire Protection Plan and improving forest health through hazardous fuels reduction; and maintenance, improvement, and expansion of firefighting infrastructure. It also includes an objective to work with the U.S. Department of Agriculture Forest Service and emergency service providers to identify locations for cell towers.

Compatibility, Contributions, and Conflict

The objectives and implementation measures that touch on national forest management are mostly compatible with or complementary to revised forest plan direction. In fact, the objective to revive the wood product industry through innovations that can use low-value, small-diameter material is not just compatible with the draft revised forest plan, such innovations would be a substantial contribution to the successful implementation of the revised forest plan. Additionally, implementation measures in the comprehensive plan for hazardous fuels reduction includes support of physically removing fuels, as well as prescribed fire. However, there may not be complete alignment related to the development of recreation facilities, which is an implementation measure in the county's plan. Dispersed recreation is the expressed emphasis in the forest plan, and while there is no plan direction prohibiting additional developed recreation sites, the forest does not have the fiscal capacity to build and maintain additional developed recreation sites.

The revised forest plan contributes to advancing the objectives in the Catron County Comprehensive Plan and Capital Improvement Plan in several ways. The forest plan's direction for community relationships and multiple uses contributes to protecting ways of life, custom, and culture into the future. Numerous ecological plan components seek to restore the ecosystems and watersheds that Catron County residents depend on for their livelihoods and avoid large extents of high-severity wildfire. There is plan direction that supports collaborative outreach and education programs to promote proactive, fire-wise communities, which could help advance implementation measures identified in Catron County's plan.

The Catron County Comprehensive Plan and Capital Improvement Plan raises a community concern about how much federal and state-controlled land occurs in the County. There is a sentiment that while public land management decisions directly impact county residents in ways, they do not impact other stakeholders, decisions are not made locally. The forest plan revision process has included outreach to rural and traditional communities and active coordination with county commissions. Catron County itself was contacted to gauge their interest in participating as a cooperating agency but did not apply for that status. Nevertheless, the dialogue that has progressed through this coordination effort has manifest itself in the revised plan as management approaches that provide for more local involvement and coordination during plan implementation.

Grant County

Goals and Action Items

The Grant County Comprehensive Plan serves as a guide for policy decisions and investment of taxpayer dollars. The plan contains policy guidance for regional coordination, land use, environment and natural resources, housing, transportation, facilities and services, economic development, and funding. Goals and action items are included to respond to identified challenges and opportunities. Coordination goals and action items pertinent to forest management include coordination on transportation infrastructure and access issues, recreational planning, and forest management efforts. The County also identified facilitating communication between the Forest Service and the public as an action item, especially between the agency and grazing allotment permittees. It specifically addresses coordination with the Forest Service and identifies tourism and visitor services, recreational amenities, transportation access, and preventing the spread of invasive species as topics of coordination.

Environment and natural resources goals and action items include preservation of natural landscapes and delicate habitats with consideration being provided for at-risk locations, wildland-urban interface values, and wildfire and flood hazard mitigation. The Grant County Economic Development Master Plan emphasizes development of an aggressive stand-alone marketing and branding strategy including natural scenery and outdoor recreation opportunities with the Gila National Forest, which was identified as a “key asset.”

Compatibility, Contributions, and Conflict

The goals and action items that touch on national forest management are all compatible with or complementary to draft revised forest plan direction.

The revised forest plan contributes to advancing the coordination of environment and natural resources goals and action items. The forest plan revision process has included active coordination with county commissions. Grant County itself was contacted to gauge their interest in participating as a cooperating agency but did not apply for that status. Plan content for community relationships and management approaches throughout the plan promote continued coordination, collaboration, and partnership with the counties. Plan direction for ecosystems and watersheds supports wildfire and flood hazard mitigation and invasive species. Plan content also supports natural scenery, outdoor recreation opportunities and tourism.

The Grant County Comprehensive Plan articulates a distrust some residents have toward the Forest Service over livestock grazing and forest access. Stakeholder engagement throughout the plan revision process has been aimed at improving relationships and building shared understanding, but continued efforts to maintain and improve transparency and communication are needed. Plan direction for community relationships and management approaches throughout the plan provide a path forward that promotes these critical relationship elements during implementation.

Hidalgo County

Goals and Strategies

The Hidalgo County Comprehensive Plan is a policy document intended to establish a basis for the regulations and programs needed to move toward the desired conditions the County’s stakeholders envision. It includes the elements of land and water, economic development, housing, transportation, infrastructure and facilities, hazard mitigation, and implementation. Each element has established values, goals and implementation strategies. Goals most pertinent to national forest management include: secure, protect and maintain safe and sustainable water quality and quantity through effective and coordinated watershed and aquifer management; promote, protect and restore the open spaces and natural resources; recognize, honor, and protect historical grazing and water rights for future generations; support, maintain

and preserve the county's rural, cultural and agricultural land uses; strengthen and support opportunities for tourism; and reduce potential loss and damage from natural and human-caused hazards.

Compatibility, Contributions, and Conflict

Most of the goals and strategies pertinent to forest management are compatible with the revised forest plan. However, the goal to recognize, honor, and protect historical grazing rights is not. The revised forest plan is consistent with law and regulation, none of which recognizes or establishes grazing "rights." Grazing on National Forest System lands is a permitted use that is authorized subject to terms and conditions and is not a legally granted right to which permit holders are entitled. Except for the goal for grazing "rights," revised plan content for ecosystems, watersheds, and multiple uses advances the goals articulated in the Hidalgo County plan.

Hidalgo County was contacted to gauge their interest in participating as a cooperating agency but did not apply for that status. The plan revision process has included active coordination with the counties, including Hidalgo County. During coordination meetings, Hidalgo County brought forth many topics where there has not been alignment in the past, including the recognition of grazing rights. This conflict cannot and will not be resolved or reduced by forest plan direction.

Sierra County

Goals, Objectives, Implementation Strategies and Actions

The Sierra County Comprehensive Plan is a practical, strategic plan for community growth and development. It addresses several issues including land use and housing, economic development, infrastructure, facilities, hazard mitigation, green community considerations, and implementation. It also contains related goals, objectives, and implementation strategies and actions. Those most pertinent to national forest management include the goal to establish a formal and influential collaborative status with federal agencies, implementation actions to keep their community wildfire protection plan current and have Forest Service representation on the Sierra County Recreation and Tourism Advisory Board.

Compatibility, Contributions, and Conflict

All the articulated goals, objectives, implementation strategies and actions pertinent to forest management are compatible with or complementary to the revised forest plan.

The revised forest plan advances Sierra County's goal for more frequent and closer collaboration through direction for community relationships and management approaches throughout the plan. Desired conditions and objectives for vegetation communities support wildfire hazard mitigation and contributes to the implementation of the Sierra County community wildfire protection plan.

Sierra County's Comprehensive Plan discusses the local community's understanding that federal lands have national significance, but that these lands are situated locally and by their proximity have very different impacts on the local community versus someone further removed. The plan goes on to articulate that many residents believe that the Forest Service pays little heed to the concerns expressed by the local community and that the loss of jobs and revenue, and inconvenience to ranchers and others by travel management decisions is a serious loss. The plan also asserts that what is lacking in the relationship between the County (and it therefore its residents) and federal agencies is the "high level of influence in decision-making" described by the Council on Environmental Quality in their collaboration handbook. The County was contacted to gauge their interest in participating as a cooperating agency but did not apply for that status.

Nevertheless, the forest plan revision process has included outreach, opportunities to provide input and feedback, and active coordination with the counties. This has been aimed at improving relationships and

building shared understanding, but continued efforts to maintain and improve transparency and communication are needed. Plan direction for community relationships, and management approaches promoting collaboration and coordination throughout the plan, provide a path forward that promotes continual improvement during implementation.

There is one issue raised in the Sierra County Comprehensive Plan that cannot and will not be addressed in the forest planning process and that is the recognition and protection of grazing rights. The forest plan must be consistent with law and regulation, which does not recognize grazing “rights” as legally valid. It does recognize grazing permits and the revised forest plan includes grazing as one of the uses it sustains.

Community Wildfire Protection Plans

Catron County

Desired Conditions, Goals and Objectives

The Catron County Community Wildfire Protection Plan’s goals and objectives are to achieve certain desired future conditions for wildland-urban interface areas, as well as for forests, woodland, and grasslands within the County. Desired conditions for the wildland-urban interface is a fire safe environment that will provide “defensible space” for firefighters in the event of a wildfire. A combination of natural fire processes and resource management that sustains forest health is the desired future condition for wildlands. The community wildfire protection plans also identifies outreach and education and socioeconomic objectives in the monitoring plan that is part of the document.

Compatibility, Contributions, and Conflict

There is a high degree of alignment between the desired conditions, goals, and objectives articulated in the Catron County Community Wildfire Protection Plan and revised forest plan direction for vegetation communities, wildland fire and fuels, the wildland-urban interface and timber, forest and botanical products.

The direction contained in the revised forest plan advance the desired conditions, goals and objectives of the Catron County Community Wildfire Protection Plan through direction for ecosystems, watersheds, wildland fire and fuels, and wildland-urban interface. Plan content in these sections also promote collaborative outreach and education related to wildfire prevention and preparedness. Treatment objectives will also contribute to local and regional industry and job opportunities.

There are no known, relevant plan related conflicts between the Catron County Community Wildfire Protection Plan and draft forest plan content.

Grant County

Goals, Objectives, and Priorities

The goals of the Grant County Community Wildfire Protection Plan include identification and prioritization of wildland fire dangers, promotion of forest product utilization, maintenance of completed projects, involvement of all interests and stakeholders, and adaptive planning. Objectives include recommendation of strategies and projects that will reduce the risk of uncontrollable wildfire, restore watershed functions and conditions, and improve socioeconomic well-being by supporting local economic development that utilizes the by-products of treatments. Priority treatments include highway rights-of-way, wildland-urban interface areas, critical watersheds, and critical infrastructure. Wildland urban interface areas were further divided into priority categories.

Compatibility, Contributions, and Conflict

There is a high degree of alignment between the Grant County Community Wildfire Protection Plan and revised forest plan direction for vegetation communities, wildland fire and fuels, the wildland-urban interface and timber, forest, and botanical products. By promoting industry that can use low-value, small-diameter products, the community wildfire protection plan contributes to the successful implementation of the forest plan and achievement of desired conditions.

The revised forest plan advances the objectives of the Grant County Community Wildfire Protection Plan. It advances objectives for infrastructure protection, urban interface-focused projects, and watershed restoration through direction for ecosystems, watersheds, wildland fire and fuels, and wildland-urban interface. Plan content in these sections also promotes collaborative outreach and education related to wildfire prevention and preparedness. Treatment objectives will also contribute to local and regional industry and job opportunities.

Although not discussed in the Grant County Community Wildfire Protection Plan, public meetings held in Grant County over the course of the forest plan revision process brought to light that some stakeholders feel the community wildfire protection plans have been ignored. While this sentiment was expressed, no further details have been provided or discovered. Presumably, this is related to the rate of progress being made, or that the connection between the priority areas identified in the plan, and the areas the Gila National Forest has treated over the years since the community wildfire protection plan was signed is not obvious. Either way, management approaches promoting closer collaboration and coordination with the community wildfire protection plan and its parties are included in the revised forest plan.

Hidalgo County

Priorities and Projects

The Hidalgo County Community Wildfire Protection Plan does not articulate objectives, but it does articulate three priorities and specific projects within those areas. Priorities include transportation, railroad, and pipeline corridors; defensible space around homes; and fuel breaks around wildland-urban interface boundaries. The Gila National Forest is specifically mentioned related to transportation corridors and limited projects that may be necessary along those corridors to provide the responding firefighting resources the best chance of suppressing human-caused starts.

Compatibility, Contributions, and Conflict

There is a high degree of alignment between the Hidalgo County Community Wildfire Protection Plan and revised forest plan direction. The revised forest plan advances the priorities and projects of the Hidalgo County plan to a limited degree, given the limited amount of the County's total area within the Gila National Forest boundary. Nevertheless, plan direction for vegetation communities, wildland-urban interface, and wildland fire and fuels management is supportive of moving the plan's priorities and projects forward to the degree that it can. There are no known, relevant plan related conflicts between the Hidalgo County Community Wildfire Protection Plan and revised forest plan content.

Sierra County

Objectives

The Sierra County Community Wildfire Protection Plan contains objectives for infrastructure protection; industry, utilization, and employment; public information and education; grants and finance; urban-interface focus projects; and watershed restoration. Urban-interface focus projects are those most critical, specific areas that were thought to be realistic to treat within three years and then moved to an annual maintenance schedule.

Compatibility, Contributions, and Conflict

There is a high degree of alignment between the Sierra County Community Wildfire Protection Plan and revised forest plan direction for vegetation communities, wildland fire and fuels, the wildland-urban interface and timber, forest and botanical products. By promoting industry that can use low-value, small-diameter products, the community wildfire protection plan contributes to the successful implementation of the forest plan and achievement of desired conditions.

The revised forest plan advances the objectives of the Sierra County Community Wildfire Protection Plan. It advances objectives for infrastructure protection, urban-interface focus projects and watershed restoration through direction for ecosystems, watersheds, wildland fire and fuels, and wildland-urban interface. Plan content in these sections also promotes collaborative outreach and education related to wildfire prevention and preparedness. Treatment objectives will also contribute to local and regional industry and job opportunities. There are no known relevant plan-related conflicts between the Sierra County Community Wildfire Protection Plan and revised forest plan content.

Municipalities

Bayard

Goals and Implementation Strategies

The City of Bayard's Comprehensive Plan provides decision-making guidance regarding the physical development of the community. It identifies and provides guidance for eight elements including land use, housing, economic development, community services, transportation, infrastructure, hazard mitigation and implementation. The goals and implementation strategies associated with these elements that are most pertinent to national forest management are related to hazard mitigation. These include promotion of defensible space and coordination with Gila National Forest fire prevention staff, coordination with Gila National Forest staff and others to implement prescribed fire around wildland-urban interface areas, and removal of invasive species around municipal facilities.

Compatibility, Contributions, and Conflict

The City of Bayard's Comprehensive Plan is compatible with the revised forest plan and contributes to the success of forest plan implementation. The City's plan contributes in terms of movement toward desired conditions for the wildland-urban interface and for native vegetation communities on the forest. Municipalities and private lands are a significant seed source for nonnative invasive and noxious species, and forest management is more likely to be successful when all jurisdictions make efforts to contain, control and eradicate populations of invasive and noxious species.

Revised forest plan content contributes toward the City of Bayard's objectives and implementation strategies through direction for vegetation communities, nonnative invasive species, wildland fire and fuels management, and the wildland-urban interface. No conflicts between the City of Bayard's Comprehensive Plan and the revised forest plan have been identified. The City was contacted to gauge their interest in participating as a cooperating agency but did not apply for that status.

Santa Clara

Goals and Implementation Strategies

The Village of Santa Clara's Comprehensive Plan provides policy guidance including goals and implementation strategies to address land use, water, economic development housing, transportation, infrastructure, and facilities, hazard mitigation and implementation. Goals and implementation strategies most pertinent to national forest management are related to wildfire hazard mitigation. The Village has a

goal to develop a local, rapid response to emergency and hazardous threats, including wildfire and a strategy to create a public information campaign to publicize the risks and responses.

Compatibility, Contributions, and Conflict

The Village of Santa Clara's Comprehensive plan, in particular the wildfire hazard mitigation content, is compatible with and complements revised forest plan direction for wildfire and fuels management and the wildland-urban interface. Revised plan content contributes to the Village of Santa Clara's goal and implementation strategy for wildfire hazard mitigation through direction and management approaches for wildland fire and fuels management and the wildland-urban interface. Plan content related to collaborative outreach and education programs addressing wildfire and associated hazards and mitigation measures support dissemination of information to the public. No conflicts between the Village of Santa Clara's Comprehensive plan and the revised forest plan have been identified. The Village was contacted to gauge their interest in participating as a cooperating agency but did not apply for that status.

Hurley

Gila National Forest staff reached out to the Town of Hurley to request a copy of their comprehensive plan, as it was not found online. No response was received.

Silver City

The Town of Silver City has both a comprehensive plan and a trails and open spaces plan that are discussed in the following subsections.

Goals, Policies and Implementation Measures

The Town of Silver City's Comprehensive Plan guides the development of public policy and addresses the same policy elements as Bayard and the Village of Santa Clara with fire hazard reduction policy content being the most pertinent to national forest management. Implementation measures include review and implementation of management strategies outlined in the New Mexico Environment, Minerals and Natural Resources Department Forestry Division's implementation plan for at-risk communities. There is also an implementation measure for intergovernmental coordination with the Gila National Forest and other agencies to establish a park, recreation, trail, and open space network that expands beyond Silver City limits.

The Town of Silver City's Trails and Open Spaces Plan, states a goal to develop an area-wide trail system that provides connectivity to the Gila National Forest and other areas outside of city limits. This goal is supported by an objective to identify trail corridors that could link to the Gila National Forest. One potential link was identified along Little Walnut Road, which was proposed for study. Working with the Forest Service and others to determine an off-road route for a spur trail to connect Silver City to the Continental Divide Trail was also identified as an action. The plan also discusses four Town-owned properties outside city limits that are currently open spaces that can only be accessed through the Gila National Forest, but the plan does not propose study or action related to these parcels.

Compatibility, Contributions, and Conflict

The Town of Silver City's Comprehensive plan, in particular the wildfire hazard mitigation content, is compatible with and complements revised forest plan direction for wildfire and fuels management and the wildland-urban interface. Revised plan content contributes to Silver City's Comprehensive Plan for wildfire hazard mitigation through direction and management approaches for wildland fire and fuels management and the wildland-urban interface. Although revised forest plan content does not specifically contribute the Town's Trails and Open Spaces Plan, it does not preclude future collaborative efforts to meet the Town's goals and objectives. No conflicts between the Town of Silver City's Comprehensive

plan and the revised forest plan have been identified. The Town was contacted to gauge their interest in participating as a cooperating agency but did not apply for that status.

Truth or Consequences

Goals, Objectives, and Implementation Strategies

The Town of Truth or Consequences Comprehensive Plan guides the development of public policy and addresses the same policy elements as the other municipalities, each with goals and objectives. Most pertinent to national forest management are the objective to support the use of the local airport as a fueling and training base for government agencies and the wildfire hazard mitigation implementation strategies. Mitigation implementation strategies include wildfire hazard outreach and education and support of fire-wise communities. The Town also has a MainStreet Economic Assessment, but that document does not contain policy or other discussion relative to forest management.

Compatibility, Contributions, and Conflict

The Town of Truth or Consequences Comprehensive Plan is compatible with and complements revised forest plan direction for wildfire and fuels management and the wildland-urban interface. Although Truth or Consequences is located farther from the Gila National Forest than the other municipalities, revised forest plan content does advance the goals, objectives, and implementation strategies for wildfire hazard mitigation. Most relevant is the plan content supporting collaborative outreach and education programs. There are no conflicts between Truth or Consequences' Comprehensive Plan and revised forest plan content. The Town was contacted to gauge their interest in participating as a cooperating agency but did not apply for that status.

Federal Agencies

Department of Agriculture

Apache-Sitgreaves and Cibola National Forests

The Apache-Sitgreaves National Forests are in Arizona, along the state line, and are essentially contiguous to the Gila National Forest. While the Cibola National Forest is not contiguous to the Gila National Forest, both forests administer lands in a handful of shared subwatersheds. The Apache-Sitgreaves finalized and adopted their revised forest plan in 2015. The Cibola National Forest finalized and adopted their revised forest plan in 2022.

Compatibility, Contributions and Conflict

Although there are differences between the Apache-Sitgreaves, Cibola, and Gila forest plans, they are all consistent with law, regulation, policy and regional agency standards for forest plans and, are therefore, compatible. The differences between the plans are necessary to address each forest's unique characteristics and circumstances. When restoration and hazardous fuel reduction activities are implemented on lands administered by any of the three national forests, it is mutually beneficial to achieving the desired conditions, goals, and objectives outlined in their respective plans. There are no conflicts, existing or anticipated, between these forest plans.

Department of the Interior

Bureau of Land Management

There are three resource area management plans (RMPs) for lands managed by the U.S. Department of the Interior Bureau of Land Management (BLM) that provide high-level direction for the management of

public lands and resources in Catron, Grant, Hidalgo, and Sierra Counties. The 1993 Mimbres Resource area RMP provides direction for lands managed by the Las Cruces District Field Office, including those in Grant and Hidalgo Counties. The 1986 White Sands Resource Area RMP also provides direction for lands managed by the Las Cruces District Field Office, including those in Sierra County. The 2010 Socorro District RMP provides direction for BLM land in Catron (and Socorro) Counties.

Compatibility, Contributions and Conflict

Because the BLM and the Forest Service both have a multiple-use sustained-yield mandate and must comply with same federal and state laws, there is a high degree of compatibility between these RMPs and the revised forest plan. When restoration and hazardous fuel reduction activities are implemented on lands of either jurisdiction, it is mutually beneficial to achieving the desired conditions, goals, and objectives outlined in their respective plans. Management approaches promoting collaboration and partnership throughout the revised forest plan will advance the implementation of both agencies' plans. The BLM was contacted to gauge their interest in participating as a cooperating agency but did not apply for that status. No conflicts with any of the relevant RMPs have been identified.

National Park Service

The U.S. Department of the Interior National Park Service administers the Gila Cliff Dwellings National Monument, which shares boundaries with the Gila National Forest. The Monument does have a fire management plan, which delegates many aspects of fire management to the Gila National Forest, but it does not yet have a comprehensive land and resource management plan. It does have what it refers to as a foundational document that provides basic guidance for planning and management decisions. This document describes the area, identifies mandates and administrative commitments, assesses planning and data needs, and identifies planning products that need to be developed.

The foundational document identifies a few opportunities to coordinate with the Forest Service in their future planning efforts. This includes sharing data and exploring opportunities to conduct joint studies, outreach and interpretation. It also identifies an opportunity to work with the Forest Service and the New Mexico Department of Transportation to find solutions for the road that crosses the West Fork Gila River and provides access to the Monument. This road is frequently compromised by high flow events, causing the Monument to shut down for periods of time.

Compatibility, Contributions and Conflict

The foundational document is compatible with and complementary to the revised forest plan, which includes management approaches for collaborative outreach and education programs and other management activities. Working together on such efforts advances the community relationships and partnerships both documents promote. The Monument was contacted to gauge their interest in participating as a cooperating agency but did not apply for that status. No conflicts have been identified.

State Agencies

State agencies are directly or indirectly responsible for various aspects of land and resource management.

New Mexico Interagency Climate Change Task Force

Governor Michelle Lujan Grisham assembled the task force, which is led by the New Mexico Department of Energy, Minerals and Natural Resources and Environment Department. Nine interagency action teams comprise the task force and they are charged with proposing, planning, and implementing strategies to reduce greenhouse gas emissions and enhance the ability to adapt to climate change. The task force released a strategic plan in 2020. This plan outlines goals and objectives for reducing emissions in the electricity, transportation, industrial, built environment, and natural and working lands sectors. It also

outlines adaptation and resilience goals and objectives for economic transition, public health, emergency management and infrastructure resilience, and water and natural resource resilience. Goals and objectives most relevant to national forest management include:

- Reduce emissions by installing renewable energy generation equipment at business, homes and public facilities
- Increase energy efficiency
- Increase clean vehicle adoption
- Reduce vehicle miles traveled
- Reduce wildfire risk
- Create reforestation policies and planting programs that anticipate forest conditions in 2090 and establish a prioritization process
- Post-fire response actions that reduce erosion, sedimentation and water quality impacts, and improve stream and aquatic habitat health
- Encourage pre-wildfire protection efforts by providing water quality and forest condition information when reviewing funding proposals and forest plans
- Leverage the New Mexico Department of Agriculture's Healthy Soils Program for outreach, education, and adoption of healthy soil practices in agriculture and rangelands
- Provide incentives for biomass production for energy generation
- Economic development through creation of diverse, high-quality jobs
- Build pathways to jobs
- Complete vulnerability and risk mapping efforts to support adaptation planning
- Foster water and water use resiliency and mitigate economic impacts related to drought
- Address climate impacts to drinking water
- Build climate resiliency through surface water action plans
- Encourage climate resiliency through permit conditions

Compatibility, Contributions, and Conflict

The New Mexico Interagency Climate Change Task Force's goals and objectives are compatible with and complementary to the revised forest plan. There are many opportunities for the Forest Service Southwestern Region and the Gila National Forest to contribute to the achievement of shared goals and objectives. As discussed in the revised plan's management approach, Change and Uncertainty, actions taken by the Gila National Forest and other national forests in the region, will advance the agency's Sustainable Operations Program and the goal of net-zero emissions. This includes reducing emissions by moving toward renewable energy sources, increasing energy efficiency, clean vehicle adoption and practices that improve fuel efficiency or reduce vehicle miles driven.

Implementing the revised forest plan will also contribute to reducing wildfire risk, pre-fire protection efforts and post-fire responses aimed at reducing watershed, riparian and aquatic impacts. Reducing wildfire risk also helps address potential impacts to drinking water sources. Coordination and collaboration with grazing permittees, the New Mexico Department of Agriculture, and the Natural Resource Conservation Service to implement healthy soils practices will improve the implementation of both the forest plan and the state's climate strategy. The state's strategy for growing biomass markets and

industries could vastly improve the rate of progress toward the forest plan's desired conditions for providing products to people and the economic contributions that come with it. It could also help with reducing wildfire risk by providing a way to get small-diameter material out of the forest. In this way, the Gila National Forest could support the creation of jobs within the state.

Vulnerability and risk mapping are the foundation for developing climate-informed actions. The state's maps will complement the cross-jurisdictional vulnerability mapping the Southwestern Region has already completed or is near completing. This will provide a more complete and shared understanding for collaborative climate actions that contribute to achieving the shared goal of climate resiliency. The revised plan supports water resource conservation with content for water use. Good working relationships with the New Mexico Environment Department around watershed-based plans and the Clean Water Act permitting processes are already in place. Incorporating additional considerations in these plans and permits will advance the state's climate strategy and improve implementation of the revised plan.

New Mexico Department of Agriculture

The New Mexico Department of Agriculture works for the benefit of the state's citizens and supports the viability of agriculture and affiliated industries. It is responsible for administration of over 30 state laws and the rules and regulations established under them. Some of the state laws were passed in response to a federal law delegating authority and responsibility to the states. The Federal Noxious Weed Act of 1974 is an example of a federal law that resulted in the New Mexico Noxious Weed Act and Noxious Weed Control Act. The New Mexico Department of Agriculture has a Strategic Plan (2014–2018) that is in the process of being updated. It identifies four priorities: (1) marketplace and economic development, (2) food protection, (3) regulatory compliance, and (4) natural resources. Each priority is accompanied by goals and objectives. Goals and objectives for the natural resources priority are most directly related to national forest management. The natural resources goal is to promote responsible and effective use and management of natural resources in support of agriculture. Objectives most pertinent to national forest management include:

- Participation and collaboration in natural resource policy and planning to promote beneficial use and protection of natural resources.
- Provide leadership in support of research to promote the long-term viability of agriculture and the state's natural resources.
- Support agriculture through programs, policies and public information regarding management and protection of natural resources.
- Promote natural resource management under the principles of multiple use and sustained yields across ownership boundaries.
- Support agricultural interest in natural resources and energy development.

New Mexico Department of Agriculture applied for and was granted cooperating agency status in the Gila National Forest plan revision effort.

Compatibility, Contributions, and Conflict

The revised forest plan is compatible with and complementary to the natural resource goals and objectives in New Mexico Department of Agriculture's 2014–2018 strategic plan. The plan revision process has advanced New Mexico Department of Agriculture's objectives to participate and collaborate in natural resource policy and planning and promote the multiple-use sustained-yield principle. Furthermore, the revised forest plan identifies many management topics on which collaboration with New Mexico Department of Agriculture and the forest user groups it advocates for are crucial to successful implementation of the forest plan—specifically on the topics of noxious weeds and livestock grazing. No

conflict between the New Mexico Department of Agriculture strategic plan and the revised forest plan have been identified.

New Mexico Department of Game and Fish

The New Mexico Department of Game and Fish conserves, regulates, propagates, and protects the state's wildlife and fish for sustainability of those resources and the benefits they provide to people. The Department has three high-level planning documents that guide their management. These include their Strategic Plan, State Wildlife Action Plan, and Statewide Fisheries Management Plan.

Strategic Plan

The Strategic Plan (2013–2018), which is in the process of being updated, includes expectations through 2025 and establishes objectives, strategies and actions for field operations, conservation services, wildlife depredation and nuisance abatement, and program support.

State Wildlife Action Plan

The State Wildlife Action Plan for New Mexico (2016) is a non-regulatory planning document that aims to “provide a high level view of the needs for and opportunities to conserve New Mexico's wildlife and their habitats.” The key themes of the plan include Species of Greatest Conservation Need, habitats and habitat conservation, and conservation opportunity areas. The Forest Service was part of the core team that contributed to development of the plan.

Statewide Fisheries Management Plan

The State Fisheries Management Plan (2016) is a vision document that seeks a balance between conserving native fisheries and providing diverse opportunities for anglers. It identifies emphasis areas for maintaining and developing sport fisheries and those where implementation of federal or state recovery plans are the priority.

Compatibility, Contributions, and Conflict

There is a great deal of alignment between the plans of the New Mexico Department of Game and Fish and the revised forest plan and opportunities for synergies in implementation of both plans. The proposed actions contained in the State Wildlife Action Plan to address multiple threats and approaches to managing climate vulnerability are complementary to those contained in the forest plan and there are many opportunities for future collaborative work, both within the conservation opportunity areas identified on the Gila National Forest, and elsewhere on the forest. There are a couple of conflicts in the State Fisheries Management Plan, which identifies certain rivers and their tributaries as a smallmouth bass, or channel and flathead catfish fisheries. These streams are designated critical habitat for loach minnow and spinedace, and although they are not currently occupied, maintaining these nonnative fisheries and promoting them as potential trophy fisheries creates conflict with recovery efforts for those federally listed species.

New Mexico Energy, Minerals, and Natural Resources Department

The New Mexico Energy, Minerals and Natural Resources Department includes several different divisions responsible for energy conservation and management, forestry and fire management, mining and minerals, oil and gas and parks. The Energy, Minerals and Natural Resources Department does not have a comprehensive planning document, but individual divisions do. These are identified below.

New Mexico Energy Conservation and Management Division

The New Mexico Energy Conservation and Management Division has a roadmap that documents goals and strategies. The goals most pertinent to national forest management are related to sustainable operations and include:

- Increase the use of alternative fuel vehicles to 15 percent by 2027.
- Reduce single occupancy vehicle miles traveled by 15 percent by 2027.
- Reduce emissions from mobile sources by 10 percent by 2027.
- Rank in the top 20 states for energy efficiency by 2027.

New Mexico State Forestry Division

The state's Forestry Division has two strategic documents: (1) the Forest Action Plan and (2) the Rare Plant Conservation Strategy.

Forest Action Plan

The 2020 Forest Action Plan includes a threat and risk assessment, provides 10 strategies to address those threats and risks, and identifies priority landscapes and forest legacy areas. The strategies are: (1) restore forests and watersheds; (2) fire management; (3) private land stewardship; (4) utility rights of way; (5) rare plant conservation; (6) reforestation; (7) urban and community forestry; (8) restoration economy; (9) land conservation; and (10) outdoor recreation. Each strategy contains sub-strategies with outcomes, measures, and actions. The strategy for restoring forests and watersheds is about identifying and treating priority areas at large scale across ownership boundaries to maximize ecosystem services and resilience to climate change and other known threats. The fire management strategy is about providing and supporting appropriate fire responses for wildland fires which provide for firefighter and public safety, protection of communities, infrastructure and ecosystems to build resilient landscapes and watershed health. The private land stewardship strategy would identify and treat opportunity areas to promote forest and watershed resilience on private lands through collaboration and direct engagement of landowners and communities. The utility rights of way would manage utility rights of way to reduce the risk of wildfire ignition and damage to infrastructure by prioritizing those rights of way and implementing accelerated management. The rare plant conservation strategy would protect and conserve New Mexico's rare and endangered plant species and their habitats through collaborative partnerships. The reforestation strategy would create conditions for planting the right tree in the right place for the 2100 climate and bring burned lands to a healthy function for people and the environment. The urban and community forestry strategy would maintain and increase resilient tree canopy in populated areas to provide cooling shade, clean and protect water, increase people's access to nature and support local economies. The restoration economy strategy would build and enhance current sustainable communities, businesses and jobs to implement the Forest Action Plan, using wood biomass from restoration projects for heat, energy and wood products to meet community needs. The land conservation strategy would identify priority conservation lands to protect habitat that maintains and enhances biodiversity, wildlife habitat connectivity and water sources, and maintain working forests and lands with significant natural and cultural resource and ecosystem service values. The outdoor recreation strategy would enhance opportunities for outdoor recreation and develop educational opportunities where restoration treatments overlap frequently visited areas. The outcomes, measures and actions for each strategy are extensive, ambitious, and achievable.

Rare Plant Conservation Strategy

The New Mexico Rare Plant Conservation Strategy has seven goals, each supported by two or more objectives, most of which are pertinent to national forest management. Goals include: (1) inventory, monitor, and research strategy species to inform management and regulatory decisions; (2) protect,

manage, and restore strategy species and their habitats; (3) improve data management storage and dissemination; (4) develop ex-situ conservation and recovery strategies and implement where appropriate; (5) improve laws, regulations and policies; (6) increase collaboration, education and outreach; and (7) improve funding, infrastructure and rare plant programs.

New Mexico State Mining and Minerals Division

This division does not have a comprehensive planning document as law, regulation, and markets govern the programs it administers.

New Mexico State Oil and Gas Division

This division does not have a comprehensive planning document, as law, regulation and markets govern the programs it administers.

New Mexico State Parks Division

This division includes individual management plans for each of the state's parks. There is only one state park in the vicinity of the Gila National Forest. The City of Rocks State Park plan was finalized and adopted in 2016. It does not mention the Gila National Forest or contain any goals, objectives, or actions pertinent to the forest plan.

The New Mexico Parks Division also has the 2016–2020 Statewide Plan for Outdoor Adventure, which includes themes of community livability, trails, health, economic vitality, and environmental health. Each of these themes has a set of goals, objectives, and actions.

Compatibility, Contributions, and Conflict

All the Energy, Minerals and Natural Resources Department plans are compatible with and complementary to the revised forest plan. The forest plan advances the Energy Conservation and Management Division's roadmap goals through plan content that promotes sustainable operations, both as desired conditions for air quality and as part of the management approach to change and uncertainty. The forest plan is in lockstep with the Forest Action Plan in every area of overlap, and with the formal shared stewardship agreement in place between the Forest Service Southwestern Region and the Forestry Division. The implementation of both plans will create opportunities for successes that are greater than the sum of their parts. The revised forest plan also contains direction related to rare and endemic plant and animal species and their habitats, which puts the Gila National Forest in direct alignment with the Rare Plant Conservation Strategy and the Forest Action Plan. Again, the implementation of the strategy and the forest plan will create opportunities for synergy. There is also broad alignment between the forest plan and the Statewide Plan for Outdoor Adventure. For example, their economic vitality goal is to "Enhance economic vitality through promoting recreation and tourism." The forest plan sustainable recreation section recognizes that that "Local communities' quality of life and economic opportunities are interwoven with the forest's future" and includes direction supporting recreation and related economic opportunities. There are no conflicts between the revised forest plan and any of the Energy, Minerals and Natural Resources Department plans.

New Mexico Department of Homeland Security and Emergency Management

The 2018 New Mexico State Hazard Mitigation Plan was developed as a cooperative effort between state agencies and coordinated by the New Mexico Department of Homeland Security and Emergency Management Preparedness Bureau. The purpose of the Hazard Mitigation Plan is to provide the framework for recovery and reconstruction processes after a declared disaster and to identify mitigation projects that will reduce the potential for future disasters. The goal for mitigation is to save lives, reduce

injuries and property damage and shorten recovery times. Events that may result in disaster declarations most pertinent to national forest management are identified as the drought-wildfire-flood cycle. Drought, wildfire, and flood all have mitigation goals and implementation strategies. The most pertinent to national forest management include incorporating drought mitigation activities into range management plans; actions to improve forest and watershed health; studies related to post-fire flooding and debris flows; increasing the number of fire-adapted communities; actions to reduce fuels in the wildland-urban interface; increase participation in community wildfire protection plans; and a comprehensive public education and outreach strategy.

Compatibility, Contributions, and Conflict

There is a great deal of alignment between the State Hazard Mitigation Plan and revised forest plan content. The forest plan includes: a management approach identifying tools for adaptive range management, desired conditions for vegetation communities, watershed health, and wildland-urban interface that are supported by treatment objectives; and management approaches to support fire-related collaborative public education and outreach programs and include community wildfire protection plans. When implemented together, the State Hazard Mitigation Plan and forest plan could generate a greater degree of progress toward common goals. There are no known conflicts between the State Hazard Mitigation Plan and the revised forest plan.

New Mexico Office of the State Engineer and Interstate Stream Commission

The New Mexico Office of the State Engineer has the authority and responsibility to administer surface and groundwater allocation and use. The Interstate Stream Commission, which includes the State Engineer as a member, established and administers the strategic water reserve, administers funding for certain water infrastructure projects, and is responsible for creating the New Mexico State Water Plan. The 2018 water plan integrates the state's 16 regional water plans and establishes the policies, goals, and strategies necessary to address water resource issues. The plan covers eight policy topics including: (1) water infrastructure policy; (2) data collection, accessibility, and monitoring policy; (3) drought; (4) watershed management; (5) water supply and demand; (6) water conservation; (7) water quality; and (8) water planning. Each of these policy topics is supported by a vast array of goals and strategies, many of which are pertinent to national forest management.

Compatibility, Contributions, and Conflict

The revised forest plan is compatible with and complementary to the State Water Plan in many ways and there are many opportunities for implementing each plan to advance the other. The State Water Plan specifically identifies the need to collaborate with the Forest Service to better understand what can and should be done to protect water storage and delivery from National Forest System lands under changing climatic conditions. It has several goals related to reducing the impacts of wildfire on water supply and quality and data driven prioritization of watershed restoration treatments. The water plan also addresses the need for mitigation measures to protect both natural resources and the economy during drought and focuses on conservation measures.

The revised forest plan includes objectives for vegetation and overall watershed condition. The forest plan emphasizes the use of science and recognizes the need for strategic placement of mechanical treatments. Given cost constraints, strategic placement is necessary to facilitate broader use of fire to support landscape and watershed scale restoration, and thereby resilience to climate-altered wildfire disturbances. Forest plan content for vegetation communities, soil, watershed, and riparian and aquatic ecosystems, and the management approach to change and uncertainty support many of the goals and strategies identified in the State Water Plan. The revised forest plan content for water uses advances the State Water Plan's goals

related to water conservation. There are no known conflicts between the revised forest plan and the State Water Plan.

New Mexico Department of Transportation

The New Mexico Department of Transportation has a strategic, long-range plan. This long-range plan identifies the need to work collaborative with partners, including the Forest Service to identify information needs and provide continuous feedback on the kinds and quality of the information New Mexico Department of Transportation presents to the public. It also recognizes the access state roads provide to public lands, the economic asset those lands represent, and the role New Mexico Department of Transportation can play in supporting recreation and tourism.

Compatibility, Contributions, and Conflict

The New Mexico Department of Transportation long-range plan is compatible with the revised forest plan, but there is no forest plan content that directly advances New Mexico Department of Transportation plan objectives. Neither is there conflict between the revised forest plan and New Mexico Department of Transportation's long-range plan.

New Mexico Economic Development Department

The New Mexico Economic Development Department's five-year plan for strategic economic growth and diversification (2013–2018), is in the process of being updated. The current plan was developed by the Economic Development Commission appointed by Governor Susanna Martinez. It contains comprehensive goals, objectives, and strategies for assisting New Mexican communities in economic development. The Economic Plan has a theme of innovation leading to enterprise and economic development and highlights two primary goals: (1) creating a diversified knowledge-based economy and (2) developing programs and initiatives requested by rural communities. Many of the strategies and recommendations covered in the plan relate to business and urban and rural revitalization; however, it does touch on a few topics relevant to national forest management. These topics are water availability and quality and support of rural communities.

Compatibility, Contributions, and Conflict

Where the Economic Plan touches on topics relevant to national forest management, it is broadly compatible with revised forest plan content. For instance, it acknowledges that "better management of the forest ecosystem" can benefit water resources. The forest plan has desired conditions for providing for favorable conditions of water flow and meeting or exceeding state water quality standards to support multiple uses on the forest and beneficial uses downstream. The Economic Plan's goals for rural development and business support include acknowledgement that extractive industries are a critical sector of the state's economy and that a balance should be sought between a sound environmental future for New Mexico and industry growth. This is compatible with the desired conditions and management approaches for multiple uses and community relationships, which, combined with plan direction and management approaches for natural resources, provides for extractive uses in a sustainable manner. There are no known conflicts between the State's Economic Plan and the revised forest plan.

New Mexico Environment Department

The New Mexico Environment Department includes several different bureaus responsible for air quality, water quality, and waste management. the New Mexico Environment Department does not have a comprehensive planning document, but individual bureaus do. These are identified below.

Air Quality Bureau

The Air Quality Bureau is responsible for enforcing air quality standards of the Federal Clean Air Act. Their regulatory authority comes from New Mexico's Environmental Improvement Act, Air Quality Control Act, which includes a Smoke Management Plan, and the State Implementation Plan.

Surface Water Quality Bureau

The Surface Water Quality Bureau is responsible for enforcing surface water quality standards established by the Water Quality Control Commission, which is delegated the authority to administer the Federal Clean Water Act through the New Mexico Water Quality Act. This includes development and maintenance of a water quality management plan and quality management and assurance plans.

Ground Water Quality Bureau

The Ground Water Quality Bureau is responsible for enforcing ground water quality standards as mandated by the New Mexico Water Quality Act and Ground and Surface Water Protection Regulations (20.6 NMAC). This bureau does not have a comprehensive planning document.

Waste Management Bureau

The Waste Management Bureau is responsible for regulating waste in the state. Many types of waste are potential environmental pollutants. This bureau does not have a comprehensive planning document.

Compatibility, Contributions, and Conflict

The New Mexico Environment Department's regulatory authority originates in federal law, state law, or both. Given this, plans or policies developed by the department do not need to be compatible with any forest plan, but all forest plans within the state must be compatible with the New Mexico Environment Department's plans, comply with regulation and policy, and advance the goals and objectives contained in plans and policies. The direction contained in the revised forest plan is compatible with, complementary to, and in compliance with New Mexico Environment Department plans and policies with the most pertinent plan direction being found in the soil, watershed, water quality, riparian and aquatic ecosystems, air quality and wildland fire and fuels sections of the plan. There is no conflict between the revised forest plan and New Mexico Environment Department plans and policies.

New Mexico State Land Office

The New Mexico State Land Office is responsible for administering 9 million acres of surface and 13 million acres of subsurface estate for the beneficiaries of the state land trust, which includes schools, universities, hospitals, and other important public institutions. It seeks to optimize revenues while protecting the health of the land for future generations. The State Land Office does not have a strategic plan, but it does have policies and procedures relevant to national forest management. These are related to historic and cultural resources and threatened and endangered plant and animal species.

Compatibility, Contributions, and Conflict

Because historic and cultural resources and threatened and endangered plant and animal species are first and foremost governed by law, there is alignment between the policies of the State Land Office and the revised forest plan. There is no conflict evident in the policy documents of the State Land Office and content in the revised forest plan.

Soil and Water Conservation Districts

Soil and Water Conservation Districts (SWCDs) are a subdivision of state government. They were organized in the 1930s as a response to the "Dust Bowl." They are a local unit of government intended to

extend the conservation assistance provided by what was then the Soil Conservation Service and now known as the Natural Resources Conservation Service. Soil and Water Conservation Districts are authorized to conserve and develop the natural resources of the state and provide for flood control. They also coordinate assistance from all available sources—public, private, local, state and federal—to develop locally driven solutions to natural resource concerns.

Four SWCDs have been involved in the Gila National Forest’s plan revision process: Grant, Hidalgo, Sierra, and the San Francisco District, which represents Catron County. All four of these districts, were provided the invitation and opportunity to participate as a cooperating agency, but only San Francisco applied and was granted that status. The information and discussion that follows is based on the documents provided to the Gila National Forest at a coordination meeting with local governments.

Grant Soil and Water Conservation District

Desired Conditions, Goals, Objectives, and Proposed Actions

Grant SWCD’s long-range plan articulates two goals for federal land and natural resources:

- To support the wise use and conservation of federal lands and natural resources, especially federally protected wildlife, including well-planned management prescriptions.
- To provide policy, plans and other documents for other governmental agencies to use to ensure that their resource management and planning is consistent with that of Grant SWCD.

Goals and objectives are articulated by topic area including agriculture and livestock production; federal lands and natural resources and multiple use management; customs and cultures; private property purchase by federal agencies; and roads and access. These are:

- Grant SWCD supports livestock grazing and other managed uses of watersheds and holds that, if properly managed, multiple uses is compatible with watershed management.
- The proper management and allocation of forage on federal lands is critical to the viability of the Grant SWCD’s agriculture, recreation, and tourism industry.
- Reduction in forage allocation resulting from forage studies, drought, or other natural disasters will be shared proportionately by wildlife.
- The viability of many agriculture and livestock operations are dependent on access to grazing on federal lands.
- Increases in available forage resulting from practices or improvements implemented by a managing agency will be allocated proportionately to all forage allocations unless the funding source specifies the benefactor.
- Permanent increases or decreases in grazing allocation reflecting changes in available forage will be based on the vegetative type of the forage and applied proportionately to livestock or wildlife based on their respective dietary need.
- Forage allocated to livestock may not be reduced for allocation to other uses. Current livestock allocation will be maintained.
- Ensure that federal lands are managed for multiple use and sustained yield for natural resources benefits of goods and services. Further, these lands should be managed to prevent loss of resources and private property from catastrophic events and to protect the safety and health of the public.
- The Conservation District desires to assist and coordinate with the U.S. Fish and Wildlife Service and all federal resource agencies in developing and implementing consistent policies for balancing

the protection of endangered and threatened species and in producing food and fiber for the American public.

- Federal land and natural resources agencies keep the Grant SWCD fully informed of management action proposed or to be implemented that may affect lands and natural resources within the district's boundaries and allow the Grant SWCD adequate time to develop the Grant SWCD's position of such action should it not be clearly defined in the Grant SWCD's resource management plans or subsequent implementation plan.
- In support of our national energy needs and considering the nation's increasing dependency on foreign oil, all federal lands must remain open to the greatest extent possible for the exploration and production of energy and other energy-related products.
- Identification of energy and mineral potential and location is important to planning for future energy needs and resource management planning. The Grant SWCD supports such activity and requests that appropriate agencies plan, fund, and encourage by way of policy, management decisions for such activity.
- Livestock grazing, the resulting lifestyles, and the resulting imprint on the landscapes of the West is one of the oldest enduring and economically important cultural and heritage resources in the West and must be preserved and perpetuated.
- The land, its people, and their heritage are at the heart of New Mexico's custom and cultures for the majority of the area residents and this relationship must be considered in all proposed actions.
- Grant SWCD supports agriculture on private and federal lands as part of our custom, culture, heritage, and as an important segment of our local economy, as well as providing for a secure national food supply.
- There shall be no net loss of the private land base and that the federal and state governments hold a sufficient amount of land to protect public interest. No "net loss" should be measured, in both acreage and fair value, without approval of the Grant SWCD.
- A private property owner has a right to dispose of or exchange his property as he or she sees fit within applicable law.
- A private property owner should be protected from federal, state and Grant SWCD encroachment and/or coerced acquisition.
- It is imperative that the quality and quantity of water is not reduced below current levels.
- Any proposed sale, lease, or other exchange of water must adequately consider and satisfy the Grant SWCD's interest and concerns before the Grant SWCD will participate or support the proposal.
- The access across and to federal lands is critical to the use, management, and development of those lands and adjoining private lands.
- No roads, trails, right-of-way, easements, or other traditional access for the transportation of people, products, recreation, energy or livestock may be closed, abandoned, withdrawn, or have a change of use without full public disclosure and analysis.
- Access to all water-related facilities such as dams, reservoirs, delivery systems, monitoring facilities, livestock water and handling facilities, etc., must be maintained. This access must be economically feasible with respect to the method and timing of such access. Unreasonable restrictions may result in the loss of use of such facilities and property rights.

- Public access and right-of-way for utilities and transportation of products must be maintained. This access must be provided for in the future when need is demonstrated. Any proposal or action taken by state or federal agencies that will result in restriction on reasonable and economical access to these resources will be opposed.
- Grant SWCD supports the current policy of open recreation areas.
- Future access must be planned and analyzed to determine its disposition at the completion of its intended life. This is to ensure needed access is maintained or that such access is removed and resulting disturbances are reclaimed.
- Roads covered by RS-2477 should remain open.
- Off-highway vehicles have become an important segment of the recreation industry and are an important tool and mode of transportations for farmers, ranchers, and resources development.
- Public land management agencies must implement and maintain an aggressive off-highway vehicle program to educate users on how to reduce resource impacts. This is to be followed by an aggressive enforcement program.
- The non-recreational use of off-highway vehicles, such as development and livestock operations, must be provided for in all areas unless restricted by law.
- The Grant SWCD will support limiting off-highway vehicles to existing roads and trails and the development of designated trail system only in areas that demonstrate documented and substantiated adverse impacts. These designations must only occur in situations where it has been substantiated those adverse impacts cannot be mitigated by other management methods.
- Many archeological sites represent a unique culture and are closely related to early religious settlement of the area. They continue to have historical significance held by many residents as reverent or consecrated sites, and are the essence of their entity. These sites must remain accessible and be preserved.
- When the necessity for a closure has been established, additional trails and areas must be opened to offset the loss of that recreational opportunity.
- The creation or expansion of areas of critical environmental concern or wilderness limits access for the elderly and physically impaired. All such withdrawal management plans from multiple use must fully provide access for these individuals and be consistent with the Americans with Disabilities Act.
- Area of critical environmental concern and wilderness management must provide for continued and reasonable access for property rights holders within the area and provide for full use and enjoyment of these rights.
- The public land agency must assess the ability to manage the resources for multiple uses and conservation and restoration practices, especially when Grant SWCD is a partner in such programs and activities.
- The public land agency must assess the ability to provide emergency services, law enforcement, water and waste management, search and rescue, and other essential services needed to support the proposed action.
- Intensify conservation planning assistance on those watersheds where critical, accelerated erosion involves treatment needs of an intensive nature. Participate with cooperating agencies in the development of upper watershed treatment policies, plans and activities.

- Develop more information regarding the feasibility of brush control through the reintroduction of fire to the ecosystem. Offer encouragement, support and assistance to New Mexico State University and other agencies and organizations to conduct field research in brush management.
- Encourage and assist ranchers to practice brush management on land where benefits of control are obvious with a strong emphasis on prescribed burns as an effective and economical practices as well as mechanical treatments where prescribed fire is limited by climate, wildland-urban interface and extreme fuel loads.
- Assist range operators to improve range productivity in terms of beef production per acre by helping them to plan and carry out improved grazing management. Expect to see planned grazing systems on 100,000 acres of rangeland in the district, with particular emphasis on those ranches in poor and fair range condition.
- Assist range operators to restore, improve and/or maintain district rangelands by improving the use of range site and condition inventory information; offer range monitoring courses for education of cooperators in conjunction with the Forest Service; additional development and use of range cost-return data; and the use of plant materials assistance to identify solutions to reseeding problems.
- Establish Noxious Weed Control Program in cooperation with New Mexico State University, Grant County Extension Services, New Mexico Association of Conservation Districts, Bureau of Land Management, County Road Department, New Mexico Road Department, Forest Service, and private landowners.

Compatibility, Contributions, and Conflict

There is a great deal of alignment or compatibility between the Grant SWCD long-range plan and the revised forest plan, but there are areas where this is less the case. Most of the areas where there is not alignment are related less to forest plan direction and more to the way it is implemented. Grant SWCD's objective to require reopening of trails or areas to compensate for a necessary closure is unrealistic. Area closures are usually temporary and necessitated by fire, flood risk, thinning contract, or a combination of these reasons. There may be more than one area closure for any of these reasons and would not be advisable to open one to close another to compensate for a loss of recreation opportunity. The same case may be made for trails, but some permanent trail closures may be necessary as forest management moves toward the desired condition for a sustainable trail system. Reopening or building another trail to replace closed trails would not result in movement toward a sustainable trail system. Even if it were possible to accommodate this objective, it is not likely to completely offset any loss of recreation opportunity, as specific areas and trails offer different user experiences.

The Grant SWCD objective to constrain off-highway vehicle use to existing roads and trails, only where cross-country travel has resulted in substantiated adverse effects, is not compatible with forest plan direction, which supports the travel management legislation enacted by Congress. It would be illegal for the Gila National Forest, or any other national forest to align with this objective. The remaining areas of misalignment between the plans is related to livestock grazing and appears to stem from content in the 1986 forest plan. The 1986 forest plan differentiates between forage allocations for livestock and wildlife. This has proven not to be realistic or implementable. Whether it be livestock or wildlife, whichever is there first and eats the fastest gets the most. To meet the Grant SWCD objectives for forage allocation, which appear to indicate a 50/50 split between wildlife and livestock, wildlife would have to be relocated when utilization was met which is not in the realm of possible plan implementation actions. Also, it is not implementable to distribute any additional forage, and therefore capacity, that could be realized from management practices or actions that benefit a specific area. The additional forage production is available wherever it grows and there is no implementation action that can change that. Another area of misalignment is related to the "no net loss of private property" objective in the Grant SWCD long-range

plan. While this is analyzed as part of two alternatives in the environmental analysis, it is not in the proposed action.

Aside from these few topics, implementation of the revised plan would advance many of the Conservation District's goals and objectives. For example, there are management approaches that support the forest's participation in collaborative noxious weed programs and rangeland monitoring. The forest plan content for community relationships and multiple uses advances the custom and culture content articulated in the long-range plan, and the livestock grazing content in the forest plan provides adequate flexibility for the improvement of grazing systems. Likewise, the implementation of the Grant SWCD long-range plan could improve the success of forest plan implementation in several ways. The SWCD's objectives to work with livestock producers to carry out improved management practices where necessary and advances the forest plan's desired conditions for livestock grazing and natural resources. Their support of prescribed fire as a management tool, expressed in their long-range plan, contributes to the success of the forest plan's restoration objectives, and may help broaden public support for the use of fire as a management tool.

Grant SWCD has been very active in coordination meetings between the Gila National Forest leadership and staff and local governments. Their efforts have helped improve relationships and build shared understanding. Plan direction for community relationships and management approaches throughout the plan provide a path forward that promotes these critical relationship elements during implementation.

Hidalgo Soil and Water Conservation District

Desired Condition and Objectives

Hidalgo SWCD's land use plan articulates three goals, or desired conditions.

- Maintain and improve the soil, vegetation and watershed resources in a manner that perpetuates, sustains, and expands the beneficial use of such resources while maintaining healthy ecosystems and fully supporting public safety, the customs and economic stability and viability of our industries and the general welfare of the citizens of the district.
- Work with federal, state, and local government agencies to coordinate with the Hidalgo Soil and Water Conservation District of the State of New Mexico so they can fulfill their primary legal responsibility to provide for the health, safety and well-being of their constituents.
- Work to reduce or eliminate the possibilities of unintended consequences of decisions and actions that may be taken by other government agencies that can negatively impact the Hidalgo Soil and Water Conservation District; their economies, their tax base, and the people they serve.

These desired conditions are supported by objectives.

- Assure the responsibilities set forth in the Act will be upheld for the full enjoyment and benefit of the citizens of Hidalgo SWCD.
- To ensure the policies and actions of the local, state and federal government in matters of soil resource protections are full inured to the benefit of that resource.
- To elevate Hidalgo SWCD into a collaborative relationship between the local, state, and federal bodies and agencies regarding planning, outlining, orchestrating, scheduling, mapping, designing, manipulating, conceptualizing, formulating, designing, plotting, or strategizing land use plans that will affect the soil resources of the district today, tomorrow, or further into the future.
- Include custom and cultural outdoor recreation as standards amongst district endeavors.

- The equality and respect for Customs and Culture created in over 413 years of recorded history must be held inviolate. Hidalgo SWCD intends to maintain such a balance in the face of federal and state management policies that are often driven by forces outside the jurisdiction of the district.
- No net loss of private property.

Compatibility, Contributions, and Conflict

The Hidalgo SWCD land use plan is generally compatible with the revised forest plan, except for the “no net loss of private property” objective as described for the Grant County SWCD plan. The forest planning process has contributed to the advancement of Hidalgo SWCD’s objective to collaborate with federal agencies. Implementation of the forest plan could provide additional opportunities, although not much of the land under the Gila National Forest’s jurisdiction is in Hidalgo County, which limits the ability of forest plan implementation to make a significant contribution toward the desired conditions and objectives of the Hidalgo SWCD.

Hidalgo SWCD was active in the first few coordination meetings between the Gila National Forest leadership and staff and local governments. Their efforts have helped improve relationships and build shared understanding, but continued efforts to maintain and improve transparency and communication are needed. Plan direction for community relationships and management approaches throughout the plan provide a path forward that promotes these critical relationship elements during implementation.

San Francisco Soil and Water Conservation District

Goals and Objectives

The overarching goals of the San Francisco SWCD’s land use plan are:

- Maintain and improve the soil, vegetation and watershed resources in a manner that perpetuates, sustains, and expands the beneficial uses of such resources while maintaining healthy ecosystems and fully supporting public safety, the customs and economic stability and viability of our industries and the general welfare of the citizens of the district.
- Provide plans and policies that direct the San Francisco SWCD in coordination with local, state, and federal bodies and agencies regarding planning, outlining, orchestrating, scheduling, mapping, designing, facilitating, imagining, formulating, designing, plotting, or strategizing land use plans that will affect the soil, water, and other resources of the district today, tomorrow, or further into the future.
- Work with federal, state, and local government agencies to fulfill the district’s primary legal responsibility to provide for the health, safety, and wellbeing of their constituents.
- Work to reduce any possibility of unintended consequences from decisions and actions that may be taken by agencies that can negatively affect the district’s economy, its tax base and the people it serves. Such action, in general, seeks to minimize the unintended consequences to the local land users from ongoing governmental courses of conduct.

These goals are supported by an objective that states:

- To create a coordinate working relationship with agencies and citizenry that protects and enhances local natural resources, safety, and well-being for all.
- The district constituency must have a regulatory environment that works for them, not against them, and minimizes any conveyance of harm to district land users. The regulatory environment should enhance lives, safety, and resources and improve the economy without imposing unacceptable or unreasonable costs. All regulatory policies must recognize the private sector and

private markets are the engines for economic growth. New regulatory approaches should respect the role of local and state governments and adopt regulations that are effective, consistent, sensible, and understandable. It is, therefore, imperative to set planning guidance for lands and resource interactions as they apply to matters of the district.

The plan also contains resource specific goals and objectives:

- Provide proactive support for corrective and conservation practices and programs to conserve, protect, and beneficially develop the soil resources of the district. It is also the goal of San Francisco SWCD to institute and manage vegetation and landscape projects that will mitigate blowing dust. Windblown dust in this area occurs both from natural and human-made sources.
- To ensure the policies and actions of the local, state, and federal government in matters of soil resource protections are fully inured to the benefit of the resource.
- To ensure the policies and actions of the local, state, and federal government in matters of water resource protections are fully inured to the benefit of the resource.
- Encourage land managers and landowners to seek technical assistance to mitigate surface disturbance and to facilitate soil and water conservation. Reestablish native or other desired vegetation.
- To accelerate projects such as brush control which support the natural replenishment of our grass base.
- Promote and provide technical information to Catron County and district cooperators on layout, design, and maintenance to reduce erosion and how to implement drainage structures on county, and private access roads.
- Provide technical information on native grass reseeding of any disturbed soils.
- It is the intent of San Francisco SWCD to take an aggressive attitude to the perpetuation and enhancement of Agriculture as well as protect water rights within the district. Rather than adopting an attitude and/or policy support for acceptance of a stabilized, diminishing or retreating agriculture base, San Francisco SWCD will pursue alternatives for expanding the emphasis of agriculture and protecting the industry from anti-agricultural bias regardless of the source.
- San Francisco SWCD's land use plan comprehensively provides the policies that allow for the continuation of farming and ranching with all the associated and supporting businesses that have made lands within San Francisco SWCD so productive and so important. All agriculture is dependent on proper soil erosion control, flood prevention, wildlife, and species management, which are the responsibilities of this district.
- It is incumbent on soil and water conservation districts to minimize drift between agriculture and various agencies, our land grant university, and local, state, and federal governments. San Francisco SWCD intends to aggressively solidify those vital relationships.
- San Francisco SWCD intends to take a lead in communicating and seeking government-to-government endeavors with other districts for the benefit of agriculture.
- To reach legal and policy standards that result in zero net loss attrition of the farmland base.
- During periods of drought or other emergencies, local, state, and federal agencies shall work closely with the district, the New Mexico State Engineer, and other local, state, and federal agencies to address availability of water for critical needs, including agriculture and municipal uses.

- Support and facilitate the continued use of private, state, and federal lands for the production of livestock. Also, work to increase productivity of rangeland to increase and/or maintain animal unit months to maximum sustainable levels on rangeland within district boundaries as well as maintain and enhance desired plant communities for the benefit of watersheds, wildlife, water quality, recreation, and livestock grazing.
- Land management plans, programs, and initiatives should provide that the amount of domestic livestock forage, expressed in animal unit months, for permitted, active use as well as wildlife forage, be no less than the maximum number of animal unit months sustainable by range conditions in grazing allotments and districts, based on “on-the-ground” and scientific analysis. This is essential to the proper operation of the district. Livestock producers do more than contribute to the economic stability of the community, which helps the district, but are also the primary entities that help to implement the district’s programs. Any reductions in domestic livestock animal unit months must be temporary and scientifically based upon rangeland conditions.
- Work closely with local, state and federal agencies to identify areas for brush management and control, based on wildlife habitat needs, without compromising overall rangeland vegetation productivity. Promote and develop treatment projects for brush management on lands that have invasive species such as, but not limited to, mesquite, salt cedar, and cholla.
- Support the recognition and protection all private property rights, including water rights.
- Encourage the use of coordinated range management plans (allotment management plans or coordinated activity plans) for each grazing allotment that allow for the flexibility and updating of management during the 10-year term of the grazing permit. (i.e., water development; juniper, salt cedar and mesquite control; reseeding, fencing, salting plans, herding plans and grazing systems).
- Support management of rangelands to maintain and enhance desired plant communities for the benefit of watersheds, wildlife, water quality, recreation, and livestock grazing.
- Support and facilitate range improvement projects to benefit rangeland, soil, and water resources.
- Coordinate with federal and state agencies on any planned or potential federal or state land acquisition within San Francisco SWCD boundaries. Encourage federal and state land management agencies to focus on lands currently under its responsibility.
- San Francisco SWCD will strive to manage vegetation and landscape projects that will (1) maximize grassland development for livestock and wildlife, collectively, (2) expand water supplies and systems to support such populations on an availability standard, (3) encourage research to determine benefits of more complex grazing practices, (4) work with the New Mexico Department of Game and Fish to elevate quality hunt opportunities, and (5) educate the general public of the benefits and the symbiotic relationships of livestock and wildlife in this desert environment
- Encourage wildlife management practices that sustain wildlife resources and habitat without measurably degrading other multiple-use activities or private property rights.
- San Francisco SWCD strongly urges land management agencies to: upon termination of a grazing permit, livestock permittee will be compensated for the remaining value of improvements such as water infrastructure, or be allowed to remove such improvements that permittee made on his or her allotment.
- San Francisco SWCD will work with the land management agencies to ensure forage reductions resulting from forage studies, fire, drought, or other natural disasters will be implemented on an allotment basis and applied proportionately based on the respective allocation to livestock, wildlife.

Reductions resulting from forage studies will be applied to the use responsible for the forage impact.

- San Francisco SWCD will work with the land management agencies to ensure permanent increase or decreases in grazing allocations reflecting changes in available forage will be based on the vegetative type of available forage and applied proportionately to livestock or wildlife based on their respective dietary need.
- San Francisco SWCD strongly supports the following mandate: “The mandate of the Taylor Grazing Act is not furthered by management practices designed to reduce grazing to improve the range.”
- The district will support opportunities for livestock grazing on private, state and federal lands. This includes advocating for the protection of equitable property rights, science-based land stewardship, and promotion of best management practices for the improvement and continued use of all rangelands within the district.
- Ensure that water projects developed for livestock will be designed so that wildlife can use the water without hazard.
- Promote and coordinate water distribution system installation and infrastructure improvements to benefit all wildlife and livestock health and welfare within the district.
- Encourage private landowners to plan, develop, and implement resource management plans that meet the standards of grazing management systems through proper stocking, deferred and rotational grazing, erosion control, control of poisonous and noxious plants, water development and distribution, and fencing.
- San Francisco SWCD will oppose any agency effort that restricts the development of livestock water or other rangeland improvements.
- Recommend local, state and federal agencies cooperate with the district and the agriculture industry to define desired plant communities on local, state, and federal lands.
- Work with all landowners and land managers to increase productivity of rangeland to increase and/or maintain animal unit months at maximum sustainable levels on rangeland. Any grazing animal unit months that are placed in a suspended use category should be returned to active use when range conditions improve.
- San Francisco SWCD will support the right of local citizens to protect their private property from wildfire. Planned and unplanned ignitions can achieve land and resource management goals. However, fire management should be only one tool in the restoration process and should be integrated with all other land management activities.
- The district’s long-term plans, policies, and projects rely upon proper vegetative management on all lands, private, state, and federal. Therefore, it is imperative that when the district identifies lands with excessive vegetation that increase the opportunity for wildfires, that it will coordinate with those agencies and landowners to assist in reducing the potential hazard.
- Through coordination with land management agencies and landowners, the district will assist in developing policies for grazing rest prescriptions related to either wildfires or prescribed burns on a site-specific basis taking into account the needs of the vegetation and flexibility to meet the needs of the landowner and to protect excessive soil erosion. Vegetative treatments and use of livestock grazing shall be used to keep fuel loads within appropriate limits
- The district will assist in developing plans and projects that strike a balance of beneficial use of fire and the detrimental effects of intense wildfire.

- Continue to support area community wildfire protection plans.
- Post-fire grazing will not be limited when monitoring and evaluation produces relevant, accurate data that demonstrates grazing will not unduly harm the range.
- Encourage development of vegetation treatments and use of livestock grazing to keep fuel loads within appropriate limits.
- To coordinate all activities in a manner that will protect the quality of customs and culture derived from historical and environmental values; that, where appropriate, will use and protect all lands in a condition that will promote land health that contributes to community economic freedom and security. The district will undertake such actions in a manner that serves all citizens with a high standard of ethical and objective leadership.
- Respect private property rights and consider the effects of policies, regulations, and federal and state decisions on these rights.
- Recognize that the protection and preservation of privately owned land is desirable and necessary in the district.
- It is the goal of San Francisco SWCD to conserve, perpetuate, and expand the good stewardship of outdoor recreation within the district.
- Promote cooperation with San Francisco SWCD cooperators, organizational partners, and entities such as town councils, county commissions, state and federal agencies. San Francisco SWCD will maintain existing and develop new partnerships to implement best management practices on all lands within San Francisco SWCD boundaries.
- Encourage recreational activities that enhance opportunities for economic development and maintain the custom and culture of the district.
- Encourage recognition of the social, cultural, and economic significance of recreation in the region, and encourage implementation of policies that will evaluate the viability and impacts of various recreational opportunities, while ensuring protection of other resources and resource use, conservation of rangeland, water, and soil resources.
- Maintain, restore, improve, and protect riparian areas so that they are in proper functioning condition for their productivity, biological diversity, and sustainability.
- Promote the perpetuation and enhancement of riparian habitat. Encourage a coordinated approach when establishing riparian and upland management plans and encourage the use of best management practices.
- Educate the value of balanced watershed management that includes riparian habitat.
- Encourage a coordinated approach when establishing riparian and upland management plans and encourage the use of best management practices.
- San Francisco SWCD will promote riparian management based on the New Mexico Non-Native Phreatophyte/Watershed Management Plan.
- Participate in all decisions and proposed actions, including National Environmental Policy Act procedures for an environmental assessment (EA) or environmental impact statement (EIS), which affect the district, regarding sensitive, threatened, or endangered species recovery plans, introduction or reintroductions, habitat conservation plans, conservation agreements or plans, or candidate conservation agreements. The matter of listing or removal of endangered species must be done based on active coordination with the district.

- Coordinate with all stakeholders on developing alternatives to listing, which may include conservation plans and related conservation agreements with local, state and federal agencies to address possible threats to species and their habitat and to avoid official listing.
- San Francisco SWCD will promote the balance of any action that results in habitat improvement and requires that the action make allowances for traditional uses such as grazing, and irrigation and it benefit both the endangered species and other users.
- Address the impact of all actions with the statutory requirements of the Endangered Species Act including the impact to the managed value of history.
- Coordinate with federal agencies in all decisions and proposed actions, including National Environmental Policy Act procedures for an environmental assessment or environmental impact statement, which affect the district, regarding sensitive, threatened, or endangered species recovery plans, introduction or reintroductions, habitat conservation plans, conservation agreements or plans, or candidate conservation agreements.
- Recommend that proponents of protection, recovery activities, and other threatened and endangered and sensitive species programs finance the activities, including public involvement and compensation to the affected landowners.
- Recommend that federal agencies respect distinctions between special status species (state sensitive species, etc.) and those listed under the Endangered Species Act.
- Support control of predators, rodents and insects, which are disease-bearing vectors that are a recognized threat to public health.
- The goal of San Francisco SWCD is to garner the support, understanding, and backing of our community and partner agencies and promote “Raise a generation of youth that understands the importance of agriculture.”
- Disseminate and promote partner agencies programs.
- Continue to support Soil Stewardship programs.
- Ensure that a wilderness designation does not affect state authority over water resources and that New Mexico's substantive and procedural laws controlling appropriation and allocation of water resources remain the primary authorities governing the waters in the district regardless of wilderness designation. Enforce determination that wilderness designation does not create a reserved water right.
- Protect any interests in ditches, reservoirs or water conveyance facilities and easements or rights-of-way associated with those interests from impairment or diminution by any wilderness or other special use designations.
- San Francisco SWCD strongly supports the critical need for healthy watersheds that provide a reliable supply of high-quality water and other benefits for New Mexico by implementing long-term, collaborative, comprehensive watershed-scale restoration projects that foster ecosystem function and resilience.
- Promote and support increasing partnerships and exchanges between natural resource agencies, local government, and private landowners on watershed restoration projects.
- Support the maximum area of land possible to be excluded from single-use or restrictive-use designations, so that excluded land is available for active and sound management on public lands.
- Promote and support increasing partnerships and exchanges between natural resource agencies, local government, and private landowners.

Compatibility, Contributions, and Conflict

The San Francisco SWCD's land use plan and the revised forest plan are largely compatible and complementary. However, there are few areas where they are not as compatible. When forage reductions occur from forage studies, fire, drought, or other natural disasters, assigning causation to either wildlife or livestock and applying those reduced allocations to the use responsible is not likely to be an implementable on federal public lands. Similarly, forage allocation based on the respective dietary needs of wildlife and livestock species is not implementable direction. As previously discussed under this heading for Grant SWCD, this San Francisco SWCD plan direction appears to be tied to the direction contained in the 1986 forest plan, which is not moved forward into the revised forest plan.

Aside from these few topics, implementation of the revised plan would advance many of the conservation district's goals and objectives. For example, there are management approaches that support the forest's participation in collaborative noxious weed programs and rangeland monitoring. The forest plan content for community relationships and multiple uses advances the custom and culture content articulated in the long-range plan, and the livestock grazing content in the forest plan provides adequate flexibility for the improvement of grazing systems. Likewise, the implementation of the San Francisco SWCD plan could improve the success of forest plan implementation in several ways. The SWCD's objectives to work with livestock producers to carry out improved management practices where necessary and advances the draft forest plan's desired conditions.

San Francisco SWCD has been very active in coordination meetings between the Gila National Forest leadership and staff and local governments. Their efforts have helped improve relationships and build shared understanding, but continued efforts to maintain and improve transparency and communication are needed. Plan direction for community relationships and management approaches throughout the plan provide a path forward that promotes these critical relationship elements during implementation.

There is one issue raised in the San Francisco SWCD Plan that cannot and will not be addressed in the forest planning process and that is the recognition and protection of grazing rights. The forest plan must be consistent with law and regulation, which does not recognize grazing "rights." It does recognize grazing permits and the forest plan includes grazing as one of the multiple uses it sustains.

Sierra Soil and Water Conservation District

Goals and Objectives

Sierra SWCD's land use plan articulates three overarching goals:

- Maintain and improve the soil, vegetation and watershed resources in a manner that perpetuates, sustains, and expands the beneficial uses of such resources while maintaining healthy ecosystems and fully supporting public safety, the customs, and economic stability and viability of our industries and the general welfare of the citizens of the district.
- Work with federal, state and local government agencies to fulfill the district's primary legal responsibility to provide for the health, safety and well-being of their constituents.
- Work to reduce any possibility of unintended consequences from decisions and actions that may be taken by agencies that can negatively impact the district, its economy, its tax base, and the people it serves.
- Provide proactive support for corrective and conservation practices and programs to conserve, protect, and beneficially develop the soil resources of the district.

These goals are supported by an objective:

- To create a coordinate working relationship with agencies and citizenry that protects and enhances local natural resources, safety, and well-being for all.
- The district constituency must have a regulatory environment that works for them, not against them. The regulatory environment should enhance lives, safety, and resources and improve the economy without imposing unacceptable or unreasonable costs. All regulatory policies must recognize the private sector and private markets are the engines for economic growth. New regulatory approaches should respect the role of local and state governments and adopt regulations that are effective, consistent, sensible, and understandable. It is, therefore, imperative to set planning guidance for lands and resource interactions as they apply to matters of the district.
- To elevate Sierra SWCD into a government-to-government relationships between the local, state, and federal bodies and agencies in regard to planning, outlining, orchestrating, scheduling, mapping, designing, manipulating, conceptualizing, formulating, designing, plotting, or strategizing land use plans that will affect the soil, water, and other resources of the district today, tomorrow, or further into the future.

Resource specific goals and objectives include the following:

- Provide proactive support for corrective and conservation practices and programs to conserve, protect, and beneficially develop the soil resources of the district.
- Assure the responsibilities set forth in the Act will be upheld for the full enjoyment and benefit of the citizens of Sierra SWCD.
- To ensure the policies and actions of the local, state, and federal government in matters of soil resource protections are fully inured to the benefit of the resource.
- To accelerate projects such as brush control, which support the natural replenishment of our grass base.
- Provide proactive support for corrective and conservation practices and programs to protect the public and conserve, expand, extend, and develop beneficially the water resources of the district.
- To assure the policies and actions of the local, state and federal government in matters of water resources protections are fully inured to the benefit of that resource.
- To seek and adopt substantive projects that retain water within the district for the purposes of returning waters into natural and or infrastructure features that expand beneficial uses.
- It is the intent of Sierra SWCD to take an aggressive attitude to the perpetuation and enhancement of agriculture as it relates to the basic resources of soil and water within the district.
- Rather than adopting an attitude and/or policy support for acceptance of a stabilized, diminishing or retreating agriculture base, Sierra SWCD will pursue alternatives for expanding the emphasis of agriculture and protecting the industry from anti-agricultural bias regardless of the source.
- To provide widespread support for the continuation of farming and ranching with all the Sierra SWCD intends associated and supporting businesses that have made lands within Sierra SWCD so productive and so important to the resource universe.
- It is incumbent on soil and water conservation districts to minimize drift between agriculture and various agencies, our land grant university, and local, state, and federal governments. Sierra SWCD intends to aggressively solidify those vital relationships.

- Sierra SWCD intends to take a lead in communicating and seeking government-to-government endeavors with other districts for the benefit of agriculture.
- To reach legal and policy standards that result in zero net loss attrition of the farmland base.
- It is the goal of Sierra SWCD to institute and manage vegetation and landscape projects that will (1) maximize grassland development for livestock and wildlife, collectively, (2) expand water supplies and systems to support such populations on an availability standard, (3) encourage research to determine benefits of more complex grazing practices, (4) work with the New Mexico Department of Game and Fish to elevate quality hunt opportunities, and (5) educate the general public of the benefits and the symbiotic relationships of livestock and wildlife in this desert environment.
- Coordinate with federal agencies, other state agencies, New Mexico Department of Agriculture (NMDA) and New Mexico State University (NMSU) to incorporate the most dynamic arid grasslands endeavors known to the world today where possible.
- Coordinate with district livestock producers, federal agencies, New Mexico Cattle Grower's Association, NMSU, NMDA, and other affiliated parties to promote a robust and healthy livestock industry within the district.
- Promote and coordinate water distribution system installation and infrastructure improvements to benefit all wildlife and livestock health and welfare within the district.
- Promote and coordinate other valuable and essential work that will provide a healthy environment for the beneficial use of resources that are implicit in the husbandry of wildlife and livestock endeavors.
- Review and promote the therapeutic effects of diverse ungulate grazing.
- Seek project and funding opportunities to build distribution system infrastructure to place water sources no greater than two miles from any point in the district.
- It is the goal of Sierra SWCD to conserve, perpetuate, and expand the good stewardship of outdoor recreation within the district.
- Promote outdoor activities of all types.
- Include outdoor recreation implicit in customs and culture as standards amongst district endeavors.
- To secure and perpetuate access for historical recreational endeavors.
- It is the goal of Sierra SWCD to promote the health and perpetuation of riparian habitat within the district.
- Promote the perpetuation and enhancement of riparian habitat.
- Educate the value of balanced watershed management, which includes riparian habitat.
- To create pilot projects to expand dual roles of limited water sources to multiple uses.
- It is the goal of Sierra SWCD to promote cutting edge management of arid lands stewardship within the district.
- Engage the BLM, NMDA, NMSU and the noted cooperators in establishing an arid lands grazing district.
- It is the position of Sierra SWCD to support the local citizenry in the unencumbered right to protect them and their private property from the ravages of floods. The district is against any administrative land designations or policies that would result in obstruction of such private

property protection. It is the goal of the district to uphold such a basic right. It is also the goal of Sierra SWCD to capture, manage and put to beneficial use all storm water emanating from controlled and wild arroyos within the district. That expansion of the district's goal is fundamental to the safety and health of every citizen within the district.

- To protect the life, limb, and property of all citizens within the district from uncontrolled flooding.
- To work to limit federal restrictions of projects, access, and planning that would obstruct such safety and welfare measures within the district.
- To capture and return all flood waters within the district to beneficial use.
- To conceptualize an expanded water management system.
- It is the goal of Sierra SWCD is to support the right of local citizens to protect their private property from wildfire.
- Identify and strike a balance of beneficial use of fire and the detrimental effects of wildfire.
- It is the goal of Sierra SWCD to coordinate all activities in a manner that will protect the quality of customs and culture derived from historical and environmental values; that, where appropriate, will preserve and protect all lands in a condition that will promote land health which contributes to community economic freedom and security; and undertake such actions in a manner that serves all citizens with a high standard of ethical and objective leadership.
- Sierra SWCD intends to maintain balance within the actions of the Board itself as well as the actions of federal and state government in land use planning within the district.
- The equality and respect for customs and culture created in over 413 years of recorded history must be held inviolate. Sierra SWCD intends to maintain such a balance in the face of federal and state management policies that are often driven by forces outside of the jurisdiction of the district.
- It is the goal of Sierra SWCD is to garner the support, understanding, and backing of our community and partner agencies.

Compatibility, Contributions, and Conflict

The Sierra SWCD's land use plan and the revised forest plan are largely compatible and complementary. Implementation of each plan will contribute to the success of the other.

Sierra SWCD has been active in coordination meetings between the Gila National Forest leadership and staff and local governments. Their efforts have helped improve relationships and build shared understanding, but continued efforts to maintain and improve transparency and communication are needed. Plan direction for community relationships and management approaches throughout the plan provide a path forward that promotes these critical relationship elements during implementation.

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Appendix E. State and Transition Modeling Process

Introduction

This appendix picks up where the environmental analysis left the discussion of analysis methodology for upland vegetation, fire ecology and fuels. It describes the state-and-transition model structure and the development of model inputs or parameters in which Gila National Forest staff played a role.

Model Structure

While there are similarities between them, each upland ecosystem type has its own model structure. Within that structure, states are defined by combinations of the dominant life form, tree size, canopy cover, storiedness and/or ecological status. Storiedness is applied only to forest/timber type ecological response units (ERUs) and describes the number of canopy layers. Single-storied conditions are indicative of even-aged dynamics, while multi-storied conditions are indicative of uneven-aged dynamics. Ecological status only applied in grassland ERUs. Ecological status is a measure of species composition. These combinations or state classes are a standardized part of the regional base models as described in the following tables.

Table E-1. State class definitions and model structure

Size Class	Seedling/Sapling	Small	Medium-Large	Very Large
Diameter (inches)	0-5	5-10	10-20	20+
Canopy Cover	Non-tree	Open	Closed	
Percent	<10	10-29.9	30+	
Storiedness	Single-storied	Multi-storied		
Number of layers	1-2	3+		
Ecological Status	High	Low-Moderate		
Percent Similarity to Site Potential	66+	<66		

Inputs and Assumptions

Model inputs include the initial, or current state class distribution and transition pathways between states. The following narrative defines these parameters and describes their development. The parameters themselves are housed within the models, which are included in the project record.

Initial Conditions

Initial conditions are the existing state class distributions specific to each ERU, or vegetation type. In other words, initial conditions describe how much of a given vegetation type is in a particular state class. The state class assignment used for the assessment was not used for this analysis. The work was redone due to lack of procedural documentation from the assessment.

For the environmental analysis, area was assigned to each state class using a recent survey-adjusted forest boundary, ERU version 5 map product (USDA FS 2014b), Mid-scale Existing Vegetation geospatial mapping products (USDA FS 2009) describing dominant lifeform^a, size class and canopy cover, the Southwestern Regional Office storiedness geospatial product (Triepeke 2017b), the Gila National Forest Terrestrial Ecological Unit Inventory (TEUI) (USDA FS 2019),^b and ecological status analysis conducted for the assessment phase of revision (USDA FS 2017). The first four datasets were processed in ArcMap

^a This dataset describes dominant lifeform as tree, shrub, herbaceous, or sparsely vegetated.

^b This dataset is not entirely complete nor readily available to the public in its entirety. For more information related to its completion and availability, please contact the Southwestern Regional Office.

using a series of “identity” and “dissolve” functions to create a product of polygons containing all the attributes necessary to define state classes by ERU.

The data was then exported to Microsoft Excel. While not explicitly necessary for this process, the TEUI was included to facilitate correct usage of the ecological status analysis conducted during the assessment phase of revision for the grasslands. It was also used to identify if any adjustments might be needed considering limitations imposed by differences in mapping protocols. The data was exported from the resulting geospatial product into Microsoft Excel to facilitate the remainder of the process.

The TEUI dataset was used as training data in the development of the remotely sensed ERU map product. Training data is field-collected data that essentially tells the computer how to interpret the satellite imagery. The Regional Office TEUI staff that mapped the Gila National Forest, the Regional Supervisory Soil Scientist, and Gila National Forest soil scientists assigned each map unit or map unit component (the characteristics) to a single ERU (the label) for this purpose. Unfortunately, computers and people aren’t perfect, and this did not consistently translate to the end product; portions of a few map units ended up in the incorrect ERU. These relatively small acreages were excluded from seral state assignment.

Differences in mapping protocol, spatial resolution, and the time at which the geospatial products were completed relative to the recent forest boundary adjustment sometimes produced conflicted information or gaps that were addressed by establishing the following ruleset.

- In grassland ERUs, if a TEU did not have enough information to be analyzed for ecological status in the assessment phase of revision, assign ecological status consistent with most map units within that ERU that were assessed.
- Where storiedness is described as “not tree” but Mid-scale Existing Vegetation values indicate an area is tree dominated, use a combination of the most recent satellite imagery available, Gila National Forest Fire History and Monitoring Trends in Burn Severity datasets to determine the relative accuracy of the storiedness and Mid-scale Existing Vegetation datasets at random locations within each ERU. The most accurate dataset guides the assignment of state class.
- Where not all Mid-scale Existing Vegetation data are populated, but canopy class is, assume tree or shrub dominance.

Additionally, the assertion made by the Interdisciplinary Team during the assessment that Gambel Oak Shrubland was not a valid ERU in the Gila National Forest was maintained. However, for the assessment these acres were split roughly equally between Mixed Conifer-Frequent Fire and Mixed Conifer with Aspen because the TEUI mapped some of these acres as being dominated by Gambel oak and New Mexico locust and the rest by aspen and New Mexico locust, in the absence or near absence of Gambel oak. A more robust examination of the TEUI data revealed that all these acres are best classified as a state class in the Mixed Conifer-Frequent Fire^c and were assigned to that ERU. Once the seral state assignments were made, the proportion of each state class in each ERU was summed. The resulting tabular data was joined to the original geospatial analysis to create a map product.

This process established the initial or current state class distribution for all ERUs, but a few required further refinements due to considerations built into the model. The Mixed Conifer with Aspen includes considerations for aspen succession and elk pressure. Heavy elk pressure has been shown to have a detrimental impact on aspen regeneration. During the assessment, the interdisciplinary team determined 60 percent of Mixed Conifer with Aspen should be modeled with aspen succession and without heavy elk pressure, but 40 percent should be modeled without aspen succession and with heavy elk pressure. The basis for this determination included distribution of this ERU in the forest and the teams’ collective observation that heavy elk pressure is generally restricted to the northern portion of the forest, which was

^c Based on TEUI climate classification information.

carried forward to populate the model for the environmental assessment. The difference between these successional pathways is that with heavy elk pressure, aspen regeneration eventually fails, and the species leaves the system. With lighter use, aspen can remain in the system.

A similar procedure was conducted for the Mixed Conifer-Frequent Fire and Ponderosa Pine Forest models, but for different model considerations. Both models include “uncharacteristic” states induced by stand-replacement fire. After stand-replacement fire, the plant community is usually dominated by grasses, forbs and/or shrubs before it eventually shifts to seedlings and saplings. The uncharacteristic state in these models reflects persistent grass/forb/shrub dominance due to large stand-replacement patch sizes resulting lack of a seed source for tree regeneration. This state is expected to perpetuate itself because the change in fuel characteristics is not conducive to the frequent low-severity fire that these forest types need to develop. During the assessment, the interdisciplinary team determined that from their collective experience and observations, the total area in post-fire state classes should be split equally between the characteristic and uncharacteristic state in both models. This was also carried forward to populate these two models for the environmental analysis.

Assumptions and Limitations

The assumption of uncharacteristic states in the Ponderosa Pine Forest and Mixed Conifer-Frequent Fire may very well be valid under predicted future climatic conditions. Tree regeneration is episodic in the Southwestern climate as very specific weather patterns and timing between weather patterns is necessary to generate a good seed crop and provide sufficient water for germination and establishment. These conditions are predicted to occur less frequently in the future. Additionally, in large high-severity fire patches, seed trees may or may not be present within dispersal distance. This increases the amount of time for trees to become established, as regeneration progresses from the edges of these patches, inward. On the other hand, successional processes take a long time. The McKnight Fire that occurred in the Black Range Mountains in the 1950s is a good example. Conifer regeneration was not observed in the brush fields that developed in areas of stand-replacement fire for 50 to 70 years, but saplings were observed emerging from the brush shortly before the area re-burned in the 2013 Silver Fire.

A limitation is imposed by the polygon sizes used to assign seral state classes in the absence of a regionally accepted scaling process. Essentially, layering all these spatial datasets together creates very small polygons as a basis to assign seral state classes, frequently less than a half-acre in size. Consider the following example as an illustration of the issues this creates: A polygon less than a half-acre in size in the Ponderosa Pine Forest ERU that is not tree dominated should be assigned to a post-disturbance bare ground/grass/forb/shrub state class that is not part of the desired condition. However, this is more likely to be grassy opening in a pine stand that is part of the desired condition. While the number of small polygons is large, the percentage of ERU acres these areas represent is small and the effect on the analysis is likewise small.

Another limitation of the data is that the Mid-scale Existing Vegetation mapping products pre-date the large wildfires of 2012 and 2013. To update those products in time to support plan revision on the Gila National Forest, the Regional Office averaged fire severity effects over the existing polygons, rather than creating new polygons based on actual effects. This is part of the reason the ruleset presented in the procedural discussion was necessary. This primarily impacts the forested/timber type ERU data. The effects on the analysis are not quantifiable until a more robust mid-scale update is conducted, and the two products can be compared. An updated mid-scale product was available when the environmental impact statement was finalized, but a comparison was not conducted because staff capacity was limited and while it could improve understanding, it would not have a substantial impact on the analysis or decision-making process. Further, any changes created by the 2022 Black Fire will not be reflected until the next mid-scale product update.

Finally, TEUI map units have multiple components, each with their own combination of dominant soil types, potential vegetation communities and climatic characteristics. Map unit assignments to ERUs that were made to support production of the ERU map were made based on the potential vegetation community of the dominant component, in part because TEUI map units are represented spatially as a whole, with no differentiation between components. Consider the following example: TEUI map unit 174 is an association with four components, the potential vegetation community would place half of the map unit area in Ponderosa Pine Forest and the other half in Mixed Conifer-Frequent Fire. Because the dominant component, representing 30 percent of the map unit is best described as Ponderosa Pine Forest, the entire map unit area is placed in that ERU.

In an association like this map unit, often the differences in potential vegetation communities is climate related and driven by aspect—that is whether a slope is north or south-facing. This limitation is likely significant for associations but is not as large of an issue for other types of TEUI map units given that they either have a single dominant soil/vegetation combination with relatively minor inclusions, or may vary in terms of soil characteristics but not climate or potential vegetation communities. The effect of TEUI map unit design on the analysis of ERU characteristics conducted for forest planning may be insignificant, or significant. No robust examination has been conducted and therefore the influence on the outcomes of this analysis cannot be quantified or stated with certainty. It is assumed the influence is insignificant.

Transition Pathways

In the model, area moves between state classes on transition pathways. Transition pathways represent a disturbance or natural growth in the absence of disturbance. The parameters required for transition pathways include: a transition type or name; an annual probability for that transition type; a “from” state class; “one or more “to” or destination state classes; and if more than one destination state classes are appropriate, a proportion of the area in the “from” state class is moving to each destination state class.

This section discusses all these parameters organized under subheadings for each transition type. Only the transition types with one or more parameters that were adjusted from the regional base models by forest staff during the assessment or environmental analysis, or otherwise populated by forest staff are included.

Wind/Weather Stress

Parameters for wind and weather stress were developed by Regional Office staff as part of the base models. They are only included for Colorado Plateau/Great Basin Grassland, Mixed Conifer with Aspen, and Pinyon Juniper Woodland. However, wind and weather stress are important and active processes in every ERU. In consultation with the Regional Analyst, who determined these could be ignored without significantly influencing outcomes, these transitions were turned off for all alternatives.

Insect and Disease Mortality

All insect and disease mortality parameters had been provided by regional office staff for revision efforts on other forests in the region. Around the time the Gila National Forest began plan revision, the decision had been made that Regional Office staff would no longer provide these parameters. Probabilities were to be calculated based on existing aerial detection survey data by forest staff. For the assessment, survey data was obtained from the Regional Office by a forest geographic information systems (GIS) analyst for the period of record 1996 through 2014. The number of acres of mortality per survey year for each ERU was extracted and an annualized probability value was then calculated using a spreadsheet tool provided by regional office staff. An attempt to acquire subsequent years of data was made for this environmental analysis. That attempt was ultimately unsuccessful. The responsibility for maintaining insect and disease data has recently been moved from the regional level to the national level. As a result, the data are not as readily obtained in the format needed.

In consultation with Regional Office forest health survey and detection staff, it was determined that a few more years of data would not likely have a measurable effect on the probabilities or the modeling results. All alternatives contain probabilities calculated during the assessment. The expertise and experience of Regional Office Forest Health staff were utilized to adjust these probabilities to different state classes and parameterize destination states and proportions. This was done using knowledge of the insect species and disease that impact trees in each ERU, and the biology of these species, leaning on insights about whether those agents typically use smaller or larger trees, in more open or closed stands. The assessment models were reviewed to ensure consistency with this work and adjustments were made where errors or oversights were identified.

Invasive Species

Parameters for invasive plant species are only included in regional base model for Semi-Desert Grassland. These were developed by Regional Office staff working with the Coronado National Forest. Invasive species are a large issue in this ERU on the Coronado, which necessitated building in both invasion and treatment transition pathways between states. Such is not the case on the Gila National Forest. While non-native and invasive species are present in some locations, they are not driving the trajectory of upland ecosystems, and there is no information or data to suggest that any one grassland type on the Gila National Forest is at more or less risk of invasion than the other. These transition pathways were turned off for all alternatives.

Wildfire

Wildfire transitions in the regional base models are parameterized with ERU specific low, moderate or mixed and high severity wildfire probabilities from a regional data summary that includes all national forests in the Southwestern Region. To characterize current fire regimes, the data summary included ERU map, Monitoring Trends in Burn Severity (MTBS) (1996–2014) and Rapid Assessment of Vegetation Condition after Wildfire (RAVG) (2015) datasets. Also, part of the regional base models, work by Weisz and others (2009), provides information to guide parameterization of destination states and proportions. This data summary describes the relationship between fire severity classes (low, moderate/mixed or high) and canopy cover classes.

During the assessment, the interdisciplinary team wanted to demonstrate the collective observation that due to its legacy of wildland fire management, wildfire plays out differently on the Gila National Forest than it does elsewhere in the region. In the assessment models, this was attempted by differentiating wildfires managed under a suppression strategy and wildfires managed for resource benefit into two different transition types with different probabilities. Proportions and/or destination states differed only in one or two state classes in two different models. Ultimately, the assessment models demonstrated no or negligible differences between wildfire management strategies in terms of effects on the ground. However, it did have an unintended consequence—an artificial inflation of how much wildfire occurred in the model. It also misrepresents the nature of natural ignitions. Natural ignitions are not something that can be planned in terms of where, when, number of acres ultimately affected or how often they occur.

For the environmental analysis, wildfire transitions were not differentiated based on whether the fire management strategy is suppression or resource benefit. Instead, the Gila National Forest specific wildfire probabilities were used instead of the regional average to reflect the difference between wildfire on the Gila National Forest as opposed to elsewhere in the region. This was done for all ERUs with three exceptions. In Mixed Conifer with Aspen and Spruce-Fir Forest regional probabilities were used. These two ERUs have an infrequent, high-severity fire regime and occupy a relatively small number of acres in the forest. It was determined that using 20 years of data from approximately 52,000 acres would not adequately represent a current fire regime, especially considering the 2012 Whitewater Baldy Complex and 2013 Silver Fires, which burned significant area in both these ERUs; the Gila-specific probabilities are a misrepresentation of what might be occurring in terms of fire rotation or frequency. The regional probabilities offer a more robust, but still limited window into the current fire regime for the purposes of

state-and-transition modeling. As currently mapped, Pinyon Juniper Woodland occupies the largest number of acres in the forest. However, like Spruce-Fir Forest and Mixed Conifer with Aspen, it is an infrequent, high-severity disturbance ecosystem. Given its larger areal representation, the Gila National Forest-specific probabilities were used.

Like Mixed Conifer with Aspen and Spruce-Fir Forest, and Madrean Pinyon-Oak Woodland occupy a relatively small area and are associated with a smaller volume of data specific to the forest. However, as it is mapped on the Gila National Forest, Madrean Pinyon-Oak Woodland differs from how it is conceived in the ERU framework. Differences in vegetation potential due to soil characteristics and associated implications for a more variable fire regime led to the decision to use the Gila National Forest-specific wildfire probabilities.

Destination states and proportions were developed using on-the-ground knowledge and expert opinion guided by the cover-severity relationships established in the data summary provided by Weisz and others (2009). Given that state classes are defined by both cover and size class, expert knowledge is necessary to determine destination states in terms of size class changes. Field experience in the forest also facilitates developing these inputs where there is more than one potential outcome. For example, some area in a seedling/sapling or small closed canopy state class may move to a seedling/sapling or small open state class or a medium-large open state class because of a mixed severity fire depending on whether larger trees were present in the stand. This was not fully considered as part of the interdisciplinary team parameterization of the assessment model and was revisited for the environmental analysis.

Additional assumptions related to parameterizing wildfire transitions for all alternatives included in this analysis include the following:

- In the grassland models, which describe early seral states as recently burned/sparsely vegetated, fire does not occur in these states due to lack of fuels.
- In early seral states dominated by grass/forb/shrub cover, fire of any severity maintains grass/forb/shrub cover dominance.
- In all ERUs except Mixed Conifer with Aspen and Spruce-Fir Forest,
 - ◆ High-severity fire only occurs in closed canopy states.
 - ◆ Low-severity fire does not occur in seedling/sapling or small closed canopy states. Neither does low-severity fire occur in medium to very large, closed canopy states in ecosystems dominated by woodland tree species as canopy heights are typically lower than in ecosystems dominated by timber tree species.
 - ◆ Low-severity fire can occur in single story (even-aged) medium to very large, closed canopy states in forest/timber type ecosystems due to the relatively density and continuity of ladder fuels. Low severity fire in multi-storied closed canopy states, does not occur due to higher density and continuity of ladder fuels, which tends to favor mixed and high severity fire.
 - ◆ In frequent-fire ERUs, mixed severity fire occurs in seedling/sapling and small open or closed canopy state classes and in medium-large and very large, closed canopy state classes, but does not occur in medium-large and very large open canopy state classes. This is due to differences in fuel characteristics and the relative susceptibility of different age-classes to experience mortality.
- In Mixed Conifer with Aspen and Spruce-Fir Forest ERUs, low-severity fire does not occur in closed canopy states or in aspen dominated states as dominant species are fire-intolerant. Mixed/moderate and high-severity fire occurs in all tree-dominated state classes.
- Funding is not a constraint naturally ignited wildfires occurring under conditions that help the forest move toward desired conditions.

Research has suggested that allowing more mixed severity fire in historically frequent, low-severity fire ecosystems is necessary if fire is to act as a restoration tool, which necessitates more risk. Under alternative 1, management has minimized risk by managing natural ignitions for resource benefit under weather and fuel conditions that favor low-severity fire, and suppressing natural ignitions where mixed and high severity fire were more likely. Under alternatives 3 and 4, management continues to minimize risk under weather and fuel conditions that favor low-severity fire, and it is assumed that leads to roughly the same annual, per acre probability of wildfire under each severity class as is represented under alternative 1.

Under alternatives 2 and 5, it is assumed that management is less risk adverse, leading to more acres experiencing wildfire. While the intention is to allow more acres of low and mixed severity fire on the landscape, when and where it makes both ecological and operational sense, it is unlikely that management can completely control the severity distribution of the additional wildfire. Some proportion of high severity is likely to accompany low and mixed severity. This is the increased risk. To reflect both the increased number of acres experiencing wildfire and the increased risk, a transition multiplier was applied. A transition multiplier increases the probability that a transition pathway will occur in the model. While the proportional probability of each severity class is likely to change under both alternatives, there is no way to quantitatively estimate those changes given annual patterns of weather conditions and ignitions, and comfort levels of different individuals in leadership. Therefore, it was necessary to assume that the current wildfire probabilities would remain proportionally the same between severity classes and the same transition multiplier was applied to each severity class.^d However, the value of this transition multiplier varies by ERU and between alternative 2 and alternative 5.

Under alternative 2, transition multiplier values were calculated by comparing the average number of acres experiencing beneficial wildfire under the no-action alternative (2007–2017) and the number of acres that would have experienced fire under the historic average fire rotation interval.^e The transition multiplier represents the percent increase that would be necessary for the number of acres experiencing wildfire to reach the midpoint between the two. For alternative 5, transition multipliers were calculated in much the same way, except instead of using the midpoint, the difference itself was used to calculate percent increase. For Mountain Mahogany Mixed Shrubland, Madrean Pinyon-Oak Woodland, and Pinyon Juniper Woodland, which have no objectives, the median percent increase was applied as a transition multiplier. This approach to the transition multipliers provides some recognition of the spatial nature of fire. Even if not targeted with plan objectives, these vegetation types are likely to experience more wildfire under both alternatives 2 and 5. Spruce-Fir Forest and Mixed Conifer with Aspen were excluded from calculation of the median value, as they are highly unlikely to be found in spatial association with woodland ERUs.

No approach is without shortcomings, and in this case, Juniper Grass Woodland required deviation from the approach described above. As calculated, Juniper Grass Woodland would have a transition multiplier more than 40,000 under alternative 2 and double that under alternative 5. The next largest value was for Semi-Desert Grassland at 50 and 100 for alternatives 2 and 5 respectively. The decision was made to use the Semi-Desert Grassland values for Juniper Grass Woodland under the rationale that some ceiling had

^d As discussed in the main body of the FEIS, MTBS data indicate that on the Gila National Forest, there is currently no trend away from the contemporary fire regime variables that area used to inform wildfire probabilities. These include fire severity distribution at a landscape level.

^e For ERUs with objectives, the low end of the historic average fire rotation interval was used to establish the maximum number of acres to be treated under alternatives 2 and 5, with limited exceptions. Under alternative 2 and at the forest supervisor's discretion, the maximum objective for Mixed Conifer with Aspen and Spruce-Fir Forest reflects the total number of acres each occupies on the forest. The desired fire effects are to build patch diversity and reduce surface fuels in the hopes of protecting these ERUs into the future. The forest supervisor's intention to using the total number of acres to cap the objective is to remove limitations, provide greater flexibility to maximize what windows of opportunity that might be had to use multiple, small, low-severity fire entries under the right conditions.

to be put in place within the model. Fifty to 100 hundred times more fire was perceived to be less unrealistic than 40 to 80 thousand.

Prescribed fire

While the assumptions developed for wildfire transition pathways and the data-driven cover-severity relationships are relevant and applied to prescribed fire transitions, probabilities are not. For the assessment, area or acre limits were used in conjunction with a fixed probability that remained the same for every severity class in every state class in every ERU.

Area limits only determine the total number acres for a given prescribed fire severity class – for the ERU. They cannot express that prescribed fire is not equally likely in every state class, in every alternative. To address this, probabilities were developed for use in conjunction with area limits, which allows for these differences to be expressed in the model. In addition to the assumptions applied to wildfire transitions, a blanket assumption applied to all alternatives for prescribed fire. Prescribed fire is limited to low and mixed severity. There is no transition for high-severity prescribed fire in any alternative.

Alternative 1 area limits are defined by average annual actual accomplishments by ERU between 2007 and 2017. Only the acres funded by congressionally appropriated dollars were used to calculate these area limits. No acres accomplished with partner dollars are included to demonstrate the plan is within the fiscal capacity of the forest. This is a requirement of the 2012 Planning Rule. Forest staff and leadership believe that partnership dollars cannot be taken for granted. Competition for those dollars is high, and their availability can vary widely based on numerous factors. The pool of congressionally appropriated dollars for vegetation treatments between 2007 and 2017 was also used in a fiscal capacity exercise to develop plan objectives under each alternative and strongly influenced the development of area limits by alternative. These funds were re-allocated between treatment types based on treatment cost estimates and the theme of the alternative. While this exercise was not intended to be construed as a literal estimation of vegetation management practices, it served as a basis to ensure objectives were sufficiently flexible that they there would be a good chance of having the funds to meet them.

Alternative 2 reflects a restoration theme that strives to balance the use of treatment tools in consideration of: providing products to people and market conditions; human health, life and property; and the number of acres that can be treated with a particular tool given the cost. Area limits also reflect the forest supervisor's relative ranking of priority ERUs. Alternatives 3 and 4 reflect restoration themes that emphasize providing products to people and reflect differences in stakeholder concerns for ERUs and the benefits they provide to people. They also reflect stakeholder concerns about the use of wildfire, whether prescribed or naturally ignited. Alternative 5 reflects a restoration theme that emphasizes prescribed and naturally ignited wildfire.

The themes of the alternatives also influence which state classes targeted with prescribed fire, and with what severity. Under alternative 1, closed-canopy woodland and woody encroached grasslands conditions have been avoided. Only open-canopy conditions have been targeted. In forested/timber types, both open-canopy conditions and medium to very large, single-storied, closed-canopy states have been targeted. Despite the closed-canopy conditions, the relative scarcity of ladder fuels under single-storied conditions leads to greater surety in maintaining low-severity fire effects under the weather and fuel moisture conditions typical of prescribed fires. This is reflected in the parameterization of associated probabilities for the no-action alternative. Probabilities were also distributed between mixed and low-severity based on the relatively limited data for prescribed fire available in the Gila National Forest's MTBS dataset over the period of record 1985–2017. This distribution is approximately 10 percent mixed severity and 90 percent low severity. Destination states and proportions were populated using the same methodology as was used for wildfire transitions.

Alternatives 3 and 4 models were parameterized identically to alternative 1 in terms of prescribed fire except for area limits. The maximum number of acres stated in the plan objectives for these alternatives

were used to set area limits and are much lower than the other three alternatives. The models for alternatives 2 and 5 vary both from the previously discussed alternatives and have both similarities and differences of their own. Both alternatives 2 and 5 expand the state classes targeted with prescribed fire to include those that have been avoided in the past. This means allowing for more mixed severity fire, which comes with additional risk. As with naturally ignited wildfire, conditions and the comfort levels of those in leadership will vary and will ultimately determine what additional risk, if any, is taken. However, for the purposes of this analysis, it was assumed that under alternative 2, the amount of mixed severity prescribed fire on the landscape would double from roughly 10 percent^f of prescribed fire acres to 20 percent. Under alternative 5, that increase would double again. Under this assumption, probabilities and area limits were adjusted.

Finally, prescribed fire treatments in the areas currently mapped as wildland-urban interface were considered. These acres were separated out from their individual ERUS in the budget re-allocation exercise conducted in objective development. This was intended to convey the importance of human values in these areas and to encourage no less than the current investment in wildland-urban interface treatments. Approximately 7 percent of the forest is currently mapped as wildland-urban interface and the acres are well distributed across ERUs. Only 5 percent of the wildland-urban interface has been treated with prescribed fire between 2007 and 2017. Through the modeling process, it was determined that any adjustment made to area limits to include wildland-urban interface would have a negligible effect on the ecological outcomes reflected by the models. Furthermore, prescribed fire in the wildland-urban interface depends on site-specific concerns and can be highly influenced by the preferences of adjacent landowners. No adjustments to area limits were made for prescribed fire transitions in the wildland-urban interface.

Prescribed Cutting Methods

Prescribed cutting methods commonly referred to as mechanical treatments; although not all prescribed cutting methods require the use of heavy equipment such as skidders, haulers, et cetera. The regional base models do not reflect the full suite of available methods. The number of transition types supported in the regional base models were optimized to lessen the workload and still provide a reasonably robust way to obtain the information necessary to fulfill important requirements of the National Forest Management Act-related to forest product or biomass volume calculations. These state-and-transition pathways are supported by Forest Vegetation Simulator (FVS) model runs conducted by regional office staff. These FVS model runs and associated tools for processing VDDT model outputs facilitate the calculations necessary to fulfill National Forest Management Act requirements (Boening 2014; Youtz and Vandendrieche 2015). This is discussed in further detail in Appendix F - Timber Suitability and Estimated Vegetation Management Practices. Actual prescribed cutting methods have and will continue to vary to fit site-specific management goals under all alternatives.

Mechanical treatment transition pathway parameterization is like prescribed fire but does not have the support of regional data summaries. Transition type (prescribed cutting method), destination state, proportions and probabilities all rely heavily on the expert opinion of the forest silviculturist and timber and fuels program manager. All mechanical treatment transition pathway parameters in the assessment models were reviewed and updated where necessary for the environmental analysis based on the input provided by the before-mentioned individuals. These inputs include prescribed cutting methods, the percentage of the time they are used in each ERU and state class, and the state classes targeted. Updates reflected improved understanding of modeling concepts gained since the assessment and adjustments to reflect the narrower timeframe being used to represent current management in alternative 1 (2007–2017) as opposed to the assessment (1996–2014). The updated inputs were used to calculate probabilities and do not vary by alternative per the forest silviculturist's input, except in the grassland ERUs under alternatives

^f Based on the limited data for prescribed fire available in the MTBS dataset's full period of record as of September 11, 2018.

2 and 3. With respect to the grasslands, current management has been targeting both open and closed canopy conditions, but the emphasis has been on open canopy encroached states. Alternative 2 reflects a more aggressive approach and focuses equally on both open and closed canopy encroached states. Alternative 3 is the most aggressive, inversely targeting closed canopy encroach states as compared to alternative 1.

Area limits were also calculated for each prescribed cutting method based on silvicultural input in conjunction with the number of acres to be treated under each alternative. As with prescribed fire, the number of acres used to calculate area limits reflects the actual accomplishments between 2007 and 2017 for each ERU under alternative 1, with the remaining alternatives being parameterized based on the budget re-allocation exercise and theme of each alternative as previously described. However, acres treated in the wildland-urban interface were included, as opposed to prescribed fire. This was due to socioeconomic considerations and the fulfillment of National Forest Management Act requirements. Area limits were established for each ERU based on the proportion of the wildland-urban interface they occupy as currently mapped and the minimum number of acres stated in the wildland-urban interface objective.

Appendix F. Timber Production Suitability, Estimated Vegetation Practices, and Projected Harvest Levels Methodology

Introduction

This appendix picks up where the environmental analysis left the discussion of analysis methodology for timber, forest, and botanical products. It adds detail to the description of the timber production suitability process and development of estimated vegetation practices, as well as the calculations involved in the sustained yield limit (SYL), projected timber sale quantity (PTSQ) and projected wood sale quantity (PWSQ). The basic process outlined in the environmental impact statement.

Timber Production Suitability

Legal Criteria

Lands not suited for timber production due to legal factors include designated wilderness areas, wilderness study areas, research natural areas, and eligible Wild River segments. The spatial data used is from the Gila National Forest corporate dataset. Timber harvest for the purposes of timber production is prohibited on these lands. The ability to use timber harvest as a tool depends on the law that establishes the prohibition.

Designated Wilderness and Wilderness Study Areas

Motorized equipment is specifically prohibited in congressionally designated wilderness areas by the Wilderness Act of 1964 (16 U.S.C. 1121 (note)). Similarly, the New Mexico Wilderness Act of 1980 requires that the two Gila National Forest wilderness study areas designated by that law must be managed to protect the wilderness characteristics that they possessed at the time of designation, subject to valid existing legally established rights and uses (16 U.S.C. 1131 (note)). Although the Gila National Forest's 1986 Plan did not recommend these areas to Congress for designation, and existing motorized and other uses at the time the Act was passed are allowed to continue, timber production would not be consistent with the requirements of the law. Consistency with these mandates must be maintained until Congress provides updated management direction through legislation, which may include releasing these lands to forest uses other than wilderness, designating them as wilderness, or some other management guidance. Existing wilderness areas on the Gila National Forest are the Gila, Aldo Leopold and Blue Range Wildernesses, which collectively cover 792,584 acres. Existing wilderness study areas are the Hell Hole and Lower San Francisco Wilderness Study Areas. These areas cover 27,660 acres.

Designated Research Natural Areas

Research natural areas are designated as such by the Chief of the Forest Service under the Code of Federal Regulations (CFR) 251, Subpart A, Section 251.23 (1966). These areas are established to provide adequately for the research necessary to serve as a basis for the management of forest and range land in each Forest Service region. Projects, activities and uses not related to research or education are not permitted and the unmodified condition of these areas must be maintained, except where measures are required to maintain a plant community that the area is intended to represent. Neither timber production nor timber harvest are allowed under the regulations. The Gila River Research Natural Area at the Gila River Bird Area is the only existing designated research natural area in the forest, which covers 393 acres.

Eligible Wild and Scenic River Segments

Most eligible Wild and Scenic River segments identified on the Gila National Forest are located within existing designated wilderness areas, which are removed from the suitable timber base by the Wilderness Act of 1964 as previously described. Forest Service handbook direction (1909.12 Chapter 80) requires that Forest Service-identified eligible rivers must be protected to maintain their free-flowing nature and outstandingly remarkable values unless a determination of non-suitability is made. Forest Service decision makers may authorize site-specific projects and activities within Forest Service-identified eligible river corridors when those projects and activities are consistent with maintaining free flow and the outstandingly remarkable values associated with the site. A suitability study may also be undertaken to resolve conflicts between mandates for management of eligible rivers and other resource management concerns. The width of the corridor receiving these protection measures is generally one-quarter mile on each side of the river, averaging no more than 320 acres per mile for the length of the segment. Congress has the authority to adjust from these generalities.

There are three classifications of eligible wild and scenic rivers, wild, scenic and recreational, with wild being the most restrictive, scenic being somewhat less, and recreational being comparatively permissive in the range of allowable developments and management actions. Cutting of trees and other vegetation is not permitted for eligible rivers receiving a preliminary classification as wild, except as consistent with a primitive recreation experience, to accommodate valid, existing, legally established rights and uses, or to protect identified outstandingly remarkable values. Such exceptions may include trail maintenance, wildfire suppression, or fires managed to restore or maintain habitat for threatened, endangered, or species of conservation concern, or to restore the natural range of variability. A range of additional vegetation management and timber harvest practices are allowed along eligible rivers with a preliminary classification of Recreational or Scenic, if these practices are designed to protect users, outstandingly remarkable values, or protect, restore, or enhance the river environment, including the long-term scenic character.

Timber production is not compatible with the preliminary classification of wild, and thus these eligible stream corridors are not suited for timber production based on the legal criteria, regardless of where they occur. There are a total of 224.11 miles of eligible Wild and Scenic Rivers with a preliminary classification of Wild, representing approximately 71,715 acres.

Technical Criteria

The Gila National Forest interdisciplinary team's rationale to the technical factors under which land is deemed not suited for timber production is described in the following subsections. These areas include those where the technology does not exist to harvest timber without causing irreversible damage to soil, slope or other watershed conditions, those where there is no reasonable assurance of adequate restocking, and lands that are not forest lands.

Irreversible Damage to Soil, Slope, or Other Watershed Condition

The term "irreversible damage" is not defined in the directives. The interdisciplinary team interpreted "irreversible" to mean impairment of soil and watershed processes and functions that would take longer than a human lifetime to recover. The primary processes and functions of concern are soil stability, soil water holding capacity, water infiltration and redistribution, and nutrient cycling. Accelerated soil loss or compaction can alter all these watershed functions. However, the extent and magnitude of accelerated soil loss or compaction due to vegetation management activities can usually be mitigated through selection of the appropriate harvesting system and equipment, and implementation of best management practices. Therefore, zero acres were removed from suitability under this criterion.

No Reasonable Assurance of Adequate Restocking

The term “final regeneration harvest” describes any timber harvest designed to promote regeneration of desirable tree species. The primary commercial species is ponderosa pine, although other forest tree species such as Douglas-fir also have commercial value. The term “adequate restocking” is defined for the Gila National Forest in the following table.

Table F-1. Minimum restocking criteria to determine adequacy of lands for timber production

Management System	Final Regeneration Harvest Type	Forest Type (ERU)	Adequate Restocking Criteria* (Trees per Acre)
Even Aged	Final Shelterwood Removal	Ponderosa Pine Forest and Ponderosa Pine-Evergreen Oak	>100 seedlings
Even Aged	Final Shelterwood Removal	Mixed Conifer-Frequent Fire and Mixed Conifer with Aspen	>150 seedlings
Uneven Aged	Last Group Selection Entry	Ponderosa Pine Forest and Ponderosa Pine Evergreen Oak	>10 trees above 10" DBH** and >30 seedlings
Uneven Aged	Last Group Selection Entry	Mixed Conifer Frequent Fire and Mixed Conifer with Aspen	>10 trees above 10" DBH** and >35 seedlings

*Minimum stocking is based on sites capable of producing over 50 cubic feet per acre. Sites with lower productivity would likely have fewer seedlings per acre.

**Diameter at breast height

Natural regeneration or restocking of stands depends on weather patterns that support a good cone crop, and subsequent weather patterns that permit the germination and establishment of seedlings and saplings. In the southwestern U.S. climate, it may be decades between natural regeneration events. Artificial regeneration, by way of planting trees, varies in its success depending on climate and weather, soils, topographic characteristics of the site (e.g., elevation, aspect, slope, and topographic position), planting density, seedling protection, and other factors.

The interdisciplinary team identified lands where there is “no reasonable assurance that lands could be adequately restocked within 5 years of final regeneration harvest” using the TEUI climate classification, which takes climate, topographic characteristics and soils into consideration. Using this classification, moisture-limited sites were removed from suitability. On sites such as these, ponderosa pine establishment and survival under the current climatic regime is episodic and site indices are low. Site indices are a measure of site productivity based on tree height, diameter and age.

These areas are represented by TEUs 87, 102, 131, 151, 186, 188, 274, 501, 553, 554, 573, 574, 575, 585, 605, 610, 618, 681, 687, 691, 693, 694 and 698.

Lands that are not Forest Lands

The Forest Service national directives define “lands that are not forest lands” as those lands that are less than 10 percent occupied by forest trees of any size or that formerly had such tree cover and are currently developed for non-forest uses. Lands that were formerly occupied by tree cover, but do not presently have tree cover, should be identified as non-forest unless the land will be naturally or artificially regenerated into forest cover soon.

To identify lands developed for non-forest uses, the interdisciplinary team used the Gila National Forest’s corporate dataset to include acreage under transmission lines with rights-of-way over 120 feet and major U.S. highways and rights-of-way. The remaining lands developed for non-forest uses are either less than 120 feet in width or are otherwise limited in acreage and are not included in the spatial display or volume

calculations. Using the forest's ERU geospatial layer, shrublands, grasslands, woodlands and riparian areas were also removed under this criterion.

Compatibility with Desired Conditions and Objectives in the Plan

Lands removed under this step of the suitability analysis were identified and described previously in Volume 1, Chapter 3 under the Timber, Forest, and Botanical Products Analysis Methodology heading. They are those lands where cutting trees for the purposes of timber production is not compatible with the desired conditions for inventoried roadless areas, recommended wilderness areas, soil and watershed resources or with the vegetation objectives. Rather than reiterating what has already been discussed, the TEUs associated with desired conditions for soil and watershed resources are identified. These are: 174 (Datil soils) only where it occurs on slopes greater than 15 percent; 108, 150, 278, 312, 313, 633, 635, 636, 638, 657, 661, 662, 671, 675, 676, 678, 685, 686 and 696 (soils with little or no soil development or erosional landforms) only where they occur on slopes greater than 25 percent. All other TEUs not identified under other suitability criteria on slopes greater than 40 percent were determined to be not suited for timber production because the greater cost per acre to cut trees on these acres would likely reduce ability to achieve of the plan's vegetation objectives and therefore, the desired conditions.

National Forest Management Act (2012 Planning Rule) Required Calculations

This section provides more detail regarding the National Forest Management Act required calculations for sustained yield limit (SYL), projected timber sale quantity (PTSQ) and projected wood sale quantity (PWSQ).

Sustained Yield Limit

Southwestern Regional Office staff developed the basis for calculating the SYL based on the so-called "regionally consistent desired conditions for vegetation." These are the desired conditions contained in the revised plan and its alternatives. This basis is only sound for the set of conditions as described. If desired conditions vary significantly from the regionally consistent desired conditions, a new SYL calculation would be required (Youtz and Vandendrieche 2015).

Using Forest Inventory and Analysis (FIA) plot data from region-wide sites Regional Office staff determined were representative of the region, the Forest Vegetation Simulator (FVS) was calibrated for the following variables by vegetation type and site index:

- Diameter growth
- Stand density mortality
- Tree senescence mortality
- Seen tree defect
- Merchantable cubic feet volumes
- Merchantable board feet volumes
- Natural tree regeneration

The FVS model was then run over time periods sufficient for volume projections to stabilize. The annual average volume after projections stabilize is then used in conjunction with number of suitable acres in each ERU to calculate annual and decadal values for the SYL (Youtz and Vandendrieche 2015).

Estimated Vegetation Practices

The general prescribed cutting practices and acres of harvest are calculated based on the silvicultural input provided for the state-and-transition modeling as described in Appendix B: State-and-Transition

Modeling Process, the objectives in the draft plan and each of its alternatives, and the state-and-transition model outputs. It is recommended that the interested reader refer to appendix B prior to continuing with this appendix.

The number of prescribed cutting methods supported in models were optimized to lessen the workload and still provide a reasonably robust way to obtain the information necessary to fulfill important requirements of the National Forest Management Act (Boening 2014). Cutting methods are further grouped for reporting requirements to include regeneration harvest that promotes establishment of additional age-classes, uneven-aged intermediate thinning, and uneven-aged stand improvement/selection harvest. Based on the expert opinion of the forest silviculturist and timber and fuels program manager, state-and-transition model inputs were developed for each ERU based on which cutting methods are likely to be used, how often particular vegetative conditions (state classes) would be targeted with a particular cutting method, and how vegetative conditions are likely to change because of each cutting method, immediately after harvest. This information was then related to the number of acres of each ERU proposed for treatment under each alternative to complete the state-and-transition model inputs.

Model outputs include the number of acres treated per year by state class and cutting method. The 100-year model run output files were used to summarize each of the first two decades.

Projected Timber Sale Quantity and Projected Wood Sale Quantity

To calculate PTSQ and PWSQ, the same state-and-transition model output files and summarization process described previously was used. The number of acres of each prescribed cutting method by vegetation type and pre-treatment conditions were entered into a Microsoft Excel calculator built by Regional Office staff (Weisz et al. 2011). This calculator tool contains volume coefficients coming from the FVS model outputs previously described.

Limitations

The FVS model it is not directly sensitive to future fluctuations in the climatic variables that influence tree growth, such as temperature patterns, rainfall patterns, and atmospheric carbon dioxide levels. Instead, growth is estimated by relationships between the tree's size, crown ratio and position in the stand that are based on equations developed from field-collected data (Crookston and Dixon 2005).

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Appendix G. Crosswalk between At-Risk Species Needs and Plan Components

Introduction

Gila National Forest planning staff have identified 72 at-risk species. Fifteen of these species are federally listed under the Endangered Species Act, and 57 species have been identified at species of conservation concern. Because the plan components for at-risk species are integrated throughout multiple resource sections in the forest plan, the full scope of the plan direction for any one species may not be evident when looking only at the Wildlife, Fish, and Plants section.

Most of the coarse-filter plan components address threats, support healthy upland ecological conditions, or both, as aquatic ecological processes are integrated within watersheds. Some plan components, such as those listed for Community and Tribal Relationships that incorporate indigenous knowledge, provide indirect support because the strong relationships, shared understanding and value for species contributes to better and more efficient development, implementation, and monitoring of projects intended to contribute to species persistence. Activities and projects that do not maintain or make progress toward desired conditions would not be consistent with the plan.

This crosswalk displays forest plan guidance intended to provide the ecological conditions necessary for the persistence of identified at-risk species and address the ecological conditions needed to fulfill their life history requirements and the activities that may affect them. Where habitat needs and threats to an at-risk species' persistence are not fully addressed by the coarse-filter, then species-specific or guild-specific plan components were developed for resources and activities. The guild approach groups of species that use the same classes of ecological resources in a similar way and helps to reduce redundancy. These species-specific and guild-specific plan components are referred to as fine-filter components. The coarse-filter/fine-filter approach for developing plan components improves conditions not just for at-risk species, but for a variety of other common and uncommon species dependent upon those same ecological conditions.

Some issues and threats to at-risk species are not within the control of the forest plan such as illegal or non-compliant activities; these activities are implementation and enforcement issues, not planning issues. Habitat degradation due to unauthorized or excess use would not be compliant with the plan and is an implementation and enforcement issue rather than a planning issue. However, plan components for uses such as livestock grazing, recreation, roads, minerals, facilities, lands and realty, and vegetation management provide constraints on activities and objectives support progress toward the plan's desired conditions and the ecological conditions required by at-risk species.

Reduced water availability due to water diversions is mostly outside the jurisdiction of the agency, as water allocation and use is governed by the New Mexico Office of the State Engineer. The Forest Service does retain some water rights and manages it for beneficial use. Reduced water sources due to drought and climate change are addressed to the extent practicable by plan components and other plan content that:

- Sustain fundamental ecosystem and watershed processes (Soils; Watersheds; Water Quality; Riparian and Aquatic Ecosystems; Wildlife, Fish, and Plants; Minerals; Roads; Sustainable Recreation; Timber, Forest, and Botanical Products; All Upland Ecological Response Units; and Livestock Grazing plan components).
- Maintain and enhance water quality (Soils; Watersheds; Water Quality; Riparian and Aquatic Ecosystems; Wildlife, Fish, and Plants; Minerals; Roads; Sustainable Recreation; Timber, Forest,

and Botanical Products; Livestock Grazing; and All Upland Ecological Response Units plan components).

- Maintain and enhance species and habitat structural diversity over a range of sites and conditions (Soils; Watersheds; Riparian and Aquatic Ecosystems; and Wildlife, Fish, and Plants).
- Reduce the risk and long-term impacts of severe disturbances (desired conditions and objectives for Soils; Watersheds; Riparian and Aquatic Ecosystems; Water Quality; and Ecological Response Units; desired conditions, standards and guidelines for Timber, Forest, and Botanical Products; and Wildland Fire and Fuels Management).
- Reduce the risk of biological stressors adaptive management and plan components that address epidemic levels of forest health agents, other insects, disease agents and pathogens, and non-native species (plan components for Upland Ecological Response Units; Riparian and Aquatic Ecosystems; Non-native Invasive Species; Timber, Forest, and Botanical Products; and Wildlife, Fish, and Plants).
- Promote aquatic habitat connectivity (Soils; Watersheds; Water Quality; Riparian and Aquatic Ecosystems; Wildlife, Fish, and Plants; Minerals; Roads; Sustainable Recreation; Timber, Forest, and Botanical Products; All Upland Ecological Response Units; and Livestock Grazing plan components).
- Promote the creation and maintenance of refugia (Riparian and Aquatic Ecosystems 4th and 5th Level Desired Condition 6).

Climate Considerations

Plan components that support resilient and resistant ecosystems and watersheds would protect species from the harmful effects of climate change. These plan components should positively influence all species when implemented through site-specific projects across the forest and improve the ability of wildlife species to adapt to changing conditions.

While plan components do not specifically address facilitating community adjustments through species transitions as the result of climate change, it does provide the flexibility and latitude to address these issues through collaboration with the U.S. Fish and Wildlife Service, New Mexico Department of Game and Fish, other national forests and other state and federal agencies. More information about how the plan addresses the threats posed by climate change can be found in the plan management approach Change and Uncertainty.

Adaptive management will be essential to effectively manage for climate change and associated impacts from disturbance events and invasive species in changing and uncertain conditions. The monitoring plan is designed to better inform the effects and effectiveness of management and progress towards desired conditions. It also better recognizes and addresses the negative effects non-native invasive species and disease can have on ecosystem integrity and biological diversity. Direction for invasive species was updated and expanded to recognize the threats to ecosystem resilience from all non-native invasive aquatic and terrestrial plants and animals likely to cause harm to ecosystems. Finally, climate change may push rare and endemic species to the limits of their range and evolutionary capacity. This is expected to be especially significant in the Southwest, an area already affected by long-term drought. The proposed action recognizes and includes plan components to help address that threat and to reduce the risk of loss of the ecological conditions important for federally listed species.

Abbreviations

The following abbreviations are used to identify plan components and limit length. A lower case “s” following any of these abbreviations in the plan’s text is plural.

DC – desired condition

LS-DC – landscape-scale desired condition

MS-DC – mid-scale desired condition

FS-DC – fine-scale desired condition

WS-DC – watershed-scale desired condition

Federally Listed Species

The key standard in the plan that provides for all federally listed species is Wildlife, Fish, and Plants Standard 4 that specifically incorporates approved recovery plans by reference. This standard both reinforces the forest's legal obligations to the Endangered Species Act and ensures that the plan direction remains current with the most recent recovery plans. Plan direction supporting federally listed species is in addition to those legal obligations to the Endangered Species Act that establishes protections for fish, wildlife, and plants that are listed as threatened or endangered.

Overall, the plan would not permanently degrade any primary constituent elements or physical and biological features for critical habitat for federally listed species. Desired conditions, standards, and guidelines should reduce the probability of habitat loss or degradation that could occur due to stochastic events such as large wildfires, drought, wind, insect infestations, and disease epidemics.

Amphibians and Reptiles

Chiricahua leopard frog

Chiricahua leopard frog (*Lithobates chiricahuensis*) is federally listed as threatened with designated critical habitat in the Gila National Forest. Chiricahua leopard frogs prefer habitat with a variety of structure and cover, including emergent and submergent vegetation, overhanging banks, and organic debris (Degenhardt et al. 1996). Although they can survive drought by burrowing in the mud, they require a perennial source of running or standing water in the form of streams, springs, stock tanks, ponds, or lakes (USDI FWS 2007a). Threats include disease particularly chytrid fungus, reduced water sources due to habitat degradation, recreation, or other factors altering hydrologic function, climate change and predation from non-native aquatic species (USDI FWS 2007a).

Narrow-headed gartersnake

The narrow-headed gartersnake (*Thamnophis rufipunctatus*) is federally listed as threatened with designated critical habitat in the Gila NF. It often occurs along well-lit sections of rocky streams with abundant riparian vegetation. In New Mexico, it feeds exclusively on fish (NatureServe 2016). Threats include direct predation from non-native aquatic species, competition by non-native fish, and loss of riparian habitat, recreation uses, and climate change.

Northern Mexican gartersnake

The northern Mexican gartersnake (*Thamnophis eques megalops*) is federally listed as threatened. There is no designated or proposed critical habitat on the Gila National Forest; however, there is approximately 1,132 acres of designated critical habitat adjacent to the forest. This snake is strongly associated with permanent water with vegetation, including stock tanks, ponds, lakes, cienegas, cienega streams, and riparian woods (Degenhardt et al. 1996, Manjarrez 1998). The diet of this species includes fishes, amphibians, earthworms, leeches, and various small animals (NatureServe 2016). Threats include loss of streams, wetlands, and riparian zones through water diversions, drought, and climate change, decline of native fish, and predation or competition from non-native aquatic species.

Table G-1. Plan components that address ecological condition and threats for federally listed amphibians and reptiles. Plan components and management approaches listed in the crosswalk tables are included verbatim in the final section of this appendix for ease of reference.

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8 All Upland ERUs- LS DCs 1, 2, 4, and 5 Caves and Abandoned Mine Lands- DC 5 Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC 2 Lands and Realty- DCs 1, 2, 4, 7, 9, 10, and 11 Livestock Grazing- DCs 2–4 Minerals- DCs 1, 2 and 4 Non-native Invasive Species- DCs 1–3 Renewable Energy- DC 1 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DCs 2–7; 6 th Level WS DCs 1, 2, and 4–9; FS DCs 1 and 2 Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12 and 15–17 Timber, Forest, and Botanical Products- DC 1 Water Quality- DC1 Watersheds- All DCs Water Uses- DCs 1 and 2 Wildland Fire and Fuels Management- DCs 1 and 6–9	Air Quality- Guideline 4 All Upland ERUs- Standards 2–4 Facilities- Standards 1 and 2, Guideline 2 Lands and Realty- Guidelines 5 and 8 Livestock Grazing- Objective 1 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Objectives 1 and 2, Standards 3–8, 10–12 and 15–18, Guidelines 1, 2, 5–9 and 11 Renewable Energy- Standard 2 Riparian and Aquatic Ecosystems- Objective 1 Roads- Objective 1, Standards 1–3, Guidelines 1, 5 and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Standards 3 and 4 Timber, Forest, and Botanical Products- Standards 1, 3, 4, 10, Guidelines 3 and 6 Watersheds- Objectives 1 and 2, Standards 1 and 2, Guidelines 1 and 2 Wildland Fire and Fuels Management- Standard 2, Guidelines 1–3 Wildlife, Fish, and Plants- Guideline 11	All Upland ERUs- LS DCs 7 and 8 Non-native Invasive Species- Objectives 3 and 4, Standards 1 and 2, Guidelines 4, 10, and 12 Livestock Grazing- Standards 1–3, Guidelines 1 and 3–5 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DC 1, 6 th Level WS DC 3, Standards 1–3, Guidelines 1–5 Roads- Guidelines 2 and 3 Sustainable Recreation- Guidelines 4, 5, 7, 9, and 12–16 Timber, Forest, and Botanical Products- Standard 11 Wildland Fire and Fuels Management- Standards 3 and 4 Wildlife, Fish, and Plants- DCs 1–7, and 9–11, Objectives 1–4, Standards 1 and 4, Guidelines 4–6, 9, 13, and 14

Ecological Conditions

The plan provides for the ecological conditions required by these federally listed amphibian and reptiles most directly through the Wildlife, Fish, and Plants; Watershed; Riparian and Aquatic Ecosystem; Water Quality and Water Uses coarse-filter plan components, listed in the table above. The objectives direct management for activities that would make progress toward desired conditions.

Riparian and Aquatic Ecosystems 6th Level Watershed Scale Desired Condition 3 provides an important fine-filter for the Chiricahua leopard frog (floodplain and streambank conditions that support burrowing) and the narrow-headed gartersnake (well-lit floodplain sections of rocky stream corridors). Plan components for Wildlife, Fish, and Plants identified in the table above also provide for the ecological conditions these species require, including prey abundance and predator-prey interactions.

Threats

Multiple plan components address the threats posed by disease agents such as chytrid fungus, including Non-native Invasive Species Standard 1, Riparian and Aquatic Ecosystems Standard 2, Wildland Fire and Fuels Management Desired Condition 9, and Wildlife, Fish, and Plants Guideline 9. Most importantly, and as mentioned in the biological opinion (dated September 14, 2022), the plan proposes to: “Implement at least 20 activities that contribute to the recovery of federally listed species of each 10-year period.” This objective will help address the site-specific needs and make progress toward desired conditions.

The plan components will help maintain primary constituent elements for critical habitat for Chiricahua leopard frog by protecting and enhancing aquatic breeding sites. Plan components also support primary constituent elements for narrow-headed gartersnake, such as maintaining a prey base and habitat connectivity. For northern Mexico garter snake, plan components support habitat conditions for controlling non-native species that cause predation and competition.

The primary needs for the Chiricahua leopard frog would be provided for through plan components can be found under the Watershed, Water Quality, Riparian and Aquatic Ecosystems, All Upland ERUs, Non-native Invasive Species, and Wildlife, Fish, and Plants, Dispersed and Developed Recreation, and Facilities plan sections of the proposed plan. Additional plan components, which balance multiple use with wildlife needs, can be found under the Wildland Fire and Fuels Management; Water Uses; Livestock Grazing; Timber, Forest, and Botanical Products; Roads; Minerals; and Dispersed Recreation sections. However, the entirety of the proposed forest plan provides for the ecological conditions needed for the Chiricahua leopard frog within the plan area.

Threats posed by direct predation by or competition with non-native aquatic species are addressed by Non-native Invasive Species Desired Condition 1, objectives for Non-native Invasive Species and Wildlife, Fish, and Plants, as well as desired conditions for native biodiversity in the All Upland Ecological Response Unit and Wildlife, Fish, and Plants sections of the plan as identified in Table G-1. These plan components, and those providing for the ecological conditions necessary to support native fish identified in subsequent sections of this appendix also address the threat of losing the native fish populations, which are the primary prey of the narrow-headed gartersnake.

Birds

Mexican spotted owl

The Mexican spotted owl (*Strix occidentalis lucida*) is federally threatened species and has designated critical habitat on the Gila National Forest. This species is non-migratory and feeds primarily on small mammals. The Mexican spotted owl requires a variety of mixed conifer habitats, proximity to canyons and riparian areas, old growth structural elements such as old and large trees and standing snags for

roosting and nesting, as well as cliffs, and rocky features. The owl will also use desert caves (USDI FWS 2012). Timber management activities negatively affected habitat before the Mexican spotted owl was listed as threatened in 1995. Thinning, prescribed burning, and other management activities are designed following the most current approved recovery plan, along with consultation with the USFWS. These management activities can still have disturbance effects to the Mexican spotted owl and its habitat. The most substantial current and potential future threats to the owl include habitat alteration and destruction due to high-intensity, landscape-scale wildland fire and long-term drought and habitat changes resulting from climate change (USDI FWS 2023b).

Table G-2. Plan components (coarse- and fine-filter) that address ecological condition and threats for the Mexican spotted owl

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8 All Upland ERUs- LS DCs 1–5 Spruce-Fir Forest ERU- All DCs Mixed Conifer with Aspen ERU- All DCs Mixed Conifer-Frequent Fire ERU- All DCs Ponderosa Pine Forest ERU- All DCs Ponderosa Pine-Evergreen Oak ERU- All DCs Caves and Abandoned Mine Lands- DCs 1–5 Cliffs and Rocky Features- DC 2 Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC2 Lands and Realty- DC 1, 2, 4, 7, 9, 10 and 11 Livestock Grazing- DCs 2–4 Minerals- DCs 1, 2 and 4 Non-native Invasive Species- DCs 1 and 2 Renewable Energy- DC 1	Air Quality- Guideline 4 All Uplands ERUs- Standards 2–4, Guideline 1 Spruce-Fir Forest ERU- Objective 1 Mixed Conifer with Aspen ERU- Objective 1 Mixed Conifer-Frequent Fire ERU- Objective 1 Ponderosa Pine Forest ERU- Objective 1 Ponderosa Pine-Evergreen Oak ERU- Objective 1 Caves and Abandoned Mine Lands- Standard 1 and Guidelines 1 and 3 Facilities- Standard 2, Guideline 1 Lands and Realty- Guidelines 5 and 8 Livestock Grazing- Objective 1, Standards 1–3, Guidelines 1, 3–5, and 8 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Objectives 1 and 2, Standards 1, 3–8, 10–12 and 15–18, Guidelines 2, 5–9 and 11	All Upland ERUs- DCs 7 and 8 Mixed Conifer with Aspen ERU- FS DCs 1–2 Caves and Abandoned Mine Lands- Standard 2 and Guideline 2 Cliffs and Rocky Features- Guidelines 2–4 Facilities- Guideline 6 Non-native Invasive Species- Guideline 4 Renewable Energy- Standard 1 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DC 1 Roads- Standard 1 Sustainable Recreation- Guidelines 5 and 9 Timber, Forest, and Botanical Products- Standard 11 Wildlife, Fish, and Plants- DCs 1–7, and 9–11, Objective 3, Standard 4, Guidelines, 9, 13, and 14 Utilities Management Area- Guideline 4

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DCs 2-7; All 6 th Level WS DCs; FS DCs 1 and 2 Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12 and 15–17 Timber, Forest, and Botanical Products- DCs 1, 2d and e Water Quality- DC 1 Watersheds- All DCs Wildland Fire and Fuels Management- DCs 1. 6–9	Renewable Energy- Standard 2 Riparian and Aquatic Ecosystems- Objective 1, Standards 1 and 3, Guidelines 1–5 Roads- Objective 1, Standards 2 and 3, Guidelines 1, 3, 5 and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Standards 3 and 4, Guidelines 4, 7 and 12–16 Timber, Forest, and Botanical Products- Standard 1 and 6, Guidelines 3–7 Watersheds- Objectives 1 and 2, Standards 1 and 2, Guidelines 1 and 2 Wildland Fire and Fuels Management- Standards 2-4, Guidelines 1–3 Wildlife, Fish, and Plants- Objectives 1, 2, 4 and 5, Standard 1, Guidelines 5, 9, 11, 13 and 14	

Ecological Conditions

Healthy ecosystems support a healthy prey base for the Mexican spotted owl, which is addressed by the coarse-filter plan components identified in Table G-2. Plan components for Wildlife, Fish, and Plants identified in the table also provide for the ecological conditions the owl requires, including prey abundance and predator-prey interactions. Management would be directed toward maintaining or moving toward these desired conditions.

The desired conditions for upland ecological response units provide a variety of mixed conifer habitats with old-growth structural elements to provide for the ecological conditions required by the Mexican spotted owl now, as well as recruitment of replacement habitat over time. The desired condition for seral state proportion (All Upland Ecological Response Units Landscape Scale DC3) is integral to sustaining old-growth structural elements over time. Seral states describe combinations of canopy cover, tree size class, and number of canopy layers. Individual ecological response unit desired conditions for old and large trees, coarse woody debris, snags, and structural complexity provide additional support for these habitat requirements. The Riparian and Aquatic Ecosystems desired conditions provide similar ecological conditions in riparian habitats important to the owl. Plan components in the Cliffs and Rocky Features, and Caves and Abandoned Mine Lands sections of the plan also address roosting and nesting habitat.

Threats

Desired conditions for upland and riparian vegetation communities include seral state proportion and plan objectives would generate movement toward desired conditions. Objectives for upland ecological response units include thinning and prescribed burning. These objectives are intended to reduce the risk of stand-replacement wildfire. Those projects implementing these objectives would be designed following the most current approved recovery plan, along with consultation with the USDI FWS. While these management activities would reduce the risk of habitat loss, they may result in disturbance effects to the Mexican spotted owl and its habitat.

The Gila tries to suppress or mitigate any high-severity fire in mixed conifer with aspen to keep as much as possible in large, closed-canopy state and get to desired condition acreages. Overall, there would be an abundance of nest and roost habitat across the forest between all ERUs used for nesting/roosting. The entirety of the proposed forest plan provides for the ecological conditions needed for Mexican spotted owl and promotes the conservation and recovery of the species. Plant components provide the primary needs for Mexican spotted owl and critical habitat in ERUs, specifically the desired conditions for mixed conifer with aspen, mixed conifer with frequent fire, and ponderosa pine forest, wildfire, fuels, and the livestock grazing program areas. Primary constituent elements would be maintained by plan components, including a range of tree species, large snags, and large downed woody debris.

Additionally, the plan includes several old-growth protections. Specifically, that the amount, distribution and connectivity of old-growth forest conditions are maintained and improved relative to the existing condition over time, recognizing that old-growth forest conditions are dynamic in nature and shift on the landscape over time because of succession and disturbance. The long-term abundance, distribution, and resiliency of old-growth conditions contribute to the overall ecological integrity of ecosystems and watersheds.

Southwestern willow flycatcher

Southwestern willow flycatcher (*Empidonax traillii extimus*) is federally listed as endangered and has designated critical habitat on the Gila National Forest. This species relies on dense riparian areas, usually dominated by willow species (forest and shrub riparian vegetation communities). Threats include degradation of riparian habitat through the loss willow and cottonwood density and recruitment, reduction in instream flow due to drought or water diversions for agricultural use, climate change, excess livestock use, large extents of high-intensity fire, recreation, noise, invasive species encroachment, and nest parasitism by the brown-headed cowbird (USDI FWS 2013).

Western yellow-billed cuckoo

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is federally listed as threatened west of the Rio Grande (distinct population segment), and critical habitat has been designated on the Gila National Forest. Western yellow-billed cuckoo inhabits dense riparian habitat greater than 200 acres (81 hectares) in size and below 7,000 elevational feet in the western United States (USDI FWS 2014b). Western yellow-billed cuckoo has been documented on the Gila National Forest. Ecosystems that could support western yellow-billed cuckoo are forest, shrub, and scrub riparian below 7,000 elevational feet, and include narrowleaf cottonwood-shrub habitat. The major threat faced is degradation of riparian habitat through the loss of cottonwood density and recruitment, reduction in instream flow due to drought or water diversions for agricultural use, climate change, excess livestock use, large extents of high-intensity fire, recreation, noise, and invasive species encroachment.

Table G-3. Plan components (coarse- and fine-filter) that address ecological condition and threats for the southwestern willow flycatcher, western yellow-billed cuckoo, and other neotropical migratory birds

Desired Conditions (Coarse Filter)	Objectives, Standards, and Guidelines (Coarse Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8 All Upland ERUs- LS DCs 1, 2, 4, and 5 Caves and Abandoned Mine Lands- DC 5 Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC 2 Lands and Realty- DCs 1, 2, 4, 7, 9, 10, and 11 Livestock Grazing- DCs 2–4 Minerals- DCs 1, 2 and 4 Non-native Invasive Species- DCs 1–3 Renewable Energy- DC 1 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DCs 2-7; 6 th Level WS DCs 1-3 and 5–9; FS DCs 1 and 2 Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12 and 15–17 Timber, Forest, and Botanical Products- DC 1 Water Quality- DC1 Watersheds- All DCs Water Uses- DCs 1 and 2 Wildland Fire and Fuels Management- DCs 1 and 6–10	Air Quality- Guideline 4 All Uplands ERUs- Standards 2-4 Facilities- Standards 1 and 2, Guideline 2 Lands and Realty- Guidelines 5 and 8 Livestock Grazing- Objective 1 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Objectives 1 and 2, Standards 3-8, 10–12 and 15–18, Guidelines 2, 5-9 and 11 Renewable Energy- Standard 1 Riparian and Aquatic Ecosystems- Objective 1 Roads- Objective 1, Standards 1-3, Guidelines 1, 5 and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Standards 3 and 4 Timber, Forest, and Botanical Products- Standards 1, 3, 4, 10, Guidelines 3 and 6 Watersheds- Objectives 1 and 2, Standards 1 and 2, Guidelines 1 and 2 Wildland Fire and Fuels Management- Standard 2, Guidelines 1–3 Wildlife, Fish, and Plants- Guideline 11	All Upland ERUs- LS DCs 7 and 8 Facilities- Guideline 6 Non-native Invasive Species- Objectives 3 and 4, Standards 1 and 2, Guidelines 4, 10, and 12 Livestock Grazing- Standards 1-3, Guidelines 1 and 3-5 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DC 1, 6 th Level WS DC 4, Standards 1–3, Guidelines 1–5 Roads- Guidelines 2 and 3 Sustainable Recreation- Guidelines 4, 5, 7, 9, and 12–16 Timber, Forest, and Botanical Products- Standard 11 Wildland Fire and Fuels Management- DC 10, Standards 3 and 4 Wildlife, Fish, and Plants- DCs 1–7, and 9–11, Objectives 2–4, Standards 1 and 4, Guidelines 4–6, 9, 13, and 14

Ecological Conditions

A diversity of riparian habitats is included in the Wildlife, Fish, and Plants; Watersheds; and Riparian and Aquatic Ecosystem desired conditions, including the dense riparian forest, shrub and scrub vegetation communities these species require. Management would be directed toward maintaining or making progress toward these desired conditions that address threats and support healthy upland ecological conditions.

Primary constituent elements for southwestern willow flycatcher would be maintained by plan components. Trees and shrubs, particularly willow, would be maintained in addition to dense riparian vegetation and a variety of insect prey populations. Primary constituent elements for western yellow-billed cuckoo would be maintained, which include mesquite bosques, desert scrub and grasslands, and evergreen woodland drainages, in addition to adequate prey base.

Threats

Riparian habitat loss is the primary threat to both southwestern willow flycatcher and western yellow-billed cuckoo and is caused in large part due to drought. Nest parasitism by brown-headed cowbirds continues to be a threat, but the plan has very limited ability to address it. While tamarisk does provide suitable habitat for nesting, there are concerns about its overall recovery value as it has increased fire regimes that are detrimental to nesting habitat.

Objectives for upland ecological response units would reduce the risk of large extents of high-intensity wildfire. Plan direction in the Sustainable Recreation section would also help avoid and mitigate impacts. However, there may be additional conservation measures identified through consultation with the U.S. Fish and Wildlife Service at the project level, which is also where noise impacts would generally be addressed. Nest parasitism is a natural predator-prey interaction that has very limited plan management control. The threat posed by invasive species is addressed in the Non-native Invasive Species section of the plan and by Wildlife, Fish, and Plants desired conditions and objectives.

Fish

Chihuahua chub

The Chihuahua chub (*Gila nigrescens*) is federally listed as threatened with no designated critical habitat in the Gila National Forest. Populations in the lower sections of the Mimbres River are located primarily upon lands managed by The Nature Conservancy and New Mexico Game and Fish. The Mimbres River at Cooney Canyon and McKnight Creek populations are on Gila NF lands. Efforts are ongoing to establish a population in McKnight Creek. Although they can be found in various types of habitats, Chihuahua chub tend to be habitat specialists and prefer areas with organic debris and root wads of large trees for cover. They prefer habitat with deep pools with undercut banks, overhanging vegetation, logs, boulders, backwater pools with woody debris that are adjacent to moderate to fast-flowing water (USDI FWS 1986 and 2007b). Threats include changes in water flow and sediment regimes, as well as changes in stream channel shape and function from large extents of stand-replacement wildfire in the uplands, excess livestock use, water diversions for agricultural use, drought, climate change, and hybridization with and competition or predation by non-native fishes.

Gila chub

Gila chub (*Gila intermedia*) is federally listed as endangered with designated critical habitat in the Gila National Forest. There is taxonomic uncertainty within the group of species of the Gila River basin within the genus *Gila* (also contains headwater and roundtail chubs), which may affect the listing status of Gila chub in the future. Gila chub commonly inhabit pools in smaller streams, springs, and cienegas (a desert wetland), and can survive in small artificial impoundments, such as human-made ponds (Miller 1945;

Minckley 1973; Rinne 1975). Gila chub are highly secretive, preferring quiet, deeper waters, especially pools, or remaining near cover including terrestrial vegetation, boulders, and fallen logs (Minckley 1973). Threats include changes in water flow and sediment regimes, as well as changes in stream channel shape and function from large extents of stand-replacement wildfire in the uplands, excess livestock use, water diversions for agricultural use, drought, climate change, and hybridization with and competition or predation by non-native fishes.

Gila trout

Gila trout (*Oncorhynchus gilae*) are federally listed as threatened with no designated critical habitat in the Gila National Forest. Gila trout is a cold-water species found in moderate- to high-gradient perennial mountain streams above 1,660 meters (5,400 feet) elevation. Streams typically flow through narrow, steep-sided canyons and valleys. Gila trout require well-oxygenated water; coarse sand, gravel and cobble substrate, stable stream bank conditions and water temperatures below 77 degrees Fahrenheit (as cited in the Framework for Streamlining Consultation on Livestock Grazing Activities 2015). Abundant invertebrate prey, deep pools and cover, and water free from contaminants are also required. Cover typically consists of undercut banks, large woody debris, exposed root masses of trees at water's edge, and overhanging vegetation (USDI FWS 2022a). Threats include changes in water flow and sediment regimes, as well as changes in stream channel shape and function from large extents of stand-replacement wildfire in the uplands, excess livestock use, water diversions for agricultural use, drought, climate change, and hybridization with and competition or predation by non-native salmonid fishes.

Loach minnow

The loach minnow (*Tiaroga cobitis*) is federally listed as endangered with designated critical habitat in the Gila National Forest. It is endemic to the Gila River basin. Loach minnows are found in perennial streams in shallow, turbulent riffles and moderate to swift currents with cobble substrates (USFWS 2012b). The loach minnow uses the spaces between, in the sheltered side of rocks for resting and spawning (USFWS 2012b). This species is rarely found or absent where fine sediments fill these interstitial spaces (USFWS 2012b). Recurrent flooding is important in keeping substrate free of sediments and in helping this species maintain a competitive edge over invading non-native fishes (NatureServe 2015). Threats include changes in water flow and sediment regimes, as well as changes in stream channel shape and function from large extents of stand-replacement wildfire in the uplands, excess livestock use, water diversions for agricultural use, drought, climate change, and hybridization with and competition or predation by non-native fishes.

Rio Grande cutthroat trout

The Rio Grande cutthroat trout (*Oncorhynchus clarkia virginalis*) is a candidate for listing under the Endangered Species Act and is only known to occur in the Gila National Forest in the Holden Prong and Animas Creek drainages on the east side of the Black Range Mountains. This species requires clear, cold water with pools and runs that have clean gravel substrates (USDI FWS 2014). Habitat needs are similar to Gila trout. Threats include changes in water flow and sediment regimes, as well as changes in stream channel shape and function from large extents of stand-replacement wildfire in the uplands, excess livestock use, water diversions for agricultural use, drought, climate change, and hybridization with and competition or predation by non-native fishes.

Spikedace

The spikedace (*Meda fulgida*) is federally listed as endangered with designated critical habitat in the Gila NF. Spikedace occupy mid-water habitats usually less than 1 meter (3 feet) deep, with slow to moderate water velocities over sand, gravel, or cobble substrates (Propst and Bestgen 1986, NatureServe 2015). Threats include changes in water flow and sediment regimes, as well as changes in stream channel shape

and function from large extents of stand-replacement wildfire in the uplands, excess livestock use, water diversions for agricultural use, drought, climate change, and competition or predation by non-native fishes.

Table G-4. Plan components (coarse- and fine-filter) that address ecological condition and threats for federally listed fishes

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8 All Upland ERUs- LS DCs 1, 2, 4, and 5 Caves and Abandoned Mine Lands- DC 5 Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC 2 Lands and Realty- DCs 1, 2, 4, 7, 9, 10, and 11 Livestock Grazing- DCs 2–4 Minerals- DCs 1, 2 and 4 Non-native Invasive Species- DCs 1–3 Renewable Energy- DC 1 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DCs 2–7; 6 th Level WS DCs 1, 2, and 4–9; FS DCs 1 and 2 Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12 and 15–17 Timber, Forest, and Botanical Products- DC 1 Water Quality- DC1 Watersheds- All DCs Water Uses- DCs 1 and 2 Wildland Fire and Fuels Management- DCs 1 and 6–10	Air Quality- Guideline 4 All Uplands ERUs- Standards 2–4 Facilities- Standards 1 and 2, Guideline 2 Lands and Realty- Guidelines 5 and 8 Livestock Grazing- Objective 1 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Objectives 1 and 2, Standards 3–8, 10–12 and 15–18, Guidelines 2, 5–9 and 11 Renewable Energy- Standard 2 Riparian and Aquatic Ecosystems- Objective 1 Roads- Objective 1, Standards 1-3, Guidelines 1, 5 and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Standards 3 and 4 Timber, Forest, and Botanical Products- Standards 1, 3, 4, 10, Guidelines 3 and 6 Watersheds- Objectives 1 and 2, Standards 1 and 2, Guidelines 1 and 2 Wildland Fire and Fuels Management- Standard 2, Guidelines 1–3 Wildlife, Fish, and Plants- Guideline 11	All Upland ERUs- LS DCs 7 and 8 Non-native Invasive Species- Objectives 3 and 4, Standards 1 and 2, Guidelines 4, 10, and 12 Livestock Grazing- Standards 1-3, Guidelines 1 and 3–5 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DC 1, 6 th Level WS DC 3, Standards 1–3, Guidelines 1–5 Roads- Guidelines 2 and 3 Sustainable Recreation- Guidelines 4, 5, 7, 9, and 12–16 Timber, Forest, and Botanical Products- Standard 11 Wildland Fire and Fuels Management- DC 10, Standards 3 and 4 Wildlife, Fish, and Plants- DCs 1–7, and 9–11, Objectives 2–4, Standards 1 and 4, Guidelines 4–6, 9, 13, and 14

Ecological Conditions

The ecological conditions these federally listed fishes require are provided for most directly by the Watershed, Riparian and Aquatic Ecosystem, Water Quality and Water Uses coarse-filter plan components listed in Table G-4. Management would be directed toward maintaining or moving toward these desired conditions.

Most other coarse-filter plan components address threats, support healthy upland ecological conditions, or both, as aquatic ecological processes are integrated within watersheds. Plan components for Wildlife, Fish, and Plants identified in the table above also provide for the ecological conditions these species require, including habitat supporting prey abundance and predator-prey interactions.

Threats

Objectives for upland ecological response units would reduce the risk of large extents of stand-replacement fire and the threat of changes in water flow and sediment regimes, and channel shape and function.

The primary threat to all fish species is habitat loss due to drought, stream dewatering and altered channel morphology. Poor watershed conditions due to increased sedimentation as a result of overgrazing, mining, vegetation management and fire suppression activities are also a concern. Predation and competition from non-native species such as bull frog and crayfish are additional threats. The plan components emphasize the protection of aquatic habitats and the preservation of native species.

Primary constituent elements that are specifically managed for the Gila chub include perennial pools, specific water temps and quality for spawning, adequate food base, habitat devoid of non-native species, and streams that maintain natural flow patterns.

Loach minnow primary constituent elements that are managed for are habitat support for all life stages with specific perennial flow velocities and stream gradients, abundant insect food base, low levels of pollutants, connectivity, lack of non-native species, and natural flow regimes.

Primary constituent elements for spikedace that are addressed by plan components are habitat to provide for all life stages, stream velocities and microhabitat types with appropriate substrate, water temperatures, insect food base, low levels of pollutants, perennial flows and connectivity, low to no presence of non-native aquatic species, and streams with natural flow regimes.

Invertebrates

Monarch butterfly

The monarch butterfly (*Danaus plexippus*) is currently considered a candidate species for listing under the Endangered Species Act. It traverses the Gila National Forest during its annual migration to its wintering grounds in Mexico and California but is not known to breed here. The monarch butterfly occurs in habitats that have milkweed or flowering plants. Milkweed plants are essential for breeding as the butterfly will only lay its eggs on milkweed plants. Threats to the monarch butterfly include loss and degradation of habitat from the conversion of grasslands to agriculture, herbicides, insecticides, logging at overwintering sites in Mexico, urban development, drought, and climate change (USDI FS 2020a).

Table G-5. Plan components (coarse- and fine-filter) that address ecological condition and threats for the monarch butterfly

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8 All Grassland ERUs- All LS DCs, MS DCs 1–3, All FS DCs All Upland ERUs- LS DCs 1–5 Community and Tribal Relationships- DCs 1, 4, and 5 Madrean Pinyon-Oak Woodland ERU- LS DCs 1 and 3, MS DCs 1, 6 and 7, FS DCs 1 and 4 Mixed Conifer with Aspen ERU- LS DCs 6 and 7, MS DCs 1 and 3, FS DC 2 Mixed Conifer-Frequent Fire ERU- LS DC 2 and 6, MS DC 6, FS DCs 2 and 3 Mountain Mahogany Mixed Shrubland ERU- MS All DCs Pinyon-Juniper Grass and Juniper Grass Woodland ERUs- LS DC 3, MS DC 2, FS DC 2 Pinyon Juniper Woodland ERU- LS DC 4, MS DC 3 Ponderosa Pine Forest ERU- LS DCs 2 and 7, MS DC6, FS DCs 2 and 3 Ponderosa Pine-Evergreen Oak ERU- LS DC 2 and 7, MS DC 6, FS DCs 2 and 3 Spruce-Fir Forest ERU- LS DCs 1, 5 and 6, MS DCs 1 and 3, FS DC 2 Lands and Realty- DCs 1, 2, 7, 9, 10, and 11 Livestock Grazing- DCs 2–4 Minerals- DC 1, 2 and 4 Non-native Invasive Species- DCs 1–3	Air Quality- Guideline 4 All Grassland ERUs- Objectives 1–3 All Uplands ERUs- Standards 2–4, Guideline 1 Mixed Conifer with Aspen ERU- Objective 1 Mixed Conifer-Frequent Fire ERU- Objective 1 Pinyon-Juniper Grass and Juniper Grass Woodland ERUs- Objectives 1 and 2 Ponderosa Pine Forest ERU- Objective 1 Ponderosa Pine-Evergreen Oak ERU- Objective 1 Spruce-Fir Forest ERU- Objective 1 Facilities- DC 2, Standard 2 Lands and Realty- Guidelines 5 and 8 Livestock Grazing- Objective 1, Standards 1 and 3, Guidelines 1 and 3–5 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Standards 1, 3–12, and 14–18, Guidelines 1, 2, and 4–9 Riparian and Aquatic Ecosystems- Objective 1, Standard 1, Guidelines 1, 4 and 5 Renewable Energy- Standard 2 Roads- Objective 1, Standards 1 and 3, Guidelines 1–3, 5 and 6	All Upland ERUs- LS DCs 7 and 8 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DC 1 Timber, Forest, and Botanical Products- Standards 10 and 11 Wildlife, Fish, and Plants- DCs 1–7, and 9–12, Standards 1 and 4, Guidelines 4, 5, and 9

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Renewable Energy- DC 1 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DCs 2-7; All 6 th Level WS DCs, All FS DCs Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12 and 15–17 Timber, Forest, and Botanical Products- DC 1 Watersheds- All DCs Wildland Fire and Fuels Management- DCs 1 and 6–10	Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Standards 3 and 4, Guidelines 4, 5, 7, 9, and 12–16 Timber, Forest, and Botanical Products- Standards 1, 3, and 4, Guideline 3 Watersheds- Objectives 1 and 2, Standards 1 and 2, Guidelines 1 and 2 Wildland Fire and Fuels Management- Standards 2–4, Guidelines 1 and 2 Wildlife, Fish, and Plants- Objective 3	

Ecological Conditions

Healthy ecosystems in a diversity of developmental stages provides the ecological conditions the monarch butterfly requires along its journey between Mexico and California. Plan components for upland Ecological Response Units and Riparian and Aquatic Ecosystems, along with the other supportive plan components identified in the table above provide for those conditions. Wildlife, Fish, and Plants Desired Condition 12 is a fine-filter plan component that specifically provides for the monarch butterfly and other at-risk pollinators.

Threats

National Forest System land status protects against the loss and degradation of monarch butterfly habitat that occurs when grasslands are converted to cropland and when wildlands are converted to urban and suburban development. Logging practices in Mexico are outside the jurisdiction of the agency and the scope of the forest plan. While the use of herbicides, insecticides, and other pesticides is allowed by the plan, it is heavily regulated. Plan standards and guidelines in the Non-native Invasive Species section provide baseline constraints to avoid or mitigate potential off-target effects to the monarch butterfly and other non-target species. Drought and climate change are addressed to the extent practicable by plan components. Habitat for native pollinator species is provided by plant community composition, structure and pattern across the forest as described in the desired conditions of each ERU.

Mammals

Mexican gray wolf

The Mexican gray wolf (*Canis lupus baileyi*) is federally listed as an endangered subspecies of gray wolf, considered an experimental, non-essential population in the Gila National Forest. The wolf does not require a specific vegetation type; however, it occurs above 4,500 feet elevation in ponderosa pine-

Gambel oak, riparian, juniper woodland and grassland habitats (USDI FWS 2022b). Threats include in-breeding, human harassment, illegal shooting, noise, small population size, and climate change.

Table G-6. Plan components (coarse- and fine-filter) that address ecological condition and threats for the Mexican gray wolf

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8 All Grasslands ERU- All DCs All Upland ERUs- LS DCs 1–5 Madrean Pinyon-Oak Woodland ERU- All DCs Mixed Conifer with Aspen ERU- All DCs Mixed Conifer-Frequent Fire ERU- All DCs Mountain Mahogany Mixed Shrubland ERU- All DCs Pinyon-Juniper Grass and Juniper Grass Woodland ERUs- All DCs Pinyon Juniper Woodland ERU- All DCs Ponderosa Pine Forest ERU- All DCs Ponderosa Pine-Evergreen Oak ERU- All DCs Caves and Abandoned Land Mines- DC 5 Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC 2 Lands and Realty- DCs 1, 2, 4, 7, 9, 10, and 11 Livestock Grazing- DCs 2–4 Minerals- DC 1 Non-native Invasive Species- DCs 1–3	Air Quality- Guideline 4 All Grassland ERUs- Objectives 1–3 All Uplands ERUs- Standards 2–4, Guideline 1 Mixed Conifer with Aspen ERU- Objective 1 Mixed Conifer-Frequent Fire ERU- Objective 1 Pinyon-Juniper Grass and Juniper Grass Woodland ERUs- Objectives 1 and 2 Ponderosa Pine Forest ERU- Objective 1 Ponderosa Pine-Evergreen Oak ERU- Objective 1 Spruce-Fir Forest ERU- Objective 1 Facilities- Standard 2, Guideline 2 Lands and Realty- Guidelines 5 and 8 Livestock Grazing- Objective 1, Standards 2 and 3, Guidelines 1, 3–5, and 8 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Standards 1, 3–12, and 14–18, Guidelines 1, 2, and 4–9 Roads- Objective 1, Standards 1 and 3, Guidelines 1–3, 5 and 6 Soils- All Standards, Guidelines and Objectives	All Upland ERUs- LS DCs 7 and 8 Livestock Grazing- Guideline 7 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DC 1 Timber, Forest, and Botanical Products- Standards 10 and 11 Wildlife, Fish, and Plants- DCs 1–7, and 9–11, Standards 1 and 4, Guidelines 4, 5, 9, 12, and 14

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Renewable Energy- DC 1 Riparian and Aquatic Ecosystems- All DCs Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12 and 15–17 Timber, Forest, and Botanical Products- DC 1 Watersheds- DC 1 Wildland Fire and Fuels Management- DCs 1 and 6–10	Sustainable Recreation- Standards 3 and 4, Guidelines 4, 5, 7, 9, and 12–16 Timber, Forest, and Botanical Products- Standards 1, 3, and 4, Guideline 3 Watersheds- Objectives 1 and 2, Standards 1 and 2, Guidelines 1 and 2 Wildland Fire and Fuels Management- Standards 2-4, Guidelines 1 and 2 Wildlife, Fish, and Plants- Objectives 1, 3, and 5	

Ecological Conditions

Healthy ecosystems support a healthy prey base for the Mexican gray wolf, which is addressed by the coarse-filter plan components identified in the table above. Plan components for Wildlife, Fish, and Plants identified in the table above also provide for the ecological conditions the wolf requires, including those that support prey abundance and predator-prey interactions. Management under the plan would maintain or make progress toward these desired conditions. Activities and projects that do not maintain or generate progress toward desired conditions would not be consistent with the plan.

Threats

In-breeding and small population size are threats being managed through recovery plan implementation and are outside the scope of the forest plan. Human harassment and illegal shooting are illegal and therefore a recovery plan implementation and enforcement issue, not a forest planning issue. Noise is generally addressed at the project level through consultation with the U.S. Fish and Wildlife Service. Threats posed by climate change are addressed by plan objectives for upland ecological response units that would reduce the risk of large, stand-replacement wildfires.

New Mexico meadow jumping mouse

The New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) is federally listed as endangered with no designated critical habitat on the Gila National Forest. This species occurs in mid-elevation riparian areas (wetland, forest, and shrub riparian) in the western United States and requires dense and tall herbaceous vegetation and perennial water. Threats include loss of suitable habitat through grazing in riparian and adjacent upland habitat, modification of flow through water use or human-made structures, and stand-replacing wildfire (USDI FWS 2023).

Table G-7. Plan components (coarse- and fine-filter) that address ecological condition and threats for the New Mexico meadow jumping mouse

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8v All Upland ERUs- LS DCs 1–5 Caves and Abandoned Land Mines- DC 5 Community and Tribal Relationships- DCs 1, 4, and 5 Lands and Realty- DCs 1, 2, 4, 7, 9, 10, and 11 Livestock Grazing- DCs 2–4 Minerals- DC 1 Non-native Invasive Species- DCs 1–3 Renewable Energy- DC 1 Riparian and Aquatic Ecosystems- All DCs (except 6 th Level WS DCs 3 and 6, which are addressed in fine-filter) Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12 and 15–17 Timber, Forest, and Botanical Products- DC 1 Watersheds- DC 1 Wildland Fire and Fuels Management- DCs 1 and 6–10	Air Quality- Guideline 4 All Uplands ERUs- Standards 2–4 Facilities- Standards 1 and 2, Guideline 2 Lands and Realty- Guidelines 5 and 8 Livestock Grazing- Objective 1, Guideline 8 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Objectives 1 and 2, Standards 1, 3–8, 10–12 and 15–18, Guidelines 2, 5–9 and 11 Renewable Energy- Standard 2 Riparian and Aquatic Ecosystems- Objective 1, Standards 1–3, Guidelines 1–5 Roads- Objective 1, Standards 1–3, Guidelines 1, 5 and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Standards 3 and 4, Guidelines 4 and 9 Timber, Forest, and Botanical Products- Standards 1, 3, 4, 10, Guidelines 3 and 6 Watersheds- Objectives 1 and 2, Standards 1 and 2, Guidelines 1 and 2 Wildland Fire and Fuels Management- Standard 2, Guidelines 1–3 Wildlife, Fish, and Plants- Guideline 11	All Upland ERUs- LS DCs 7 and 8 Non-native Invasive Species- Objectives 1 and 2, Guideline 4 Livestock Grazing- Standards 1–3, Guidelines 1 and 3–5 and 7 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DC 1, 6 th Level WS DCs 3 and 6 Roads- Guidelines 2 and 3 Sustainable Recreation- Guidelines 5, 7, and 12–16 Timber, Forest, and Botanical Products- Standard 11 Wildland Fire and Fuels Management- DC 10, Standards 3 and 4 Wildlife, Fish, and Plants- DCs 1–7, and 9–11, Objectives 2–4, Standards 1 and 4, Guidelines 4–6, 9, 13, and 14

Ecological Conditions

The ecological conditions for the mouse are provided for most directly by the Wildlife, Fish; and Plants; Watershed; Riparian and Aquatic Ecosystem; Water Quality; and Water Uses coarse-filter plan components listed in Table G-7. Management under the plan would maintain or make progress toward these desired conditions. Riparian and Aquatic Ecosystems 6th Level Watershed Desired Condition 3 provides a fine-filter plan component specific to the mouse's hibernation requirements. Plan components for Wildlife, Fish, and Plants identified in the table also provide for the ecological conditions these species require, including food abundance and cover. Most other coarse-filter plan components address threats, support healthy upland and riparian ecological conditions, or both.

Threats

Habitat loss is the primary threat and has occurred across the historical range of the mouse. Due to their life history, they are particularly sensitive to habitat loss and degradation. They have a short active period, short life span, low fecundity, and low dispersal ability. The cause of past habitat loss has been grazing pressure, water and vegetation management, drought and wildfires. Flooding, loss of beaver ponds, road and human developments, and unregulated recreation are also concerns. Legacy grazing impacts are addressed by implementing the recovery plan and management directed toward maintaining or making progress toward desired conditions for Wildlife, Fish, and Plants; Soils; Watersheds; and Riparian and Aquatic Ecosystems and plan objectives for these resources. Plan components for recreation would reduce human-caused disturbance to habitat.

Excess use is illegal and not consistent with the plan. It is an implementation and enforcement issue, not a planning issue. The threats posed by large extents of stand-replacement wildfire and post-wildfire flooding events are addressed by desired conditions and plan objectives for upland ecological response units. Plan direction in the Sustainable Recreation section would also help avoid or mitigate impacts. Additional conservation measures identified through consultation with the U.S. Fish and Wildlife Service would be implemented at the project level, which is also where noise impacts would generally be addressed.

Species of Conservation Concern

Amphibians

Arizona toad

The Arizona toad (*Anaxyrus microscaphus*) is well distributed in the Gila National Forest, occurring within the Gila, San Francisco, and Mimbres watersheds with disjunct populations in the Black Range (Ryan et al. 2015). In New Mexico, the toad's habitat consists of highly variable riverine systems that occur at higher elevation than populations in Arizona, Nevada, and Utah (Ryan et al. 2015). Habitat includes rocky stream courses in the pine-oak zone, or stream courses bordered by willows and cottonwoods, irrigation ditches, irrigated fields, and reservoirs (NatureServe 2016). They may also use pinyon-juniper woodlands and ponderosa pine forests but have demonstrated a "strong preference" for associating with lotic systems and appear to be restricted to breeding in slow-flowing and shallow streams (BISON-M 2016). They appear to require clear water conditions with sand or cobble substrates (Ryan et al. 2015). Potential threats include climate change, large extents of high-intensity fire and post-fire flooding, hybridization, and the disease chytridiomycosis (Ryan et al. 2015). Chytridiomycosis has been responsible for many enigmatic amphibian population die-offs and declines (Wake and Vredenburg 2008) and is responsible for declines in some New Mexico species (Ryan et al. 2015).

Ecological Conditions

The ecological conditions required by the Arizona toad are addressed primarily by plan components for Wildlife, Fish, and Plants; Soils; Watersheds; Water Quality; Water Uses; and Riparian and Aquatic Ecosystems. They are also provided for by the desired conditions and objectives or the ERUs used by the toad: pinyon-juniper woodlands and ponderosa pine forests, Ponderosa Pine Forest, Ponderosa Pine-Evergreen Oak, Madrean Pinyon-Oak Woodland, Pinyon Juniper Woodland, Pinyon Juniper Grass Woodland, Juniper Grass Woodland and Mountain Mahogany Mixed Shrubland. listed in Table G-1 for federally listed amphibians and reptiles.

Threats

Plan components (coarse- and fine-filter) that address ecological conditions and threats for the Arizona toad are the same as those identified for federally listed amphibians and reptiles (Table G-1), except for Wildlife, Fish, and Plants Standard 4 (fine-filter), which specifically incorporates by reference all approved recovery plans for federally listed species.

There are multiple plan components that address the threats posed by disease agents such as chytrid fungus, including Non-native Invasive Species Standard 1, Riparian and Aquatic Ecosystems Standard 2, Wildland Fire and Fuels Management Desired Condition 9, and Wildlife, Fish, and Plants Guideline 9. Threats posed by hybridization with non-native species are addressed by Non-native Invasive Species Desired Condition 1, objectives for Non-native Invasive Species and Wildlife, Fish, and Plants, as well as desired conditions for native biodiversity in the All Upland Ecological Response Unit and Wildlife, Fish, and Plants sections of the plan. The plan does not address hybridization with other native species as it is outside the scope of the plan.

Birds

Gila woodpecker

Gila woodpecker (*Melanerpes uropygialis*) is confined to lower-elevation woodlands and stream courses, especially those streams dominated by mature cottonwoods, sycamores, or both (NatureServe 2016, BISON-M 2016) and is a cavity-nester requiring large snags. This species is found in the Burro Mountains along the Gila River near Patterson and Pancho Canyons. Diversions or other flood control practices can alter habitat through changes in the flood disturbance regimes and alter hydrographs necessary for establishment of certain riparian species. The availability of excavated cavities and competition with other cavity nesters may limit reproductive success (NatureServe 2016, Kerpez and Smith 1990). Other threats to this species include large extents of high-intensity fire and post-fire flooding, cutting of cottonwood trees, recreation, agriculture development displacement of native riparian plants by invasive non-native plants, drought and climate change.

Lewis's woodpecker

Lewis's woodpecker (*Melanerpes lewis*) occurs in low-elevation riparian woodlands, and in ponderosa pine forests with large trees and open canopy (NMPIF 2007). Based on e-Bird (2016) locations, this species is distributed across the western two-thirds of the Gila National Forest. It may use existing holes or natural cavities or excavate holes in trees that are in an advanced stage of decay. Typically, larger-than-average trees are chosen for nesting (NMPIF 2007). In the riparian woodlands, this species uses habitat types that are dominated by cottonwoods. There is a long-term population decline for this species and the Breeding Bird Survey routes in the Gila National Forest also show declining trends (Sauer et al. 2014). Threats include large extents of high-intensity fire and post-fire flooding, loss of large snags, loss of riparian habitats, competition for nesting trees, and drought (Nature Serve 2022). Plan components

(coarse- and fine-filter) that address ecological conditions and threats for the Gila woodpecker are the same as those identified for federally listed southwestern willow flycatcher and western yellow-billed cuckoo (Table G-3), with two exceptions: (1) Wildlife, Fish, and Plants Standard 4 (fine-filter) Timber, Forest, and Botanical Products Standard 11 (fine-filter), because they are specific to approved recovery plans for federally listed species; (2) desired conditions and objectives for Mixed Conifer-Frequent Fire, Ponderosa Pine Forest and Ponderosa Pine-Evergreen Oak are additional coarse-filter plan components providing for the ecological conditions Lewis's woodpecker requires.

Pinyon jay

The pinyon jay (*Gymnorhinus cyanocephalus*) is an obligate bird of pinyon-juniper and other pine-juniper woodlands that has experienced significant population declines and is of increasing conservation concern (Somershoe et al. 2020). In New Mexico, pinyon jays are associated primarily with Colorado pinyon (*Pinus edulis*). The species may be found in foothills throughout the state, wherever large blocks of pinyon-juniper woodland habitat are present (NMPF 2007). As pinyon jay populations have declined, the pinyon-juniper woodlands that provide most of their habitat across the species range continue to face threats, including removal of trees to accomplish other management priorities, long-term fire suppression, changes in woodland age and tree density, and changing climatic conditions that cause reduced pinyon nut production and increased pinyon pine mortality (Somershoe et al 2020). Mining, drought, and excess livestock use may also contribute to habitat loss. Noise and recreation are also threats.

Table G-8. Plan components (coarse- and fine-filter) that address ecological condition and threats for birds of conservation concern

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8 All Upland ERUs- LS DCs 1–5 Ponderosa Pine-Evergreen Oak- All DCs Pinyon-Juniper Grass (and Juniper Grass) Woodland ERUs- All DCs Pinyon Juniper Woodland ERU- All DCs Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC2 Lands and Realty- DC 1, 2, 4, 7, 9, 10 and 11 Livestock Grazing- DCs 2–4 Minerals- DCs 1, 2 and 4 Non-native Invasive Species- DCs 1 and 2	Air Quality- Guideline 4 All Uplands ERUs- Standards 2–4, Guideline 1 Pinyon-Juniper Grass (and Juniper Grass) Woodland ERUs- Objective 1 Facilities- Standard 2, Guideline 1 Lands and Realty- Guidelines 5 and 8 Livestock Grazing- Objective 1, Standards 1–3, Guidelines 1, 3–5, and 8 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Objectives 1 and 2, Standards 1, 3–8, 10– 12 and 15–18, Guidelines 2, 5-9 and 11 Renewable Energy- Standard 2 Riparian and Aquatic Ecosystems- Objective 1, Standards 1, 3 and 4, Guidelines 1–5	All Upland ERUs- DCs 7 and 8 Facilities- Guideline 6 Non-native Invasive Species- Guideline 4 Renewable Energy- Standard 1 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DC 1 Roads- Standard 1 Sustainable Recreation- Guidelines 5 and 9 Wildlife, Fish, and Plants- DCs 1–7, and 9– 11, Objectives 3, Standard 1, Guidelines, 9, 13, and 14

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Renewable Energy- DC 1 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DCs 2-7; All 6 th Level WS DCs; FS DCs 1 and 2 Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12 and 15–17 Timber, Forest, and Botanical Products- DCs 1, 2d and e Water Quality- DC 1 Watersheds- All DCs Wildland Fire and Fuels Management- DCs 1. 6–10	Roads- Objective 1, Standards 2 and 3, Guidelines 1, 3, 5 and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Standards 3 and 4, Guidelines 4, 7 and 12–16 Timber, Forest, and Botanical Products- Standard 1 and 6, Guidelines 3–7 Watersheds- Objectives 1 and 2, Standards 1 and 2, Guidelines 1 and 2 Wildland Fire and Fuels Management- Standards 2–4, Guidelines 1–3 Wildlife, Fish, and Plants- Objectives 1, 2, 4 and 5, Standard 1, Guidelines 5, 9, 11, 13 and 14	

Ecological Conditions

The ecological conditions required by Gila and Lewis’s woodpeckers are primarily addressed by the Wildlife, Fish, and Plants; Watersheds; and Riparian and Aquatic Ecosystems plan components, with Riparian and Aquatic Ecosystems 6th Level Desired Condition 4 specifically providing the large snags required by these cavity-nesters. Desired conditions for All Upland Ecological Response Units and desired conditions and objectives for Ponderosa Pine Forest also contribute to the ecological conditions required by Lewis’s woodpecker, and the Upland Vegetation, Fire Ecology and Fuels analysis indicates there will continue to be more than enough snags in Ponderosa Pine Forest over the life of the plan. The desired conditions for Woodland, Ponderosa Pine Forest and Ponderosa Pine-Evergreen Oak Ecological Response Units contribute to the ecological conditions required by the pinyon jay as all these units can contain *Pinus edulis*. Most other coarse-filter plan components address threats and support healthy ecological conditions.

Threats

Plan components (coarse- and fine-filter) that address ecological conditions and threats for the Gila woodpecker are mostly the same as those identified for federally listed southwestern willow flycatcher and western yellow-billed cuckoo (Table G-5), with the exception of Wildlife, Fish, and Plants Standard 4 and Timber, Forest, and Botanical Products Standard 11 (fine-filter), because they are specific to approved recovery plans for federally listed species.

Objectives for upland ecological response units would reduce the risk of large extents of stand-replacement fire and the threat of changes in water flow and sediment regimes, and channel shape and function. Pinyon Juniper Woodland does not have a treatment objective, which does not preclude hazardous fuel reduction projects, making monitoring of ecological conditions critical to addressing

threats to the pinyon jay. Monitoring question 3 would inform adaptive management, if needed, to generate movement toward desired conditions for ecological conditions important to Lewis's woodpecker and the pinyon jay **Question 3:** Are our management activities sufficient to maintain or generate progress toward defining structural components for each upland ecological response unit? **Indicator(s):** Trend in seral state proportion, coarse woody debris density, snag density, and area expected to be dominated by old trees for each ecological response unit. Other capacity-dependent monitoring may also provide valuable information for adaptation.

Plan direction in the Sustainable Recreation section would help avoid or mitigate recreation-related impacts. However, there may be additional conservation measures identified at the project level, which is also where noise impacts would generally be addressed. Cottonwood trees are not targeted in riparian restoration projects, encroaching upland species would be what was cut, and cottonwoods are not a species sought after for firewood. Regardless, the firewood guide prohibits cutting within 100 feet of a live stream.

Competition with other cavity nesters is a natural interaction outside management control and is therefore not addressed by plan direction. Excess livestock use is illegal, would not be compliant with the plan, and is therefore, an implementation and enforcement issue and not a planning issue. National Forest System land status prevents changes in land use such as agricultural development, however, plan direction does address threats posed by invasive non-native plants with Non-native Invasive species plan components as identified in Table G-8. Mining law does not allow much agency discretion, what ability the agency does have to avoid or mitigate mining impacts is addressed in law, regulation, policy, and plan components found in the Minerals section of the forest plan.

Fish

Rio Grande sucker

Rio Grande sucker (*Catostomus plebeius*) habitat includes rocky pools, runs, and riffles of small to medium rivers (Lee et al. 1980, Page and Burr 2011), usually over gravel and/or cobble, but also in backwaters and pools below riffles. This species is rarely found in waters with heavy silt and organic detritus (Sublette et al. 1990). Threats to the species include water diversions, dams, grazing, drought, fire, disease, flooding, habitat degradation and fragmentation, climate change, and hybridization or competition with other non-native trout species (USDOI FWS 2014). Plan components (coarse- and fine-filter) that address ecological conditions and threats for the Rio Grande sucker are the same as those identified for federally listed fishes (Table G-6), except for Wildlife, Fish, and Plants Standard 4 (fine-filter), which specifically incorporates by reference all approved recovery plans for federally listed species.

Roundtail (headwater) chub

The roundtail (and headwater) chub (*Gila robusta/Gila nigra*) habitat includes rocky runs, rapids, and pools of creeks and small to large rivers; also, large reservoirs in the upper Colorado River system; generally, this species prefers cobble-rubble, sand-cobble, or sand-gravel substrate. It also encompasses middle to headwater reaches of headwaters, creeks, and small rivers (Minckley and DeMarais 2000, Page and Burr 2011). Adults are associated with the largest, most permanent water in streams (Minckley 1981), where a few deep (greater than 1 meter) pools with cover (boulders, woody debris) are intermixed with riffles, runs, and eddies (Bestgen and Propst 1989, Propst 1999). Chubs usually are in pools and runs near cover such as rocks, rootwads, undercuts, or deep water (Bestgen and Propst 1989). Threats include changes in flow regimes and stream characteristics from uncharacteristic fire in the uplands, water diversions for agricultural use, drought, climate change, and competition or predation by non-native fish species.

Ecological Conditions

The plan provides for the ecological conditions the Rio Grande sucker and roundtail/headwater chub the same way as it does for federally listed fishes, except for those plan components that incorporate recovery plans by reference.

Threats

The primary threat to all fish species is habitat loss due to drought, stream dewatering, and altered channel morphology. Poor watershed conditions due to increased sedimentation as a result of overgrazing, mining, vegetation management and post-fire effects are also a concern. Predation and competition from non-native species such as green sunfish, flathead catfish, brown trout, smallmouth bass, and crayfish are additional threats. The plan components emphasize the protection of aquatic habitats and the preservation of native species. The plan addresses threats to the Rio Grande sucker and roundtail chub in much the same way as it does for federally listed fishes, except for those plan components that incorporate recovery plans by reference.

Invertebrates

Stoneflies

A stonefly (*Capnia caryi*) was found in the Iron Creek, which is a clear, cool, low gradient stream with scattered boulders and a mixture of cobble with gravels in the Gila Wilderness. The Iron Creek watershed is in an unallotted portion of the Gila Wilderness where domestic livestock grazing has not been authorized since the 1950s. Specific threats are not known, but likely, anything that may affect other macroinvertebrates such as changes in water flow and sediment regimes and reduced water quality from large extents of high-intensity fire, post-fire flooding, drought, climate change and recreational use could be considered threats.

The stonefly (*Taenionema jacobii*) occurs in the Gila River watershed where it was examined from larvae collected in Cherry Creek (Stewart 2009). The species has been found in the Gila River watershed into Arizona (NatureServe 2016). Specific threats are not known, but likely anything that may affect other macroinvertebrates changes in water flow and sediment regimes and reduced water quality from large extents of high-intensity fire, post-fire flooding, drought, climate change, water diversions for agriculture, excess livestock use, and recreational use could be considered threats.

Plan components (coarse- and fine-filter) providing the ecological conditions these two stoneflies require and addressing threats are generally the same as those described for the Arizona toad and federally listed amphibians previously addressed in this appendix.

“Gila” may fly

The “Gila” may fly (*Lachlania dencyanna*) was found in a high gradient, medium-sized river at the junction of East Fork and mainstem Gila River clinging to woody debris. The area where it was located was characterized as a warm, unshaded, turbid, and rapid stream. Specific threats are generally unknown, but likely anything that would affect other macroinvertebrates such as diversions or other de-watering of streams, reducing dissolved oxygen, pollution, or increased sediments could be considered threats. Drought and climate change are also likely threats. Plan components (coarse-and fine-filter) providing the ecological conditions the “Gila” may fly requires and addressing threats are generally the same as those described for the Arizona toad previously in this appendix. The species was petitioned for federal listing in 2014.

Ecological Conditions

The plan provides for semi-aquatic insects in much the way it does for at-risk fishes and amphibians. Water Quality, Watershed, and Riparian and Aquatic Ecosystem plan components address the primary ecological conditions required by these two stoneflies and the “Gila” may fly.

Threats

The plan addresses threats to semi-aquatic insects in much the way it does for other at-risk fishes and amphibians as many of the known threats to their persistence are the same.

Snails

There are 20 snail species of conservation concern in the Gila National Forest. The Black Range mountainsnail (*Oreohelix metcalfei acutidiscus*), *Oreohelix metcalfei hermosensis*, Black Range woodlandsnail (*Ashmunella cockerelli*), Cockerell Holospira snail (*Holospira cockerelli*), Mineral Creek mountainsnail (*Oreohelix pilsbryi*), *Ashmunella cockerelli perobtusa*, *Oreohelix metcalfei radiata*, and *Oreohelix metcalfei concentrica* all occur in the Black Range mountains. Their habitat consists of talus slopes of igneous rock, limestone, or other calcareous rock and limestone bedrock or outcrops. Threats include any ground-disturbing activities that would affect any of the rock formations where these species occur, such as mining and road construction or maintenance. Much of the Black Range is within the Aldo Leopold Wilderness or inventoried roadless areas being managed to preserve roadless characteristics. High-intensity wildfire may also be a threat to the snails where these rocky features also support vegetation or are near flammable vegetative material. For example, roots and leaves may smolder beneath talus slopes and hold sufficient heat long enough to cause mortality. Drought and climate change are also likely threats.

Table G-9. Plan components (coarse- and fine-filter) that address ecological conditions and threats for snails dependent on talus slopes or other rocky features

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC8 All Upland ERUs- LS DCs 1–5 Ponderosa Pine-Evergreen Oak- All DCs Madrean-Pinyon-Oak Woodland- All DCs Pinyon Juniper Woodland- All DCs Pinyon Juniper Grass and Juniper Grass Woodlands- All DCs Caves and Abandoned Mine Lands – DC 5 Community and Tribal Relationships- DCs 1, 4, and 5	Air Quality- Guideline 4 All Uplands ERUs- Standard 1 Ponderosa Pine-Evergreen Oak- Objective 1 Pinyon Juniper Grass and Juniper Grass Woodlands- Objectives 1 and 2 Lands and Realty- Guideline 8 Minerals- Standards 4 and 6, Guideline 2 Non-native Invasive Species- Objective 2, Standards 1, 3, 4–12, and 14–18, Guidelines 2, 4–9, and 11 Roads- Standards 1–3, Guidelines 1, 2 and 6	All Uplands ERUs- LS DCs 7 and 8, Standards 2-4 Cliffs and Rocky Features- All DCs, All Guidelines Minerals- Guideline 16 Sustainable Recreation- Guidelines 5 and 9 Wildlife, Fish, and Plants- DCs 1-7, and 9–11

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Lands and Realty- DCs 1, 2, 4, 7, 9, 10, and 11 Minerals- All DCs Non-native Invasive Species- DCs 1-3 Roads- DCs 2, 4, and 5 Sustainable Recreation- DCs 1, 3, 12, 15, and 17 Timber, Forest, and Botanical Products- DC 1 Watersheds- DC 1 Wildland Fire and Fuels Management- DCs 1, 6–10	Sustainable Recreation- Guidelines 12 and 14–16 Timber, Forest, and Botanical Products- Standards 1, 3, 4 and 10 Wildland Fire and Fuels Management- Guidelines 1 and 2	

The **bearded mountainsnail** (*Oreohelix barbata*), *Ashmunella tetrodon animorum*, *Ashmunella tetrodon inermis*, *Ashmunella tetrodon mutator*, **Sonoran snaggletooth snail** (*Gastrocopta prototypus*), and **Whitewater Creek woodlandsnail** (*Ashmunella danielsi*) all occur in canyon bottoms in riparian areas near creeks or springs in the Mogollon or Black Range Mountains. Habitat for these species consists of igneous rock in talus on moist northern slopes, moss covered in places, and damp leaf litter in interstices, or deep canyons with riparian areas where deciduous trees produce an abundant leaf litter and snails occur under and around stones and logs. Threats to these species include drought, climate change, flooding, or any other activities that could impact stream courses.

The **Morgan Creek mountainsnail** (*Oreohelix swopei*) is found in canyons of the northern Black Range, Turkey Run, head of Morgan Creek, Diamond Creek, and Black Canyon. These canyons are all mesic canyons with flowing water and riparian leaf litter among rock. *Ashmunella cockerelli argenticola* has been found in flourishing colonies along Forest Road 523 in the Black Range where it crosses Silver Creek Canyon and further north where it crosses Rustlers Canyon (a tributary of Silver Creek Canyon). Silver Creek woodlandsnail (*Ashmunella binneyi*) has a very limited range in the Gila National Forest, occurring only in the upper ends of Silver, Bull Top, and Spring Canyons in Black Range between 8,000 and 8,500 feet in elevation. Threats to these species include wildfire, flooding, drought, climate change, and any disturbances that may impact canyon bottoms and leaf litter covering rocks. Mixed Conifer-Frequent Fire and Ponderosa Pine Forest also contribute to the coarse-filter for Silver Creek woodlandsnail.

Table G-10. Plan components (coarse- and fine-filter) that address ecological conditions and threats for snails endemic to the Black Range and Mogollon Mountains and dependent on north-facing talus slopes and riparian canyons

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC8 All Upland ERUs- LS DCs 1– Caves and Abandoned Mine Lands – DC 5 Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC 2 Lands and Realty- DCs 1, 2, 4, 7, 9, 10, and 11 Minerals- All DCs Non-native Invasive Species- DCs 1–3 Renewable Energy- DC 1 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DCs 2–7; 6 th Level WS DCs 1, 2, and 4–9; FS DCs 1 and 2 Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12, 15 and 17 Timber, Forest, and Botanical Products- DC 1 Watersheds- DC 1 Wildland Fire and Fuels Management- DCs 1, 6–10	Air Quality- Guideline 4 All Uplands ERUs- Standards 1–4 Facilities- Standards 1 and 2, Guideline Lands and Realty- Guidelines 5 and 8 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Objectives 1 and 2, Standards 3– 8, 10–12 and 15–18, Guidelines 2, 5–9 and 11 Renewable Energy- Standard 2 Riparian and Aquatic Ecosystems- Objective 1 Roads- Standards 1–3, Guidelines 1, 2 and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Standards 3 and 4, Guidelines 12 and 14–16 Timber, Forest, and Botanical Products- Standards 1, 3, 4, 10, Guidelines 3 and 6 Watersheds- Objectives 1 and 2, Standards 1 and 2, Guidelines 1 and 2 Wildland Fire and Fuels Management- Standard 2, Guidelines 1–3	All Uplands ERUs- LS DCs 7 and 8, Standards 2–4 Cliffs and Rocky Features- All DCs, All Guidelines Livestock Grazing- Standards 1– 3, Guidelines 1 and 3–5 Minerals- Guideline 16 Non-native Invasive Species- Standards 1 and 2, Guidelines 4, 10, and 12 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DC 1, 6 th Level WS DC 3, Standards 1–3, Guidelines 1–5 Roads- Guidelines 2 and 3 Sustainable Recreation- Guidelines 4, 5, 7, 9, and 12–16 Wildland Fire and Fuels Management- DC 10, Standards 3 and 4 Wildlife, Fish, and Plants- DCs 1–7, and 9–11, Objectives 2–4, Standards 1 and 4, Guidelines 4– 6, 9, 13, and 14

Gila springsnail (*Pyrgulopsis gilae*) occurs in cool to warm springs in rhyolite fissures adjacent to the Gila River. The species is common in cool water springs within its range. Threats include habitat modification from water diversions, recreational use and modification of hot springs, drying of springs

and creeks, wetland habitat loss, drought, climate change, and livestock trampling (NatureServe 2016, BISON-M 2016).

New Mexico hot springsnail (*Pyrgulopsis thermalis*) inhabits thermal waters (91 to 100 degrees Fahrenheit) along a vertical cliff feature above the Gila River. Principal outflows are generally too hot for the snail, so they occur in cooler portions of the outflows. Threats include habitat degradation from recreational bathing, water pollution, water diversions on private land, groundwater pumping, illegal off-highway vehicle use, displacement of native riparian vegetation communities by invasive species, drought, and climate change. Much of the Gila River flows through an unallotted portion of the Gila Wilderness where domestic livestock grazing has not been permitted since the 1950s. Recreational and Forest Service pack and saddle stock are allowed. A herd of feral cattle that tends to congregate along the Gila River may also be a threat. The feral cattle issue is in the process of being resolved at the time this document was written.

Table G-11. Plan components (coarse- and fine-filter) that address ecological conditions and threats for spring-dependent snails

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC8 All Upland ERUs- LS DCs 1–5 Caves and Abandoned Mine Lands – DC 5 Cliffs and Rocky Features- All DCs Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC 2 Lands and Realty- DCs 1, 2, 4, 7, 9, 10, and 11 Minerals- All DCs Non-native Invasive Species- DCs 1–3 Renewable Energy- DC 1 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DCs 2–7; 6 th Level WS DCs 1, 2, and 4–9; FS DCs 1 and 2 Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12, 15 and 17	Air Quality- Guideline 4 All Uplands ERUs- Standards 1–4 Facilities- Standards 1 and 2, Guideline Lands and Realty- Guidelines 5 and 8 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Objectives 1 and 2, Standards 3–8, 10–12 and 15–18, Guidelines 2, 5–9 and 11 Renewable Energy- Standard 2 Riparian and Aquatic Ecosystems- Objective 1 Roads- Standards 1–3, Guidelines 1, 2, and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Standards 3 and 4, Guidelines 12 and 14–16 Timber, Forest, and Botanical Products- Standards 1, 3, 4, 10, Guidelines 3 and 6	All Uplands ERUs- LS DCs 7 and 8, Standards 2–4 Livestock Grazing- Standards 1–3, Guidelines 1 and 3–5 Minerals- Guideline 16 Non-native Invasive Species- Standards 1 and 2, Guidelines 4, 10, and 12 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DC 1, 6 th Level WS DC 3, Standards 1–3, Guidelines 1–5 Roads- Guidelines 2 and 3 Sustainable Recreation- Guidelines 4, 5, 7, 9, and 12–16 Wildland Fire and Fuels Management- DC 10, Standards 3 and 4 Wildlife, Fish, and Plants- DCs 1–7, and 9–11, Objectives 2–4, Standards 1 and 4, Guidelines 4–6, 9, 13, and 14

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Timber, Forest, and Botanical Products- DC 1 Water Quality- DC1 Water Uses- DCs 1 and 2 Watersheds- DC 1 Wildland Fire and Fuels Management- DCs 1, 6–10	Watersheds- Objectives 1 and 2, Standards 1 and 2, Guidelines 1 and 2 Wildland Fire and Fuels Management- Standard 2, Guidelines 1–3	

Iron Creek woodlandsnail (*Ashmunella mendax*) occurs in wooded canyons at lower elevations but it is more widespread in wooded zones of higher elevations in the Black Range. It is abundant where found and wide-ranging in elevation from 5,500 to 9,000 feet (Metcalf and Smartt 1997). It occurs from pinyon-juniper woodlands to moist mixed conifer forests. Threats may include high-intensity fire, post-fire flooding, drought, climate change, timber harvest and other types of thinning projects that remove canopy cover or reduce understory cover. Much of the Black Range is within the Aldo Leopold Wilderness or inventoried roadless areas where mechanical thinning projects are either entirely precluded or unlikely to be authorized.

The **marsh slug snail** (*Deroceras heterura*) is endemic to Willow Creek in the Mogollon Mountains and from Sawyers Peak north to Morgan Creek in the Black Range. This species appears to be widespread in these areas above 8,000 feet elevation. It occurs from ponderosa pine to moist mixed conifer forests (Metcalf and Smartt 1997). Threats to this species include timber harvest and other types of thinning activities, mining, road construction, traffic, wildland fire, drought, and climate change. A good portion of their Black Range habitat is within the Aldo Leopold Wilderness or inventoried roadless areas being managed for roadless characteristics. Some of its habitat in the Mogollon Mountains is within the Gila Wilderness. Plan components (coarse-and fine-filter) providing the ecological conditions the Iron Creek woodlandsnail and marsh slug snail species require and addressing threats include those identified for riparian- and spring-dependent snails (Table G-11) because they do occupy canyon habitat that may contain riparian or wetland ecosystems. In addition, the desired conditions and objectives for Madrean Pinyon-Oak Woodland, Pinyon Juniper Woodland, Pinyon Juniper Grass Woodland, Juniper Grass Woodland, Ponderosa Pine-Evergreen Oak, Ponderosa Pine Forest, Mixed Conifer-Frequent Fire and Mixed Conifer with Aspen may provide additional coarse-filter direction relevant to the ecological conditions and threats for the Iron Creek woodlandsnail. Ponderosa Pine Forest, Mixed Conifer-Frequent Fire and Mixed Conifer with Aspen provide additional coarse-filter direction relative for both the Iron Creek woodlandsnail and the marsh slug snail.

Ecological Conditions

The plan provides the ecological conditions required by snails of conservation concern with plan components for Cliffs and Rocky Features, Soils, Upland Ecological Response Units, Riparian and Aquatic Ecosystems, Watersheds, and Water Quality. Other important plan components have been discussed in the narratives for each snail species previously in this subsection.

Threats

Many threats to snails of conservation concern are shared with other at-risk species and how the plan addresses those threats has been discussed in previous plan adequacy subsections of this appendix. Some

threats such as illegal or unauthorized uses are outside the scope of the forest plan and are an implementation and enforcement issue—not planning issues. Species-specific threats have been discussed in the narratives for each snail species in this subsection. Site-, activity-, and species-specific conservation measures could be required at the project level, but much of the habitat for these snails is within designated wilderness or inventoried roadless areas that are not likely to see mechanized management activities.

Western bumblebee

Western bumblebee (*Bombus occidentalis occidentalis*) was collected in the Gila National Forest along the Bursum Road in 1961. The habitat for this species is described as open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows (Williams et al. 2014, as cited in NatureServe 2018). Bumblebees, including *B. occidentalis*, are generalist foragers and have been reported visiting a wide variety of flowering plants (Hatfield et al. 2015). Threats to this species include disease, non-native invasive species, pesticide use, habitat loss and alteration due to agriculture, urban development, conifer encroachment, logging, off-road vehicle use, and climate change. Plan components (coarse- and fine-filter) that address ecological conditions and threats for the western bumblebee are the same as those identified for monarch butterfly (candidate for federal listing) (Table G-5), except for Wildlife, Fish, and Plants Standard 4 and Timber, Forest, and Botanical Products Standard 11 (fine-filter), which specifically incorporate by reference all approved recovery plans for federally listed species.

Tiger moth

Tiger moth (*Alexicles aspersa*) is known from extreme northeastern Arizona, northwestern New Mexico, and Mexico. Details of its distribution in New Mexico are not recorded. Its life history and habitat requirements are not known; however, this species has been collected in high-elevation coniferous forests. Plan components (coarse- and fine-filter) that address ecological conditions and threats for the tiger moth are essentially the same as those identified for monarch butterfly (candidate for federal listing) (Table G-5), except for Wildlife, Fish, and Plants Standard 4 and Timber, Forest, and Botanical Products Standard 11 (fine-filter), which specifically incorporate by reference all approved recovery plans for federally listed species. Further, those coarse-filter components specific to grasslands, shrublands and mid- and lower-elevation forests may or may not be applicable to the tiger moth based on where it has been collected.

Nitocris fritillary butterfly

Nitocris fritillary butterfly (*Speyeria nokomis nitocris*) is limited to moist, montane meadows and has been documented in such meadows in the Gila National Forest (Zimmerman 2001) near Willow Creek on the Reserve Ranger District. Threats include Willow Creek campground development, collection, loss of riparian habitat, drought, climate change, or any disturbance that reduces or eliminates *Viola nephrophylla* (Zimmerman 2001). Plan components (coarse- and fine-filter) that address ecological conditions and threats for the nitocris fritillary butterfly are the same as those identified for monarch butterfly (candidate for federal listing) (Table G-5), except for Wildlife, Fish, and Plants Standard 4 and Timber, Forest, and Botanical Products Standard 11 (fine-filter), which specifically incorporate by reference all approved recovery plans for federally listed species. Further, those coarse-filter components specific to Colorado Plateau/Great Basin Grasslands, Semidesert Grasslands, Mountain Mahogany Mixed Shrubland, woodland ERUs and Ponderosa Pine-Evergreen Oak are probably not applicable to the nitocris fritillary butterfly based on the ecological conditions it requires. Montane/Subalpine Grasslands, Riparian and Aquatic Ecosystems and within Ponderosa Pine Forest, Mixed Conifer-Frequent Fire, Mixed Conifer with Aspen and Spruce-Fir Forest, which may include openings and open seral states, are relevant coarse-filter components.

Ecological Conditions

The plan provides for the ecological conditions required by the western bumblebee, tiger moth, and nitocris fritillary butterfly as described above and in the same way in which it provides the ecological conditions required by the monarch butterfly. The plan components support habitat for native pollinator species by plant community composition, structure and pattern across the forest as described in the desired conditions of each ERU.

Threats

The plan addresses threats to pollinators of conservation concern in the same way it addresses threats to the monarch butterfly, previously described in this appendix.

Plants

Arizona crested coralroot

Arizona crested coralroot (*Hexalectris arizonica*) occurs in heavy litter in oak, pine, or juniper woodlands in mesic to dry soils, often in limestone from 5,000 to 7,000 feet elevation (NMRPTC 2023, SEINet 2018). Threats to this species include climate change and fire management.

Table G-12. Plan components (coarse- and fine-filter) that address ecological condition and threats for the Arizona crested coralroot

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8 All Upland ERUs- LS DCs 1–5 Madrean Pinyon-Oak Woodland ERU- All DCs Pinyon-Juniper Grass and Juniper Grass Woodland ERUs- All DCs Pinyon Juniper Woodland ERU- All DCs Ponderosa Pine Forest ERU- All DCs Ponderosa Pine-Evergreen Oak ERU- All DCs Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC 2 Lands and Realty- DCs 1, 2, 7, 9, 10, and 11 Livestock Grazing- DCs 2–4	Air Quality- Guideline 4 All Uplands ERUs- Standards 1–4, Guideline 1 Pinyon-Juniper Grass and Juniper Grass Woodland ERUs- Objectives 1 and 2 Ponderosa Pine Forest ERU- Objective 1 Ponderosa Pine-Evergreen Oak ERU- Objective 1 Facilities- Guideline 2 Lands and Realty- Guideline 8 Livestock Grazing- Objective 1, Guideline 3 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Standards 1, 3–12, and 14–18, Guidelines 1, 2, and 4–9	All Upland ERUs- LS DCs 7 and 8 Livestock Grazing– Standard 3, Guidelines 1 and 4 Sustainable Recreation- Guidelines 7 and 14 Timber, Forest, and Botanical Products- Standard 10, Guidelines 1 and 3 Wildlife, Fish, and Plants- DCs 1–7, and 9–11, Standards 2 and 3, Guidelines 4 and 7–9

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Minerals- DC 1 Non-native Invasive Species- DCs 1–3 Renewable Energy- DC 1 Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12 and 15–17 Timber, Forest, and Botanical Products- DC 1 Watersheds- DC 1 Wildland Fire and Fuels Management- DCs 1 and 6–10	Roads- Objective 1, Standards 1 and 3, Guidelines 1–3, 5 and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Guidelines 5, 12, and 16 Timber, Forest, and Botanical Products- Standard 1, Guideline 3 Watersheds- Objectives 1 and 2, Guideline 1 Wildland Fire and Fuels Management- Standard 2, Guidelines 1 and 2 Wildlife, Fish, and Plants- Objectives 1, 3, and 5	

Chiricahua mountain mudwort

Chiricahua mountain mudwort (*Limosella pubiflora*) occurs in wet sand and mud flats at the edges of ponds, lakes, or cienegas (NMRPTC 2023, SEINet 2018, NatureServe 2018). It requires surface water for its survival and appears to do well where slopes are essentially level (NatureServe 2018 as described by Malusa and Warren 1994). Populations of this species have been found at the edges of stock watering tanks in New Mexico where they have not appeared to suffer (NMRPTC 2023). This species has only been found in the mud flats adjacent to the boat ramp at Quemado Lake. Overall, trend for this species has been in decline as it has not been found in other areas it was originally described. Threats to this species include groundwater pumping; climate change; construction of dams, levees, diversions, roads and pipes; non-native invasive species such as saltcedar; and agricultural and urban development.

Table G-13. Plan components (coarse- and fine-filter) that address ecological condition and threats for the Chiricahua mountain mudwort

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8 All Upland ERUs- LS DCs 1–5 Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC 2 Lands and Realty- DCs 1, 2, 7, 9, 10, and 11	Air Quality- Guideline 4 All Uplands ERUs- Standards 1–4, Guideline 1 Pinyon-Juniper Grass and Juniper Grass Woodland ERUs- Objectives 1 and 2 Ponderosa Pine Forest ERU- Objective 1	All Upland ERUs- LS DCs 7 and 8 Livestock Grazing– Standard 3, Guidelines 1 and 4 Sustainable Recreation- Guidelines 7 and 14 Timber, Forest, and Botanical Products- Standard 10, Guidelines 1 and 3

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Livestock Grazing- DCs 2-4 Minerals- DC 1 Non-native Invasive Species- DCs 1-3 Renewable Energy- DC 1 Riparian and Aquatic Ecosystems- 4 th and 5 th Level WS DCs 1, 2, 5-7; 6 th Level WS DCs 2, 5-9, FS DCs 1f, 2 and 3 Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12 and 15–17 Timber, Forest, and Botanical Products- DC 1 Watersheds- DC 1 Wildland Fire and Fuels Management- DCs 1 and 6–10	Ponderosa Pine-Evergreen Oak ERU- Objective 1 Facilities- Guideline 2 Lands and Realty- Guideline 8 Livestock Grazing- Objective 1, Guideline 3 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Standards 1, 3–12, and 14–18, Guidelines 1, 2, and 4–9 Roads- Objective 1, Standards 1 and 3, Guidelines 1–3, 5 and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Guidelines 5, 12, and 16 Timber, Forest, and Botanical Products- Standard 1, Guideline 3 Watersheds- Objectives 1 and 2, Guideline 1 Wildland Fire and Fuels Management- Standard 2, Guidelines 1 and 2	Wildlife, Fish, and Plants- DCs 1– 7, and 9–11, Standards 2 and 3, Guidelines 4 and 7–9

Cliff brittlebush

Cliff brittlebush (*Apacheria chiricahuensis*) occurs in areas containing bare rock, talus, scree, cliffs such as limestone or rhyolitic rock outcrops montane conifer forests between 5,500 to 7,000 feet elevation (NMRPTC 2023). In the Gila NF, it is only known in Running Water Canyon, a tributary to Diamond Creek in the Aldo Leopold Wilderness Area. Mineral exploration and development are identified threats that could possibly affect some populations outside of areas withdrawn from mineral entry by wilderness designation (provided no valid existing rights), or Bureau of Land Management approved withdrawal application.

Table G-14. Plan components (coarse- and fine-filter) that address ecological condition and threats for the cliff brittlebrush

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8 All Upland ERUs- LS DCs 1-5 Mixed Conifer with Aspen- All DCs Mixed Conifer-Frequent Fire- All DCs Ponderosa Pine Forest ERU- All DCs Ponderosa Pine-Evergreen Oak ERU- All DCs Cliffs and Rocky Features- All DCs Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC 2 Lands and Realty- DCs 1, 2, 7, 9, 10, and 11 Livestock Grazing- DCs 2-4 Minerals- DC 1 Non-native Invasive Species- DCs 1-3 Renewable Energy- DC 1 Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12, and 15-17 Timber, Forest, and Botanical Products- DC 1 Watersheds- DC 1 Wildland Fire and Fuels Management- DCs 1 and 6-10	Air Quality- Guideline 4 All Uplands ERUs- Standards 1-4, Guideline 1 Mixed Conifer with Aspen- Objective 1 Mixed Conifer-Frequent Fire- Objective 1 Ponderosa Pine Forest ERU- Objective 1 Ponderosa Pine-Evergreen Oak ERU- Objective 1 Facilities- Guideline 2 Lands and Realty- Guideline 8 Livestock Grazing- Objective 1, Guideline 3 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Standards 1, 3-12, and 14-18, Guidelines 1, 2, and 4-9 Roads- Objective 1, Standards 1 and 3, Guidelines 1-3, 5, and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Guidelines 5, 12, and 16 Timber, Forest, and Botanical Products- Standard 1, Guideline 3 Watersheds- Objectives 1 and 2, Guideline 1 Wildland Fire and Fuels Management- Standard 2, Guidelines 1 and 2	All Upland ERUs- LS DCs 7 and 8 Cliffs and Rocky Features- Guidelines 3-5 Livestock Grazing- Standard 3, Guidelines 1 and 4 Sustainable Recreation- Guidelines 7 and 14 Timber, Forest, and Botanical Products- Standard 10, Guidelines 1 and 3 Wildlife, Fish, and Plants- DCs 1-7, and 9-11, Standards 2 and 3, Guidelines 4 and 7-9

Davidson's cliff carrot

Davidson's cliff carrot (*Pteryxia davidsonii*) occurs on moist, rocky places on sheer north-facing cliffs in woodland ERUs between 6,500 and 8,000 feet elevation (NMRPTC 2023). Threats are not well known but may include mining or mineral exploration and wildfire. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Davidson's cliff carrot are the same as those identified for cliff brittlebush except that desired conditions and objectives for woodland ERUs replace those for Ponderosa Pine Forest, Mixed Conifer-Frequent Fire and Mixed Conifer with Aspen in the coarse-filter.

Gila morning glory

Gila morning glory (*Ipomoea gilana*) occurs in open woodlands of pinyon, juniper, and evergreen oak on southern to eastern slopes, and occur mid-elevation (6,600 to 6,700 feet) of the Black Range on the eastern edge of the Gila National Forest. The surrounding topography of the area where they have been located consists of a landscape featuring steep slopes (greater than 45 percent) with shallow soils and exposed rhyolitic outcrops. Threats to this species include wildfire, drought and fuel breaks, road maintenance and forest thinning. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Gila morning glory are the same as those identified for cliff brittlebush except that desired conditions and objectives for woodland ERUs replace those for Ponderosa Pine Forest, Mixed Conifer-Frequent Fire and Mixed Conifer with Aspen in the coarse-filter.

Goodding's onion

Goodding's onion (*Allium gooddingii*) occurs in spruce-fir and mixed conifer from 6,500 to 9,400 feet elevation. Threats include impacts from flooding in post-fire erosion events (Roth 2016), collection, excess livestock use, and logging. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Goodding's onion are the same as those identified for Arizona crested coralroot except that desired conditions and objectives for Spruce-Fir Forest, Mixed Conifer with Aspen and Mixed Conifer-Frequent Fire replace the woodland and ponderosa pine dominated ERUs in the coarse-filter.

Greene milkweed

Greene milkweed (*Asclepias uncialis* ssp. *uncialis*) occurs in grasslands, on sandy to rocky soils and within an elevational range of 5,000 to 7,000 feet. Identified threats to the species include residential development (particularly in Arizona), agriculture, and livestock operations. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Greene milkweed are the same as those identified for Arizona crested coralroot except that desired conditions and objectives for grassland ERUs replace the pine woodlands and ponderosa pine dominated ERUs in the coarse-filter.

Heartleaf groundsel

Heartleaf groundsel (*Packera cardamine* (*Senecio cardamine*)) occurs in Mixed Conifer with Aspen and Spruce-Fir Forest, typically above 8,000 feet elevation (Roth 2016). It is generally associated with Douglas-fir (*Pseudotsuga menziesii*), white fir (*Abies concolor*), mountain spray (*Holodiscus dumosus*), aspen (*Populus tremuloides*), alpine woodsorrel (*Oxalis alpina*), wild geranium (*Geranium* sp.), nodding ragwort (*Senecio bigelovii*), and Canadian violet (*Viola canadensis*) (Roth 2016). Likely threats include drying out of sites because of timber harvest and other forest thinning activities or forest fire. Plan components (coarse- and fine-filter) that address ecological conditions and threats for heartleaf groundsel are the same as those identified for Arizona crested coralroot except that desired conditions and objectives for Spruce-Fir Forest and Mixed Conifer with Aspen ERUs replace the woodland and ponderosa pine dominated ERUs in the coarse-filter.

Hess's fleabane

Hess's fleabane (*Erigeron hessii*) occurs in mixed conifer or sub-alpine forest at an elevational range of 9,500 to 10,200 feet. This species is endemic to three sites documented near Whitewater Baldy in the unallotted portion of the Gila Wilderness. The species is dependent upon exposed rock or rocky outcrops (NMRPTC 2023). Threats include climate change, drought, fire, and trampling from recreational users. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Hess's fleabane are the same as those identified for cliff brittlebush except that desired conditions and objectives for Spruce-Fir Forest and Mixed Conifer with Aspen ERUs replace the Mixed Conifer-Frequent Fire and ponderosa pine dominated ERUs in the coarse-filter. Further, plan components related to motorized uses and infrastructure, livestock grazing, and timber, forest and botanical products are generally not applicable given the known locations are all in an unallotted portion of the Gila Wilderness.

Metcalfe's penstemon

Metcalfe's penstemon (*Penstemon metcalfei*) occurs in cliffs and steep north slopes of montane conifer forest from 6,600 to 9,500 feet elevation. Threats include fire, canopy removal, woody species competition, off-road travel,^a dispersed camping and post-fire erosion including streambank scouring and incision, debris flows, and large volumes of debris deposition (Roth 2016).

Table G-15. Plan components (coarse- and fine-filter) that address ecological condition and threats for the Metcalfe's penstemon

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8 All Upland ERUs- LS DCs 1–5 Mixed Conifer with Aspen- All DCs Mixed Conifer-Frequent Fire- All DCs Ponderosa Pine Forest ERU- All DCs Cliffs and Rocky Features- All DCs Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC 2 Lands and Realty- DCs 1, 2, 7, 9, 10, and 11 Livestock Grazing- DCs 2–4 Minerals- DC 1	Air Quality- Guideline 4 All Uplands ERUs- Standards 1–4, Guideline 1 Mixed Conifer with Aspen- Objective 1 Mixed Conifer-Frequent Fire- Objective 1 Ponderosa Pine Forest ERU- Objective 1 Facilities- Guideline 2 Lands and Realty- Guideline 8 Livestock Grazing- Objective 1, Guideline 3 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Standards 1, 3–12, and 14–18, Guidelines 1, 2, and 4–9	All Upland ERUs- LS DCs 7 and 8 Cliffs and Rocky Features- Guidelines 3–5 Livestock Grazing– Standard 3, Guidelines 1 and 4 Sustainable Recreation- Guidelines 7 and 14 Timber, Forest, and Botanical Products- Standard 10, Guidelines 1 and 3 Wildlife, Fish, and Plants- DCs 1–7, and 9–11, Standards 2 and 3, Guidelines 4 and 7–9

^a Motorized use off the designated road system is an implementation and enforcement issue, not a planning issue.

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Non-native Invasive Species-DCs 1–3 Renewable Energy- DC 1 Riparian and Aquatic Ecosystems- All DCs Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12, and 15–17 Timber, Forest, and Botanical Products- DC 1 Watersheds- DC 1 Wildland Fire and Fuels Management- DCs 1 and 6–10	Riparian and Aquatic Ecosystems- Standards 1 and 3, Guidelines 1 and 3–5 Roads- Objective 1, Standards 1 and 3, Guidelines 1–3, 5, and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Guidelines 5, 12, and 16 Timber, Forest, and Botanical Products- Standard 1, Guideline 3 Watersheds- Objectives 1 and 2, Guideline 1 Wildland Fire and Fuels Management- Standard 2, Guidelines 1 and 2	

Mimbres figwort

Mimbres figwort (*Scrophularia macrantha*) occurs on north-facing slopes in pinyon-juniper woodlands to dry mixed conifer between 6,500 to 8,200 feet elevation (NMRPTC 2023). Threats include mining or mineral exploration, fire, road construction or maintenance, and collection. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Mimbres figwort are the same as those identified for Arizona crested coralroot with the addition of desired conditions and objectives for Mixed Conifer-Frequent Fire and removal of Juniper Grass Woodland and Madrean-Piñon Oak Woodland in the coarse-filter.

Mogollon clover

Mogollon clover (*Trifolium neurophyllum*) occurs in wet meadows, springs, and along riparian corridors in montane coniferous forest from 6,500 to 9,000 feet elevation (NMRPTC 2023). Threats include drought and impacts to riparian habitat due to grazing, both native and domestic, or drying of streams or wet meadows through water developments (NatureServe 2016, NMRPTC 2023). Plan components (coarse- and fine-filter) that address ecological conditions and threats for Mogollon clover are the same as those identified for Metcalfe’s penstemon with the addition of Montane/Subalpine Grasslands in the coarse-filter.

Mogollon death camas

Mogollon death camas (*Zigadenus mogollonensis*) occurs in wet mixed conifer, sub-alpine fir over 8,700 feet elevation (NMRPTC 2023). Threats include habitat alteration, open areas created by fire and off-road motorized travel. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Mogollon death camas are the same as those identified for Arizona crested coralroot except that the desired conditions and objectives for Mixed Conifer with Aspen and Spruce-Fir Forest replace the other ERUs in the coarse-filter.

Mogollon hawkweed

Mogollon hawkweed (*Hieracium brevipilum* (*H. fendleri* var. *mogollense*)) occurs in ponderosa pine to mixed conifer forests from 8,200 to 10,500 feet elevation (NMRPTC 2023). More work is needed to determine effects from logging, as well as determining abundance and habitat requirements. The species appears to respond positively to disturbance from fires. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Mogollon death camas are the same as those identified for Mogollon hawkweed with the desired conditions and objectives for Mixed Conifer-Frequent Fire and Ponderosa Pine Forest replacing Spruce-Fir Forest in the coarse-filter.

Mogollon mountain lousewort

Mogollon mountain lousewort (*Pedicularis angustifolia*) occurs in mature forests in Catron County between 7,000 and 9,000 feet elevation (NatureServe 2016) in the Gila Wilderness. It has been found in mixed-conifer and spruce-fir forests on mature forest floors (SEINet 2016). Threats to the species would include anything that would remove mature forests, such as logging and wildfire. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Mogollon mountain lousewort are the same as those identified for Mogollon death camas with the addition of desired conditions and objectives for Mixed Conifer-Frequent Fire in the coarse-filter.

Piños Altos fameflower

Piños Altos fameflower (*Talinum humile*) occurs in pine oak woodlands on rocky, south-facing slopes, usually on shallow, gravelly, usually clayey soils overlaying rhyolite (NMRPTC 2023). Threats to this plant include grazing and habitat loss due to housing development. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Piños Altos fameflower are the same as those identified for Arizona crested coralroot.

Porsild's starwort

Porsild's starwort (*Stellaria porsildii*) occurs in shady and partially open understory of mixed conifer stands between 7,900 and 8,200 feet elevation (NMRPTC 2023). This species is occasionally found scattered on roadsides with steep, loamy, and rocky embankments. Drought is reported as a threat as plants may not emerge during dry periods. Additionally, forest fire, grazing, and recreational impacts may be threats. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Porsild's starwort are the same as those identified for Arizona crested coralroot with the desired conditions and objectives for Mixed Conifer with Aspen and Mixed Conifer-Frequent Fire replacing those for other ERUs in the coarse-filter.

Ray Turner's spurge

Ray Turner's spurge (*Euphorbia rayturneri*) occurs in desert grasslands from 4,600 to 5,600 feet elevation (NMRPTC 2023, NatureServe 2018) in sandy, moist soils (Gila Flora 2018). This plant has only been found to occur in Juniper Grass Woodland as mapped in the Gila National Forest. More work is needed to determine effects from management activities, as well as determining abundance and specific habitat requirements. Climate change is a threat to this species. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Ray Turner's spurge are the same as those identified for Arizona crested coralroot with the desired conditions and objectives for Semidesert Grasslands and Juniper Grass Woodland being the only ERUs in the coarse-filter.

Wooton's hawthorn

Wooton's hawthorn (*Crataegus wootoniana*) occurs in riparian habitat in montane conifer forest at an elevational range of 6,500 to 8,000 feet. This species has been infrequently described in the Gila National

Forest historically, with no documentation on abundance (NatureServe 2016). It is likely this species is not very abundant in the Gila National Forest but is believed to have been observed by forest staff along Trail 153 and Mogollon Creek downstream from Woodrow Canyon in the Gila Wilderness. Identified threats may include drought, climate change, timber harvest activities, riparian disturbances, and wildfire effects. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Wooton's hawthorn are the same as those identified for Metcalfe's penstemon, except the desired conditions and objectives for Mixed Conifer with Aspen, Mixed Conifer-Frequent Fire and Ponderosa Pine Forest may be less relevant in the coarse-filter.

Wright's catchfly (campion)

Wright's catchfly, or campion, (*Silene wrightii*) occurs on cliffs and rocky outcrops in conifer forests between 6,800 and 8,000 feet elevation (NMRPTC 2023). The species is believed to be well distributed in the Gila National Forest and occurs in Socorro, Sierra, Luna, Grant, and Catron Counties. Current land uses apparently pose no threats to this species as the cliff and crevice habitat it occupies is relatively inaccessible and offers considerable protection (NMRPTC 2023). Abundance and trend for this species in the Gila National Forest are not known. Plan components (coarse- and fine-filter) that address ecological conditions and threats for Wright's catchfly are the same as those identified for cliff brittlebush.

Yellow lady's-slipper

Yellow lady's-slipper (*Cypripedium parviflorum* var. *pubescens*) occurs in mesic meadows in ponderosa pine and mixed conifer forests, and wet areas along streams. Identified threats include plant collection and habitat loss or degradation (NMRPTC 2023). Plan components (coarse- and fine-filter) that address ecological conditions and threats for yellow lady's-slipper are the same as those identified for Metcalfe's penstemon.

Ecological Conditions

The plan provides for the ecological conditions required by plant species of conservation concern through desired conditions for Upland Ecological Response Units; Soils; Watersheds; Riparian and Aquatic Ecosystems; and Wildlife, Fish, and Plants.

Threats

Many of the threats to plant species of conservation concern including drought, stand-replacement fire, and climate change, are primarily provided for through the desired conditions for their respective ERU settings. There are also several desired conditions, standards and guidelines that address threats specific to plant species of conservation concern, and other rare and endemic plant species, in the Wildlife, Fish, and Plants section of the plan. Examples include:

Desired Condition 4: The locations of rare and endemic plant and animal species, habitat requirements, abundance, threats, and responses to management are known. Habitats and refugia for these species are intact, functioning, and sufficient for species persistence.

Standard 2: Where there are known populations of rare and endemic plants, no new permanent roads or motorized trails will be constructed unless it is to provide legal access to private property. Temporary motorized routes that facilitate management activities are acceptable provided appropriate avoidance or mitigation measures are incorporated. Temporary motorized routes are closed when no longer needed.

Standard 3: Where there are known populations of rare and endemic plants, the use of non-selective herbicides or herbicides that may have activity on the species will not be authorized

unless it is to control or eradicate noxious weeds, and other integrated pest management efforts have failed or are unlikely to succeed.

Guideline 7: Where there are populations of rare or endemic plant species, maintenance of existing motorized routes should avoid ground disturbance outside the existing road prism and associated drainage features.

Guideline 8: Rare and endemic plant populations should be avoided when siting new developed recreation facilities such as trailheads, campgrounds, and parking areas.

The Livestock Grazing section of the plan also addresses threats with plan components such as:

Standard 3: New livestock handling facilities designed to hold or concentrate livestock (for example, corrals, traps, or water developments) will be located outside of riparian management zones, significant archeological sites, and occupied sites of at-risk plant species. Buffer distances will be determined during project planning on a case-by-case basis in coordination with the permittee to adequately address management needs, site-specific circumstances, species-specific characteristics, and any associated legal requirements.

Guideline 4: Mineral (for example, salt) or vitamin supplements should not occur on or adjacent to known occupied sites of at-risk plant species, significant archaeological sites, cave entrances, poorly drained or saturated soils, unsatisfactory soils, or those with severe erosion hazard or high mass wasting hazard ratings. Buffer distances will be determined on a case-by-case basis in coordination with the permittee to adequately address management needs, site-specific circumstances, species-specific characteristics, and any associated legal requirements.

Like with other at-risk species, the need for any additional conservation measures would be evaluated at the project-level when more site- and activity-specific information can be considered.

Mammals

Arizona montane vole

Arizona montane vole (*Microtus montanus arizonensis*) occurs in mesic meadows in ponderosa pine and mixed conifer. Threats include habitat alteration through excess livestock use or other activities that dry out mesic meadows (BISON-M 2016).

Ecological Conditions

Plan components (coarse- and fine-filter) that address ecological conditions and threats for the Arizona montane vole are the same as those identified for the New Mexico meadow jumping mouse (Table G-7), except for Wildlife, Fish, and Plants Standard 4 and Timber, Forest, and Botanical Products Standard 11 (fine-filter), which specifically incorporates by reference all approved recovery plans for federally listed species. Desired conditions and objectives for Ponderosa Pine Forest, Mixed Conifer-Frequent Fire and Mixed Conifer with Aspen also provide coarse-filter components relevant to the ecological conditions required by the Arizona montane vole.

Threats

Unauthorized and excess livestock use would not be compliant with plan direction and is an implementation and enforcement issues, not a planning issue. Management directed toward maintaining and achieving the plan's desired conditions would address threats to the vole. Threats posed by drought, climate change, and stand-replacing fire are addressed as previously discussed in other adequacy subsections of this appendix.

Gunnison's prairie dog

Gunnison's prairie dog (*Cynomys gunnisoni*) occurs in grasslands and shrublands from 6,000 to 12,000 feet elevation. Threats include recreational shooting and sylvatic plague (NMDGF 2008).

Table G-16. Plan components (coarse- and fine-filter) that address ecological conditions and threats for the Gunnison's prairie dog

Desired Conditions (Coarse-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8 All Grasslands ERU- All DCs All Upland ERUs- LS DCs 1–5 Pinyon-Juniper Grass and Juniper Grass Woodland ERUs- All DCs Caves and Abandoned Land Mines- DC 5 Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC 2 Lands and Realty- DCs 1, 2, 4, 7, 9, 10, and 11 Livestock Grazing- DCs 2–4 Minerals- DC 1 Non-native Invasive Species- DCs 1–3 Renewable Energy- DC 1 Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12 and 15–17 Timber, Forest, and Botanical Products- DC 1 Watersheds- DC 1 Wildland Fire and Fuels Management- DCs 1 and 6–10	Air Quality- Guideline 4 All Grassland ERUs- Objectives 1–3 All Uplands ERUs- Standards 2–4, Guideline 1 Pinyon-Juniper Grass and Juniper Grass Woodland ERUs- Objectives 1 and 2 Facilities- Standard 2, Guideline 2 Lands and Realty- Guidelines 5 and 8 Livestock Grazing- Objective 1, Standards 2 and 3, Guidelines 1, 3–5, and 8 Minerals- Standards 4 and 6, Guidelines 2 and 11 Non-native Invasive Species- Standards 1, 3–12, and 14–18, Guidelines 1, 2, and 4–9 Roads- Objective 1, Standards 1 and 3, Guidelines 1–3, 5 and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Standards 3 and 4, Guidelines 4, 5, 7, 9, and 12–16 Timber, Forest, and Botanical Products- Standards 1, 3, and 4, Guideline 3 Watersheds- Objectives 1 and 2, Standards 1 and 2, Guidelines 1 and 2 Wildland Fire and Fuels Management- Standards 2–4, Guidelines 1 and 2 Wildlife, Fish, and Plants- Objectives 1 and 5	All Upland ERUs- LS DCs 7 and 8 Timber, Forest, and Botanical Products- Standard 10 Wildlife, Fish, and Plants- DCs 1–7, and 9–11, Standard 1, Guidelines 4, 5, 9, and 14

Ecological Conditions

The plan provides the ecological conditions required by Gunnison's prairie dog, primarily through desired conditions for grasslands and open-canopy woodlands. Other plan components support the healthy ecosystems the prairie dog relies on.

Threats

Recreational shooting and sylvatic plague are the primary threats to prairie dogs and are largely outside the management control of the Forest Service. There are some preventative actions management could do to help address plague, such as dusting prairie dog colonies with the insecticide Deltamethrin, which controls fleas that carry the bacterium that causes plague. The plan provides the flexibility for future projects to consider doing this. Additionally, there is the potential for collaborative work with New Mexico Department of Game and Fish and others to administer vaccines to prairie dog colonies or to reduce recreational shooting of the species. Other potential threats such as climate change and drought have been identified for other at-risk species discussed in other plan adequacy subsections in this appendix.

Lesser long-nosed bat

Lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*) was recently (April 2018) delisted from the federal threatened and endangered species list. The lesser long-nosed bat is a nectar, pollen, and fruit-eating bat that migrates seasonally from Mexico to southern Arizona and southwestern New Mexico. Human disturbance of roost sites, white-nose syndrome, urban development, high-intensity wildland fire, changing fire regimes resulting from non-native invasive plants, and climate change are considered threats. Two new threats that have been identified include illegal border activities and their enforcement actions, as well as new wind farms (USDI FWS 2007b).

Table G-17. Plan components (coarse- and fine-filter) that address ecological condition and threats for the lesser long-nosed bat

Desired Conditions (Coarse-Filter and Fine-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Air Quality- DC 8 All Grasslands ERU- All DCs All Upland ERUs- LS DCs 1–5 Madrean Pinyon-Oak Woodland ERU- All DCs Pinyon-Juniper Grass and Juniper Grass Woodland ERUs- All DCs Pinyon Juniper Woodland- All DCs Community and Tribal Relationships- DCs 1, 4, and 5 Facilities- DC 2 Lands and Realty- DCs 1, 2, 4, 7, 9, 10, and 11	Air Quality- Guideline 4 All Grassland ERUs- Objective 3 All Uplands ERUs- Standards 2–4, Guideline 1 Pinyon-Juniper Grass and Juniper Grass Woodland ERUs- Objectives 1 and 2 Facilities- Standard 2, Guideline 2 Lands and Realty- Guidelines 5 and 8 Livestock Grazing- Objective 1, Standards 2 and 3, Guidelines 1, 3–5, and 8 Minerals- Standards 4 and 6, Guidelines 2 and 11	All Upland ERUs- LS DCs 7 and 8 Caves and Abandoned Land Mines- DCs 1–5, Standards 2 and 3, Guidelines 1–3 Cliffs and Rocky Features- DCs 1 and 2, Guidelines 1–5 Renewable Energy- Standard 1 Timber, Forest, and Botanical Products- Standard 10 Wildlife, Fish, and Plants- DCs 1–7, and 9–11, Standard 1, Guidelines 4, 5, 9, and 14

Desired Conditions (Coarse-Filter and Fine-Filter)	Objectives, Standards, and Guidelines (Coarse-Filter)	Desired Conditions, Objectives, Standards, and Guidelines (Fine-Filter)
Livestock Grazing- DCs 2-4 Minerals- DC 1 Non-native Invasive Species- DCs 1–3 Renewable Energy- DC 1 Roads- DCs 2, 4, and 5 Soils- DC 1 Sustainable Recreation- DCs 1, 3, 12 and 15–17 Timber, Forest, and Botanical Products- DC 1 Watersheds- DC 1 Wildland Fire and Fuels Management- DCs 1 and 6–10	Non-native Invasive Species- Standards 1, 3–12, and 14–18, Guidelines 1, 2, and 4–9 Roads- Objective 1, Standards 1 and 3, Guidelines 1–3, 5 and 6 Soils- All Standards, Guidelines and Objectives Sustainable Recreation- Standards 3 and 4, Guidelines 4, 5, 7, 9, and 12–16 Timber, Forest, and Botanical Products- Standards 1, 3, and 4, Guideline 3 Watersheds- Objectives 1 and 2, Standards 1 and 2, Guidelines 1 and 2 Wildland Fire and Fuels Management- Standards 2–4, Guidelines 1 and 2 Wildlife, Fish, and Plants- Objectives 1 and 5	

Ecological Conditions

The ecological conditions required by the lesser long-nosed bat are provided for in plan components for Upland Ecological Response Units that support the agave and cacti species the bat feeds on, plan components for Caves and Abandoned Mine Lands and Cliffs and Rocky Features, which provide roost sites, and plan components in the Wildlife, Fish, and Plants section of the plan. Other plan components identified in the table above help support the healthy ecosystems and watersheds the bat requires and address threats.

Threats

National Forest System land status helps address threats to the bat from urban development. Human disturbance of roost sites and the introduction and spread of white-nose syndrome is addressed primarily in the Caves and Abandoned Mine section of the plan, including a supportive management approach. Non-native invasive species are addressed by plan components, including objectives in the Non-native Invasive Species section of the plan. Objectives for vegetation treatments address the risk of high-intensity wildfire. Climate change is a threat to all at-risk species and the way it is addressed by plan direction has been discussed in several plan adequacy subsections in this appendix. Illegal border activities and their enforcement action are outside the scope of plan revision. Standard 1 in the Renewable Energy section of the plan would require any wind energy facilities to incorporate appropriate siting, design features, and operational protocol to minimize and mitigate bat and bird collisions.

Referenced Plan Components

The plan components referenced in the previous crosswalk tables above are included verbatim here to facilitate reference.

Air Quality

Desired Condition 8: Atmospheric deposition of pollutants does not negatively impact water quality and other ecosystem components (see also Water Quality).

Guideline 4: Dust abatement should occur during project implementation where dust impacts are a concern.

All Upland Ecological Response Units

Landscape-Scale Desired Condition 1: Natural disturbances (for example, insects, disease, wind, and fire), and human activities that mimic the effects of natural disturbances, maintain fully functioning ecosystems and native vegetation communities that contain the full range of characteristic components, processes, and conditions.

Landscape-Scale Desired Condition 2: The adaptive capacity of the native vegetation communities to disturbances of varying frequency, extent, and severity, including long-term drought and climatic variability is high, with adaptive capacity measured by the area where structure, composition, process, function, and connectivity are restored and maintained.

Landscape-Scale Desired Condition 3: The characteristic full range of natural variability in composition, structure, and pattern, reflective of each individual ecological response unit, topographic characteristics, and soil properties are expressed (see terrestrial ecological unit).

- a. Overstory and understory plant species composition are each at least 66 percent similar to site potential as measured by each particular terrestrial ecological unit but can vary considerably at fine- and mid-scales owing to a diversity of seral conditions.
- b. All seral states are present. The relative proportions of seral states are at least 66 percent similar to the reference proportions as described in the most recent Region 3 Seral State Proportion Supplement.

Landscape-Scale Desired Condition 4: Transition zones or ecotones between riparian areas, forest, woodlands, shrublands, and grasslands are present. Transition zones shift in time and space due to climatic variability and natural disturbances such as fire.

Landscape-Scale Desired Condition 5: Organic ground cover (leaf litter, needle cast, coarse woody debris, nonvascular plants and biological crusts, and basal area) and vegetative canopy cover provide effective protection of soil, contribute to moisture retention and infiltration, nutrient cycling, plant and animal diversity, and ecosystem function.

Landscape-Scale Desired Condition 7: Ecological conditions support habitat quality, distribution, abundance, and connectivity to self-sustaining populations of all native and desirable non-native plant and animal species that are healthy, well distributed, and genetically diverse, including federally listed species, species of conservation concern, and rare and endemic species. Conditions provide for life history requirements, predator-prey interactions, and natural population fluctuations of all species within the capability of the landscape.

Landscape-Scale Desired Condition 8: Habitat availability, configuration, and connectivity allow wildlife populations to adjust their movements (seasonal migration, foraging, et cetera) in response to long-term trends in climate and human land use. Populations of rare and endemic species that rely wholly

on ecological response units with high or very high vulnerabilities are known, and conservation measures are in place.

Standard 2: On soils derived from volcanic sediment (Datil soils), ground-based mechanical thinning treatments will be limited to slopes less than 15 percent rise unless site-specific analysis determines fire behavior poses a greater risk to watershed or urban interface values. Pushing or chaining (see glossary at the end of this section) will not be authorized on these soils regardless of slope gradient. Fire incident management is exempted from this standard. Suppression rehabilitation activities will include any additional measures identified by the Resource Advisor or watershed program staff.

Standard 3: On soils with little to no soil development and those on erosional landforms, ground-based mechanical thinning treatments will be limited to slopes less than 25 percent rise unless site-specific analysis determines fire behavior poses a greater risk to watershed or urban interface values. Mastication or plucking is preferred over pushing or chaining. Pushing or chaining will not be authorized on these soils where slope gradients are greater than 15 percent. Fire incident management is exempted from this standard. Suppression rehabilitation activities will include any additional measures identified by the Resource Advisor or watershed program staff.

Standard 4: On soil types not addressed by previous standards, ground-based mechanical thinning treatments will be limited to 40 percent rise. Timber harvest on steeper slopes is restricted to aerial technologies and appropriate cable systems unless site-specific analysis determines that fire behavior poses a greater risk to watershed or urban interface values and the technology is available to do so safely and without long-term adverse effects. Mastication or plucking is preferred over pushing or chaining. Pushing or chaining will not be authorized on these soils where slope gradients are greater than 15 percent. Fire incident management is exempted from this standard. Suppression rehabilitation activities will include any additional measures identified by the Resource Advisor or watershed program staff.

Guideline 1: Vegetation treatments should be designed to recruit under-represented seral states and thereby promote continuous recruitment of old-growth characteristics across the landscape over time.

Spruce-Fir Forest

Landscape Scale Desired Condition 1: The Spruce-Fir Forest vegetation community is a mosaic of structural and seral states ranging from young trees through old and is composed of multiple species. The landscape arrangement is an assemblage of variably sized and aged groups and patches of trees and other vegetation.

- a. Patch sizes vary but are mostly in the hundreds of acres, with very infrequent disturbances creating patch sizes in the thousands of acres.

Landscape Scale Desired Condition 2: Tree canopies are typically more closed than in Mixed Conifer with Aspen. Overstory canopy cover varies with seral state and time since disturbance, topographic characteristics, and soil properties, often approaching complete canopy closure in mid- to late seral states (see terrestrial ecological unit).

Landscape Scale Desired Condition 3: Old growth occurs over large, continuous areas. Old-growth components include old trees, standing dead trees (snags), downed wood (coarse woody debris), and structural diversity. The location of old growth shifts on the landscape over time because of natural growth, death, and disturbance.

Landscape Scale Desired Condition 4: The Spruce-Fir Forest is composed predominantly of vigorous trees, but declining trees provide snags; top-killed, lightning- and fire-scarred trees; downed logs (greater than 12 inches diameter at mid-point, greater than 8 feet long) and coarse woody debris (greater than 3 inches diameter). Snags and coarse woody debris are well distributed. The number of snags and amount of coarse woody debris vary by site productivity, seral state, and disturbance history.

- a. Snags greater than 18 inches diameter at breast height have an average range between 5 to more than 30 per acre. Snag density in general (8 inches diameter at breast height and greater) averages 20 per acre with a range of 13 to 30. Average snag density increases with successional stage with less in early stages and more in late stages.
- b. Average coarse woody debris, including downed logs, varies from five to 30 tons per acre in early seral states; 30 to 40 tons per acre in mid-seral states; and 40 tons per acre or greater for late-seral states.

Landscape Scale Desired Condition 5: An understory of native grasses, forbs, and shrubs is typically present, with basal area, canopy cover, and species composition varying with seral state, degree of canopy closure, and terrestrial ecological unit.

Landscape Scale Desired Condition 6: In the lower Spruce-Fir Forest subtype, mixed-severity fires (fire regime group III) occur infrequently. In the upper spruce-fir subtype, high-severity fires (fire regime IV and V) occur very infrequently. Patches created by stand-replacement fire typically do not exceed 1,000 acres.

Mid-Scale Desired Condition 1: The size and number of tree groups and patches vary depending on disturbance history, topographic characteristics, and soil properties (see terrestrial ecological unit). There may also be small disturbances resulting in groups and patches of tens of acres or less. Grass, forb, and shrub interspaces created by disturbance may involve single trees or comprise up to 100 percent of the mid-scale area following infrequent, high-severity disturbances. Aspen is occasionally present in large patches.

Mid-Scale Desired Condition 2: Average tree densities range from 20 to 250 square feet of basal area or greater per acre depending on time since disturbance, seral states of the groups and patches, topographic characteristics, and soil properties.

Mid-Scale Desired Condition 3: The understory consists of native shrubs, perennial grasses and sedges, forbs, mosses, and other non-vascular plants with basal area ranging from less than 1 percent to 20 percent, depending on soil properties (see terrestrial ecological unit), seral state, and degree of canopy closure.

Mid-Scale Desired Condition 4: Forest conditions in goshawk post-fledging family areas are like general forest conditions except these forests typically contain at least 10 percent greater basal area than goshawk foraging areas and the general forest. Nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than other areas.

Fine-Scale Desired Condition 1: Mid- to old-age trees grow tightly together with interlocking crowns. Trees are generally of the same height (single story) and age in early group or patch development but may be multi-storied in late development. Small gaps are present because of localized disturbances such as wind throw, insects, or disease.

Fine-Scale Desired Condition 2: Organic ground cover and herbaceous vegetation provide protection for soil, moisture infiltration, and contribute to plant diversity and ecosystem function.

Objective 1: Treat at least 250 and no more than 23,779 acres per decade using a combination of naturally ignited wildfire and prescribed fire methods to maintain or move toward desired conditions.

See also **Adaptation** management approach.

Mixed Conifer with Aspen

Landscape Scale Desired Condition 1: The Mixed Conifer with Aspen vegetation community is a mosaic of structural and seral stages ranging from young trees through old and is composed of multiple

species. Species composition within tree patches depends on seral state. The landscape arrangement is an assemblage of variably sized and aged groups and patches of trees and other vegetation.

- a. Patch sizes vary but are mostly between 100 and 300 acres, with rare disturbances creating patch sizes in the thousands of acres.

Landscape Scale Desired Condition 2: Tree canopies are typically more closed than in the Mixed Conifer-Frequent Fire ecological response unit. Overstory canopy cover varies with seral state and time since disturbance, topographic characteristics, and soil properties, often approaching complete canopy closure in mid- to late seral states (see terrestrial ecological unit).

Landscape Scale Desired Condition 3: Old growth occurs over large, continuous areas. Old growth components include old trees, standing dead trees (snags), downed wood (coarse woody debris), and structural diversity. The location of old growth shifts on the landscape over time because of natural growth, death, and disturbance.

Landscape Scale Desired Condition 4: The Mixed Conifer with Aspen is composed predominantly of vigorous trees, but declining trees provide snags, top-killed, lightning- and fire-scarred trees, downed logs (larger than 12 inches diameter at mid-point, more than 8 feet long), and coarse woody debris (larger than 3 inches diameter).

Landscape Scale Desired Condition 5: Snags and coarse woody debris are well distributed. The number of snags and amount of coarse woody debris vary by site productivity, seral state, and disturbance history, generally increasing from early through late succession.

- a. Snags 18 inches or greater diameter at breast height have an average range from 1 to more than 5 per acre. Snag density in general (8 inches diameter at breast height and greater) averages 20 per acre with a range of 13 to 30.
- b. Average coarse woody debris, including downed logs, varies from 10 to 40 tons per acre or more depending on site productivity, disturbance history, and seral state.

Landscape Scale Desired Condition 6: An understory of native grasses, forbs, and shrubs is typically present, with basal area, canopy cover and species composition varying with seral state, degree of canopy closure, and terrestrial ecological unit.

Landscape Scale Desired Condition 7: Infrequent mixed-severity fire (fire regime group III) is characteristic, especially at lower elevations of this type. High-severity fires occur very infrequently (fire regime groups IV and V) and typically occur at the higher elevations of this type. Patches created by stand-replacement fire typically do not exceed 1,000 acres.

Mid-Scale Desired Condition 1: The landscape arrangement is a mosaic of variably sized groups and patches of trees, primarily even aged within groups or patches with ages varying between groups or patches. Groups and patches of tens of acres or less are relatively common. The size and number of tree groups and patches vary depending on disturbance history, topographic characteristics, and soil properties (see terrestrial ecological unit). Grass, forb, and shrub interspaces created by disturbance may involve single trees or compose up to 100 percent of the mid-scale area following major disturbances. Openness, species dominance, and overall composition also vary within and between patches, depending on seral state. Aspen is occasionally present in large patches.

Mid-Scale Desired Condition 2: Average tree densities range from 20 to 180 square feet of basal area or greater per acre depending on time since disturbance, seral states of the groups and patches, topographic characteristics, and soil properties.

Mid-Scale Desired Condition 3: The understory consists of native shrubs, perennial grasses, sedges, forbs, mosses, and other non-vascular plants with basal area ranging from less than 1 percent to

20 percent or more depending on soil properties (see terrestrial ecological unit), seral state, and degree of canopy closure.

Mid-Scale Desired Condition 4: Forest conditions in goshawk post-fledging family areas are like general forest conditions except these forests typically contain at least 10 percent greater basal area than goshawk foraging areas and the general forest. Nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than other areas.

Fine-Scale Desired Condition 1: In mid-aged and older forest groups, trees are typically variably spaced with crowns interlocking or nearly interlocking. Trees within groups can be of similar or variable species and ages. Small openings are present because of disturbances.

Fine-Scale Desired Condition 2: Organic ground cover and herbaceous vegetation provide protection for soil, moisture infiltration, and contribute to plant diversity and ecosystem function.

Objective 1: Treat at least 300 and no more than 73,934 acres per decade using a combination of naturally ignited wildfire, prescribed fire, and mechanical methods to maintain or move toward desired conditions.

See also **Adaptation** management approach.

Mixed Conifer-Frequent Fire

Landscape Scale Desired Condition 1: The Mixed Conifer-Frequent Fire vegetation community is a mosaic of structural and seral stages ranging from young trees through old and is composed of multiple species. Forest appearance is variable but is generally uneven-aged and open. Occasional patches of even-aged structure are present.

Landscape Scale Desired Condition 2: The forest arrangement is an assemblage of variably sized openings of grasses, forbs, and shrubs. Size, shape, number of trees per group, and number of groups per area are variable across the landscape. Where they occur, groups of aspen and all structural stages of oak are present. Denser tree conditions exist on northerly aspects, steep slopes, toe slopes, and in canyon bottoms.

Landscape Scale Desired Condition 3: Old growth occurs over large, continuous areas. Old-growth components include old trees, standing dead trees (snags), downed wood (coarse woody debris), and structural diversity. The location of old growth shifts on the landscape over time because of natural growth, death, and disturbance.

Landscape Scale Desired Condition 4: Mixed Conifer-Frequent Fire is composed predominantly of vigorous trees, but declining trees provide snags, top-killed, lightning- and fire-scarred trees, downed logs (more than 12 inches diameter at mid-point, over 8 feet long), and coarse woody debris (more than three inches diameter). Snags and coarse woody debris are well distributed. The number of snags and amount of coarse woody debris vary by site productivity, seral state, and disturbance history.

Landscape Scale Desired Condition 5: Dwarf mistletoe occurs in less than 15 percent of host trees in uneven-aged forest structures and less than 25 percent in even-aged forest structures.

Landscape Scale Desired Condition 6: Frequent, low-severity fires (fire regime group I) are characteristic, including throughout goshawk home ranges. Infrequent mixed-severity fire (fire regime group III) is characteristic only in the higher elevations where this type transitions with mixed conifer with aspen or where topography and other physical site conditions are predisposed to more severity.

Mid-Scale Desired Condition 1: The Mixed Conifer-Frequent Fire vegetation community is characterized by variation in the size and number of tree groups depending on disturbance history, elevation, aspect, topography, topographic position, and soil properties (see terrestrial ecological unit).

The more productive sites contain more trees per group and more groups per area. Openness typically ranges from 50 percent in more productive sites to 90 percent in less productive sites.

Mid-Scale Desired Condition 2: Average tree densities range from 40 to 125 square foot basal area per acre depending on disturbance history, topographic characteristics, and soil properties (see terrestrial ecological unit).

Mid-Scale Desired Condition 3: Patch size, as measured by individual trees or clumps of trees, ranges from less than 1 acre to tens of acres. The mosaic of tree groups is generally composed of uneven-aged forest with all age classes and structural stages included. Occasionally, small patches of even-aged forest structure are present but are generally less than 60 acres. A small percentage of the landscape may be predisposed to larger even-aged patches. Even-aged stand size depends on the timing of regeneration establishment and the timing, frequency, and severity of disturbance events.

Mid-Scale Desired Condition 4: Snags 18 inches or larger diameter at breast height average three per acre. Snag density in general (over 8 inches diameter at breast height) averages eight per acre.

Mid-Scale Desired Condition 5: Downed logs (over 12 inches diameter at mid-point) average three per acre within forested areas. Average coarse woody debris, including downed logs, ranges from five to 15 tons per acre in forested areas, depending on site productivity, disturbance history, and seral state.

Mid-Scale Desired Condition 6: The understory consists primarily of perennial grasses and forbs capable of carrying low-severity surface fire, with basal vegetation values ranging between less than 1 and 25 percent depending on soil properties (see terrestrial ecological unit) and seral state. Basal vegetation values at the low end of this range are typically restricted to soils formed from certain rhyolite and tuff units (see terrestrial ecological unit).

Mid-Scale Desired Condition 7: Forest conditions in goshawk post-fledging family areas are like general forest conditions except these forests typically contain at least 10 percent greater basal area than goshawk foraging areas and the general forest. Nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than other areas.

Fine-Scale Desired Condition 1: Trees typically occur in irregularly shaped groups and are variably spaced with some tight clumps. Crowns of trees in the mid-to-old age groups are interlocking or nearly interlocking. Groups in the mid-to-old age groups consist of 2 to approximately 50 trees per group. Size of tree groups is typically less than 1 acre. Trees within groups are of similar or variable ages and one or more species.

Fine-Scale Desired Condition 2: Interspaces surrounding tree groups are variably shaped and composed of a mixture of grasses, forbs, and shrubs. Some natural openings contain individual trees or snags.

Fine-Scale Desired Condition 3: Organic ground cover and herbaceous vegetation provide protection for soil, moisture infiltration, and contribute to plant diversity and ecosystem function.

Objective 1: Treat at least 6,875 and no more than 282,400 acres per decade using a combination of naturally ignited wildfire, prescribed fire, and mechanical methods to maintain or move toward desired conditions.

Ponderosa Pine Forest

Landscape Scale Desired Condition 1: The Ponderosa Pine Forest is composed of trees from structural stages ranging from young to old. Forest appearance is variable but is generally uneven-aged and open; occasional areas of even-aged structure are present.

Landscape Scale Desired Condition 2: The forest arrangement is in individual trees, small clumps, and groups of trees interspersed within variably sized openings of grasses, forbs, and shrubs like historical patterns. The size, shape, number of trees per group, and number of groups per area are variable across

the landscape. Denser tree conditions exist on northerly aspects, steep slopes, toe slopes, and in canyon bottoms.

Landscape Scale Desired Condition 3: In the Gambel oak subtype, all sizes and ages of oak trees are present.

Landscape Scale Desired Condition 4: Old growth occurs throughout the landscape, generally in small areas as individual old-growth components, or as clumps of old growth. Old-growth components include old trees, standing dead trees (snags), downed wood (coarse woody debris), and structural diversity. The location of old growth shifts on the landscape over time because of natural growth, death, and disturbance.

Landscape Scale Desired Condition 5: The Ponderosa Pine Forest is composed predominantly of vigorous trees, but declining trees provide snags and coarse woody debris; downed logs (larger than 12 inches diameter at mid-point, over 8 feet long) and coarse woody debris (over 3 inches diameter). Snags and coarse woody debris are well distributed. The number of snags and amount of coarse woody debris vary by seral state.

Landscape Scale Desired Condition 6: Dwarf mistletoe occurs in less than 15 percent of host trees in uneven-aged forest structures and less than 25 percent in even-aged forest structures.

Landscape Scale Desired Condition 7: Frequent, low-severity fires (fire regime group I) are characteristic, including throughout goshawk home ranges.

Mid-Scale Desired Condition 1: The Ponderosa Pine Forest vegetation community is characterized by variation in the size and number of tree groups depending on disturbance history, topographic characteristics, and soil properties (see terrestrial ecological unit). The more productive sites contain more trees per group and more groups per area. Openness typically ranges from 52 percent in more productive sites to 90 percent in less productive sites. In areas with high fine-scale aggregation of trees into groups, mid-scale openness ranges between 78 and 90 percent.

Mid-Scale Desired Condition 2: Tree density generally ranges from an average of 22 to an average of 89 square foot basal area per acre depending on disturbance history, topographic characteristics, and soil properties (see terrestrial ecological unit). Denser tree conditions exist on northerly aspects, steep slopes, toe slopes, and in canyon bottoms.

Mid-Scale Desired Condition 3: The mosaic of tree groups is generally composed of uneven-aged forest with all age classes and structural stages. Occasionally, small patches of even-aged forest structure are present. A small percentage of the landscape may be predisposed to larger even-aged patches. Even-aged stand size depends on the timing of regeneration establishment and the timing, frequency, and severity of disturbance events.

Mid-Scale Desired Condition 4: Snags are typically 18 inches or larger diameter at breast height and average one to two per acre. In the Gambel oak subtype, large oak snags (more than 10 inches diameter at mid-point) are a well-distributed component.

Mid-Scale Desired Condition 5: Downed logs average three per acre. Average coarse woody debris, including downed logs ranges from 5 (Graham et al. 1994, Brown et al. 2003) to 10 tons per acre.

Mid-Scale Desired Condition 6: The understory consists primarily of perennial grasses and forbs capable of carrying frequent, low-severity surface fire, with basal vegetation values ranging between less than 1 and 25 percent depending on soil properties (see terrestrial ecological unit) and seral state; basal vegetation values at the low end of this range are typically restricted to soils formed from some rhyolites and tuffs (see terrestrial ecological unit).

Mid-Scale Desired Condition 7: Forest conditions in goshawk post-fledging family areas are similar to general forest conditions except these forests typically contain 10 percent or greater basal area than

goshawk foraging areas and the general forest. Nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than other areas.

Fine-Scale Desired Condition 1: Trees typically occur in irregularly shaped groups and are variably spaced with some tight clumps. Crowns of trees in the mid- to old-age groups are interlocking or nearly interlocking. Groups in the mid-to old age groups consist of 2 to approximately 40 trees per group. Size of tree groups is typically less than one acre, but average half an acre. Trees within groups are of similar or variable ages and may contain species other than ponderosa pine.

Fine-Scale Desired Condition 2: Interspaces surrounding tree groups are variably shaped and composed of a mixture of grasses, forbs, and shrub. Some natural openings contain individual trees or snags.

Fine-Scale Desired Condition 3: Organic ground cover and herbaceous vegetation provide protection for soil, moisture infiltration, and contribute to plant diversity and ecosystem function.

Objective 1: Treat at least 6,320 and no more than 600,300 acres per decade using a combination of naturally ignited wildfire, prescribed fire, and mechanical methods to maintain or move toward desired conditions.

Ponderosa Pine-Evergreen Oak

Landscape Scale Desired Condition 1: The perennial grass subtype of Ponderosa Pine-Evergreen Oak is composed of structural and seral stages ranging from young trees through old and is composed of multiple species. Forest appearance is variable but is generally uneven-aged and open at the landscape scale, although it can appear even-aged within tree groups; occasionally larger areas of even-aged structure are present.

Landscape Scale Desired Condition 2: The forest arrangement is in individual trees, small clumps and groups of trees interspersed within variably sized openings with grasses, forbs, and shrubs. The size, shape, number of trees per group, and number of groups per area vary across the landscape. Denser tree conditions exist on northerly aspects, steep slopes, toe slopes, and in canyon bottoms.

Landscape Scale Desired Condition 3: All age and structural classes of oak are present with old trees occurring as dominant individuals and small groups occurring typically within openings. In the perennial grasses subtype, shrubs occur at low densities that do not inhibit ponderosa pine regeneration, typically averaging less than 30 percent canopy cover. In the evergreen shrub subtype, shrub canopy cover averages more than 30 percent.

Landscape Scale Desired Condition 4: Old growth occurs throughout the landscape, generally in small areas as individual old-growth components, or as clumps of old growth. Old-growth components include old trees, standing dead trees (snags), downed wood (coarse woody debris), and structural diversity. The location of old growth shifts on the landscape over time because of natural growth, death, and disturbance.

Landscape Scale Desired Condition 5: Ponderosa Pine-Evergreen Oak is composed predominantly of vigorous trees, but declining trees provide snags and coarse woody debris; downed logs (larger than 12 inches diameter at mid-point, more than 8 feet long), and coarse woody debris (over 3 inches diameter). Snags and coarse woody debris are well distributed. The number of snags and amount of coarse woody debris vary by seral state.

Landscape Scale Desired Condition 6: Dwarf mistletoe occurs in less than 15 percent of host trees in uneven-aged forest structures and in less than 25 percent in even-aged forest structures.

Landscape Scale Desired Condition 7: Frequent, low-severity fires (fire regime group I) are characteristic of the perennial grasses subtype, including throughout goshawk home ranges. Mixed-severity fire (fire regime group III) is characteristic of the evergreen shrub subtype.

Mid-Scale Desired Condition 1: The Ponderosa Pine-Evergreen Oak is characterized by variation in the size and number of tree groups depending on disturbance history, topographic characteristics, and soil properties (see terrestrial ecological unit). The more productive sites contain more trees per group and more groups per area. Openness typically ranges from 10 percent in more productive sites to 70 percent in less productive sites.

Mid-Scale Desired Condition 2: The mosaic of tree groups is generally composed of uneven-aged forest with all age classes and structural stages, though tree groups and patches may be relatively even-aged. Occasionally, small patches of even-aged forest structure are present. A small percentage of the landscape may be predisposed to larger even-aged patches. Even-aged stand size depends on the timing of regeneration establishment and the timing, frequency, and severity of disturbance events.

Mid-Scale Desired Condition 3: Average tree density ranges from 20 to 80 square foot basal area per acre depending on disturbance history, topographic characteristics, and soil properties (see terrestrial ecological unit). Denser tree conditions exist on northerly aspects, steep slopes, toe slopes, and in canyon bottoms.

Mid-Scale Desired Condition 4: Snags are typically 18 inches or larger diameter at breast height and average one to two per acre. Snags between 8- and 18-inches average 5 per acre. Large oak snags (over 10 inches diameter at mid-point) are a well-distributed component.

Mid-Scale Desired Condition 5: Downed logs average four per acre. Average coarse woody debris, including downed logs varies with seral state and ranges from 5 (Graham et al. 1994, Brown et al. 2003) to 15 tons per acre in forested areas depending on site productivity, disturbance history, and seral state.

Mid-Scale Desired Condition 6: In both subtypes, the understory consists primarily of native shrubs, perennial grasses, and forbs capable of supporting the natural fire regime with basal vegetation values ranging between 5 and 25 percent, depending on the terrestrial ecological unit.

Mid-Scale Desired Condition 7: Forest conditions in goshawk post-fledging family areas are similar to general forest conditions except these forests typically contain 10 percent or greater basal area than goshawk foraging areas and the general forest. Nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than other areas.

Fine-Scale Desired Condition 1: Trees typically occur in small groups and are variably spaced with some tight clumps. Crowns of trees in the mid-to-old-age groups are interlocking or nearly interlocking. Trees within groups are of similar or variable ages and may contain species other than ponderosa pine. Patch size, as measured by individual trees or clumps of trees, is typically less than half an acre in the evergreen shrub subtype and less than 1 acre in the perennial grasses subtype.

Fine-Scale Desired Condition 2: Interspaces surrounding tree groups are variably shaped and composed of a mixture of grasses, forbs, and shrubs reflective of each subtype. Some natural openings include large open-grown oaks.

Fine-Scale Desired Condition 3: Organic ground cover and herbaceous vegetation provide protection for soil, moisture infiltration, and contribute to plant diversity and ecosystem function.

Madrean Pinyon-Oak Woodland

Landscape Scale Desired Condition 1: The Madrean Pinyon-Oak Woodland is characterized by relatively homogenous structure, generally uneven-aged with open or closed canopies. Occasional patches of even-aged structure are present.

Landscape Scale Desired Condition 2: Old growth occurs throughout the landscape, generally in small areas as individual old-growth components, or as clumps of old growth. Old-growth components include old trees, standing dead trees (snags), downed wood (coarse woody debris), and structural diversity. Declining trees are a well-distributed component providing for snag and coarse woody debris recruitment.

The location of old growth shifts on the landscape over time because of natural growth, death, and disturbance.

Landscape Scale Desired Condition 3: Infrequent mixed-severity fire (fire regime group III) is characteristic, with high-severity fire occurring very infrequently (fire regime group V).

Mid-Scale Desired Condition 1: Most of the woodland is in a moderately open condition with overstory tree cover averaging between 10 and 50 percent or more depending on disturbance history, topographic characteristics, and soil properties (see terrestrial ecological unit). Higher overstory tree cover values typically occur on northerly facing slopes, toe slopes, drainage bottoms, and areas where local topography includes concave pockets.

Mid-Scale Desired Condition 2: Tree groups vary in size, shape, and number depending on disturbance history, topographic characteristics, and soil properties (see terrestrial ecological unit). The more productive sites contain more trees per group and more groups per acre. Patch sizes, as measured by groups or clumps of trees, range from less than 1 acre to tens of acres, applicable at both the mid and fine scales.

Mid-Scale Desired Condition 3: Mixed-severity fire and other disturbances occasionally favor the development of even-aged patches at both the mid and fine scales.

Mid-Scale Desired Condition 4: All structural stages of oak are present with old trees occurring as dominant individuals and small groups.

Mid-Scale Desired Condition 5: The vegetation community is predominantly vigorous, but declining trees are a component and provide for well-distributed snags and coarse woody debris.

- a. Snags 18 inches diameter at breast height or larger average one per acre; snags in general (8 inches diameter at breast height or larger) average four per acre; large oak snags (over 10 inches diameter at breast height) are also a well-distributed component.
- b. Coarse woody debris varies with seral state but averages 2 to 5 tons per acre.

Mid-Scale Desired Condition 6: Basal vegetation values vary from less than 1 to 5 percent, depending on disturbance history, seral state, degree of tree canopy closure, soil properties and shrub species (see terrestrial ecological unit).

Mid-Scale Desired Condition 7: The amount of shrub canopy cover varies between less than 1 to more than 30 percent, depending on disturbance history, seral state, degree of tree canopy closure, soil properties, and shrub species (see terrestrial ecological unit).

Fine-Scale Desired Condition 1: The woodland arrangement is in individual trees, small clumps, and groups of trees interspersed within variably sized openings containing grasses, forbs, and shrubs. Some openings include large, open-grown oaks. Tree groups vary in size and number depending on climate, soil properties, and past disturbance. The more biologically productive sites contain more trees per group and more groups per acre. As a result, patch sizes can vary from less than one acre to tens of acres.

Fine-Scale Desired Condition 2: Trees within groups are of similar or variable ages and may contain species other than oak, juniper, and piñon pine.

Fine-Scale Desired Condition 3: Crowns of trees within the mid-to-old-age groups are interlocking or nearly interlocking. These groups consist of 2 to approximately 40 trees.

Fine-Scale Desired Condition 4: Organic ground cover and herbaceous vegetation provide protection for soil, moisture infiltration, and contribute to plant diversity and ecosystem function.

Pinyon Juniper Woodland

Landscape Scale Desired Condition 1: The Pinyon-Juniper Woodland is characterized by even-aged patches of piñon and juniper species that at the landscape level, form multi-aged woodlands.

Landscape Scale Desired Condition 2: Old growth occurs throughout the landscape and is often concentrated in mid- and fine-scale units as patches of old growth. Old-growth components include old trees, standing dead trees (snags), downed wood (coarse woody debris), and structural diversity. The location of old growth shifts on the landscape over time because of natural growth, death, and disturbance.

Landscape Scale Desired Condition 3: Very old trees (more than 300 years old) are present, while snags and older trees with dead limbs and tops are scattered across the landscape.

- a. Snags 18 inches diameter at root crown and above average one per acre.
- b. Snags 8 to 18 inches at root crown average five snags per acre.
- c. Coarse woody debris increases from early successional states through later successional states and averages 2 to 5 tons per acre.

Landscape Scale Desired Condition 4: Fire as a disturbance is less frequent and variable due to differences in understory conditions, though some sites can carry frequent surface fire. Most fires that do occur are mixed to high severity (fire regime III, IV, and V).

Mid-Scale Desired Condition 1: Tree density and canopy cover are high, shrubs are sparse to moderate, and herbaceous cover may be low and discontinuous, depending on the terrestrial ecological unit.

Mid-Scale Desired Condition 2: Trees occur in even-aged patches ranging from young to old, where patch sizes range from tens to hundreds of acres.

Mid-Scale Desired Condition 3: Understory basal vegetation values (shrubs, grasses, and forbs) typically range from less than 5 percent to 25 percent, depending on soil properties (see terrestrial ecological unit) and seral state.

Pinyon Juniper Grass and Juniper Grass Woodlands

Landscape Scale Desired Condition 1: Pinyon-Juniper Grass and Juniper Grass Woodlands are generally uneven-aged and open in appearance.

Landscape Scale Desired Condition 2: Old growth occurs throughout the landscape, generally in small areas as individual old-growth components, or as clumps of old growth. Old-growth components include old trees, standing dead trees (snags), downed wood (coarse woody debris), and structural diversity. The location of old growth shifts on the landscape over time because of natural growth, death, and disturbance.

Landscape Scale Desired Condition 3: Fires are typically frequent and low severity (fire regime I).

Mid-Scale Desired Condition 1: Snags and coarse woody debris are scattered across the landscape.

- a. Snags 18 inches diameter at root crown or above average one per acre
- b. Snags 8 to 18 inches diameter at root crown average five per acre
- c. Coarse woody debris increases from early seral states through late seral states and averages 1 to 3 tons per acre.

Mid-Scale Desired Condition 2: Scattered shrubs and a dense herbaceous understory including native grasses, forbs, and annuals are present to support frequent surface fires, with shrub canopy cover averaging less than 30 percent and understory vegetation basal area values averaging between about 10 and 30 percent, depending on soil properties (see terrestrial ecological unit).

Fine-Scale Desired Condition 1: Trees occur as individuals, but occasionally in small groups ranging from young to old. Individual trees and clumps range from less than one-tenth to one acre. Occasionally patches of uneven-aged structure are present because of disturbance and regeneration establishment timing. A small percentage of the landscape may be predisposed to larger even-aged patches, based on physical site conditions that favor mixed-severity and stand-replacement fire and other disturbances.

Fine-Scale Desired Condition 2: Organic ground cover and herbaceous vegetation provide protection for soil, moisture infiltration, and contribute to plant diversity and ecosystem function.

Objective 1: In Pinyon-Juniper Grass, treat at least 4,000 and no more than 145,800 acres per decade using a combination of naturally ignited wildfire, prescribed fire, and mechanical methods to maintain or move toward desired conditions.

Objective 2: In Juniper Grass, treat at least 4,000 and no more than 88,000 acres per decade using a combination of naturally ignited wildfire, prescribed fire, and mechanical methods to maintain or move toward desired conditions.

Mountain Mahogany Mixed Shrubland

Landscape Scale Desired Condition 1: The Mountain Mahogany Mixed Shrubland vegetation community is a mosaic of structural and seral states ranging from young trees through old and is composed of multiple species.

Landscape Scale Desired Condition 2: Tree cover is less than 10 percent, except in dissimilar inclusions driven by local topography, microclimate, and soil properties (see terrestrial ecological unit).

Landscape Scale Desired Condition 3: Infrequent, stand-replacement fire (fire regime group IV) is characteristic of this vegetation type.

Mid-Scale Desired Condition 1: Shrub cover is greater than 10 percent and may exceed 30 percent in late seral states, depending on disturbance history, elevation, aspect, topography, and soil properties (see terrestrial ecological unit). Shrub basal area values typically range from 5 to 15 percent or more.

Grasslands

Landscape Scale Desired Condition 1: Vegetation is dominated by native herbaceous plants. Biological diversity is high. In mid- to late seral states, species composition is at least 66 percent, similar to site potential (see terrestrial ecological unit). There are inclusions of tree or shrub cover, or both, and variability within the landscape as well as ecotones on the fringes.

- a. Old-growth components may exist but are limited to some savanna settings with sparse tree cover, where there are scattered large trees and occasional snags. The location of these components shifts over time because of natural growth and mortality, drought, and fire.

Landscape Scale Desired Condition 2: Fire plays its natural role on the landscape, thereby limiting conifer encroachment. Vegetation height and density carry frequent, low-severity fire (plan contains footnote discussing differences in describing fire severity in grasslands).

Landscape Scale Desired Condition 3: There is regeneration, seed head production, and a balance of native perennial grasses and forb species, including warm and cool season species in most years, reflecting the capability of soils, weather patterns, and the range of natural variability.

Mid-Scale Desired Condition 1: The composition, structure, and distribution of native vegetation reflect a mix of early, middle, and late seral states. Early seral states will typically contain more forbs, with older states being dominated by a diversity of native perennial grasses and fewer forbs. Native plant species are present in all age classes and are healthy, vigorous, and reproducing.

Mid-Scale Desired Condition 2: Tree and shrub cover are each less than 10 percent, except in the Colorado Plateau-Great Basin Grassland and Semidesert Grassland where shrub cover, but not tree cover, may occasionally exceed 10 percent.

Mid-Scale Desired Condition 3: Biological diversity is high. Within site capability, a mosaic of vegetation density exists across the landscape, ranging from densely vegetated areas to small bare areas that result from natural processes, such as freeze-thaw action or burrowing by small mammals.

Mid-Scale Desired Condition 4: Vegetation conditions provide hiding, nesting, and thermal cover in contiguous blocks for wildlife, including small mammals and songbird nesting.

Fine-Scale Desired Condition 1: Within site capability, a mosaic of vegetation density exists across the landscape, ranging from densely vegetated areas to small bare areas that result from natural processes, such as freeze-thaw action or burrowing by small mammals.

Fine-Scale Desired Condition 2: Organic ground cover and herbaceous vegetation provide protection for soil, moisture infiltration, and contribute to plant diversity and ecosystem function.

Objective 1: In Colorado Plateau-Great Basin Grassland, treat at least 2,000 and no more than 59,500 acres per decade using a combination of naturally ignited wildfire, prescribed fire, and mechanical methods to maintain or move toward desired conditions.

Objective 2: In Montane/Subalpine Grasslands, treat at least 4,600 and no more than 94,800 acres per decade using a combination of naturally ignited wildfire, prescribed fire, and mechanical methods to maintain or move toward desired conditions.

Objective 3: In Semidesert Grassland, treat at least 800 and no more than 88,900 acres per decade using a combination of naturally ignited wildfire, prescribed fire, and mechanical methods to maintain or move toward desired conditions.

Caves and Abandoned Mine Lands

Desired Condition 1: Cave resources continue to develop or erode under natural conditions. Water flowing into, from, or within these systems contains naturally fluctuating background levels of sediment, organic matter, and dissolved minerals, and is not polluted by human activities.

Desired Condition 2: Cave resources and abandoned mine lands provide habitat for species, particularly bats, that require specialized niches for raising young, roosting, and overwintering. Caves maintain humidity, temperature, and disturbance levels consistent with historical conditions. Caves known to be important for endemic, rare, federally listed, species of conservation concern, or cave-roosting bats are intact and provide habitat for these species. Disease is not spread by human activities.

Desired Condition 3: The cultural, archaeological, geological, hydrological, paleontological, biological, and scenic resources associated with caves are maintained. Cave resources are not damaged or defaced by human activities.

Desired Condition 4: Features, characteristics, values, or opportunities for which caves have been designated or nominated as “significant” are maintained.

Desired Condition 5: Abandoned mine lands do not pose an environmental quality, public health, or safety hazard.

Standard 1: Authorization of activities with the potential to impact caves that have been designated or nominated as “significant,” management must include design criteria that maintain the features, characteristics, values, or opportunities for which they were recognized.

Standard 2: When closing mine features and caves to public entry, pre-closure inspections must be conducted to determine if cave-dependent or other species are present. Closures will be designed and

implemented to address the needs of resident or historically occurring wildlife within the constraints of meeting public safety needs.

Standard 3: The most current guidance and decontamination procedures must be used to avoid the spread of white-nose syndrome or other pathogens and diseases.

Guideline 1: Environments in caves and abandoned mines should not be altered except where necessary to protect associated natural resources, health, and safety.

Guideline 2: Identified bat roosts should be managed to provide for the enhancement and protection of bat populations. Protection measures may include seasonal or permanent closures, public education, or both. Where closures are necessary, they should preserve habitat for wildlife, including roosting bats, and avoid direct impacts to bats. If bats or other species are present, structures should meet the most current regional guidelines for wildlife-friendly closures.

Guideline 3: Management activities that have the potential to affect microclimate, hydrology, water chemistry, sediment regime, or structural integrity of the cave or mine feature should incorporate a buffer zone to avoid impacting the cave or mine feature environment. The size of the buffer may be dependent on site and activity but should be at least 100 feet. Buffer zones less than 100 feet may only be used where necessary to protect associated natural resources, health, or safety.

Cliffs and Rocky Features

Desired Condition 2: Cliffs and rocky features provide specialized habitats for a variety of plant and animal species including rare, endemic, and special status species. They provide nesting and feeding habitats for birds of prey, roosting habitat for bats, and escape, bedding, and lambing cover for bighorn sheep.

Guideline 1: Management activities affecting rockslides and talus slopes should maintain denning spaces and substrate for small mammals, lizards, snakes, rare and endemic plants, land snails, and other special status species except where necessary to maintain existing road or trail access or to protect public safety.

Guideline 2: Management activities should be designed to avoid disturbance or alteration of naturally occurring rock outcrops or cliff faces.

Guideline 3: Rock climbing and similar recreation activities should not disrupt the life processes of cliff- or rocky feature-dependent species such as the American peregrine falcon, Mexican spotted owl, bats, rare or endemic plants, or land snails, or diminish the function of specialized vegetation such as mosses and lichens. Where rock climbing or other recreational activities have the potential to disturb known populations of special status plant or animal species, or cultural sites, signs should be posted educating groups how to avoid impacts.

Guideline 4: Installation of permanent rock-climbing hardware and use of motorized drills should not be authorized in areas where cultural, ecological, geological, and scenic values can be impacted.

Guideline 5: Talus slopes should not be altered or be used as a common variety mineral materials source where disturbance would destabilize the slope or alter any endemic or rare species habitat or presence. In areas that harbor talus-dependent species such as snails, vegetation treatments should be designed to retain microhabitat characteristics.

Community and Tribal Relationships

Desired Condition 1: Gila National Forest leadership, staff, and the diverse communities and partners it serves are engaged, able to create shared understanding of issues, and successfully implement programs and projects that and sustain the social, economic, and ecological benefits that the forest provides.

Desired Condition 4: Forest leadership and staff have a network of dependable partners and volunteers who provide additional capacity to meet forest plan desired conditions effectively and efficiently.

Desired Condition 5: Youth, diverse communities, volunteerism, citizen science, and conservation education support work across program areas, connect people with public lands, and foster a sense of stewardship.

Facilities

Desired Condition 2: Facilities provide an environment free from recognized hazards for people and avoid or minimize negative impacts to natural and cultural resources.

Standard 1: Where construction, reconstruction, and maintenance of facilities have the potential to impact water quality, best management practices will be incorporated into design and implementation to mitigate those impacts (see also Soils, Water Quality, and Watersheds).

Standard 2: Construction of new facilities in floodplains, wetlands, and other environmentally sensitive areas will not be authorized unless a practical alternative does not exist. In these cases, the disturbance footprint must be as small as possible and incorporate design features to minimize impacts.

Guideline 1: Emerging technologies and sustainable concepts consistent with the Built Environment Image Guide (USDA FS 2001 or similar guidance), should be incorporated in facility design, maintenance, and renovation to improve energy efficiency, conserve water and other natural resources, improve functionality, and ensure consistency with scenic character.

Guideline 2: Facilities and structures should be designed and maintained to address the needs of physically challenged individuals and to prevent or mitigate impacts to terrestrial and aquatic species.

Guideline 6: If regular bird collisions are occurring on specific windows, management should evaluate and implement the most appropriate collision prevention measures for the facility and window(s). Fire lookouts are exempted from this guideline.

Lands and Realty

Desired Condition 1: Land ownership adjustments improve accessibility, management efficiency, habitat connectivity and conservation, and sound community development.

Desired Condition 2: Residents and visitors are aware of Forest Service regulations and common property boundaries.

Desired Condition 4: Unauthorized, unpermitted construction or placement of fences and gates, structures, signs, or other private personal property on forest lands does not occur on the forest.

Desired Condition 7: Special-use authorizations include only those required by law or fulfilling a public need, and do not interfere with forest management objectives.

Desired Condition 9: Permitted research promotes a greater understanding of ecological, social, cultural, and economic systems, and maintains wilderness characteristics in recommended wilderness and wilderness character in designated wilderness.

Desired Condition 10: Special uses protect public health and safety, conserve natural resources, and are consistent with National Forest System management plans.

Desired Condition 11: Special uses are administered based on sound resource management objectives and business principles.

Guideline 5: Land exchanges should not result in a net decrease of riparian, wetland, or perennial stream habitat in within the forest's administrative boundary.

Guideline 8: To minimize impacts to ecological, cultural, and visual resources, special-use infrastructure should be consolidated or located together whenever possible. New buildings and structures should be co-located with existing ones. Linear uses should be routed parallel to each other.

Livestock Grazing

Desired Condition 2: Livestock use provides for conditions that support movement toward natural fire regimes.

Desired Condition 3: Livestock grazing and use is compatible with the desired conditions for ecological sustainability, biodiversity, and other uses.

Desired Condition 4: Range infrastructure facilitates livestock management and the production of forage, allows wildlife safe and reliable access to water, provides for habitat connectivity and wildlife movement, and does not negatively affect the safety of forest users or Forest Service personnel.

Objective 1: Implement at least one action per year to improve poor or very poor range condition (or equivalent condition class), other than mechanical treatments targeting woody invaders (woody invaders are addressed through the objectives for vegetation communities. All Upland Ecological Response Units.

Standard 1: Project-specific best management practices identified in the proposed action will be followed (see also Soils, Water Quality, and Watersheds) to mitigate impacts to soil, water, riparian, and aquatic resources.

Standard 2: New or reconstructed range improvements will be designed to prevent wildlife entrapment (for example, escape ramps in water troughs and cattleguards) and allow for wildlife passage except where specifically intended to exclude wildlife (for example, elk exclosure fence) or to protect human health and safety (see also Wildlife, Fish, and Plants).

Standard 3: New livestock handling facilities designed to hold or concentrate livestock (for example, corrals, traps, or water developments) will be located outside of riparian management zones, significant archeological sites, and occupied sites of at-risk plant species. Buffer distances will be determined during project planning on a case-by-case basis in coordination with the permittee to adequately address management needs, site-specific circumstances, species-specific characteristics, and any associated legal requirements.

Guideline 1: Annual operating instructions should address ecological resources such as native plant communities, at-risk species, soils, riparian health, and water quality, if they are departed from desired conditions, as determined by data that are relevant to the allotment and the current management system.

Guideline 3: Existing livestock handling and watering facilities located in riparian management zones should be modified or relocated where interdisciplinary evaluation finds they are not compatible with movement toward desired conditions for other resources. These evaluations would be made during environmental analysis or review or triggered by monitoring results. Any modification or relocation of infrastructure should include consultation with the permittee.

Guideline 4: Mineral (for example, salt) or vitamin supplements should not occur on or adjacent to known occupied sites of at-risk plant species, significant archaeological sites, cave entrances, poorly drained or saturated soils, unsatisfactory soils, or those with severe erosion hazard or high mass wasting hazard ratings. Buffer distances will be determined on a case-by-case basis in coordination with the permittee to adequately address management needs, site-specific circumstances, species-specific characteristics, and any associated legal requirements.

Guideline 5: Mineral (for example, salt) or vitamin supplements should not be authorized within 0.25 mile of water sources to support maintenance of or movement toward desired conditions for soil, water quality, watersheds, riparian and aquatic ecosystems, and range condition by encouraging better distribution of use. Exceptions may occur if prior written approval is obtained from the appropriate line officer and one or more of the following sets of circumstances are present: (1) the water source is not in a riparian management zone and special circumstances dictate a short-term need; (2) the water source is not in a riparian management zone and the intent of placing the supplement near water is to draw use away from riparian areas; or (3) the water source is not in a riparian management zone and the particular supplement requires that it be close to water to encourage better distribution (for example, high-protein liquid feed).

Guideline 8: As part of all management activities, range infrastructure and associated materials (including barbed and smooth wire, storage tanks, pipeline, et cetera) that are no longer functioning or are more than what was needed for the maintenance, reconstruction, or construction activity, should be removed to provide for the safety of forest visitors, wildlife, recreational and permitted livestock, and aesthetics. Such requirements should be incorporated into contracts, permits, and agreements. Forest personnel should resolve any such safety hazards identified during project or incident activities.

Minerals

Desired Condition 1: Mining and geothermal energy activities meet the legal mandates to facilitate their development in a manner that minimizes adverse impacts to watersheds and water resources, ecological sustainability, biodiversity, scenic character, sustainable recreation, and the desired conditions for other natural resources and uses.

Desired Condition 2: Historical mining operations have been reclaimed, their hazards resolved and no longer pose a human health and safety threat or environmental concern.

Desired Condition 4: Salable mineral materials are available for personal, commercial, county, and Forest Service use in convenient, accessible locations. The location and methods of mining these materials do not cause excessive erosion, degrade stream beds or channels, or damage riparian areas.

Standard 4: Permits and authorizations for exploration and development of salable, common variety minerals must include terms and conditions for controlling operating methods and timing to prevent adverse impacts to other natural resources and uses.

Standard 6: Geothermal leasing must undergo site-specific environmental analysis to determine if leases can be authorized and what site-specific stipulations may be required.

Guideline 2: Locatable mineral operations should make diligent and honest efforts to accommodate desired conditions of other resources.

Guideline 11: Streambed and floodplain alteration or removal of salable mineral material should not be authorized if it prevents the eventual attainment of riparian and aquatic ecosystem desired conditions.

Non-native Invasive Species

Desired Condition 1: Plant and animal communities are dominated by native species. Non-native invasive and noxious species are absent or exist at levels that do not cause economic harm or negatively impact human health, disrupt ecological processes, alter hydrologic or sediment regimes, reduce biodiversity, or affect the sustainability of native and desirable non-native species, such as non-reproducing triploid rainbow trout stocked in lakes or reservoirs.

Desired Condition 2: Collaborative information and education programs build awareness of non-native invasive and noxious species and the threats they pose at all levels and across all jurisdictions.

Desired Condition 3: Information and collaborative education programs build awareness of the laws and regulations governing pesticide use, the role of pesticides in integrated pest management systems, the risks and benefits of their use, and the design criteria that can mitigate those risks.

Objective 1: Treat at least 100 acres of noxious weed species annually.

Objective 2: Inventory up to 2,000 acres annually.

Objective 3: Reduce non-native fish and other aquatic species within native aquatic populations in at least four to six stream reaches during each 10-year period.

Objective 4: Remove non-native fish populations from at least one stream reach containing a natural or constructed barrier in compliance with recovery plans over a 10-year period.

Standard 1: Forest projects, authorized activities, and special use permits must include appropriate decontamination procedures to prevent the spread of invasive species, non-desirable fungi, and diseases (see also Wildlife, Fish, and Plants, Caves and Abandoned Mine Lands, Riparian and Aquatic Ecosystems, and Wildland Fire and Fuels Management).

Standard 2: When drafting water from streams or other waterbodies, measures must be taken to prevent entrapment of fish and aquatic organisms (see also Wildland Fire and Fuels Management).

Standard 3: Prevention, control, containment, and eradication of invasive species will be designed and implemented using integrated pest management to maintain or improve ecosystem and watershed function and minimize treatment impacts on native species and human health.

Standard 4: Projects and special uses must use certified noxious weed-free products for all products where there is a certification process in place. Exceptions may occur only if no certified weed-free product or alternative non-seed-bearing product is available and there is a health and safety reason the project or use cannot be delayed until the certified product or alternative is available. Fill and rock material, and source areas will be visually inspected for invasive and noxious weeds, and treated, if necessary, prior to transport and use elsewhere.

Standard 5: Planting and seeding projects will use native plant species. Local genetics or those with genetics that may be more suitable in future climate scenarios are preferred where the quantities required are available within project timelines. Exceptions apply to the use of non-native annual cereal grains for emergency watershed stabilization if those cereal grain species are not designated as noxious by New Mexico Department of Agriculture.

Standard 6: Domestic goats and sheep will not be used to control invasive plants.

Standard 7: Application of all herbicides will be performed or supervised by a state or federally licensed applicator.

Standard 8: All treatment projects that involve using herbicides will develop and implement pesticide use plans that include transportation and handling specifications.

Standard 10: All timing stipulations, terms and conditions, reasonable and prudent measures, buffers, or avoidance areas identified through consultation efforts (that is Tribal, Section 106, and Section 7 consultations) and site-specific analysis will be integrated into all application scenarios. If these differ from what is included in plan direction, the most restrictive criteria will be applied.

Standard 11: Only adjuvants, such as surfactants or dyes, and inert ingredients included in Forest Service hazard and risk assessment documents will be used. The least toxic options will be used.

Standard 12: Aerial application will not be authorized. To reduce or eliminate direct or indirect effects to non-target plants, animals, and water quality, follow the label and consult the risk assessment. All product label instructions will be followed.

Standard 15: Backpack spray and boom or broadcast spray applications will use drift control agents to reduce the potential for drift to non-target species, food, and water sources.

Standard 16: To reduce the risk of offsite and non-target impacts, application will only occur under favorable weather conditions as identified in the label instructions and in accordance with equipment manufacturer's specifications. All spraying will occur with winds less than 10 miles per hour unless otherwise indicated in the label instructions.

Standard 17: Granular herbicides will not be used on slopes greater than 15 percent due to the probability of runoff carrying the granules into non-target areas.

Standard 18: If feral hogs are found in the forest, any efforts to eradicate them will be in coordination and cooperation with the New Mexico Department of Agriculture and Animal and Plant Health Inspection Service, consistent with the National Feral Swine Damage Management Program.

Guideline 1: A decision matrix should be used when choosing the best treatment option for any pest control project. This will include highest chance of success and least impactful option for ecosystem and human health.

Guideline 2: When more than one herbicide may be suitable for a specific application scenario, the one with the lowest toxicity to wildlife should be selected, unless there is information to suggest that doing so would promote the development of resistance to the lower toxicity herbicide in the target species.

Guideline 4: Site-specific soil characteristics, surface drainage patterns, proximity to surface water, and local water table depth will be considered to determine the appropriate herbicide formulation, application timing and method, and if there is a need for riparian or aquatic buffer zones. Where herbicide is likely to be delivered to surface waters, only use products registered for aquatic use. For herbicide formulations not registered for aquatic use, the minimum buffers should be established.

Guideline 5: To prevent off-site movement and maintain treatment effectiveness, if there is a 50 percent or greater probability of local rainfall amounts of 0.25 inch or more within 24 hours, then applications should only occur when it is anticipated that there will be sufficient time (at least 4 hours) for the application to dry before rainfall occurs.

Guideline 6: Ground-disturbing activities should be assessed for risk of noxious weed invasion or establishment of latent seed in the seed bank and incorporate measures that reduce the potential for the spread of noxious and invasive species.

Guideline 7: Burned area emergency response recommendations should include early detection rapid response actions for noxious weeds.

Guideline 8: Permitted activities and the forest's saddle and pack stock program should certified weed-free feed products to prevent the introduction of noxious weeds.

Guideline 9: Treatment of invasive plant species should be prioritized according to the New Mexico Department of Agriculture noxious weed classification. Exceptions may occur when weeds identified as noxious by Animal and Plant Health Inspection Service or other state departments of agriculture are newly discovered in New Mexico, even if they have not yet been analyzed for designation as noxious by New Mexico Department of Agriculture. If such exceptions occur, treatment of those species should take precedence in keeping with early detection rapid response principles.

Guideline 10: Desirable non-native fish species should be managed in such a way that they do not conflict with the recovery of native species or existing multiple uses.

Guideline 11: Measures should be incorporated into authorized activities, project planning, and implementation to prevent, control, contain, or eradicate priority infestations or populations of invasive species to ensure the integrity of native species populations and their habitats are maintained.

Guideline 12: Habitat improvement and aquatic restoration projects within or adjacent to water sources occupied by Chiricahua leopard frogs, northern Mexican or narrow-headed gartersnakes, or native fish should include provisions to remove non-native invasive animals.

Renewable Energy

Desired Condition 1: Exploration, development, production, and transmission of renewable energy sources contribute social and economic benefits to local economies and are conducted in a manner that minimizes adverse long-term impacts to water resources, habitat connectivity, ecological integrity, biodiversity, and other uses.

Standard 1: Wind energy facilities must incorporate appropriate siting, design features, and operational protocol to minimize and mitigate bat and bird collisions.

Standard 2: Wind and solar energy facilities must incorporate engineering methods and other best management practices (see also Soils, Water Quality, and Watersheds) as necessary to mitigate the effects of site preparation and maintenance on soils, overland flow patterns, erosion, and sedimentation.

Riparian and Aquatic Ecosystems

4th and 5th Level Watershed Scale Desired Condition 1: Riparian, wetland, and aquatic ecosystems support the distribution, diversity, and complexity of watershed and watershed-scale features that, in turn, support biodiversity, contribute to the recovery of listed species, and support the persistence of species of conservation concern, as well as native and desired non-native aquatic and riparian-dependent plant and animal species. The system's ability to support unique physical and biological attributes is sustained by necessary soil, water, and vegetation characteristics.

4th and 5th Level Watershed Scale Desired Condition 2: The ecological function of riparian and wetland areas is resilient to natural disturbances, animal use, human activities, and long-term climate variability (see also Watersheds).

- a. Riparian and wetland areas have reduced fire frequency and severity compared to the surrounding upland vegetation communities, owing to characteristics such as surface water and saturated soils. Fire is infrequent and patchy, and riparian areas and wetlands are resilient and able to recover following fire.
- b. Regeneration, growth, and persistence of riparian and wetland dependent vegetation is supported by natural variation in depth to groundwater, volume of surface water, and the timing and magnitude of their fluctuations. Flooding and scour occur at a frequency and magnitude characteristic of the watershed, or at least supports the regeneration of dependent native vegetation and a diverse plant structure including herbaceous, shrub and tree species of all ages and size classes.

4th and 5th Level Watershed Scale Desired Condition 3: Woody vegetation and high levels of structural and compositional diversity provide food, cover, and water for terrestrial, riparian-dependent, semi-aquatic and aquatic wildlife species. Riparian areas have sufficient structural diversity to support high bird species diversity and provide an abundance of nesting and foraging opportunities for neotropical migrant birds, raptors, and cavity-dependent wildlife. The density and structure of vegetation provides site-appropriate shade to regulate water temperature in streams.

4th and 5th Level Watershed Scale Desired Condition 4: All seral states are present and there is a low overall departure from reference proportions as described in the most recent Region 3 Seral State Proportion Supplement, which is a positive indicator of ecosystem condition.

4th and 5th Level Watershed Scale Desired Condition 5: Overall plant community composition, functional group diversity, or both are greater than 66 percent similar to site potential but can vary

considerably at the 6th level watershed or fine scales owing to disturbance history and the diversity of seral conditions.

4th and 5th Level Watershed Scale Desired Condition 6: Spatial connectivity is provided within and between watersheds. Where appropriate, riparian corridors provide important dispersal corridors, access to new habitats, and perpetuation of genetic diversity. Within riparian corridors and wetland areas, aquatic, riparian, and upland components reflect their natural linkages and range of variability. Drainage network connections include floodplains, wetlands, upslope areas, headwater tributaries and intact habitat refugia. These connections provide chemically and physically unobstructed routes to areas critical for fulfilling life history requirements of aquatic, riparian-dependent, and many upland species of plants and animals.

4th and 5th Level Watershed Scale Desired Condition 7: Riparian and aquatic conditions protect or improve dependent resources while allowing for management of other compatible uses.

6th Level Watershed Scale Desired Condition 1: A diverse vegetation structure, including mature trees, snags, logs, and coarse woody debris, is present to provide habitat for dependent species. The species composition and structural diversity of vegetation communities provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration. The amount, spatial distribution, and sizes of coarse woody debris and fine particulate organic matter are sufficient to sustain physical complexity and stability.

6th Level Watershed Scale Desired Condition 2: The composition, structure, and function of riparian and aquatic ecosystems are resilient to the frequency, extent, and magnitude of disturbances, animal uses, human activities, and long-term climate variability.

6th Level Watershed Scale Desired Condition 3: Floodplains and adjacent upland areas provide diverse habitat components necessary for migration, hibernation, or extended periods of inactivity specific to the needs of riparian and wetland dependent species including the Chiricahua leopard frog, New Mexico meadow jumping mouse, Arizona montane vole, narrow-headed gartersnake, beavers, and others.

6th Level Watershed Scale Desired Condition 4: Riparian areas with the site potential for a strong tree component have large trees and snags to support species including beaver, yellow-billed cuckoo, bald eagle, common black hawk, various bat species, and others. Woody regeneration is sustainable, approximating reference conditions according to the overall percentage of early to mid-seral states (see 4th and 5th Level Watershed-Scale Desired Condition 4).

6th Level Watershed Scale Desired Condition 5: Vegetative groundcover ranges between 5 to 30 percent depending on site potential for a given terrestrial ecological unit or as determined through field reconnaissance of reference sites, while the amount of bare ground likewise reflects site potential with a greater than 66 percent similarity to that site potential.

6th Level Watershed Scale Desired Condition 6: Riparian and wetland areas can filter sediment, aiding floodplain development, dissipating wind and water energy, and contributing to water retention and groundwater recharge. Soil functions are maintained in satisfactory condition as defined by the most current Southwestern Region soil quality technical guidance. Conditions support the life history requirements of burrowing animals, including at-risk species.

6th Level Watershed Scale Desired Condition 7: Riparian vegetation consists mostly of native species that support a wide range of animal species. Invasive plant and animal species are rare or absent. Native riparian and wetland dependent vegetation dominate bank cover. Upland, dry-site vegetation is not increasing, and the extent of riparian communities is widening or has achieved its potential and is within the natural range of variability.

6th Level Watershed Scale Desired Condition 8: The distribution and health of riparian, wetland, and aquatic communities perpetuate ecosystem functions and biodiversity. They are resilient to natural

disturbances, human activities, and climate variability (see also Watersheds). Riparian and aquatic health and resilience are determined by a functioning properly (or equivalent condition class) rating for watershed condition indicators addressing aquatic physical and biological processes at a 6th level watershed scale. These include:

- a. Riparian and aquatic habitat provides for self-sustaining populations of native fish, amphibians, reptiles, and other aquatic and semi-aquatic species within their historical and future distribution. Habitat is resilient to long-term climate variability and extreme events. Streams and rivers provide a variety of habitats for aquatic species, including deep pools and overhanging banks, structure provided by large wood, off-channel areas, and protective cover within the potential of each fine-scale unit.
- b. Streams exhibit full connectivity (more than 95 percent of historical aquatic habitats are still connected) except where barriers to movement are necessary to protect native species and prevent movement of non-native species (for example, fish barrier structures to protect Gila trout populations from non-native fish). Ephemeral watercourses provide for dispersal, access to new habitats, and perpetuation of genetic diversity, as well as nesting and foraging for riparian, aquatic, and semi-aquatic species.
- c. Streambank and slope stability, wood delivery to streams and floodplains, and other organic matter input, thermal shading, microclimates, and water quality are consistent with natural disturbance regimes.
- d. The connections of floodplains, channels, and water tables distribute flood flows and sustain diverse habitats. Hydric and alluvial soil functions are maintained, supporting natural sediment regimes, patterns of water flow, and amount and distribution of plant-available water and nutrients. Width-to-depth ratios are what would be expected in the absence of human influence and are stable in at least 95 percent of the 6th level watershed.
- e. Within their type and capability, riparian vegetation communities are composed of a diversity of native species, functional groups, and multiple age classes (at least two) to provide large woody debris and groundcover, protect streambanks and capture sediment, dissipate stream energy, and protect and enrich soil.
- f. Wetlands and groundwater-dependent ecosystems in upland settings, including springs, seeps, and wet meadows, persist in size, seasonal and annual timing, and exhibit groundwater table elevations within their natural range. They also support stable, vigorous, native herbaceous and woody vegetative communities. Wet meadows have substantive ground cover, functional group diversity, and a diverse species composition, especially of grasses and forbs.
- g. Groundwater discharge supports base flows and water temperature in streams, springs, seeps, and wetlands that sustain the function of surface and subsurface aquatic ecosystems within their natural range of variability.

6th Level Watershed Scale Desired Condition 9: Riparian and aquatic conditions protect or improve dependent resources while allowing for management of other compatible uses.

Fine-Scale Desired Condition 1: Riparian areas are in proper functioning condition, or equivalent condition class as demonstrated by the following:

- a. Frequent flood flows (approximately 1.5-year recurrence interval) can spread out across the floodplain to dissipate energy, deposit sediment, recharge floodplain aquifers, inundate riparian vegetation, and redistribute organic matter and nutrients. In upland environments, saturation at or near the land surface maintains hydric soils and the potential natural riparian or wetland vegetation community.

- b. Riparian systems are in balance with the water and sediment being supplied by the watershed (that is, no excessive erosion or deposition) and floodplain and channel characteristics (such as rocks, woody material, vegetation, floodplain size, and overflow channels) are adequate to dissipate energy. In streamside riparian systems, sinuosity, gradient, and width-to-depth ratios are in balance with the landscape setting (that is, landform, geology, and bioclimatic region). Streams are laterally and vertically stable and are not incising.
- c. Riparian vegetation communities are dominated by vigorous native species, indicative of the site's soil moisture characteristics, and are capable of stabilizing streambanks, dissipating energy during flood flows, and regulating water temperatures within state water quality standards. There is an adequate diversity of species and age classes (at least two) for maintenance and recovery.
- d. Native upland species are present where they are part of the potential natural vegetation community and are absent where they are not. Upland species composition and density in riparian corridors do not contribute to increases in fire frequency or severity.
- e. Upland and riparian plant communities are an adequate source of large woody debris, which is recruited into the stream system at near-natural levels.
- f. The area occupied by riparian and wetland vegetation is expanding or has achieved its potential extent, as defined by topography, soil properties, and water availability.

Fine-Scale Desired Condition 2: Hydric and alluvial soil functions are maintained, supporting natural sediment regimes, patterns of water flow, and amount and distribution of plant-available water and nutrients.

Objective 1: Implement at least one riparian improvement project annually.

Standard 1: Decision's authorizing uses and activities in riparian management zones must provide preferential consideration to riparian and aquatic resources. Project-specific best management practices will be developed, identified in the proposed action, and followed as the principal mechanism for demonstrating preferential consideration and controlling nonpoint source pollutants to protect beneficial uses and riparian and aquatic ecosystem values (see Best Management Practices Resources in the Soils section).

Standard 2: Activities in and around surface waters will follow decontamination procedures that prevent the spread of non-desirable fungus, disease, non-native or invasive organisms.

Standard 3: Special use permits for new groundwater or surface water uses will not be issued if it is determined those uses would have an adverse impact on riparian or aquatic resources within the forest.

Guideline 1: To minimize sediment delivery to streams, new construction or realignment of roads and motorized routes, recreation sites or other infrastructure should not be located within the 100-year floodplain or within 300 feet of a riparian management zone. Exceptions for stream crossings are made where determined necessary by site-specific analysis to reduce potential long-term investments in maintenance or adverse impacts (a downward trend or movement away from desired conditions) to floodplains and water resource features.

Guideline 2: New or redesigned stream crossings, such as bridges and culverts, should be wide enough to at least pass the bankfull width unimpeded and incorporate aquatic organism passage design.

Guideline 3: Projects should leave downed woody material in riparian management zones in place, except where interdisciplinary teams determine it exists at excessive levels and poses a fire or safety concern.

Guideline 4: All projects and activities that include riparian management zones within their area should provide for the maintenance of those riparian management zones that are in proper functioning condition

(or equivalent condition class) and include actions to improve riparian management zones that are not in proper functioning condition, within the scope of the project.

Guideline 5: New or reconstructed spring developments should be designed to maintain or restore ecological conditions and functions for the dependent ecosystems and maintain water quality and quantity.

Roads

Desired Condition 2: The road system provides a variety of motorized recreation opportunities while limiting resource and user conflicts.

Desired Condition 4: Roads have minimal impacts on ecological and cultural resources.

Desired Condition 5: Unneeded roads are closed to motor vehicle use and decommissioned as appropriate to reduce impacts to ecological sustainability and biodiversity.

Objective 1: Decommission at least 50 miles of closed roads every 10-year period until the need has been met.

Standard 1: Motor vehicle use off the designated system identified on the Gila National Forest's most current motor vehicle use map is prohibited, except as authorized by law, permits, or orders in connection with resource management, and public safety.

Standard 2: Road construction and maintenance should incorporate best management practices (see also Soils, Water Quality, and Watersheds) to minimize impacts to water quality.

Standard 3: Chemicals for dust abatement must not be used; water is the only acceptable agent for dust abatement.

Guideline 1: Roads should be located, designed, and maintained to ultimately achieve the desired conditions for other uses and resources.

Guideline 2: Construction and maintenance of roads should accommodate terrestrial and aquatic species movement and habitat connectivity.

Guideline 3: New road construction should avoid riparian management zones, areas occupied by populations of rare and endemic plants, and unstable areas (see Terrestrial Ecological Unit Inventory interpretations). Where unavoidable due to terrain or topography, new road construction should incorporate best management practices into design and implementation (see also Soils, Water Quality, and Watersheds) to minimize impacts. Engineering specifications for road construction and reconstruction should avoid side-casting fill material in riparian management zones. Routine maintenance should involve pulling any loose material from the stream side of the road back onto road surface to finish the cap.

Guideline 5: Temporary roads that support adaptation and restoration activities, fuels management, or other projects should be restored to more natural vegetative conditions upon project completion to assist in moving toward desired conditions for watersheds and habitats and to discourage illegal motorized use.

Guideline 6: Maintenance and reconstruction of existing roads should be emphasized over permanent new road construction.

Soils

Desired Condition 1: The soil can perform essential functions, sustain biological productivity and overall ecosystem and watershed health, and contribute to resilience. The ability of the soil to sustain ecosystem services within its natural capability is high.

- a. Soil functions are broadly resilient to the impacts of human activities and natural disturbances, including long-term climatic variability and extreme weather events, where resilience is measured by the area where soil condition is restored to, or maintained in satisfactory or equivalent condition class. Naturally unstable and other high-risk soils (see Terrestrial Ecological Unit Inventory information) are influenced primarily by natural processes.
- b. Overstory and understory plant species composition support soil functions and are each at least 66 percent similar to site potential as measured by each particular terrestrial ecological unit, but can vary considerably at fine- and mid-scales owing to a diversity of seral conditions (see also All Upland Ecological Response Units landscape scale desired conditions).
- c. Organic ground cover (leaf litter, needle cast, coarse woody debris, nonvascular plants and biological crusts, and basal area) and vegetative canopy cover contribute to soil functions and maintain soil loss rates at near natural rates, thereby contributing to high water quality and watershed and ecosystem function (see also All Upland Ecological Response Units landscape-scale desired conditions).
- d. No new gullies or headcuts are forming and existing ones are stabilizing or have stabilized.
- e. Soil organic carbon represents reference conditions for a given ecological response unit (see Regional Carbon Supplement), but are transitory and adaptive with site potential, characteristic disturbances, and long-term trends in climate (see All Upland Ecological Response Units landscape-scale desired conditions).

Objective 1: Implement at least one action per year to improve an area of “impaired” or “unsatisfactory” soil condition.

Objective 2: Implement at least 10 projects per decade to address active headcuts or gully erosion. Examples of projects meeting the intent of this objective include construction or maintenance of watershed structures, or road maintenance and improvement of drainage features associated with active headcuts or gullies. Examples of projects not meeting the intent of this objective include prescribed fire and mechanical vegetation treatments.

Standard 1: Best management practices identified in the project proposal or decision documentation will be followed to mitigate negative impacts to water quality and the long-term productivity of the land (see Related Plan Content).

Guideline 1: Projects and activities should incorporate the applicable management potentials, capabilities, hazards, suitability, and other interpretations for each terrestrial ecological unit into design and implementation (see the Terrestrial Ecological Unit Inventory information).

Guideline 2: New activities that encourage concentrated use (for example, recreation sites, landings, construction, stock tanks, mineral supplements, and corrals) on poorly drained or saturated, unsatisfactory soils, or those with severe erosion hazards or high mass wasting hazards, should be mitigated (see the Terrestrial Ecological Unit Inventory information).

Guideline 3: All projects and activities should be designed and implemented so that they do not result in downward trends in soil condition and include actions to improve those soils not in satisfactory condition (or equivalent condition class), within the capacity of the project.

Sustainable Recreation

Desired Condition 1: A diverse, adaptable, and sustainable range of recreation opportunities is available and responsive to trends in public interest and compatible with the desired conditions for ecological sustainability, biodiversity, and other uses.

Desired Condition 3: The unique and diverse cultural, historical, and ecological resources of the forest are appreciated through corresponding recreation opportunities, education, and interpretation. Visitors have opportunities to connect to the past, present, and future of the forest.

Desired Condition 12: Trails are well-marked and provide safe access for multiple uses and management activities. The design, construction and maintenance of the trail system is sustainable, consistent with public desires, enhances the recreation experience, diminishes user conflicts, and minimizes effects to natural resources, especially water resource features such as springs.

Desired Condition 15: Recreationists engaging in motorized activities practice TreadLightly® principles.

Desired Condition 16: Unneeded motorized trails are closed to motor vehicle use and naturalized to reduce impacts to ecological resources.

Desired Condition 17: Recreation special-use authorizations (1) provide unique opportunities, services, and experiences for the recreating public and (2) address demonstrated demand for specific recreation opportunities within resource capacity and without causing movement away from desired conditions for ecological resources and other uses.

Standard 3: All recreation facilities that have the potential to impact water quality must be designed, constructed, or maintained using current best management practices to mitigate those impacts (see Soils, Water Quality, and Watersheds).

Standard 4: All trails will be sustainably designed, constructed, rerouted, or maintained using current best management practices to mitigate impacts to water quality while providing for safety desired recreation opportunities (see Soils, Water Quality, and Watersheds). Recreation residences located in 100-year floodplains will not be built or rebuilt if destroyed by fire, flooding, or natural disaster.

Guideline 4: Recreation facilities and improvements should be planned, designed, and managed to avoid human and wildlife conflicts.

Guideline 5: Where excessive or inappropriate recreational use contributes to resource damage, temporary closure orders should be issued, and appropriate rehabilitation activities should be implemented. Recreation activities should be managed to minimize impacts to special status species and desired ecological conditions, especially within riparian management zones.

Guideline 7: New developed trailheads and other recreation facilities should be located away from riparian management zones and areas where populations of rare, endemic, or at-risk plants are known. Buffer distances should be determined based on the site, species-characteristics, or both. New day-use areas should have more than one point of entry and exit except where it is not possible.

Guideline 9: Rock climbing, cave exploration, and backcountry river floating should be managed to balance demand for the activity and the need to support special status species, cultural resources, and applicable designated area management requirements.

Guideline 12: System trails that are found to affect natural or cultural resources or public health and safety substantially and adversely should be evaluated for realignment to alternative routes. If there are no feasible alternative alignments that would reduce impacts, the trail should be considered for closure and decommissioning.

Guideline 13: Newly constructed trails should avoid extended travel through wet meadows, seeps, springs, riverine wetlands and floodplains, sacred sites, and high concentration of significant archeological sites to avoid negative impacts to these resources. Newly constructed motorized trails should minimize the number of stream crossings or be otherwise mitigated to reduce impacts to aquatic species.

Guideline 14: New motorized trails should be designed and located so as not to impede terrestrial and aquatic species movement and habitat connectivity, and to avoid Mexican spotted owl protected activity

centers, northern goshawk post-fledging family areas, and other areas identified as sensitive and important to the recovery or persistence of special status species.

Guideline 15: New trails should avoid naturally unstable soils, and erosional landforms and landscape positions. Where unavoidable, the Terrestrial Ecological Unit Inventory should be consulted to determine the appropriate surface grade and design features to minimize erosion.

Guideline 16: If project-specific travel management decisions remove motorized trails from the network, those trails should be rehabilitated to avoid impacts to soil and watershed function and aquatic habitat.

Timber, Forest, and Botanical Products

Desired Condition 1: Silvicultural treatments (for example, prescribed fire, manual, mechanical, and chemical treatments) and utilization of products promotes movement toward, achievement, and maintenance of ecosystem and watershed desired conditions.

- a. Treatments mimic the outcomes of natural ecological processes, integrating considerations for socioeconomic values, soil and water quality, wildlife habitat, recreation, and aesthetics.
- b. Soil impacts are minimized. Previously managed areas that have incurred detrimental soil disturbance recover through natural processes or restoration activities. Organic matter and woody debris remain on site after treatments in sufficient quantities to retain moisture, maintain soil quality, and enhance soil development and fertility by periodic release of nutrients as they decompose (see individual ecological response unit mid-scale desired conditions).
- c. Treatments promote long-term sustainability of ecosystems by reducing the risk of undesirable effects from altered disturbance regimes, including fire, drought, wind, insect infestations, and disease epidemics.

Desired Condition 2d: In areas suitable for timber production, existing infrastructure facilitates salvage of dead or dying trees, recovering as much of the economic value of the wood as possible while retaining enough material to provide for wildlife habitat, soil productivity, and shelter for future regeneration of trees (see individual ecological response unit mid-scale desired conditions).

Desired Condition 2e: In areas suitable for timber production, post-treatment environments favor natural regeneration and seedling survival, support the natural fire regime, and retain sufficient tree density to sustain ecosystem services. Following high-severity disturbances, planting environments favor seedling survival. Artificial regeneration in these areas provides tree densities sufficient to act as seed sources for long-term recovery.

Standard 1: During project planning, interdisciplinary teams must incorporate recreation, range, watershed, timber, wildlife, rare plants, aquatic, cultural resources, and fire and fuels program areas as appropriate.

Standard 2: No timber harvest for the sole purpose of producing timber products may occur on lands identified as not suited for timber production (see Chapter 4. Suitability).

Standard 3: No timber harvest for any purpose may occur where soil, slope or other watershed condition would be irreversibly damaged (see Chapter 4. Suitability).

Standard 4: Project-specific best management practices will be developed, identified in the proposed action, and followed (see also Soils, Water Quality, Watersheds, and Air Quality) to mitigate effects to soil, water, riparian, aquatic, and air resources.

Standard 10: Permits, contracts, and agreements that authorize removal and or use of forest and botanical products will include provisions to protect, maintain, or enhance relevant resource values.

Standard 11: Projects and activities must implement approved recovery plans for species recognized under the Endangered Species Act as described in Wildlife, Fish, and Plants S4.

Guideline 3: Projects and activities should promote movement toward plan-level desired conditions for habitat connectivity, seral state diversity, species composition, size class distribution, old growth, patch size, and coarse woody debris (see All Upland Ecological Response Units and individual ecological response unit desired conditions).

Guideline 4: Where ponderosa or piñon pine are present, projects and activities should reduce opportunities for Ips beetle populations to increase through treatment timing and management of residual green slash.

Guideline 5: Projects and activities should:

- a. Encourage release and development of healthy southwestern white pine and aspen as minor components where they occur.
- b. Sustain representation of healthy spruce and corkbark fir where they occur within potential or identified refugial areas.

Guideline 6: Projects and activities should retain coarse woody debris sufficient to meet wildlife needs, maintain site productivity, and support natural fire regimes (see individual ecological response unit mid-scale desired conditions), except in the wildland-urban interface (see Chapter 3. Management Areas).

Guideline 7: Tree planting should consider reforestation potential information in the Terrestrial Ecological Unit Inventory and relevant climate change vulnerability assessments.

Utilities Management Area

Guideline 4: Special-use permits should include specifications to reduce bird collisions and electrocution such as those recommended by the Avian Power Line Interaction Committee

Water Quality

Desired Condition 1: Water quality meets or exceeds state water quality standards and provides for the attainment of designated uses. Water quality is sustained at a level that retains the biological, physical, and chemical integrity of aquatic systems, and benefits the survival, growth, reproduction, and migration of native aquatic and riparian species (see also Soils, Watersheds, Riparian and Aquatic Ecosystems plan components and related content).

Watersheds

Desired Condition 1: Watersheds are functioning properly (or equivalent condition class) and exhibit high geomorphic, hydrologic, and biotic integrity relative to their potential condition as evaluated at the 6th level watershed as indicated by the following:

- a. Water quality is sustained at a level that retains the biological, physical, and chemical integrity of aquatic systems (see also Water Quality).
- b. Quantity and timing of water flows support ecological structure and functions, including aquatic and riparian species diversity, and downstream human values. Watershed resilience to drought, higher air temperatures, reduced snowpack, erratic runoff timing, and other effects of long-term climate variability is sustained, maintained, or restored.
- c. There is a low likelihood of losing defining ecosystem components affecting hydrologic and sediment regimes due to natural disturbance or human activity as indicated by the following.

- i. Vegetation structure supports fire frequencies, severities and extents that are characteristic of the watershed's component ecological response units (see also All Upland Ecological Response Units).
- ii. Insect and disease levels are within the natural range of variability (see also All Upland Ecological Response Units).
- iii. Understory vegetation communities are composed of native or desired non-native plant composition (at least 66 percent similarity to site potential) and herbaceous canopy and ground cover is at near-natural levels, as defined in the watershed's component Terrestrial Ecological Units (see also All Upland Ecological Response Units).
- iv. Invasive and noxious plant populations are absent (see also Non-Native Invasive Species).

Desired Condition 2: Watersheds support high-quality, resilient aquatic habitat and stream channel conditions. All native aquatic communities and life histories appropriate to the site and watershed are present and self-maintaining. Desired non-native species, such as triploid rainbow trout in reservoirs may be present, but do not negatively impact the presence, distribution, or persistence of native species (see also Riparian and Aquatic Ecosystems and Wildlife, Fish, and Plants).

- a. Riparian vegetation communities are composed of native species and are in proper functioning condition or equivalent classification (see also Riparian and Aquatic Ecosystems).
- b. The density, distribution, and maintenance of roads and linear motorized features do not substantially alter hydrologic and sediment regimes.
- c. Soil condition is in satisfactory, functioning properly, or equivalent condition category (see also Soils).

Desired Condition 3: Watersheds provide for groundwater recharge and sustain groundwater quantity and quality as indicated by a functioning properly (or equivalent) condition class rating.

Desired Condition 4: Groundwater provides a water source for aquatic and riparian wildlife habitat and for beneficial uses within the forest boundary.

Objective 1: Improve condition class in at least five 6th level watersheds within the planning period.

Objective 2: Aside from unavoidable consequences that may result from naturally ignited wildfire, maintain condition class in those 6th level watersheds currently in proper functioning condition (or equivalent condition class) over the planning period.

Standard 1: Project-specific best management practices will be developed, identified in the proposed action and followed as part of the interdisciplinary process and as a principal mechanism for controlling nonpoint source pollutants to protect beneficial uses and riparian and aquatic ecosystem values (see Best Management Practices Resources in the Soils section).

Standard 2: Landscape-scale projects will incorporate activities identified in watershed restoration action plans, other watershed-based plans, or other restoration and adaptation plans to move toward soil and watershed desired conditions.

Guideline 1: Management should strive for proper functioning condition (or equivalent condition class) in all indicators of watershed condition as described in the watershed condition classification technical guide (Potyondy and Geier 2011). If the Forest Service watershed condition model changes, the intent of this guideline will be met by managing for equivalent conditions as described by that model.

Guideline 2: New and reauthorized management activities should not negatively impact groundwater quality or quantity to the extent that ecosystems are adversely affected.

Water Uses

Desired Condition 1: Watershed conditions support favorable conditions of water flow and permitted water uses both in the forest and downstream (see Watersheds desired conditions).

Desired Condition 2: Where they are necessary, watershed structures slow water flow and retain sediment to support favorable conditions of water flow.

Wildland Fire and Fuels Management

Desired Condition 1: Safety of firefighters, other agency personnel, and the public is the priority in every fire and fuels management activity. Fire and fuels management activities minimize the risk of loss of life or injury and damage to property and improve ecosystem and watershed function.

Desired Condition 6: Wildland fire functions in its natural ecological role on a landscape scale and across administrative boundaries, under conditions where safety and values at risk can be enhanced, mitigated, or protected.

Desired Condition 7: Frequent, low-severity fire mitigates high-severity disturbances and protects social, economic, and ecological values at risk.

Desired Condition 8: High-severity fires rarely occur where they were not historically part of the fire regime. Where high-severity fire is part of the fire regime, patch sizes larger than what is known to have occurred historically are rare.

Desired Condition 9: Non-native invasive and noxious species, diseases, and pathogens are not introduced or spread by wildland fire and fuels management activities and associated equipment.

Standard 2: Managers will use a decision support process to guide and document all wildland fire management decisions. Appropriate response strategies will be developed based on consideration of risks to life, safety, and potential resource impacts with interdisciplinary participation from forest resource staff; other agency personnel; and other agencies, authorities, and jurisdictions, if needed and as appropriate.

Standard 3: Whether in the forest or on an off-forest assignment, forest personnel must follow the operational guidelines for invasive species, aquatic invasive species, and decontamination provided in the most current Interagency Standards for Fire and Fire Aviation Operation (see also Non-Native Invasive Species S1 and S2).

Standard 4: Aerial application of retardant to water, riparian, wetland, and aquatic ecosystems must be avoided unless it is necessary to protect human safety or prevent property loss.

Guideline 1: Natural ignitions should be managed to meet multiple objectives when fire weather and fuel conditions facilitate progress toward desired conditions for ecosystems and watersheds.

Guideline 2: To avoid unintended and unacceptable negative post-fire watershed effects because of fire management activities, soil erosion and mass wasting hazard ratings should be considered during planning and decision-making processes.

Guideline 3: Fuel treatments should retain amounts and distributions of coarse woody debris (1,000-hour fuels) as described in desired conditions for each ecological response unit. For coarse woody debris amounts appropriate to wildland-urban interface situations, see Chapter 3. Management Areas (see also Timber, Forest, and Botanical Products).

Wildlife, Fish, and Plants

Desired Condition 1: Sustainable populations of native wildlife, fish, and plants, including at-risk, rare and endemic, and special status species, are supported by healthy, connected ecosystems and watersheds as described in the desired conditions for vegetation communities, soils, water quality, watersheds, riparian and aquatic ecosystems, cliffs and rocky features, caves and abandoned mine lands, and non-native invasive species. Species are well distributed throughout a majority of their historical and potential future ranges.

Desired Condition 2: The ecological conditions affecting habitat quality, distribution and abundance as described in the desired conditions for vegetation communities, soils, water quality, watersheds, riparian and aquatic ecosystems, cliffs and rocky features, caves, and abandoned mine lands, contribute to self-sustaining populations of plant and animal species, including at-risk, rare and endemic and special status species. Conditions provide for the life history requirements, distribution, and natural population fluctuation of the species within the biological capacity of the ecosystem. Populations are healthy, well distributed, genetically diverse, and connected, enabling species to adapt to changing environmental conditions including long-term climatic variability and extreme events.

Desired Condition 3: Ecological conditions as described previously provide habitat that contributes to the survival, recovery, and delisting of species under the Endangered Species Act; preclude new listings; improve the status of species of conservation concern; and sustain both common and uncommon native species.

Desired Condition 4: The locations of rare and endemic plant and animal species, habitat requirements, abundance, threats, and responses to management are known. Habitats and refugia for these species are intact, functioning, and sufficient for species persistence.

Desired Condition 5: Habitat connectivity and distribution provide for genetic exchange, daily and seasonal movements of animals, predator-prey interactions, and other interspecific relationships across the landscape, consistent with the existing terrain.

Desired Condition 6: Habitat configuration and availability, and species genetic diversity allow adaptation or long-distance range shifts of plant and animal populations in response to changing climatic conditions. Human-induced barriers to movement only exist to protect native species and prevent the movement of non-native species (such as in-stream fish structures to protect native trout from non-native invasion).

Desired Condition 7: Habitat fragmentation between National Forest System lands and other public and privately conserved lands is reduced and connectivity is enhanced.

Desired Condition 9: Desirable non-native fish species provide recreational fishing in reservoirs and other artificial waters where those opportunities are not in conflict with the recovery of native species.

Desired Condition 10: Hunting, fishing, plant-gathering, and other species-based recreation, and cultural opportunities exist but do not compromise species, populations, or habitat.

Desired Condition 11: All riparian and aquatic habitats are as described in the desired conditions for water quality, watersheds, and riparian and aquatic ecosystems support diverse populations of prey species that support both resident and migratory species.

Desired Condition 12: Foraging habitat for pollinators such as the monarch butterfly, western bumble bee, tiger moth, and other common and uncommon species, is provided by conditions described in the desired conditions for vegetation communities, which include a diverse mix of native grasses, wildflowers, cacti, shrubs, and trees across multiple vegetation community developmental stages. Populations of northern bog violet (*Viola nephrophylla*) in mid- to high-elevation moist meadows and riparian areas are sufficient to sustain the nitocris fritillary butterfly.

Objective 1: Assess and maintain, reconstruct, or decommission based on the assessment 10 percent of upland water features constructed for wildlife per year.

Objective 2: Assess and complete maintenance, reconstruction, or decommissioning activities as determined necessary by the assessment on 10 percent of constructed aquatic barriers per year.

Objective 3: Implement at least 20 activities that contribute to the recovery of federally listed species over each 10-year period.

Objective 4: Restore or enhance at least 100 miles of stream habitat over each 10-year period.

Standard 1: Constructed water features such as tanks and troughs, must be designed to provide safe access and escape for wildlife, such as ramps or other climbing features (see also Livestock Grazing S3).

Standard 2: Where there are known populations of rare and endemic plants, no new permanent roads or motorized trails will be constructed unless it is to provide legal access to private property. Temporary motorized routes that facilitate management activities are acceptable provided appropriate avoidance or mitigation measures are incorporated. Temporary motorized routes are closed when no longer needed.

Standard 3: Where there are known populations of rare and endemic plants, the use of non-selective herbicides or herbicides that may have activity on the species will not be authorized unless it is to control or eradicate noxious weeds, and other integrated pest management efforts have failed or are unlikely to succeed.

Standard 4: Project activities and special uses occurring within occupied, designated, or proposed critical habitats for federally listed species must follow the most recent approved U.S. Fish and Wildlife Service recovery plan and integrate habitat management objectives and species recovery, conservation, and protection measures identified in the plan unless otherwise negotiated through consultation.

Guideline 4: Permits authorizing the collection of species should only be issued when there is information indicating it will not be detrimental to species persistence, is necessary for species conservation, is important for tribal collection, or is a research request that will aid in the management of that species.

Guideline 5: Specifications for all new fence construction should include wildlife-friendly⁵³ design features, unless the purpose of the fence is to exclude wildlife (for example, an elk enclosure fence around a spring restoration). When existing range fences are identified for reconstruction or maintenance as part of permit administration, the permit modification should specify and incorporate wildlife-friendly design features and what is to be done with the old fence and any excess materials. Other existing fences without wildlife-friendly design features, such as those associated with recreation or administrative sites not located in populated places should include those design features when fences are identified for reconstruction or replacement.

Guideline 6: Except for structures deemed necessary to achieve conservation goals for aquatic species, such as in-stream fish barriers to protect native fish from non-native invasion, infrastructure should avoid fragmenting aquatic habitats and isolating populations through design features appropriate to the site and type of infrastructure.

Guideline 7: Where there are populations of rare or endemic plant species, maintenance of existing motorized routes should avoid ground disturbance outside the existing road prism and associated drainage features.

Guideline 8: Rare and endemic plant populations should be avoided when siting new developed recreation facilities such as trailheads, campgrounds, and parking areas.

Guideline 9: Projects and management activities should be designed or managed to maintain or improve habitat for native species and to prevent or reduce the likelihood of introduction or spread of disease.

Guideline 10: In areas of high diversity and concentration of rare and endemic plant species, trailheads and other gathering sites such as parking areas or campsites should include interpretive and educational signage to increase awareness and valuation of these resources.

Guideline 11: All open top vertical pipes used for fences, survey markers, building plumbing vents, signposts, or other infrastructure with an inside diameter greater than one inch should be capped or otherwise designed to prevent animal entrapments.

Guideline 12: Trash cans and food storage boxes at developed recreation areas should be wildlife resistant.

Guideline 13: Management of coldwater streams should include streamside vegetation cover and width-to-depth ratio to move toward state of New Mexico standards for stream water temperatures. (See also Riparian and Aquatic Ecosystems and Water Quality desired conditions.)

Guideline 14: As part of construction, maintenance, or reconstruction of wildlife habitat improvement projects, all materials (including barbed and smooth wire, storage tanks, pipe, et cetera) that are no longer needed, or were more than what was needed, should be removed to provide for the safety of forest visitors, wildlife, recreational and permitted livestock, and aesthetics. Such requirements should be incorporated into contracts, permits, and agreements. Forest personnel should resolve any such safety hazards identified during project or incident activities.

Appendix H. Documentation of the Wilderness Process

Introduction

In conjunction with the forest plan revision process, planning staff are required to complete an inventory and evaluation process for lands that may be suitable for inclusion in the National Wilderness Preservation System. The responsible official must consider the inventory and evaluation and determine whether to recommend suitable lands to Congress for wilderness designation, or not. Congress reserves the authority to designate wilderness through legislation. [Forest Service Handbook 1909.12 Chapter 70](#) provides direction and guidance for the four-step process. The four steps are:

1. **Inventory** – identify all National Forest System lands in the forest that may have wilderness characteristics, as defined in the Wilderness Act
2. **Evaluation** – determine the level or degree to which wilderness characteristics exist within the lands identified as possessing them.
3. **Analysis** – determine which of the evaluated areas may be suitable for inclusion in one or more plan alternatives as part of the environmental analysis process.
4. **Recommendation** – forest supervisor determines which, if any, of those lands included in one or more plan alternatives will be recommended to Congress for inclusion in the National Wilderness Preservation System. Only Congress may designate wilderness.

The forest supervisor assembled an interdisciplinary team of diverse Forest Service resource specialists to complete a transparent, systematic, reasonably broad, and inclusive process that incorporated public input. This appendix provides a detailed summary of the process. More information can be found on the Gila National Forest [website](#).

Step One—Inventory

Forest Service Handbook direction outlines the steps and criteria the interdisciplinary team must follow to complete the inventory step. Areas are included when:

1. The area meets the size criteria. The area must be at least 5,000 acres OR if less than 5,000 acres, it must be large enough to be manageable as wilderness (FSH 1909.12 Chapter 70 section 71.21).
2. The area meets the improvements criteria. Roads, airstrips, heliports, vegetation treatments, timber harvest areas, permanently installed vertical structures such as electronic installations that support communications, permanently installed linear structures such as powerlines and pipelines, areas of mining activity, range, and recreation infrastructure, are examples of what may be defined as improvements (FSH 1909.12 Chapter 70 sections 71.22, 71.22a and 71.22b).
 - d. The area meets the road improvement criteria outlined in handbook direction (FSH 1909.12 Chapter 70 section 71.22a).
 - e. The area meets the other improvements criteria outlined in handbook direction. Other improvements must not be “substantially noticeable” in the area as a whole FSH 1909.12 Chapter 70 section 71.22b).

No definition of “substantially noticeable” is provided by handbook direction. As part of undertaking a reasonably broad, inclusive, and transparent process, planning staff provided opportunities for the people

who care about the Gila National Forest to help define the term for the inventory (see Appendix C: Documentation of the Public Engagement Process).

To people who care about the Gila National Forest, an improvement is substantially noticeable if it negatively affects the natural appearance of the surrounding landscape due to one or more of the following traits:

- It is not of a relatively small size or of an inconspicuous height compared to surrounding features on the landscape;
- They are numerous within the area and are located close by to each other rather than scattered broadly across the landscape;
- It is not unobtrusive in shape or contour, and consists of straight lines and right angles;
- It is not highly reflective or not of natural coloration, and cannot be made non-reflective or altered to be a more natural coloration;
- It appears to be of modern, human construction, and are not made of natural or natural appearing materials;
- It is not shielded from general view by their location, by being sheltered by landscape features, or by being hidden by surrounding vegetation;
- It is not temporary in nature, and cannot be removed or restored without unreasonable expense or difficulty, or without inflicting unreasonable impacts to a valid existing forest use, existing essential service, essential infrastructure, valid existing right, or a valid existing permitted use expected to continue for the foreseeable future;
- It will not either decompose or naturalize by vegetation growth, and will continue to affect the natural appearance of the area for more than 20 years into the future;
- It does not contribute significantly to the historical character and cultural context of the area by their presence and preservation;
- It is not a range improvement allowed to be maintained under the Congressional Grazing Guidelines for Wilderness, or they are not like improvements that currently exist in Gila National Forest wilderness areas.

After applying the handbook criteria for road improvements, the interdisciplinary team based initial inventoried area boundaries on a 300-foot buffer from roads with maintenance levels greater than 1 to be consistent with the travel management dispersed camping corridors. Maintenance level 1 roads, which were used intermittently if at all and only maintained to a level that prevented resource damage, were closed by travel management. Areas including level 1 roads were included in the inventory. Open roads of all other maintenance levels were removed from the inventory consistent with handbook direction (FSH 1909.12 Chapter 70 section 71.22a). These initial boundaries were not set in stone. Throughout the entire wilderness process, buffers were to a distance that aligned to the context of the area and the step in the process. Refinements were made to account for conflicts and the unique circumstances of each area such as administrative access, rights of way, and other valid existing rights.

For consistency with the buffers applied to open roads, an initial 300-foot buffer was applied to those other improvements the interdisciplinary team determined met the public's definition of "substantially noticeable." As areas moved forward in the process, these buffers were re-examined and adjusted on a case-by-case basis so that the area boundaries were appropriate in the context of the individual circumstances.

Larger buffers (1,000 feet) were applied to gravel pits, areas of mining activity to allow for ongoing development and future restoration needs. Smaller buffers (100 feet) were applied to areas of planned vegetation treatments. In addition to the other improvements specified in handbook direction (FSH 1909.12 Chapter 70 section 71.22b). Designated fuelwood areas established through a National Environmental Policy Act process and open to public use were also considered substantially noticeable.

There were cases where singular and isolated, or multiple and widely dispersed improvements meeting the definition of substantially noticeable made it difficult to exclude them with a buffer or a simple boundary adjustment. In these cases, the interdisciplinary team made efforts to dissect the area into smaller areas or “cherry stem” the improvement so that area could be included in the inventory.

To assist with ease of identification and a shared frame of reference, each area was assigned an identification number and a unique common name that was meaningful to the ranger district or districts fell within. The identification number consisted of an upper-case or capital letter(s) indicating the district(s) within which the area is located. “Q” for Quemado District, “B” for Black Range District, “R” for Reserve District, G for Glenwood District, “W” for Wilderness District, and “S” for Silver City District. The letter(s) were followed by a sequential number among the areas within the district(s). For examples: if the Glenwood District has 7 discrete polygons identified on that district, the assigned numbers would be G1 through G7; or if there were 3 polygons that cross the boundary between Silver City and Glenwood districts, they would be numbered SG-1 through SG-3.

Separate inventoried area boundary polygons contiguous to the same existing wilderness, primitive area, administratively recommended wilderness, or wilderness inventory of other federal ownership, were generally distinguished by using the same identifier number with a lower-case letter at the end. For example, two separate polygons on the Black Range District contiguous to the Aldo Leopold Wilderness would be numbered B-7a, and B-7b.

In all official correspondence, both identifiers were used to refer to an area. For example: If reference were made to the Aspen Mountain area, both the public and agency employees will more easily orient to the area than if it were referred to as only area G1.

A draft inventory process paper, including the definition of “substantially noticeable” that was developed from previous public participation, was made available for a 30-day public review and comment period. Following the review of comments received during this time, the final process paper and the draft inventory maps were released for another 30-day public review and comment period. The public was able to view the inventoried areas and make comments using the interactive web map. They also had access to digital (.pdf) and hardcopy maps and a guide to crafting comments.

The forest supervisor has the discretion to allow for areas not meeting the inventory process criteria to be included in the inventory anyway. (FSH 1909.12 Chapter 70 section 71.2). During review of the comments received on the final process paper and draft inventory map, the forest supervisor did not find a reason to exercise this discretion. No additional lands were included in the final inventory.

When the final inventory maps were released, it included 1,219,019 acres within 100 separate area polygons. Fifty of the identified polygon areas were contiguous to existing wilderness, with the remaining as stand-alone areas or oriented closely to but not contiguous to existing areas.

The products resulting from the inventory process were a series of maps conforming to the requirements of handbook direction (FSH 1909.12 chapter 70 section 71.3). The final process paper and final inventory map were made available for continued public review and feedback through the rest of the wilderness and plan revision process. Again, the public was able to view the inventoried areas and make comments using the interactive web map. They also had access to digital (.pdf) and hardcopy maps. Lands shown on the

inventory maps do not imply designation or convey or require a particular kind of management. The inventoried lands continue to be open to consideration for inclusion or removal in any step of the process until the record of decision for the final plan is signed. The following map displays the final inventory map of the entire Gila National Forest.

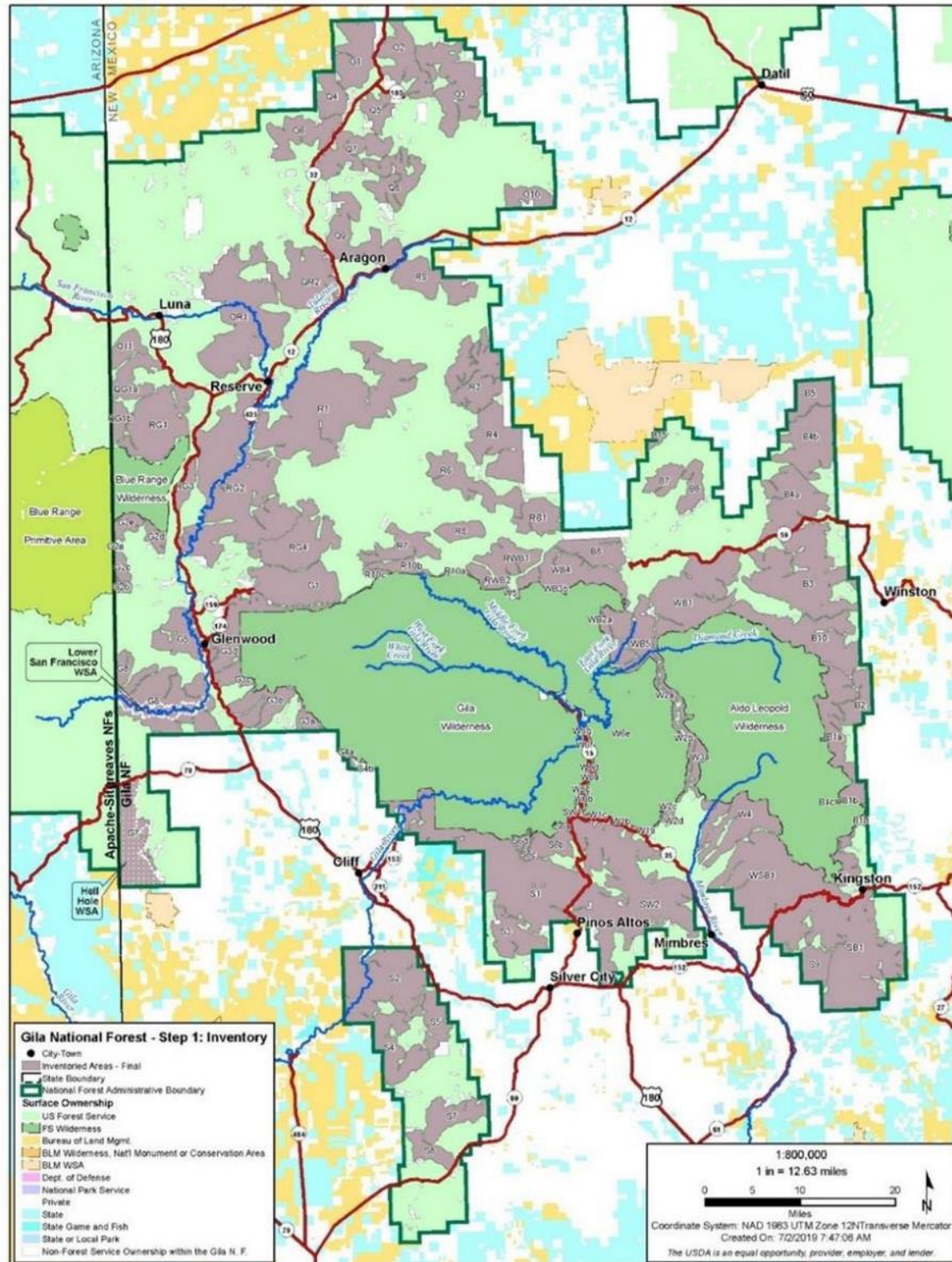


Figure H-1. Gila National Forest – Step 1: Inventory

Step Two—Evaluation

The inventory step identified areas that may have wilderness characteristics and be manageable as wilderness. The evaluation step determines if those characteristics do in fact exist, which ones, and to what degree. Like the inventory step, a draft evaluation process paper was developed and release for a 30-day public review and comment period. After internal review of the comments received, a final evaluation process paper was released for ongoing public review and comment as described for the inventory phase. Like the inventory step, the evaluation process is outlined in handbook direction (FSH 1909.12 Chapter 70 section 72.1) which is based on the criteria developed in the Wilderness Act of 1964. These criteria include manageability, apparent naturalness, opportunities for solitude or for a primitive and unconfined type of recreation, and other features or value if they exist.

During the evaluation process, the boundaries of inventoried areas were further refined at the forest supervisor's discretion (FSH 1909.12 Chapter 70 section 72) based on recommendations from the interdisciplinary team and public comment. These refinements were varied based on specific characteristics of each area, or portions of the area. These refinements are documented in the final evaluation report and series of maps.

Driven by the criteria, the process followed a stepwise procedure.

1. Is the area of sufficient size to be manageable as wilderness? If yes, proceed to the next step. If no, discontinue evaluation. Area is not suitable for recommendation.
2. Is the area manageable to wilderness characteristics? If yes, proceed to the next step. If no, discontinue evaluation. Area is not suitable for recommendation.
3. Does the area possess one or more wilderness characteristics (apparent naturalness, opportunities for solitude, or opportunities for a primitive and unconfined type of recreation, and other features of value)? To what degree does the area possess wilderness characteristics? How does each area rank overall in terms of wilderness characteristics when compared to one another?

General considerations for determining manageability (steps 1 and 2) included:

- Area size, shape and arrangement of landscape features, including location relative to substantially noticeable improvements. Feasibility of boundary adjustments that could make the area manageable to wilderness characteristics.
- Location relative to existing designated wilderness, primitive areas, administratively recommended wilderness, or wilderness inventory on lands of other federal jurisdictions.
- Landscape features such as terrain, bodies of water, vegetation cover and other location dependent characteristics that influence the ability of management to successfully manage uses that may conflict with wilderness management.
- Any existing laws, legally established uses or valid existing rights that may conflict with wilderness management.
- The presence and amount of non-federal land in the area.
- Management of surrounding lands.

Areas that were dropped from further evaluation in steps 1 and 2 include:

Q7 – East Gallo: The narrow, odd shape, with cherry stems nearly bisecting it, the entire western end of the area being dominated by a motorized trail system, and lack of space for a sizable core area all combine to make the area not manageable to preserve wilderness characteristics.

Q8 – Bull Camp: The area's narrow spaces between boundary intrusions, odd overall shape and configuration, deeply cherry stemmed roads, level 1 roads in the northeastern portion, occurrence of private inholdings located deep inside the area, and lack of uninterrupted core area relative to its size all combine to make the area not manageable to preserve wilderness characteristics.

Q10 – East Boundary: The area's odd, cumbersome, and narrow crescent shape, small size, and the presence of private inholdings intruding deep into the core, and an intruding closed, but not decommissioned level 1 road, all combine to make the area unmanageable to preserve wilderness characteristics.

R6 – Elk Mountains: The area's narrow, often torturous shape created by several cherry stems, adjacent roads, and the presence of several closed but not decommissioned level 1 roads, and the resulting lack of a core area combine to make the area unmanageable to preserve wilderness characteristics.

R7 – Negrito: The area's long, narrow, and odd shape, moderate total acreage, cherry stems and adjacent roads, all combine to make the area lacking a core area large enough to be manageable to preserve wilderness characteristics. The entire western part of the area is also heavily dissected by a series of decommissioned level 1 roads.

R8 – T-Bar Ridge: The area's small size, narrow shape, location, terrain, vegetation cover and adjacent roads and developments all combine to make the area lacking a core area large enough and with boundaries manageable to preserve wilderness characteristics.

R10c - Gila Additions North Reserve: The area's narrow, odd shape and configuration between open roads combine with unmanageable boundaries to be unmanageable to preserve wilderness characteristics.

RWB1 – Canyon Creek: There are multiple issues with the configuration of the area that make it unmanageable to preserve wilderness characteristics. There are several cherry stem roads, including two that may connect on the ground and together extend nearly 3/4 across the polygon, high development system roads on all boundaries, and it lacks sizable core area where wilderness characteristics could be d.

RWB2 – Gila Addition North Central: The shape and configuration of this small area makes it unmanageable to preserve wilderness characteristics. There is a large parcel of developed private land dominating the area, and several cherry-stemmed roads creating an awkward shaped area with unmanageable boundaries.

RG3 – Brushy Canyon: This area is both less than 5,000 acres and not contiguous to existing wilderness or similar management. During inventory, the steep terrain was considered as possibly making the area practicable to manage as wilderness. However, as part of the first step of the Evaluation it was determined that roads and other developments affect the entire area, making it not being manageable as wilderness at its present size.

G2 – Blue Primitive Addition: Though much of this consists of inventoried roadless area, its small size and configuration would not be manageable to protect wilderness characteristics. The entire 315-acre area is completely enclosed by fences and is mostly surrounded by open roads, having an outsized effect on such a very small area. Its addition would not contribute to the wilderness characteristics of the adjacent primitive area.

G2b and G2c – Blue Range South Additions: These small, convoluted and narrowed shapes, their orientation narrowly sandwiched between adjacent roads, lack of manageable boundaries, presence of maintenance level 1 closed but not decommissioned roads, and the gentle roadside terrain all combine to make these areas extremely vulnerable to intrusions and not manageable to preserve wilderness characteristics.

G3c – Gila Addition Northwest: This tiny area consists of just 20 acres, and it is oriented in a very narrow space between two open forest roads, and lacks a core area to be able to protect wilderness characteristics. The area would not contribute positively to the wilderness characteristics or the management of wilderness characteristics if it were an addition to the existing adjacent wilderness.

G4a and G4b – Gila Additions West: These very small areas' odd shapes, orientation sandwiched between adjacent roads and private property, and the roadside terrain all combine to make them not manageable to preserve wilderness characteristics.

B2– Brushy Mountain: There are multiple issues with the ability to manage the area's boundaries to protect wilderness characteristics, including relatively flat terrain, open vegetation cover, existing mining claims, mining operations on adjacent lands, and issues with access due to extensive private lands adjacent to area boundaries. Also, several closed, but not decommissioned roads extend deeply into the area from the west-northwest to the south, preventing sufficient core area to preserve wilderness characteristics. All these factors contribute to the determination that the area is unmanageable to protect wilderness characteristics.

B3 – Big Dry Creek: It was determined that this area was unmanageable to protect wilderness characteristics due to very deep incursions of private property inholdings, cherry stems, unmanageable boundaries, and a lack of core area. Even if boundary adjustments were made, the resulting smaller areas would be isolated from existing wilderness and not manageable to preserve wilderness characteristics. Compounding issues with manageability are maintenance level 1 roads accessing into much of the area. There may also be issues with mining claims in the area.

B4 – Wahoo South: This area was determined to be unmanageable due to an aggregate of management factors, including unmanageable boundaries close to firewood cutting areas and private property, flatness of terrain, the presence of an extensive network of closed roads, some not decommissioned, and a lack of sizeable core area due to deeply intruding cherry stems around open forest roads. These were also considered in context to the relative size of the area.

B6 – Sand Canyon: Several problems cause this area to be unmanageable to preserve wilderness characteristics, including its narrow shape relative to its very small size, proximity to private property all along its southeast boundary, the remaining boundary consisting of open roads, a cherry stem incursion deep into the area, and a lack of a core area to protect wilderness characteristics. There is also a closed, decommissioned but still substantially noticeable level 1 road that nearly bisects the area from north to south, contributing to there being insufficient core area available to preserve wilderness characteristics.

B7 – Indian Peaks: Due to the very small size of the area combined with it being bounded on all sides by open roads, having a very deep cherry stem around an open forest road, a closed but not decommissioned maintenance level 1 road along the southeast boundary, proximity to private property to the south, the area is very susceptible to intrusions and not manageable as wilderness.

B15 – Continental Divide WSA Addition: Due to its very small size, open terrain, generally unmanageable boundaries, and orientation in proximity to roads, powerlines, and other infrastructure this area is not manageable to preserve wilderness characteristics. The area also would not contribute positively to the wilderness characteristics of the adjacent wilderness study area managed by the Bureau of Land Management.

S6c – Gila Addition Southwest: This area was included in the inventory step in error. It does not meet size criteria and does not adjoin existing wilderness or similarly managed area. It was removed from further consideration.

SW2 – Signal Peak: The area is relatively large in overall size but has numerous and deeply intruded cherry stem roads. The overall shape is very narrow in places, with multiple narrow protrusions and narrow chokepoints throughout. There are relatively extensive private land inholdings within the area and along the external boundaries. It is close to several towns and villages and is well-separated from existing wilderness. The Cobre Mine is directly adjacent to the south, with the influence of continuous industrial activity dominating the southeastern portion of the area, and there is no access into the area through these mine lands. Barriers to preserving wilderness characteristics are pervasive throughout the entirety of the area.

W1a and W1b – Gila Additions Lake Roberts: Due to small size, configuration, location close to residentially developed private property, roads, high levels of development, these areas are unmanageable to preserve wilderness characteristics. The existing wilderness boundary to which these areas are adjoin are likely to have been based on maintenance level 1 road prisms and powerline rights of ways.

W2b, W2c, and W2d – Gila Additions East: In places, these small, narrow areas are affected by utilities rights-of-way. Existing wilderness boundary locations were likely chosen due to these and other manageability considerations along the road corridor. They are not manageable to preserve wilderness characteristics.

W5 – Gila Addition North Central: Due to its very small size and awkward orientation between a powerline right of way and adjacent private lands, this area is not manageable to preserve wilderness characteristics.

W6a, W6b, W6c, W6d, W6e, W6f, and W6g – Gila Additions Central: Due to existing state highway and utility rights of way and nearby private property, these very small and narrow areas are not manageable to preserve wilderness characteristics.

WB3 – Gila Addition North: It was determined that due to its very small size, orientation, and proximity to roads that this area is not manageable to preserve wilderness characteristics.

WB5 – North Star: A number of circumstance make this area unmanageable to preserve wilderness characteristics, including its narrow shape relative to its small size, a private property inholding within the core area that nearly bisects it, private property along much of its boundary, open roads along the remaining boundary and a closed, but not decommissioned forest road extending from north to south into the area.

For step 3, wilderness characteristic presence or absence was guided by handbook direction (FSH 1909.12 chapter 70 section 72.1). Those wilderness characteristics were then ranked as “none,” “low,” “moderate,” “high,” or “outstanding” using the matrix and point system displayed in the following table.

Table H-1. Matrix for ranking of wilderness characteristics

Wilderness Characteristic Ranking	Apparent Naturalness¹	Opportunities for Solitude²	Opportunities for Primitive or Unconfined Recreation³
<i>Outstanding</i> 8 to 10 points	The area appears to be affected primarily by the forces of nature, with the imprints of human works being substantially unnoticeable. If improvements exist, they are few, widely dispersed, difficult to locate, do not appear modern or contribute significantly to the historical and cultural context.	It's easy to attain a feeling of being alone or remote from civilization throughout the area. Encounters with other visitors, and groups of visitors are very rare to nonexistent. The sights and sounds of human activities are very rare to nonexistent.	The setting provides a very broad range of opportunities at all skill levels. There are no regulatory restrictions on entry. Few to no limitations on visitors are necessary to wilderness characteristics.
<i>High</i> 6 to 7 points	Plant and animal communities appear natural over at least 90% of the area. There is only minor evidence of modern human management activities or evidence is present only near the outer boundaries of the area. Improvements are substantially unnoticeable, few, rarely encountered, not concentrated in one area, do not appear modern, or contribute significantly to the historical and cultural context.	Across most of the area, it's easy to attain a feeling of being alone or remote from civilization. Encounters with other visitors, and groups of visitors are uncommon, but occasionally occur. The sights and sounds of human activities are possible, but infrequently experienced.	The setting provides opportunities for a range of recreation types and skill levels. There are few or no regulatory restriction on entry. There are few limitations on visitors necessary to wilderness characteristics.
<i>Moderate</i> 3 to 5 points	Plant and animal communities appear natural over most of the area. Modern human management activity is noticeable in some locations. There is a low density of improvements, they may appear modern, they may be concentrated in some locations and may impose limitations on apparent naturalness. They contribute to historical and cultural context to a limited degree.	Feeling alone is possible but required effort to attain. Encounters with other visitors, and groups of visitors is likely in popular locations but is not unavoidable throughout the area. The sights and sounds of human activities are likely to be experienced.	The setting provides opportunities for moderate range of recreation types and skill levels. There are moderate regulatory restrictions on entry. There are some additional limitations on visitors necessary to wilderness characteristics.

Wilderness Characteristic Ranking	Apparent Naturalness¹	Opportunities for Solitude²	Opportunities for Primitive or Unconfined Recreation³
<i>Low</i> 1 to 2 points	Plant and animal communities appear natural in some locations, but not over most of the area. The evidence of modern human management activities is noticeable and there is a high level of modern, human-caused disturbance. Improvements are high density, widespread, often concentrated and contributed little to historical and cultural context.	There is little opportunity to feel alone. Encounters with other visitors and large groups of visitors are common. The sights and sounds of human activities are difficult to avoid.	The setting provides few opportunities for primitive or unconfined recreation. There are significant regulatory limitations on entry. There are significant restrictions on visitor use necessary to wilderness characteristics, such as areas closed to camping and a permit system.
<i>None</i> 0 points	Plant and animal communities are in visible departure from apparent naturalness. There is widespread and obvious evidence of modern human management activity. Improvements are prevalent, substantially noticeable, widespread and there are few locations from which they are not visible. They appear modern and do not contribute to the historical and cultural context.	The opportunity to feel alone is almost nonexistent throughout most of the area. Encounters with other visitors are common, frequent, and difficult to avoid. The sights and sounds of human activities prevalent throughout the area.	There are no or poor opportunities to engage in primitive and unconfined recreation. There are strict regulatory restrictions on entry. Any restrictions visitor use are unlikely to be adequate to wilderness characteristics.

¹ Apparent naturalness is calculated as the average score of three elements defined in handbook direction: (a) the degree to which plant and animal communities appear natural or unnatural (for example, they would appear unnatural if past management activities have created a plantation style forest with trees of uniform species, age and are planted in rows); (b) the extent to which the area appears to reflect ecological conditions that would normally be associated with a lack of human intervention and; (c) the extent to which improvements are substantially noticeable and represent a departure from apparent naturalness.

² Solitude is a subjective experience of feeling alone, remote from civilization, and removed from modern society. Solitude experiences may include seeing few or no other people, having privacy, and freedom from societal constraints and obligations.

³ Primitive and unconfined recreation experiences are non-motorized, non-mechanized, nature-based opportunities of personal challenge, self-discovery and rejuvenation that are free from excessive management restrictions. Examples include but are not limited to observing wildlife, hiking, backpacking, horseback riding, fishing, hunting, floating, kayaking, cross-country skiing, camping, and enjoying nature.

Other features of value were not ranked on the same point system because they are not required for an area to be suitable for inclusion in the Wilderness Preservation System. They are only evaluated where they exist. Other features of value include ecological, geological, or other features of scientific, educational, scenic, or historical value. Examples of what may be considered other features of values include rare plant or animal communities, rare ecosystems, historic and cultural resource sites, research natural areas, high quality water resources or important watershed features, or outstanding landscape features such as waterfalls, viewpoints, et cetera (FSH 1909.12 chapter 70 section 72.1). Where the interdisciplinary team determined they existed, a ranking of low, moderate, high, or outstanding was assigned with 1, 2, 3, or 4 bonus points assigned to each rank, respectively. These bonus points were

tallied and added to the overall score for wilderness characteristics, with the rationale for each value and corresponding rank documented in a narrative.

It is important to note that there are a great many historic and prehistoric heritage resources located across the Gila National Forest. Nationally significant and otherwise valuable heritage resources exist in each of the areas being evaluated; however, they were only evaluated as other features of value where they have been documented and are of an exceptional and unique nature as compared to what may be found elsewhere in the forest.

After the wilderness characteristics in each area were evaluated, the points for each wilderness characteristic were then added together to reach an overall ranking so that the areas. Those areas with zero points were ranked as “none,” between 1 and 5.9 points were ranked as “low,” between 6 and 11.9 points ranked as “moderate,” between 12 and 13.9 points ranked as “moderate/high,” between 14 and 15.9 points ranked as “high” and those with 16 or more points being ranked as “outstanding” overall.

Like the inventory report and maps, documentation of the evaluation step met the requirements of handbook direction (FSH 1909.12 Chapter 70 section 72.2) and there were public review and comment periods at draft and final. Because of the length of the draft report and in response to public requests, the comment period was lengthened from 30 days to 56 days. Resources for effective comment writing and opportunities to view and comment using an interactive web map were likewise provided. Detailed maps were available in digital format and hardcopy, paper maps were made available upon request. Lands shown on all maps and described in the report do not imply any form of designation or convey or require a particular kind of management. The following map provides the final results of the evaluation for the entire forest, followed by a tabular summary.

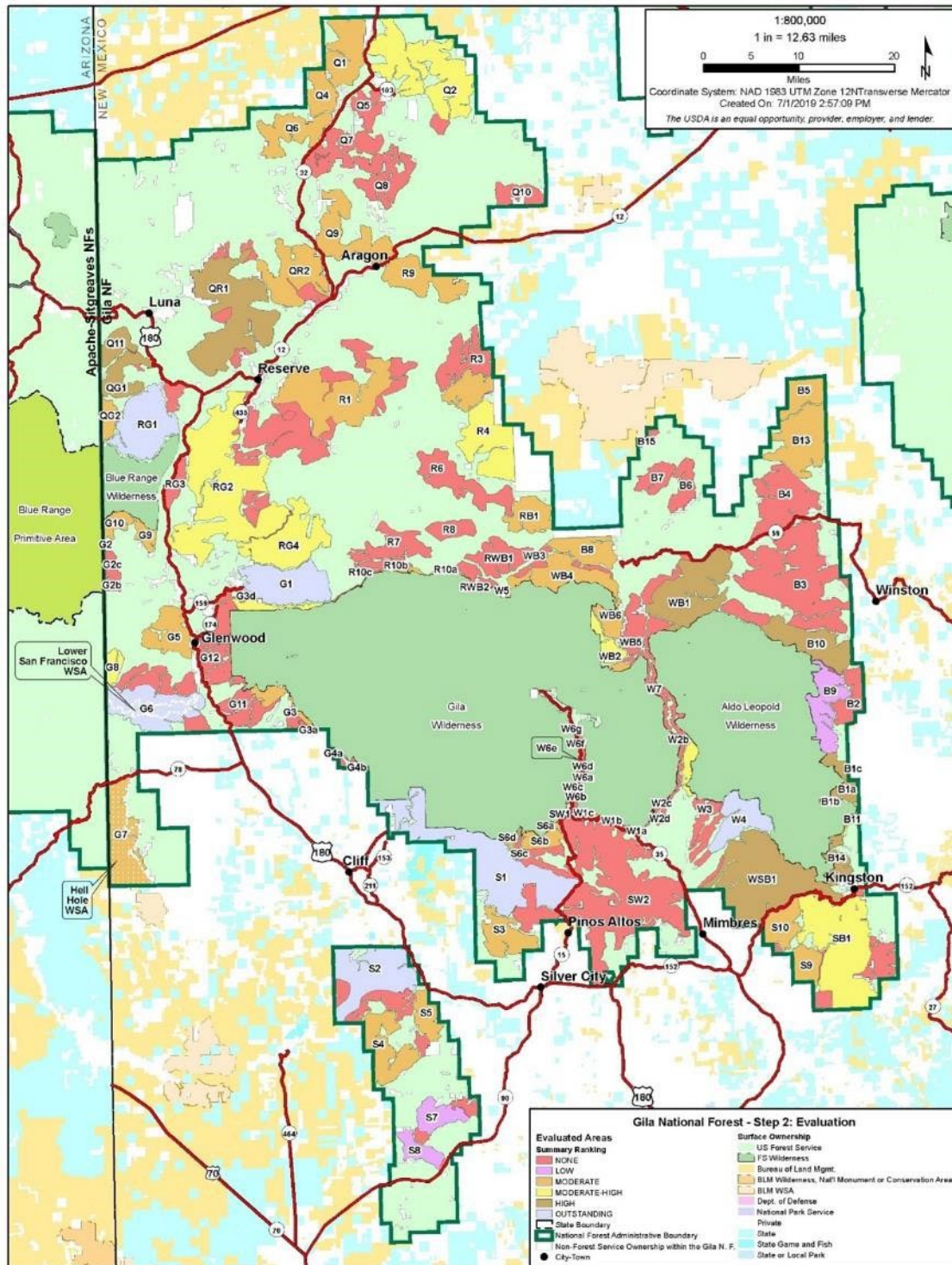


Figure H-2. Gila National Forest – Step 2: Evaluation

Table H-2 displays the results from the evaluation step.

Table H-2. Results of evaluation for wilderness characteristics

Evaluated Area	Inventoried Area Acres	Practicable Size (less than 5,000 acres)	Manageability	Apparent Naturalness	Solitude	Primitive Unconfined Rec	Other Features of Value	Overall Ranking Score	Overall Ranking
Quemado District Evaluated Areas	--	--	--	--	--	--	--	--	--
Q1 – Largo	15,288	Not applicable	Yes	Moderate	High	Moderate	Low	10.3	Moderate
Q2 –The Hub	36,344	Not applicable	Yes	High	High	High	Low to Moderate	13.5	Moderate to high
Q4 – Chavez Lake	7,237	Not applicable	Yes	Moderate	High	Moderate	None	10.3	Moderate
Q5 – Agua Fria:	5,691	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
Q6 – Fox Mountain	12,956	Not applicable	Yes	Moderate	High	High	Low	11.6	Moderate
Q7 – East Gallo	13,330	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
Q8 – Bull Camp	14,186	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
Q9 – Apache Mountain	17,972	Not applicable	Yes	Moderate	High	High	N	10.3	Moderate
Q10 – East Boundary	6,333	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
Q11 – Mother Hubbard	5,728	Not applicable	Yes	Moderate	Outstanding	High	Low	15.7	High
Shared Quemado and Glenwood Districts	--	--	--	--	--	--	--	--	--
QG1 – Nolan North	8,685	Not applicable	Yes	Moderate	Outstanding	High	Low	15.7	High
QG2 – Nolan South	4,404	Yes	Yes	Moderate	Outstanding	High	None	11.7	Moderate
Shared Quemado and Reserve Districts	--	--	--	--	--	--	--	--	--
QR1 – Upper Frisco Box	41,047	Not applicable	Yes	Moderate	High	High	High	14.7	High
QR2 – Upper Frisco Box East	18,810	Not applicable	Yes	Moderate	Moderate	High	N	9	Moderate

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Evaluated Area	Inventoried Area Acres	Practicable Size (less than 5,000 acres)	Manageability	Apparent Naturalness	Solitude	Primitive Unconfined Rec	Other Features of Value	Overall Ranking Score	Overall Ranking
Reserve District Evaluated Areas	--	--	--	--	--	--	--	--	--
R1 – Eagle Peak	31,993	Not applicable	Yes	Moderate	Moderate	High	Low	11.7	Moderate
R3 – Moraga Canyon	8,527	Not applicable	Yes	Moderate	Moderate	Moderate	Low	10.3	Moderate
R4 – O-Bar-O Mountain	20,010	Not applicable	Yes	Moderate	High	Moderate	Low	12	Moderate to high
R6 – Elk Mountains	15,526	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
R7 – Negrito	10,461	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
R8 – T-Bar Ridge	5,270	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
R9 – Wagon Tongue	14,628	Not applicable	Yes	Moderate	High	Moderate	N	11.7	Moderate
R10a, R10b, - Gila Additions North Reserve	536 657	Yes	Yes	Moderate	Moderate	Moderate	N	9	Moderate
R10c - Gila Additions North Reserve	1,451	Yes	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
Shared Reserve and Black Districts	--	--	--	--	--	--	--	--	--
RB1 – East Elk Mountain	9,064	Not applicable	Yes	Moderate	Moderate	Moderate	N	10	Moderate
Shared Reserve, Wilderness, and Black Districts	--	--	--	--	--	--	--	--	--
RWB1 – Canyon Creek	10,282	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
RWB2 – Gila Addition North Central	3,392	Yes	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
Shared Reserve and Glenwood Districts	--	--	--	--	--	--	--	--	--
RG1 – Aspen Mountain	22,089	Not applicable	Yes	High	High	High	Moderate	16	Outstanding

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Evaluated Area	Inventoried Area Acres	Practicable Size (less than 5,000 acres)	Manageability	Apparent Naturalness	Solitude	Primitive Unconfined Rec	Other Features of Value	Overall Ranking Score	Overall Ranking
RG2 – Devil's Creek	61,067	Not applicable	Yes	Moderate	High	High	Moderate	13	Moderate to high
RG3 – Brushy Canyon	3,977	No	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
RG4 – North Mogollon Mountains	21,591	Not applicable	Yes	Moderate	High	High	None	12	Moderate to high
Glenwood District Evaluated Areas	--	--	--	--	--	--	--	--	--
G1 – Mineral Creek	20,525	Not applicable	Yes	Outstanding	Outstanding	Outstanding	Outstanding	23.3	Outstanding
G2 – Blue Primitive Addition	315	Yes	No	No	No	No	None	0	None
G2b and G2c – Blue Range South	1,321 2,676	Yes	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
G3 – Gila Rain Creek Addition	1,298	Yes	Yes	Moderate	Moderate	Moderate	None	10.3	Moderate
G3c – Gila Addition Northwest	20	Yes	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
G4a and G4b – Gila Additions West	776 158	Yes	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
G5 – Park Mountain	11,316	Not applicable	Yes	Moderate	Moderate	Moderate	None	10.7	Moderate
G6 – Lower San Francisco	21,196	Not applicable	Yes	High	High	Outstanding	Outstanding	18.3	Outstanding
G7 – Hell Hole	20,535	Not applicable	Yes	Moderate	High	Moderate	Low	11	Moderate
G8 – Smoothing Iron Mesa	3,588	Yes	Yes	Moderate	High	Moderate	Low	12.3	Moderate to high
G9 – Blue Range SE Addition	3,040	Yes	Yes	Moderate	Moderate	Low	None	6	Moderate
G10 – Blue Range SW Addition	3,709	Yes	Yes	Moderate	Moderate	Low	None	8	Moderate
G11 – Gila Dry Creeks Addition	3,129	Not applicable	Yes	Moderate	High	High	None	10.3	Moderate

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Evaluated Area	Inventoried Area Acres	Practicable Size (less than 5,000 acres)	Manageability	Apparent Naturalness	Solitude	Primitive Unconfined Rec	Other Features of Value	Overall Ranking Score	Overall Ranking
G12 – Gila Whitewater Addition	3,463	Yes	Yes	High	High	High	None	13.7	Moderate to high
Black Range District Evaluated Areas	--	--	--	--	--	--	--	--	--
B1a, B1b, B1c, – Aldo Leopold Seco Additions	5741 265 78	Yes	Yes	High	High	High	Low	14.3	High
B2– Brushy Mountain	7,751	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
B3– Big Dry Creek	39,126	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
B4 – Wahoo South	19,769	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
B5 – Stone Creek	8,384	Not applicable	Yes	Moderate	High	Moderate	N	11.3	Moderate
B6 – Sand Canyon	6,136	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
B7 – Indian Peaks	5,516	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
B8 – Beaverhead	9,849	Not applicable	Yes	Moderate	Moderate	Moderate	Low	9	Moderate
B9 – Aldo Leopold Addition East	13,558	Not applicable	Yes	Low	Low	Moderate	None	5.7	Low
B10 – Aldo Leopold Addition Northeast	15,909	Not applicable	Yes	High	High	High	Low	14.3	High
B11 – Aldo Leopold Addition Southeast	1,242	Yes	Yes	Moderate	High	High	Low	12.7	Moderate to high
B13 – Wahoo North	20,139	Not applicable	Yes	Moderate	Moderate	High	None	11.3	Moderate
B14 – Aldo Leopold Addition Carbonate Creek	5,380	Not applicable	Yes	High	High	Outstanding	None	14	High
B15 – Continental Divide WSA Addition	1,405	Yes	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None

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Evaluated Area	Inventoried Area Acres	Practicable Size (less than 5,000 acres)	Manageability	Apparent Naturalness	Solitude	Primitive Unconfined Rec	Other Features of Value	Overall Ranking Score	Overall Ranking
<i>Silver City and Black Range Shared District</i>	--	--	--	--	--	--	--	--	--
SB1 – Sawyer Peak	41,063	Not applicable	Yes	Moderate	Outstanding	High	None	13.7	Moderate to high
Silver City District Evaluated Areas	--	--	--	--	--	--	--	--	--
S1 – Mogollon Box/Tadpole Ridge	48,067	Not applicable	Yes	High	Outstanding	High	High	17	Outstanding
S2 – Gila Middle Box	25,335	Not applicable	Yes	Moderate	Moderate	High	Outstanding	16	Outstanding
S3 - Bear Mountain	11,124	Not applicable	Yes	Moderate	Moderate	Moderate	Low	9	Moderate
S4 – North Burros	15,786	Not applicable	Yes	Moderate	Moderate	Moderate	Low	9	Moderate
S5 – Saddle Rock	6,734	Not applicable	Yes	Moderate	Low	Moderate	Low	9.8	Moderate
S6a, S6b, S6c, and S6d – Gila Additions Southwest	526 4,643 961 1,040	Yes	Yes	Moderate	Moderate	Moderate	None	9	Moderate
S7 – Burro Peak	7,522	Not applicable	Yes	Moderate	Low	Low	Low	6	Moderate
S8 – Knight Peak	5,618	Not applicable	Yes	Moderate	Low	Low	Low	6.3	Moderate
S9 – Royal John	6,915	Not applicable	Yes	Moderate	High	Moderate	None	11.7	Moderate
S10 – Lower Gallinas Canyon	9,048	Not applicable	Yes	Moderate	Moderate	Moderate	None	8.7	Moderate
<i>Shared Silver City and Wilderness District</i>	--	--	--	--	--	--	--	--	--
SW1 – Gila Addition Sapillo	264	Yes	Yes	High	High	Moderate	None	12	Moderate to high
SW2 – Signal Peak	66,486	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
Wilderness District Evaluated Areas	--	--	--	--	--	--	--	--	--
W1a and W1b – Gila Additions Lake Roberts	664 323	Yes	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
W1c – Gila Addition Lake Roberts	732	Yes	Yes	High	Low	Moderate	N	10	Moderate

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Evaluated Area	Inventoried Area Acres	Practicable Size (less than 5,000 acres)	Manageability	Apparent Naturalness	Solitude	Primitive Unconfined Rec	Other Features of Value	Overall Ranking Score	Overall Ranking
W2b, W2c, and W2d – Gila Additions East	2,088 393 455	Yes	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
W3 – Aldo Leopold Addition West	3,394	Not applicable	Yes	High	High	High	None	12	Moderate to high
W4 – Aldo Leopold Addition McKnight Canyon	12,458	Not applicable	Yes	Outstanding	Outstanding	High	None	16.3	Outstanding
W5 – Gila Addition North Central	27	Yes	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
W6a, W6b, W6c, W6d, W6e, W6f, and W6g – Gila Additions Central	2,371 25 689 115 16 178 58	Yes	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
W7 – Gila Addition East	1,057	Yes	Yes	High	Low	Moderate	Low	11	Moderate
<i>Shared Wilderness and Black Range Districts</i>	--	--	--	--	--	--	--	--	--
WB1 – Taylor Creek:	27,335	Not applicable	Yes	Moderate	High	High	High	15	High
WB2 – Gila Addition East:	4,437	Yes	Yes	Moderate	High	Moderate	Moderate	14	High
WB3 – Gila Addition North	39	Yes	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
WB4 – Gila Addition Northeast:	14,153	Not applicable	Yes	Moderate	Moderate	High	Low	10.7	Moderate
WB5 – North Star	7,148	Not applicable	No	Not applicable	Not applicable	Not applicable	Not applicable	0	None
WB6 – Gila Addition Beaver Creek	4,975	Yes	Yes	Moderate	Moderate	Moderate	Low	11	Moderate
<i>Shared Wilderness Silver City and Black Range Districts</i>	--	--	--	--	--	--	--	--	--
WSB1 – Rabb Park	43,998	Not applicable	Yes	High	High	Outstanding	Low	15	High

Step Three—Analysis

The analysis step is completed in the environmental impact statement through the comparison of alternatives.

Alternative Development

The evaluation provided one of the criteria that informed the forest supervisor's selection of which areas, or modified areas would be analyzed as part of one or more alternatives in the plan's environmental impact statement. The comments from people who care about the forest were also an important consideration for building the alternatives. Planning staff worked closely with the forest supervisor to develop the full set of criteria used to build the alternatives. These criteria were informed by the perspectives people shared throughout the wilderness process. Each of the five alternatives and the criteria used to develop them are described in the below.

Alternative 1: 1986 Forest Plan

This is the "no action" alternative. The 1986 forest plan recommended no new areas as wilderness and there are none associated with this alternative. Further, the 1986 forest plan decision did not include a wilderness recommendation for the two congressionally designated Hell Hole and Lower San Francisco River Wilderness Study Areas. Therefore, neither of these two designated wilderness study areas are recommended in this alternative.

Alternative 2: Proposed Action

This alternative includes the areas that the forest supervisor determined suitable for recommendation based on a set of criteria that attempts to balance public perspectives and management concerns across the full range of forest resources. It attempts to align with the forest's distinctive roles and contributions, honor the legacy of the first designated wilderness and the unparalleled opportunity for wilderness experiences the forest provides, and the vision outlined in Chapter 1 of the revised plan. Like the other steps in the wilderness process, this alternative was developed by applying the forest supervisor's criteria in a stepwise fashion.

1. Start with areas having an overall evaluation ranking of moderate/high, high, and outstanding that contribute to the existing wilderness niche of a large, mostly contiguous wilderness complex. Then, identify:
 - a. Areas with 10 percent or more^a of their area coincident with moderate or greater relative probabilities of stand-replacement fire if a fire occurred under extreme fire weather conditions^b. These areas are to be considered candidates for restoration efforts that may

^a The 10 percent threshold was established for the probability of high severity fire based on the forest supervisor's judgement of what constituted an acceptable risk. The forest supervisor reasoned that these conditions could be indicative of areas that are candidates for restoration work that required mechanical or motorized equipment to be feasible to implement, including mechanical thinning treatments.

The 10 percent threshold was also and applied to other criteria to provide for consistency in the analysis.

^b This determination was based on a dataset was developed by Parks and others at the Rocky Mountain Research Station, Aldo Leopold Research Institute. It represents statistical model predictions of the relative likelihood of stand-replacement (high-severity) fire in areas currently under tree cover. It does not predict the likelihood of fire occurrence, merely what is likely to occur should a fire happen. Extreme weather conditions are those moisture and temperature conditions that have been observed in the data only 5 percent of the time during active wildfire season. Although predictions were prepared for the average and median fire season weather conditions, the forest supervisor chose the extreme fire weather scenario for this purpose because those conditions are predicted become more common as climate change progresses. These conditions are when initial attack is most difficult and least likely to be successful, and where thinning treatments could be instrumental in moderating fire severity.

necessitate motorized or mechanical equipment. Consult with the forest supervisor, adjust the area boundary if excluding these locations would maintain manageability and preserve the overall evaluation ranking and continue to step 3. If boundary adjustments are not possible, remove the entire area from the alternative.

- b. Areas with more than 10 percent of their area being identified as potentially suitable for timber production. For more information on the timber suitability analysis, see Appendix F to the environmental analysis. If the area does not meet this threshold, proceed to the next step. If it does, consult with the forest supervisor, adjust the area boundary if excluding these locations would maintain manageability and preserve the overall evaluation ranking and then continue to the next step. If boundary adjustments are not possible, remove the entire area from the alternative.
- c. Areas that tribal communities have indicated are important to them and those they have indicated it is important for them to have motorized access to. If the area does not contain these areas, continue to the next step. If it does, consult with the forest supervisor, adjust the area boundary if excluding these locations would maintain manageability and preserve the overall evaluation ranking and then continue to the next step. If boundary adjustments are not possible, remove the entire area from the alternative.
- d. Areas that have been identified by the public as having current or potential for wilderness nonconforming traditional or recreational uses such as mountain biking, motorized access, and fuelwood harvest. If the area is not identified as such, consult with the forest supervisor, adjust the area boundary if excluding these locations would maintain manageability and preserve the overall evaluation ranking and then continue to the next step. If boundary adjustments are not possible, remove the entire area from the alternative.
- e. Areas where 10 percent of all water sources present are associated with permitted grazing and require frequent maintenance or access by motorized means. Such improvements may include developed springs or wells, pipelines, solar panels, pumps, large above ground water storage structures or similar types of improvements. If this criterion is not met, proceed to the next step. If it is met, consult with the forest supervisor, adjust the area boundary if excluding these locations would maintain manageability and preserve the overall evaluation ranking and then continue to the next step. If boundary adjustments are not possible, remove the entire area from the alternative.
- f. Areas that contain more than 1 mile of the total length of range fence within its boundaries that is currently accessed by the permittee for authorized purposes of fence line inspection, repairs, and maintenance by motorized means. Consult with the forest supervisor, adjust the area boundary if excluding these locations would maintain manageability and preserve the overall evaluation ranking and then continue to the next step. If boundary adjustments are not possible, remove the entire area from the alternative.
- g. Areas that contain or are adjacent to private property and wildland urban interface values that may require the use of mechanical equipment to create and maintain defensible space. Consult with the forest supervisor, adjust the area boundary if it would preserve defensible space, maintain manageability and preserve the overall evaluation ranking and then continue to the next step. If boundary adjustments are not possible, remove the entire area from the alternative.

Reference: Parks, S.A., L.M. Holsinger, M.H. Panunto, W.M. Jolly, S.Z. Dobrowski, and G.K. Dillon. High-severity fire: evaluating its key drivers and mapping its probability across western U.S. forests. *Environmental Research Letters* 13(2018) 044037. Available online at <https://doi.org/10.1088/1748-9326/aab791>.

2. Submit the alternative to the forest supervisor's review and approval. The forest supervisor reserves the authority to make any adjustments based on any additional considerations at any time. Document any additional relevant considerations in the environmental impact statement.

Alternative 3

This alternative includes the areas that the forest supervisor determined suitable for recommendation based on a set of criteria that also attempts to align with the forest's distinctive roles and contributions, honor the legacy of the first designated wilderness and the unparalleled opportunity for wilderness experiences the forest provides. It differs from alternative 2 in that it shifts the emphasis from balance across forest resources to traditional uses that provide products to people and restoration of historically open woodlands and grasslands for the benefits they provide to livestock grazing as a use of the forest. The use of prescribed fire as a management tool is limited, but natural ignitions will continue to occur and be managed as appropriate to the weather and fuel conditions and available firefighting resources. Like the other steps in the wilderness process, this alternative was developed by applying the forest supervisor's criteria in a stepwise fashion.

1. Start by considering all areas that emerged from the evaluation with low, moderate, moderate/high, high, and outstanding. Then, identify:
 - a. Areas containing 10 percent^a or more area with relative probabilities of high-severity fire moderate or greater, in grasslands and historically open-canopy woodland vegetation types, if a fire occurred under extreme fire weather conditions.^b If this criterion is not met, continue to step 3. If it is, consult with the forest supervisor, adjust the area boundary if excluding these locations would maintain manageability and preserve the overall evaluation ranking and then continue to step 3. If boundary adjustments are not possible, remove the entire area from the alternative.
 - b. Areas that tribal communities have indicated are important to them and those they have indicated it is important for them to have motorized access to. If the area does not contain these areas, continue to the next step. If it does, consult with the forest supervisor, adjust the area boundary if excluding these locations would maintain manageability and preserve the overall evaluation ranking and then continue to the next step. If boundary adjustments are not possible, remove the entire area from the alternative.
 - c. Areas that have been identified by the public as having current or potential for wilderness nonconforming traditional or recreational uses such as mountain biking, motorized access, and fuelwood harvest. If the area is not identified as such, consult with the forest supervisor, adjust the area boundary if excluding these locations would maintain manageability and preserve the overall evaluation ranking and then continue to the next step. If boundary adjustments are not possible, remove the entire area from the alternative.
 - d. Areas where 10 percent of all water sources present are associated with permitted grazing and require frequent maintenance or access by motorized means. Such improvements may include developed springs or wells, pipelines, solar panels, pumps, large above ground water storage structures or similar types of improvements. If this criterion is not met, proceed to the next step. If it is met, consult with the forest supervisor, adjust the area boundary if excluding these locations would maintain manageability and preserve the overall evaluation ranking and then continue to the next step. If boundary adjustments are not possible, remove the entire area from the alternative.
 - e. Areas that contain more than 1 mile of the total length of range fence within its boundaries that is currently accessed by the permittee for authorized purposes of fence line inspection, repairs and maintenance by motorized means. After forest supervisor approval, remove these areas from recommendation. Consult with the forest supervisor, adjust the area boundary if

excluding these locations would maintain manageability and preserve the overall evaluation ranking and then continue to the next step. If boundary adjustments are not possible, remove the entire area from the alternative.

- f. Areas that contain or are adjacent to private property and wildland-urban interface values that may require the use of mechanical equipment to create and maintain defensible space. Consult with the forest supervisor, adjust the area boundary if excluding these locations would maintain manageability and preserve the overall evaluation ranking and then continue to the next step. If boundary adjustments are not possible, remove the entire area from the alternative.
2. Submit the alternative to the forest supervisor's review and approval. The forest supervisor reserves the authority to make any adjustments based on any additional considerations at any time. Document any additional relevant considerations in the environmental impact statement.

Alternative 4

This alternative includes the areas that the forest supervisor determined suitable for recommendation based on a set of criteria that also attempts to align with the forest's distinctive roles and contributions, honor the legacy of the first designated wilderness and the unparalleled opportunity for wilderness experiences the forest provides. It is like alternative 3 except vegetation types receiving management emphasis are forested/timber types and the benefits that timber harvest provides to people. The evaluation criteria and process are identical to alternative 3 except that criterion 2 is focused on forested/timber vegetation types instead of historically open-canopy woodlands and grasslands.

Alternative 5

This alternative was intended to be responsive to the perspective that the areas recommended to Congress should be maximized to the extent possible or mirror the citizen's proposal that was submitted during one of the comment periods. It emphasizes the use of prescribed and naturally ignited fire and generally limits the use of mechanical treatments to the wildland urban interface. Like the other steps in the wilderness process, this alternative was developed by applying the forest supervisor's criteria in a stepwise fashion.

1. Start by considering all areas that emerged from the evaluation with moderate, moderate/high, high, and outstanding. Then, identify:
2. Areas that contain or are adjacent to private property and wildland urban interface values that may require the use of mechanical equipment to create and maintain defensible space. Consult with the forest supervisor, adjust the area boundary if it would preserve defensible space, maintain manageability and preserve the overall evaluation ranking and then continue to the next step. If boundary adjustments are not possible, remove the entire area from the alternative.
3. Submit the alternative to the forest supervisor's review and approval. The forest supervisor reserves the authority to make any adjustments based on any additional considerations at any time. Document any additional relevant considerations in the environmental impact statement.

Summary Results of the Alternative Development Process:

The following two tables provide a summary of the wilderness recommendations associated with each alternative. The first summarizes the number of areas and the total acres recommended by alternative. The second provides a more detailed summary for each area that moved from the evaluation phase to the analysis phase and how many acres of each area are recommended by alternative. The tables are followed by a series of maps depicting each alternative analyzed in the plan's environmental impact statement. More detailed documentation may be found in the last section of this appendix and on the [Gila National Forest website](#).

Table H-3. Summary number of areas and acres of recommended wilderness by alternative

Alternative	Number of Areas Recommended	Total Acres Recommended
1	0	0
2	13	110,402
3	26	130,012
4	17	72,901
5	58	745,286

Table H-4. Summary of recommended wilderness by action alternative

Evaluated Area	Evaluation Acres	Evaluation Overall Ranking Score	Evaluation Overall Ranking	Alternative 2 Acres	Alternative 3 Acres	Alternative 4 Acres	Alternative 5 Acres
Q1-LARGO	15,288	10.3	Moderate	0	0	0	14,265
Q2-THE HUB	36,344	13.5	Moderate to high	0	0	0	34,085
Q4-CHAVEZ LAKE	7,237	10.3	Moderate	0	0	0	6,759
Q6-FOX MOUNTAIN	12,956	11.6	Moderate	0	0	0	9,704
Q9-APACHE MOUNTAIN	17,972	10.3	Moderate	0	0	0	13,942
Q11-MOTHER HUBBARD	5,728	15.7	High	0	0	0	5,689
QG1-NOLAN NORTH	8,685	15.7	High	6,718	7,686	0	7,609
QG2-NOLAN SOUTH	4,404	11.7	Moderate	0	0	0	4,404
QR1-UPPER FRISCO BOX	41,047	14.7	High	0	0	0	36,691
QR2-UPPER FRISCO BOX EAST	18,810	9	Moderate	0	0	0	14,252
R1-EAGLE PEAK	31,993	11.7	Moderate	0	0	0	31,169
R3-MORAGA CANYON	8,527	10.3	Moderate	0	0	0	8,162
R4-O-BAR-O MOUNTAIN	20,010	12	Moderate to high	0	0	0	18,555
R9-WAGON TONGUE	14,628	11.7	Moderate	0	0	0	11,463
R10a-GILA ADDITIONS NORTH RESERVE	536	9	Moderate	0	536	0	536
R10b -GILA ADDITIONS NORTH RESERVE	657	9	Moderate	0	657	207	657
RB1-EAST ELK MOUNTAIN	9,064	10	Moderate	0	0	0	8,924
RG1-ASPEN MOUNTAIN	22,089	16	Outstanding	19,053	0	0	21,895
RG2-DEVILS CREEK	61,067	13	Moderate to high	0	0	0	43,383
RG4-NORTH MOGOLLON MOUNTAINS	21,591	12	Moderate to high	0	11,584	0	20,398
G1-MINERAL CREEK	20,525	23.3	Outstanding	16,538	16,540	0	16,848
G3-GILA RAIN CREEK ADDITION	1,298	10.3	Moderate	0	374	871	1,095
G5-PARK MOUNTAIN	11,316	10.7	Moderate	0	0	0	10,737
G6-LOWER SAN FRANCISCO	21,196	18.3	Outstanding	0	0	14,746	21,018

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Evaluated Area	Evaluation Acres	Evaluation Overall Ranking Score	Evaluation Overall Ranking	Alternative 2 Acres	Alternative 3 Acres	Alternative 4 Acres	Alternative 5 Acres
G7-HELL HOLE	20,535	11	Moderate	0	0	0	19,623
G8-SMOOTHING IRON MESA	3,588	12.3	Moderate to high	0	0	3,152	3,588
G9-BLUE RANGE SE ADDITION	3,040	6	Moderate	0	0	0	2,856
G10-BLUE RANGE SW ADDITION	3,709	8	Moderate	0	0	0	3,709
G11-GILA DRY CREEKS ADDITION	3,129	10.3	Moderate	0	1,973	373	2,827
G12-GILA WHITEWATER ADDITION	3,463	13.7	Moderate to high	1,960	3,116	0	2,223
B1a-ALDO LEOPOLD SECO ADDITIONS	5,741	14.3	High	4,724	517	4,031	5,741
B1b-ALDO LEOPOLD SECO ADDITIONS	265	14.3	High	0	208	0	229
B1c-ALDO LEOPOLD SECO ADDITIONS	78	14.3	High	48	78	40	48
B5-STONE CREEK	8,384	11.3	Moderate	0	0	0	8,383
B8-BEAVERTHEAD	9,849	9	Moderate	0	0	0	8,055
B10-ALDO LEOPOLD ADDITION NORTHEAST	15,909	14.3	High	8,381	4,076	0	15,181
B11-ALDO LEOPOLD ADDITION SOUTHEAST	1,242	12.7	Moderate to high	944	943	943	1,242
B13-WAHOO NORTH	20,139	11.3	Moderate	0	0	0	19,737
B14-ALDO LEOPOLD ADDITION CARBONATE CREEK	5,380	14	High	2,819	3,592	0	4,546
SB1-SAWYER PEAK	41,063	13.7	Moderate to high	0	21,007	23,353	39,150
S1-MOGOLLON BOX/TADPOLE RIDGE	48,067	17	Outstanding	0 ^a	930	4,856	46,437
S2-GILA MIDDLE BOX	25,335	16	Outstanding	0	0	0	24,523
S3-BEAR MOUNTAIN	11,124	9	Moderate	0	0	0	10,056
S4-NORTH BURROS	15,786	9	Moderate	0	0	0	15,556
S5-SADDLE ROCK	6,734	9.3	Moderate	0	0	0	6,519
S6a-GILA ADDITIONS SOUTHWEST	526	9	Moderate	0	11	120	447

^a S1-Mogollon Box/Tadpole Ridge emerged from the evaluation with a ranking of Outstanding. However, after stepping the area through the Forest Supervisor's criteria for alternative 2, such a small area remained that the Forest Supervisor deemed the smaller area be re-evaluated for wilderness characteristics. This re-evaluation resulted in an overall ranking of Low, which led to it being dropped from alternative 2.

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Appendix H. Documentation of the Wilderness Process

Evaluated Area	Evaluation Acres	Evaluation Overall Ranking Score	Evaluation Overall Ranking	Alternative 2 Acres	Alternative 3 Acres	Alternative 4 Acres	Alternative 5 Acres
S6b-GILA ADDITIONS SOUTHWEST	4,643	9	Moderate	0	270	0	4,558
S6d-GILA ADDITIONS SOUTHWEST	1,040	9	Moderate	0	248	0	1,040
S7-BURRO PEAK	7,522	6	Moderate	0	0	0	7,319
S8-KNIGHT PEAK	5,618	6.3	Moderate	0	0	0	5,294
S9-ROYAL JOHN	6,915	11.7	Moderate	0	0	0	6,915
S10-LOWER GALLINAS CANYON	9,048	8.7	Moderate	0	0	0	8,544
SW1-GILA ADDITION SAPILLO	264	12	Moderate to high	0	186	256	128
W1c-GILA ADDITION LAKE ROBERTS	732	10	Moderate	0	0	691	393
W3-ALDO LEOPOLD ADDITION WEST	3,394	12	Moderate to high	1,110	1,109	0	3,389
W4-ALDO LEOPOLD ADDITION MCKNIGHT CANYON	12,458	16.3	Outstanding	11,094	11,050	0	12,458
W7-GILA ADDITION EAST	1,057	11	Moderate	0	0	642	564
WB1-TAYLOR CREEK	27,335	15	High	10,012	6,672	0	26,852
WB2-GILA ADDITION EAST	4,437	14	High	0	1,434	4,437	3,919
WB4-GILA ADDITION NORTHEAST	14,153	10.7	Moderate	0	9,230	0	13,862
WB6-GILA ADDITION BEAVER CREEK	4,975	11	Moderate	0	0	2,273	4,252
WSB1-RABB PARK	43,998	15	High	27,002	25,984	0	42,878
Alternative Total:	-	-	-	110,402	130,012	72,901	745,286

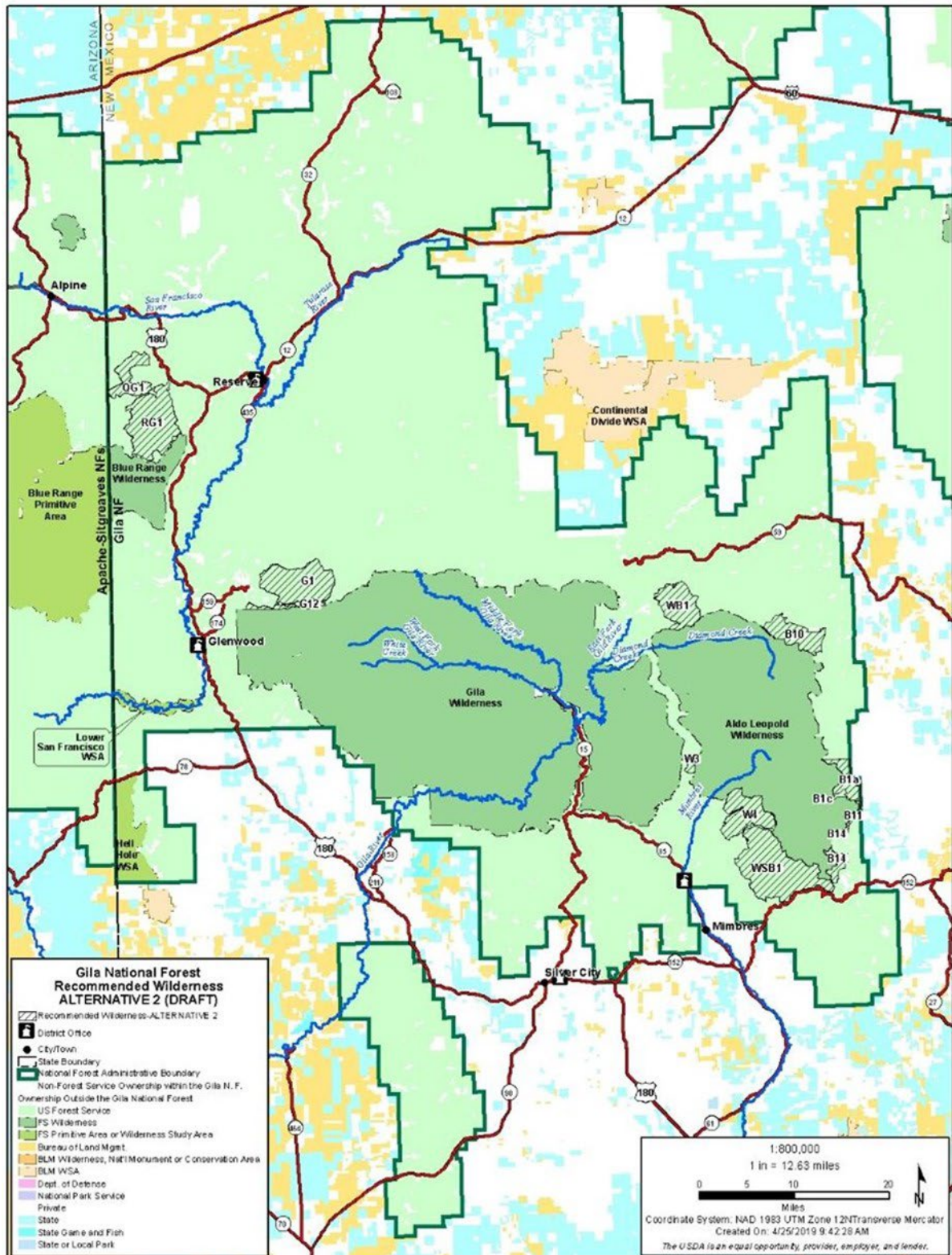


Figure H-3. Recommended wilderness under alternative 2

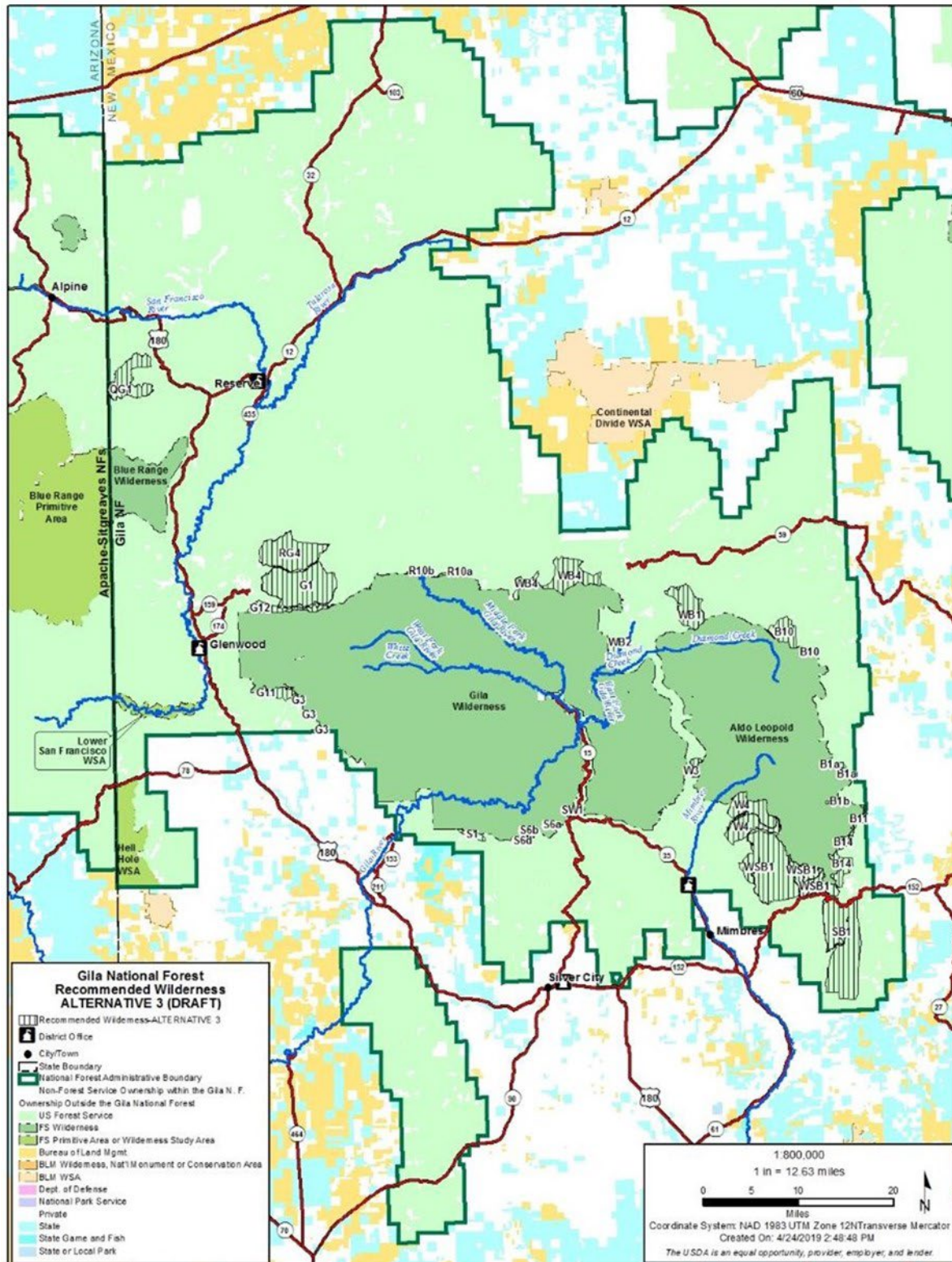


Figure H-4. Recommended wilderness under alternative 3

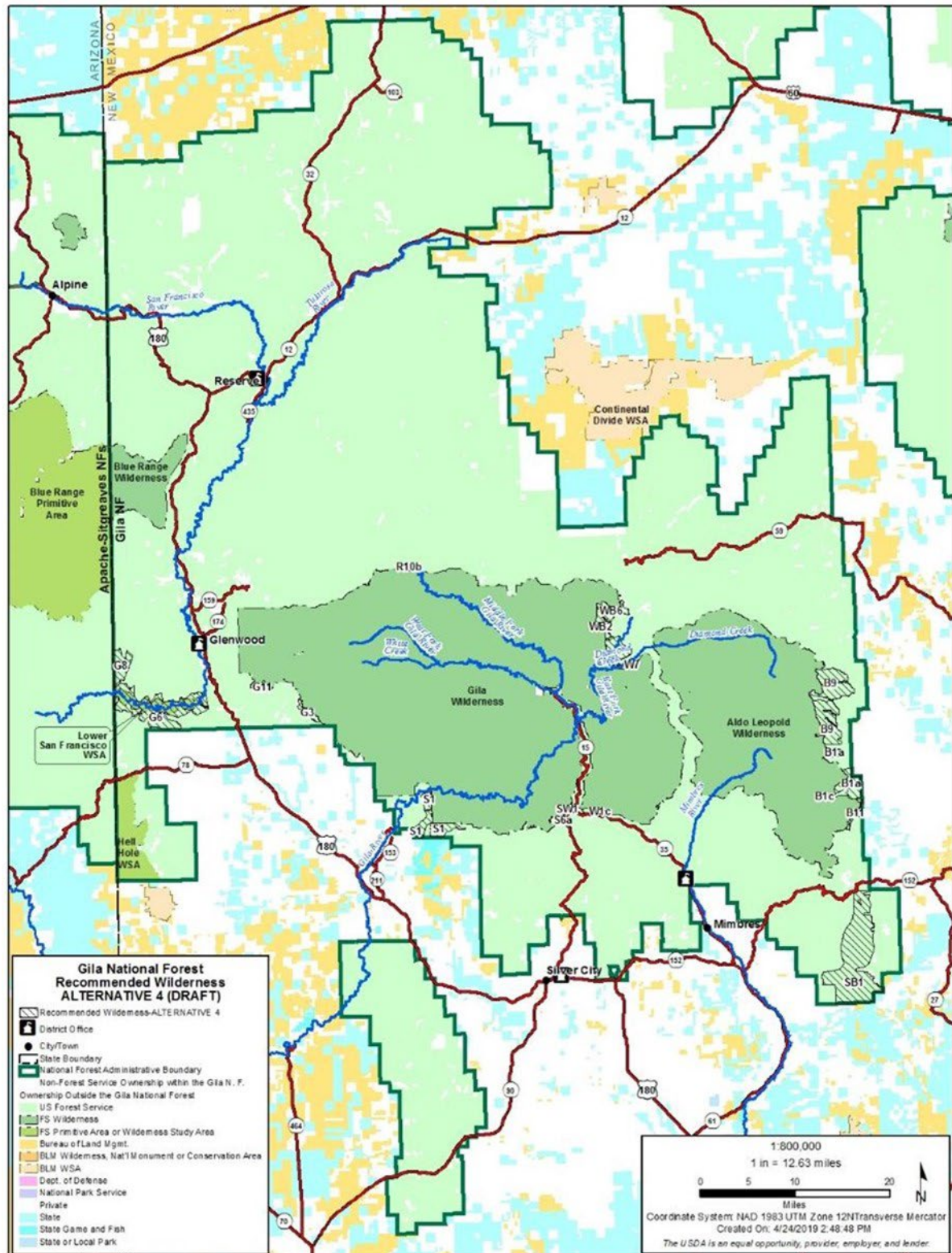


Figure H-5. Recommended wilderness under alternative 4

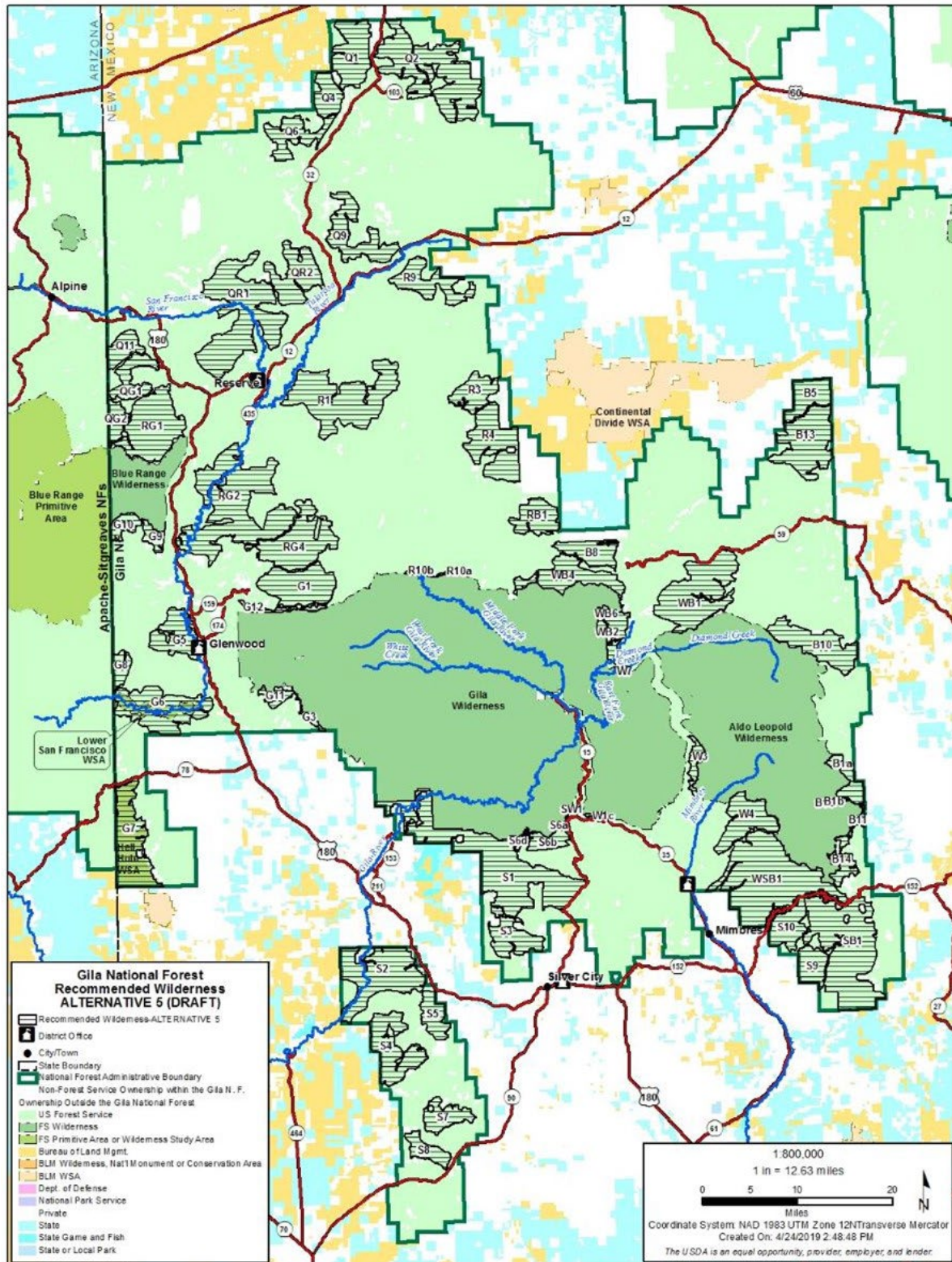


Figure H-6. Recommended wilderness under alternative 5

Description of Areas Recommended for Wilderness Designation in Alternatives

This section provides more specific information about each area recommended for wilderness designation in one or more alternatives. In areas recommended by more than one alternative, area boundaries and total acres are often different because the criteria used to develop each alternative was different.

Q1 - Largo

A 14,265-acre area is recommended only by alternative 5. It is in the central to eastern part of the northernmost area of the Quemado Ranger District in Catron County, New Mexico. Some modifications to the boundary established in the evaluation step were necessary to meet the criteria for inclusion in alternative 5. For detailed boundary locations see Figure H-7.

This area is dominated by pinyon-juniper woodland communities, with some open grasslands and occasional stringers of ponderosa pine in the drainages. Although the terrain is relatively gentle across most of the area, the geology and soils can be highly erodible. This is evidenced by erosional features including isolated mesas with steep side slopes, and hoodoos, which punctuate the otherwise gentle terrain. Largo Mesa is a dominant landscape feature.

Most of the area is within an inventoried roadless area and is managed to protect roadless characteristics. Very little management activity has occurred here and is unlikely to occur in the future due to the erosion potential and terrain. Permitted livestock grazing is a historic and ongoing use of the land. The area contains portions of the Agua Fria, East Demetrio, and El Caso livestock grazing allotments. Outside of hunting seasons, the likelihood of encountering other visitors is extremely low and there are very good opportunities for solitude. Other Features of Value are present within the area, include a proposed research natural area and scenic vistas.

Table H-5. Evaluated wilderness characteristics of the Q1 – Largo

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	3.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (SOLITUDE) MODERATE (RECREATION)	6
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE	10.3

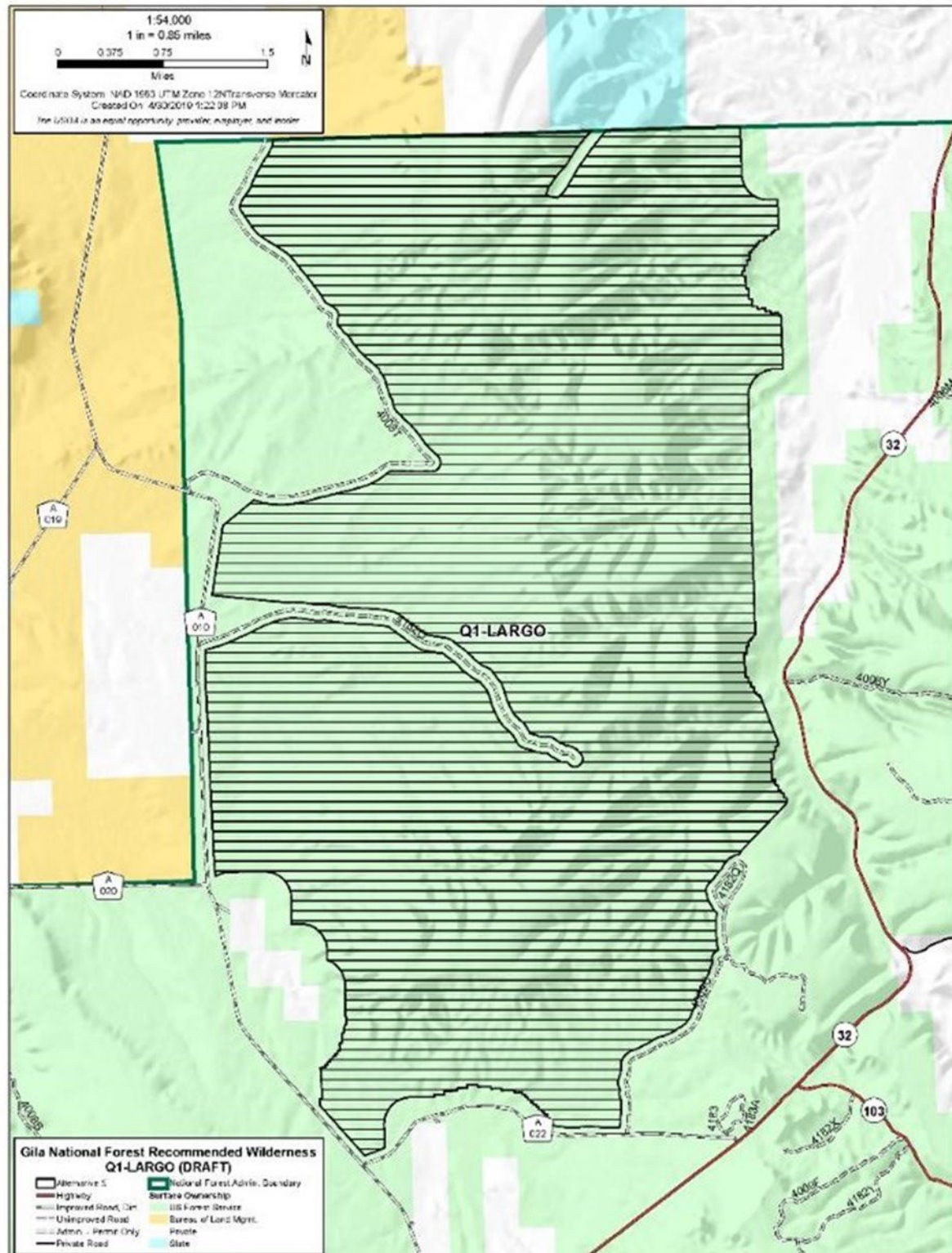


Figure H-7. Recommended wilderness by alternative for Q1 – Largo

Q2 – The Hub

A 34,085-acre area is recommended only by alternative 5. It is in the northeastern region of the Quemado Ranger District, adjacent to Quemado Lake in Catron County, New Mexico. Based on the recommendations of Quemado Ranger District staff familiar with the area, two smaller areas from the inventory step of the wilderness process were combined, with some modification to address two cherry-stemmed roads. Some modifications to the new evaluation boundary were necessary to meet the criteria for inclusion in alternative 5. For detailed boundary locations see Figure H-8.

This relatively large area includes most of Escondido Mountain. Vegetation communities in the lower elevations are dominated by pinyon-juniper woodland. Mixed conifer is present at the higher elevations and some drainages contain stringers of ponderosa pine. There are interesting geologic features and hoodoos at the “The Hub,” for which the area is named. The Hub is a wide, shallow box canyon area that is easily accessible and contains an unusual group of spherical rock formations locally referred to as “bubble rocks.” The terrain is relatively steep and rugged, providing substantial scenic views. The Hub and the outstanding scenery are considered other features of value. The area contains several non-motorized trails which receive very light use. Access to some areas is challenging because private property inholdings where easements have not been established. There is a fair level of development adjacent areas, such as the developed recreation area at Quemado Lake and residential area.

Almost half of the area is within an inventoried roadless area and is currently managed to protect roadless characteristics. Very little management activity has occurred within the area and is unlikely to occur in the future due to the limiting terrain. Permitted livestock grazing is a historic and ongoing use of the land. The area contains portions of the Agua Fria, Escondido, El Caso and San Antone grazing allotments. For the size of the area, there is relatively little range infrastructure, with natural barriers acting as fences for livestock containment. The area receives visitor use during antler gathering and hunting seasons, but because of the steep, rugged terrain, motorized access is limited and difficult. Outside of these seasons the likelihood of encountering other visitors is extremely low and there are very good opportunities for solitude. Because of the relative size of the area, the terrain, and trail access, opportunities for primitive and unconfined recreation are high.

Table H-6. Evaluated wilderness characteristics of the Q2 – The Hub

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	6
Step 5 – Other Features of Value	LOW/MODERATE	1.5
Overall Rank of Wilderness Characteristics	MODERATE/HIGH	13.5

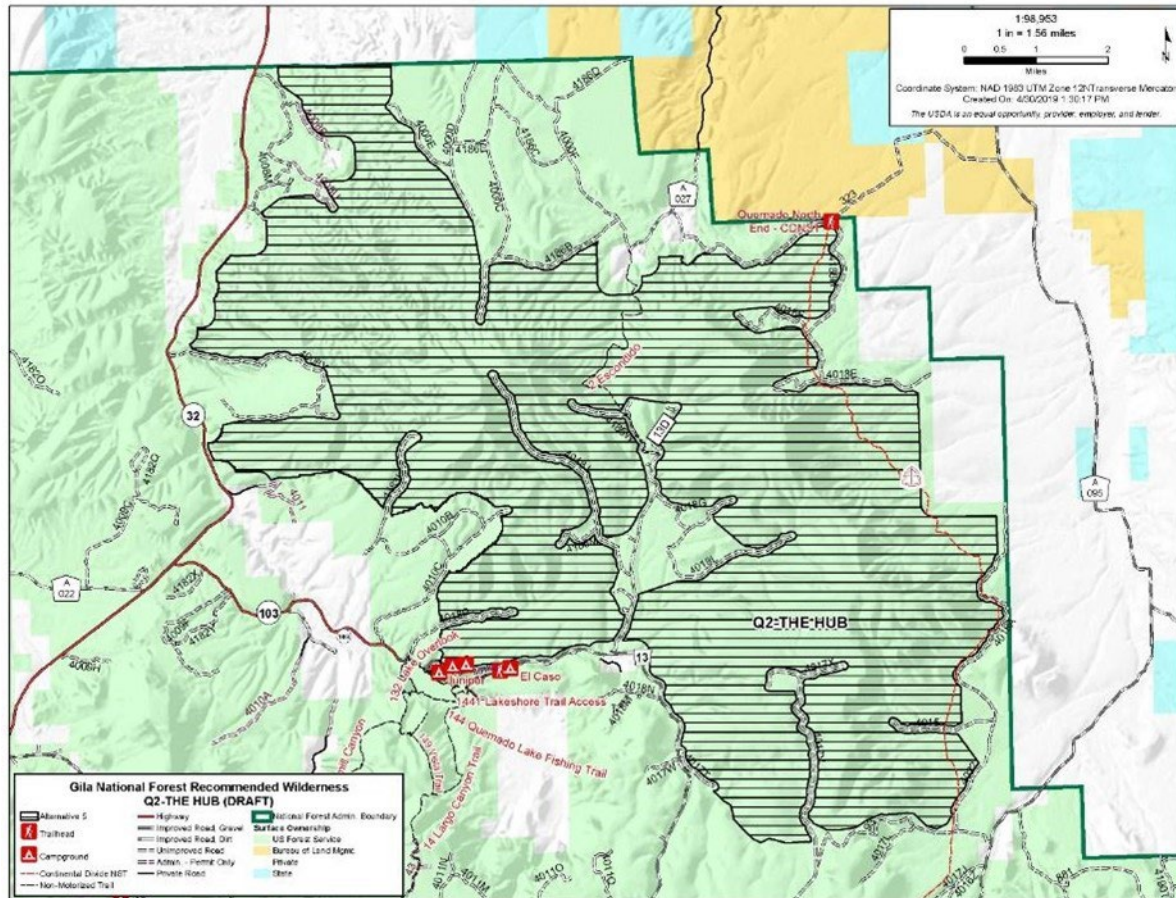


Figure H-8. Recommended wilderness by alternative for Q2 – the Hub

Q4 – Chavez Lake

A 6,759-acre area is recommended only by alternative 5. It is in the central part of the northern most region of the Quemado Ranger District, within Catron County, New Mexico. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-9.

Chavez Lake is a small area located on a large mesa top, with rough terrain bordering the core area. Piñon-juniper woodlands dominate the mesa top, with some open grassy areas. There are excellent views of Fox Mountain. There are no inventoried roadless areas or other congressionally or administratively designated areas within the area. Permitted livestock grazing is a historic and ongoing use of the land. The area contains portions of the East Demetrio, West Demetrio, and Jewett Gap grazing allotments and there is a fair amount of range infrastructure. It is a very remote and rarely visited area for most of the year and there is a high probability of finding solitude at most times.

Table H-7. Evaluated wilderness characteristics of the Q4 – Chavez Lake

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	4.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (SOLITUDE) MODERATE (RECREATION)	6
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	10.3

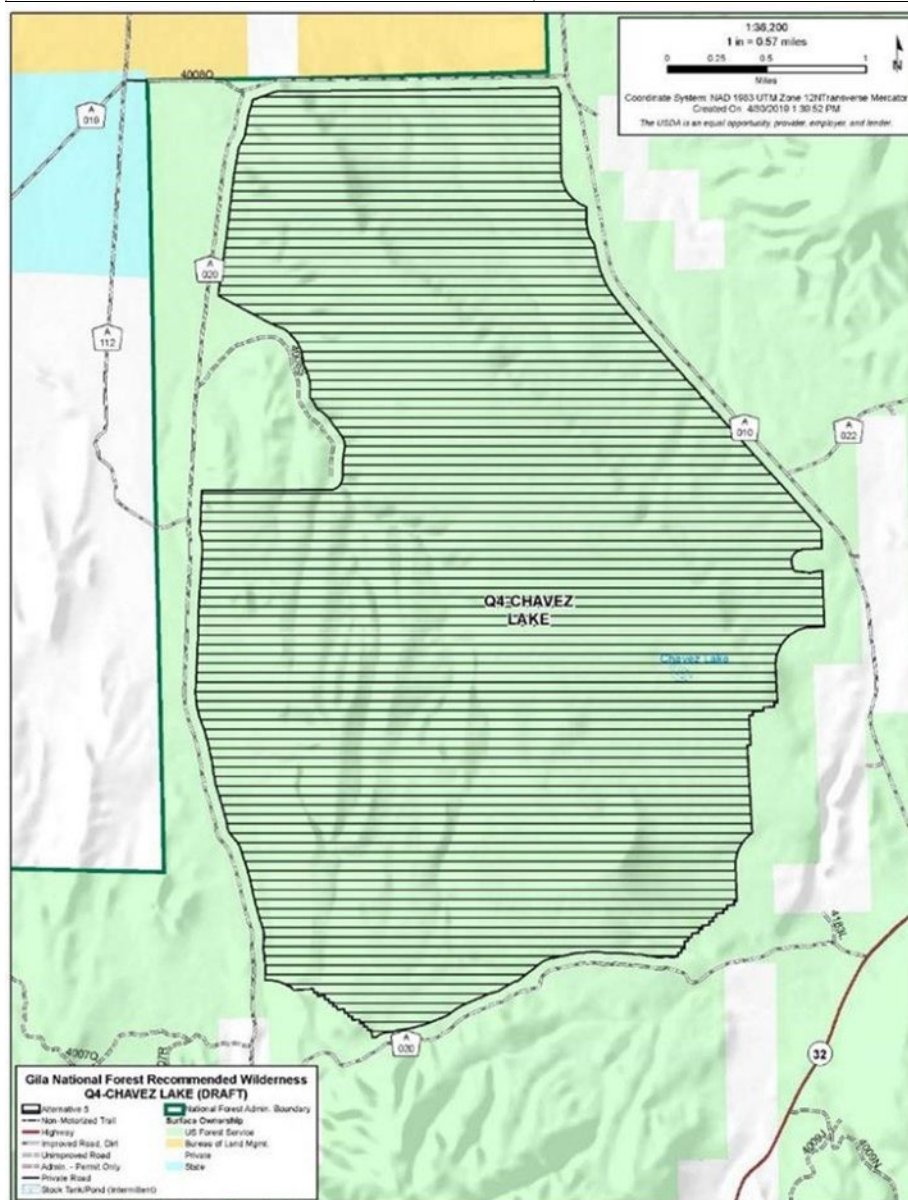


Figure H-9. Recommended wilderness by alternative for Q4 – Chavez Lake

6 – Fox Mountain

A 9,704-acre area is recommended only by alternative 5. It is in the in the north-central region of the Quemado Ranger District, within Catron County, New Mexico. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-10.

This small to moderate-sized area features some of the most steep and rugged terrain for this part of the Quemado District. The terrain provides for spectacular scenery, which is considered another feature of value. The vegetation communities are diverse and vary based on elevation and slope's orientation to the sun. Piñon-juniper woodland communities dominate the lower elevations and south-facing slopes. The drainages and north facing slopes are dominated by ponderosa pine, and mixed conifer is present at the highest elevations facing north to northeast. The Fox Mountain Lookout and its co-located electronic communication site with a small building, are immediately adjacent to the area.

Less than half of this area is located within an inventoried roadless area and is managed to preserve roadless characteristics. Very little management activity has occurred in the inventoried roadless area portion of Q6-Fox Mountain and is unlikely to occur in the future due to the steep and rugged terrain. Outside the inventoried roadless area, there is evidence of past vegetation treatments, including logging operations and brush removal. These activities are most notable in the Blanco Canyon area. Permitted livestock grazing is a historic and ongoing use of the land. The area contains portions of the West Demetrio and Jewett Gap grazing allotments.

For the size of the area, there is relatively little range infrastructure. There is limited opportunity for motorized access into the area, with the few existing roads often becoming impassible in wet weather. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is extremely low in most parts of the area. It is a very remote and rarely visited area for most of the year and there is a high probability of finding solitude at most times. There may be issues with accessing the Blanco Trail because of private property, but throughout most of the area there are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-8. Evaluated wilderness characteristics of the Q6 – Fox Mountain

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	4.6
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	6
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE	11.6

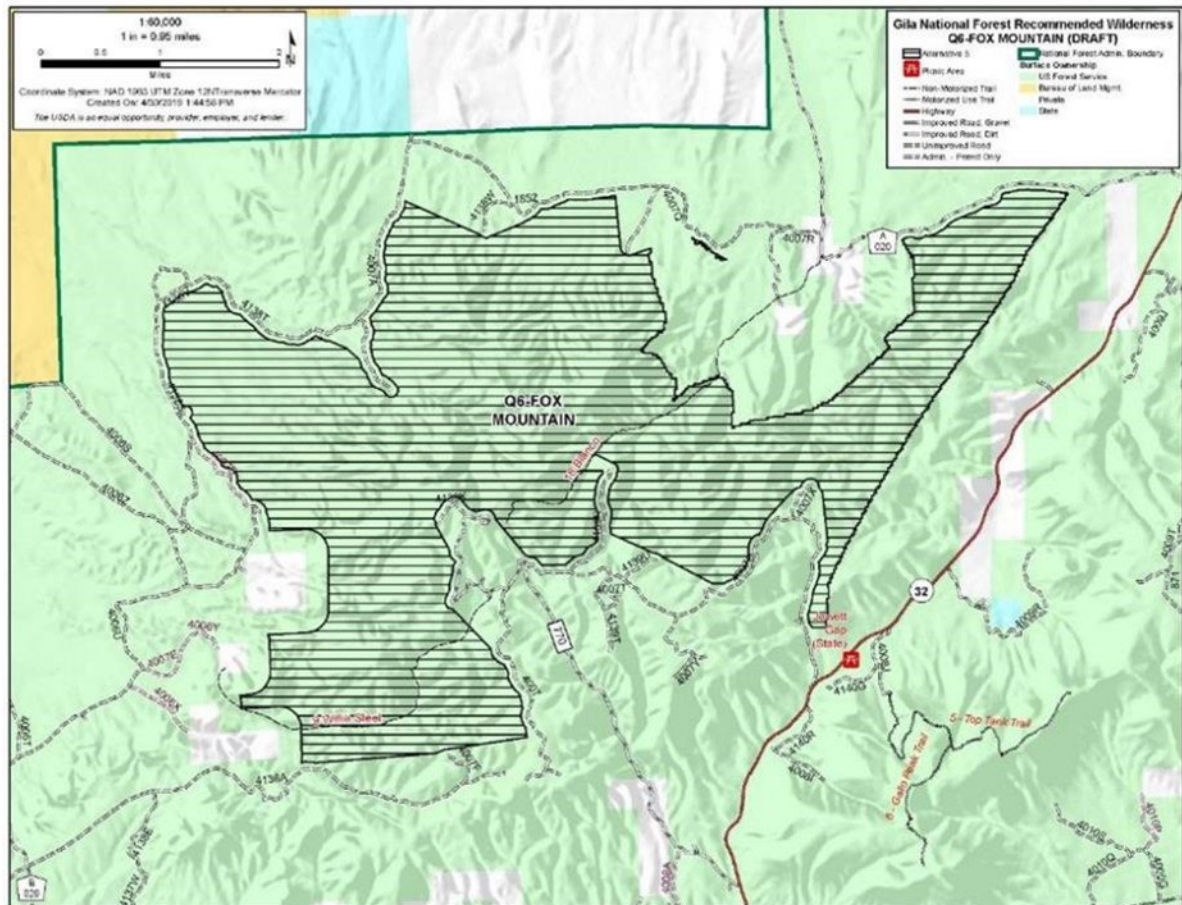


Figure H-10. Recommended wilderness by alternative for Q6 – Fox Mountain

Q9 – Apache Mountain

A 13,942-acre area is recommended only by alternative 5. It is in the central region of the Quemado Ranger District, within Catron County, New Mexico. New Mexico State Hwy 32 passes by the southwestern-most corner of the area and New Mexico State Hwy 12 passes to the southeast. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-11.

This small-to-moderate sized area is somewhat narrow and crescent shaped. It contains some of the most steep and rugged terrain on the Quemado District. Piñon-juniper woodlands dominate the area with ponderosa pine and mixed conifer in pockets on the north slopes. Most of the area lies within an inventoried roadless area and is managed to preserve roadless characteristics. Very little management activity has occurred and would be unlikely in the future mostly due to the terrain. Permitted livestock grazing is a historic and ongoing use of the land. The area contains portions of the Gallo Mountain, East Jewett, East Apache Creek, and West Sand Flat grazing allotments.

This is a very remote and rarely visited area for most of the year. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is extremely low and there are very good opportunities for solitude. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-9. Evaluated wilderness characteristics of the Q9 – Apache Mountain

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	4.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	6
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	10.3

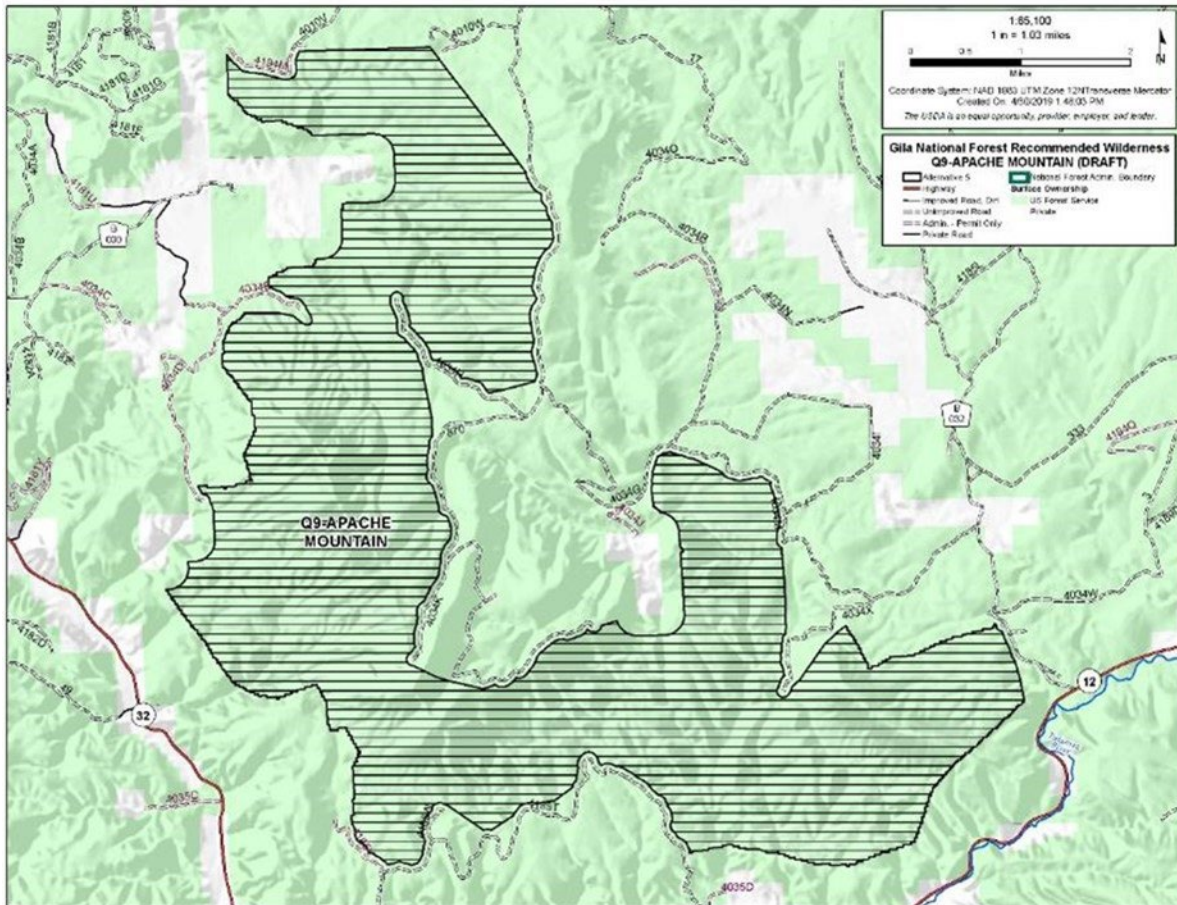


Figure H-11. Recommended wilderness by alternative for Q9 – Apache Mountain

Q11 – Mother Hubbard

A 5,689-acre area is recommended only by alternative 5. It is in the in the southwestern region of the Quemado Ranger District, within Catron County, New Mexico. It is near the Blue River at the edge of the Mogollon Rim. The western boundary abuts the state line with Arizona and lands managed by the Apache-Sitgreaves National Forests. The evaluation boundary was adjusted to meet the criteria for Alternative 5. For detailed boundary locations see Figure H-12.

This area consists of mostly steep and rugged terrain, including deeply incised canyons. Ponderosa pine-oak forests dominate, but there are smaller areas of mixed conifer and at lower elevations pinyon-juniper woodlands. Grassy meadows are scattered throughout the area, including some drainage bottoms. There are several perennial streams with high quality riparian areas. Some of these streams contain dramatic waterfalls during periods of higher water. The area's scenic character, including dramatic terrain, waterfalls and quality riparian areas are considered other features of value.

Mother Hubbard is separated on its southern boundary from QG1-Nolan North by a motorized trail that follows the bottom of the Dry Blue River drainage. Mother Hubbard is part of a larger inventoried roadless area that crosses state and national forest boundaries. Across the state line on the Apache-Sitgreaves National Forests, the inventoried roadless area is overlapped by a slightly larger area found suitable for wilderness designation, but not recommended, during their plan revision process which was completed in 2015.

Being within an inventoried roadless area, Q11-Mother Hubbard is managed to preserve roadless characteristics. Very little management activity has occurred and is unlikely in the future, mostly due to terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Luna grazing allotment. For the size of the area, there is relatively little range infrastructure aside from a fence in the northeast portion.

This is a very remote and rarely visited area for most of the year. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is extremely low and there are very good opportunities for solitude. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-10. Evaluated wilderness characteristics of the Q11 – Mother Hubbard

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	OUTSTANDING (SOLITUDE) HIGH (RECREATION)	9
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	HIGH	15.7

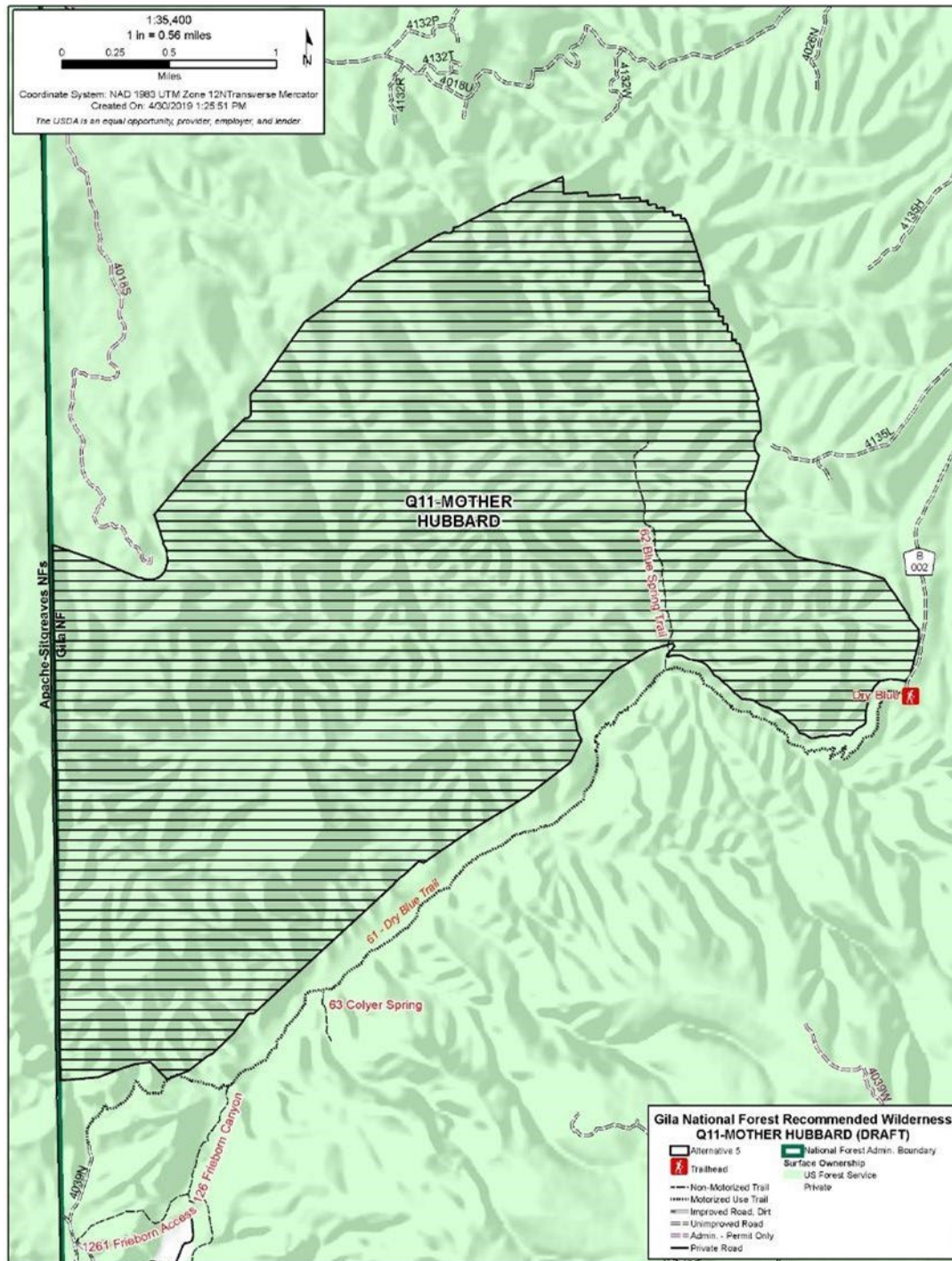


Figure H-12. Recommended wilderness by alternative for Q11 – Mother Hubbard

QG1 – Nolan North

This area is in the southwestern region of the Quemado Ranger District within Catron County, New Mexico. It is near the Blue River at the edge of the Mogollon Rim. A 6,717-acre area is recommended by alternative 2. A 7,686-acre area is recommended by alternative 3. A 7,609-acre area is recommended by alternative 5. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-13.

This crescent-shaped area is dominated by steep, rugged terrain with deeply incised canyons. Ponderosa pine-oak forests dominate, but there are smaller areas of mixed conifer and at lower elevations pinyon-juniper woodlands. Grassy meadows are scattered throughout the area, including some drainage bottoms. There are several perennial streams with high quality riparian areas. Some of these streams contain dramatic waterfalls during periods of higher water. The area's scenic character, including dramatic terrain, waterfalls and quality riparian areas are considered other features of value.

This area is almost entirely within inventoried roadless area and currently managed to preserve roadless characteristics. QG1-Nolan North is part of a larger inventoried roadless area that crosses state and national forest boundaries. Across the state line on the Apache-Sitgreaves National Forests, the inventoried roadless area is overlapped by a slightly larger area found suitable for wilderness designation, but not recommended, during their plan revision process which was completed in 2015.

Little management activity has occurred and is unlikely in the future, mostly due to terrain. However, there is some evidence of past logging and other vegetation management activities. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Luna grazing allotment. This is a very remote and rarely visited area for most of the year. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is extremely low and there are very good opportunities for solitude. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-11. Evaluated wilderness characteristics of the QG1 – Nolan North

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	OUTSTANDING (Solitude) HIGH (Primitive Recreation)	9
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	HIGH	15.7

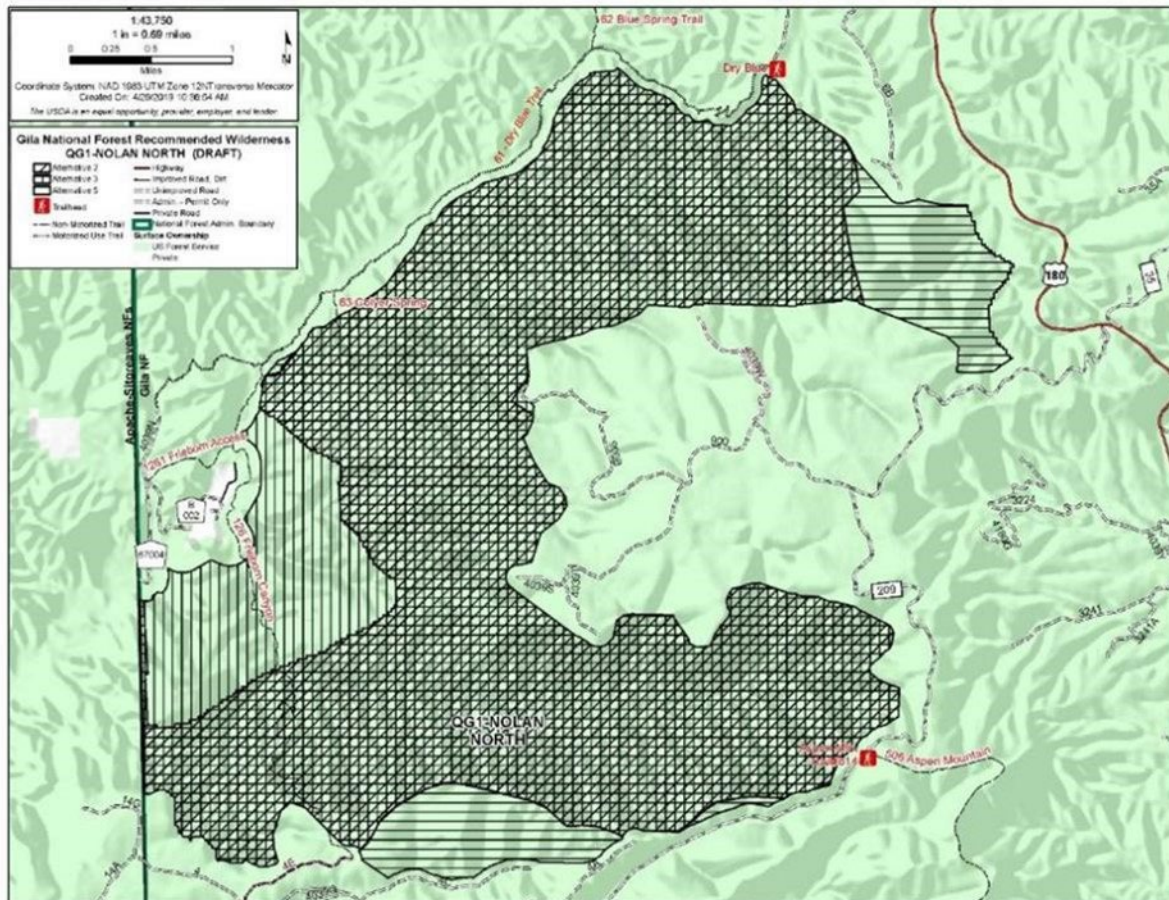


Table H-12. Evaluated wilderness characteristics of the QG2 – Nolan South

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	3.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	OUTSTANDING (SOLITUDE) HIGH (RECREATION)	8
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	11.7

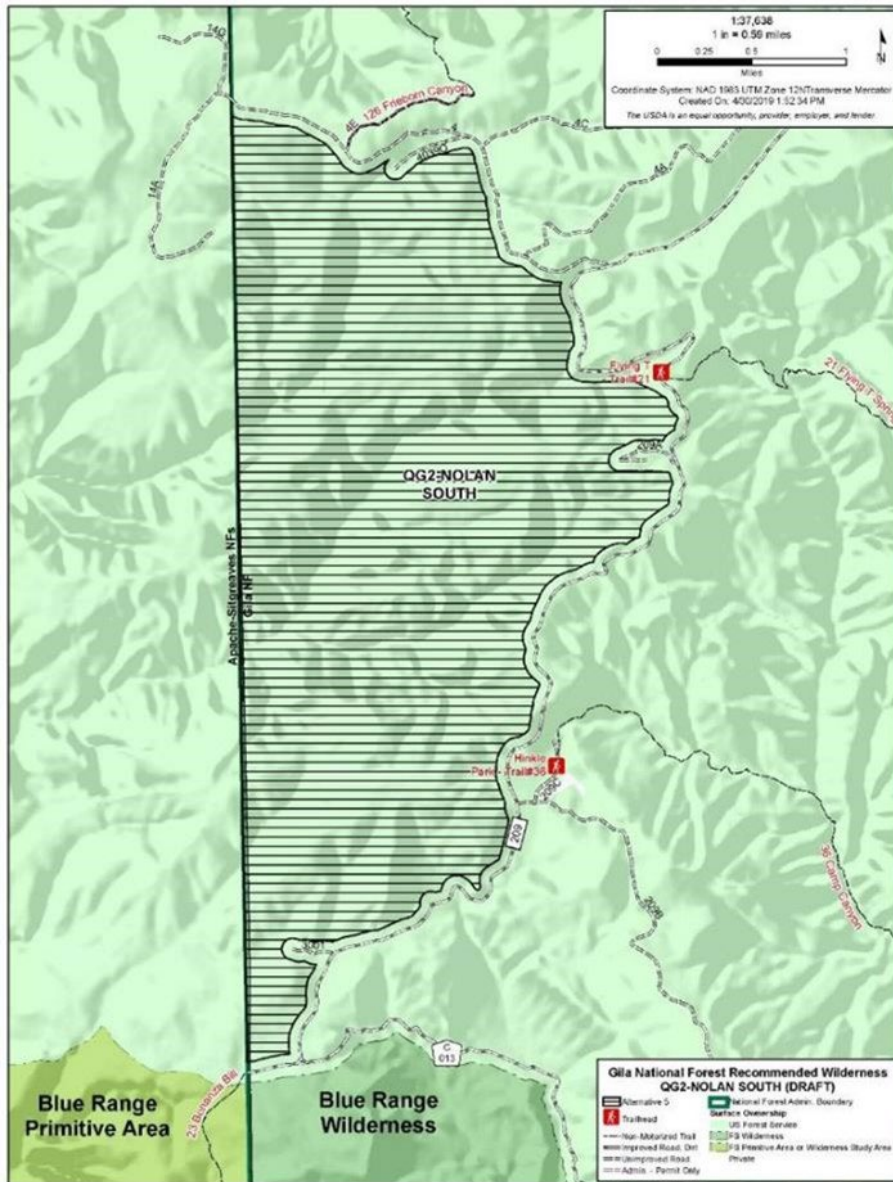


Figure H-14. Recommended wilderness by alternative for QG2 – Nolan South

QR1 – Upper Frisco Box

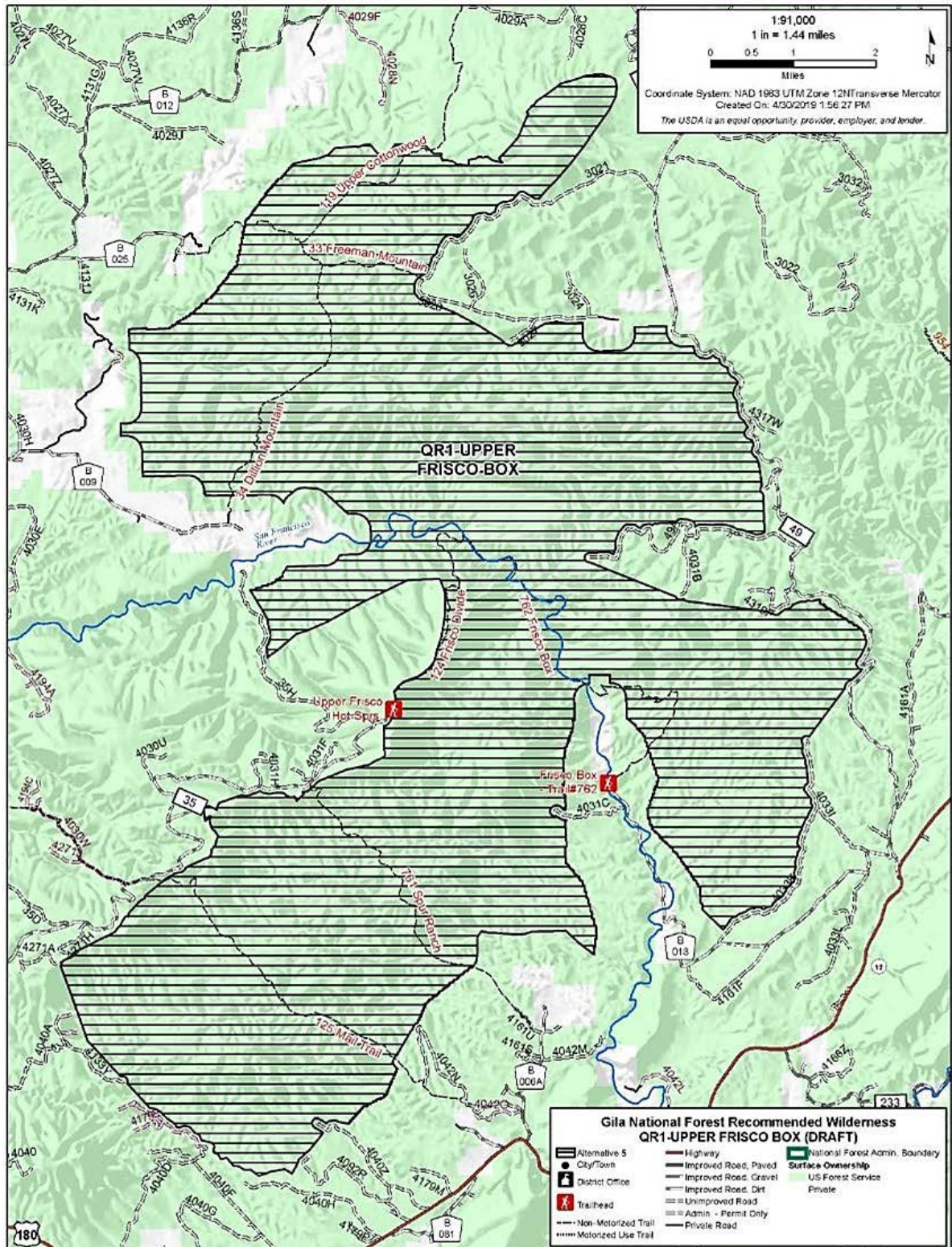
A 36,691-acre area is recommended only by alternative 5. It is in the south-central region of the Quemado Ranger District and crosses boundaries into the north-central portion of the Reserve Ranger District, within Catron County, New Mexico. The town of Reserve is located a few miles to the southeast. It is situated between US Hwy 180 to the west and southwest, and New Mexico State Hwy 12, although neither is close to the boundary at any point. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-15.

This moderately large area contains the Upper Frisco Box, a unique, spectacularly scenic, and physically challenging slot canyon along the San Francisco River. The Upper Frisco Box and the scenic character of the area are considered other features of value. Terrain is variable throughout the area, with some rolling relief, mesa tops, steep slopes and large, deeply incised canyons. Piñon-juniper woodlands dominate the area, with ponderosa pine and mixed conifer in pockets at the higher elevations on the north-facing slopes. There is an extensive system of trails providing access throughout the area, including through the Upper Frisco Box.

The area is mostly within inventoried roadless area and managed to preserve roadless characteristics. Little management activity has occurred and is unlikely in the future, mostly due to terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Centerfire, Cross V, Laney, and Black Bob grazing allotments. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is extremely low and there are very good opportunities for solitude. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-13. Evaluated wilderness characteristics of the QR1 – Upper Frisco Box

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	4.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	7
Step 5 – Other Features of Value	HIGH	3
Overall Rank of Wilderness Characteristics	HIGH	14.7



QR2 – Upper Frisco Box East

A 14,252-acre area is recommended only by alternative 5. It is in the south-central region of the Quemado Ranger District and crosses boundaries into the north-central portion of the Reserve Ranger District, within Catron County, New Mexico. Most of the area is in the Reserve Ranger District. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see figure h-16.

This moderately sized area is comprised of moderate to rugged terrain. Piñon-juniper woodlands dominate with the presence of ponderosa pine being driven by elevation and aspect. There is no overlap with inventoried roadless area but terrain limits management to some degree in the southern half of the area. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Cross V, Apache Canyon, and West Apache Creek grazing allotments. There is generally a low density of improvements, but they are concentrated in some locations and limit apparent naturalness. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is low and there are good opportunities for solitude. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-14. Evaluated wilderness characteristics of the QR2 – Upper Frisco Box East

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (RECREATION) MODERATE (SOLITUDE)	6
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	9

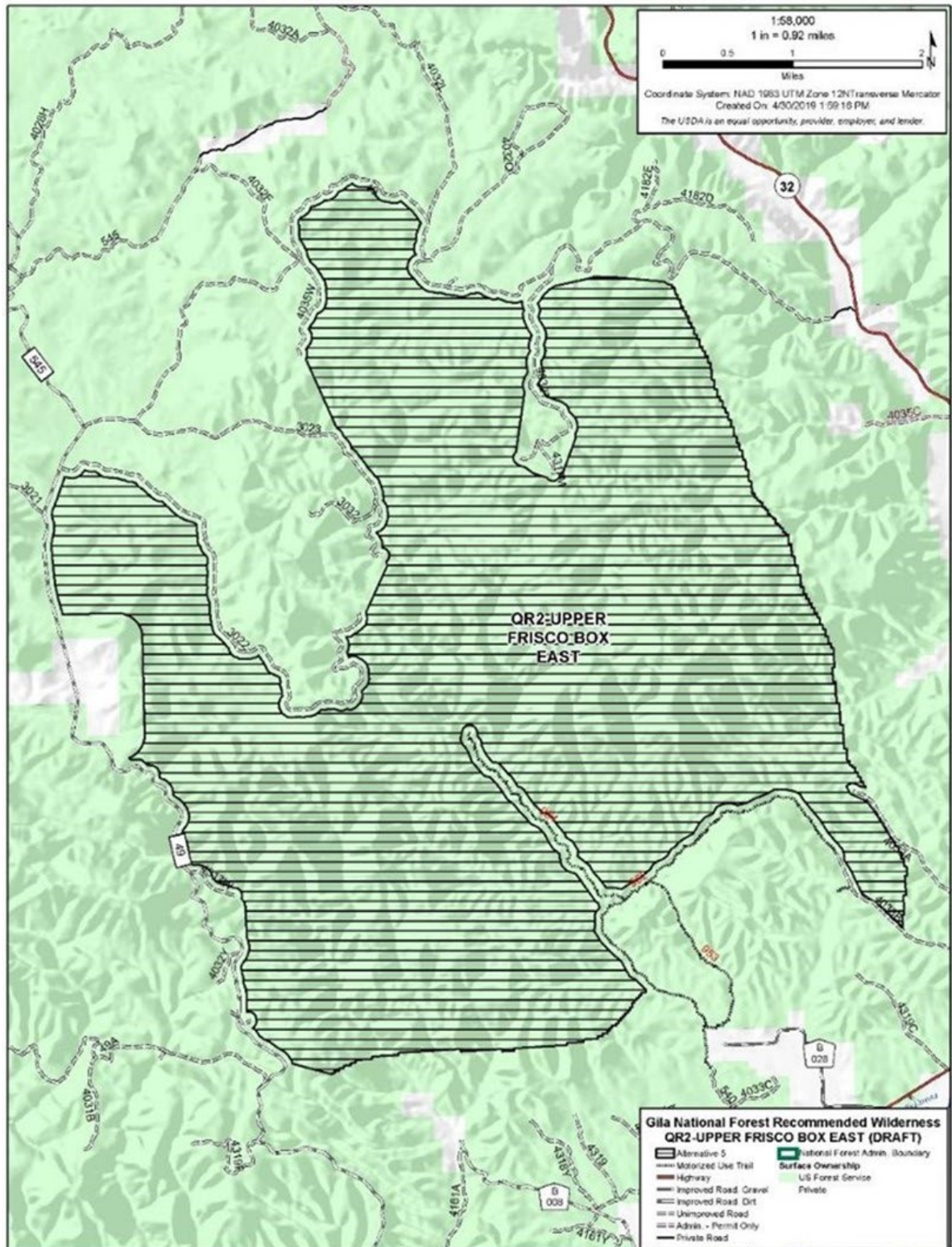


Figure H-16. Recommended wilderness by alternative for QR2 – Upper Frisco Box East

R1 – Eagle Peak

A 31,169-acre area is recommended only by alternative 5. It is in the in the southeastern region of the Reserve Ranger District within Catron County, New Mexico. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-17.

Vegetation communities in this area are driven by elevation and aspect and consist of pinyon-juniper woodlands, ponderosa pine and mixed conifer. The terrain is variable but generally steep and rugged, particularly in the southern portion. The Eagle Peak lookout is located just outside the area boundary. The Continental Divide National Scenic Trail passes nearby, but no portion of the Trail is within R1-Eagle Peak. Eagle Peak is a popular side-hike for hikers traveling the entire length of the Continental Divide National Scenic Trail. High quality scenery within Negrito Canyon and the views of and from Eagle Peak are considered other features of value.

The entire area is located within inventoried roadless area and is being managed to preserve roadless characteristics. Little management activity has occurred or is likely in the future, mostly due to the limiting terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Deep Canyon, Eagle Peak, and Negrito/Yeguas grazing allotments. The density of improvements is generally low but there are some locations where improvements are concentrated and detract from apparent naturalness. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is low and there are good opportunities for solitude. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-15. Evaluated wilderness characteristics of the R1 – Eagle Peak

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	3.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (RECREATION) MODERATE (SOLITUDE)	7
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE	11.7

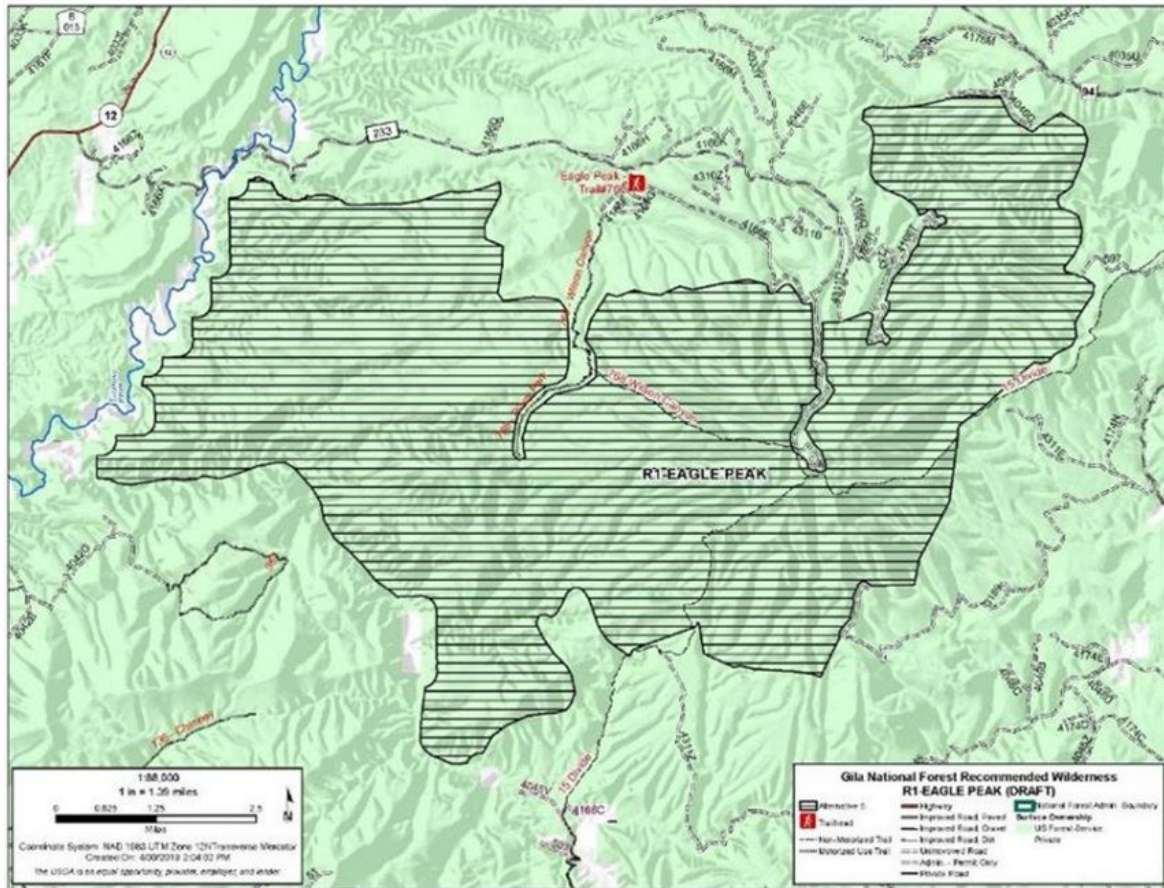


Figure H-17. Recommended wilderness by alternative for R1 – Eagle Peak

R3 – Moraga Canyon

An 8,162-acre area is recommended only by alternative 5. It is in the eastern region of the Reserve Ranger District within Catron County, New Mexico. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-18.

The terrain consists of rolling hills and drainages. Grasslands are the predominant vegetation communities with some pinyon-juniper woodlands. This area may provide ideal pronghorn habitat and recent vegetation management to improve habitat connectivity for pronghorn. There is no inventoried roadless area. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Y Canyon grazing allotment. The density of improvements is generally low but there are some locations where improvements are concentrated and detract from apparent naturalness. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is low and there are good opportunities for solitude. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-16. Evaluated wilderness characteristics of the R3 – Moraga Canyon

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	4.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (BOTH)	5
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE	10.3

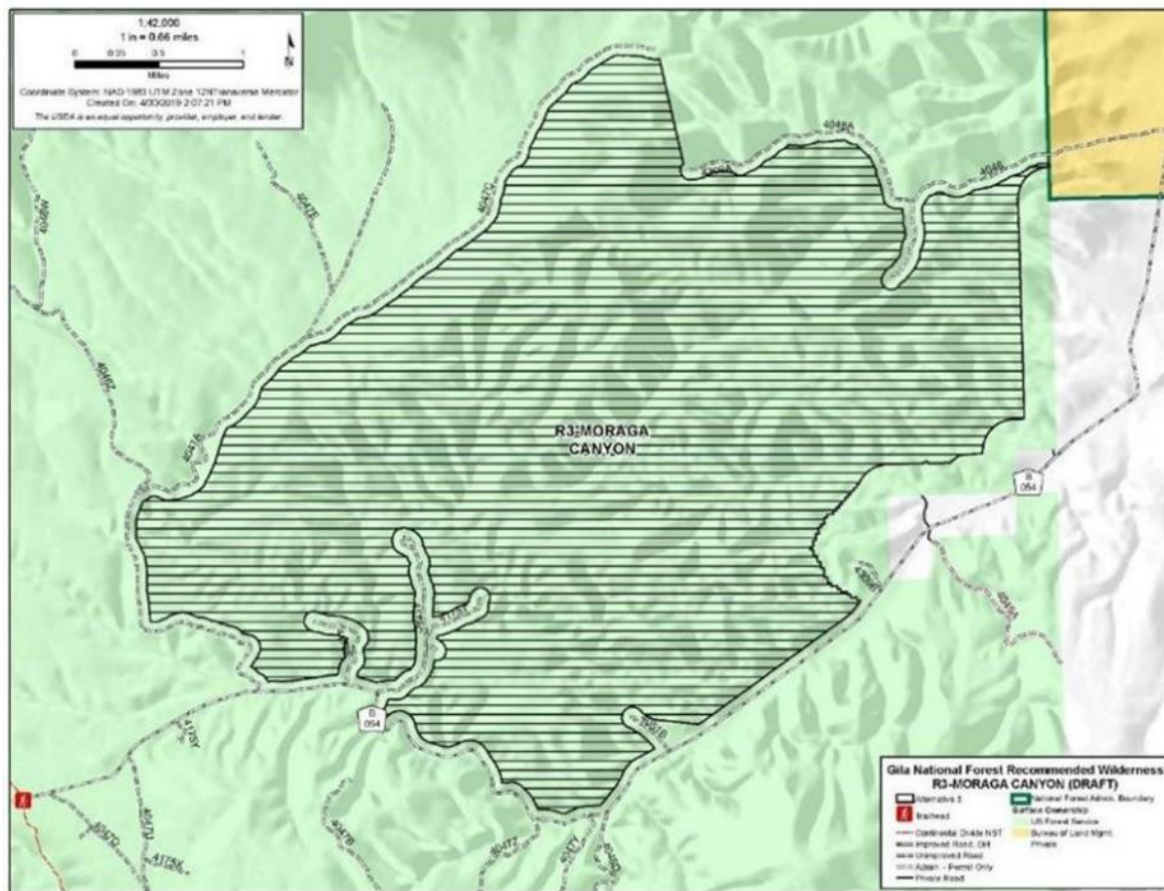


Figure H-18. Recommended wilderness by alternative for R3 – Moraga Canyon

R4 – O-Bar-O Mountain

An 8,162-acre area is recommended only by alternative 5. It is in the eastern region of the Reserve Ranger District within Catron County, New Mexico. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-19.

The terrain in this area is variable and includes O-Bar-O Mountain and Salvation Peak. Piñon-juniper woodlands dominate the vegetation communities with open grasslands at lower elevations. The grassland areas may be ideal habitat for pronghorn. Vegetation treatments to improve habitat connectivity for pronghorn have occurred. A section of the Continental Divide National Scenic Trail passes through this area. There are no inventoried roadless areas. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Y Canyon and O-Bar-O grazing allotments. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is low and there are good opportunities for solitude, except along the Continental Divide National Scenic Trail where visitor use is higher. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-17. Evaluated wilderness characteristics s of the R4 – O-Bar-O Mountain

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (SOLITUDE) MODERATE (RECREATION)	6
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE/HIGH	12

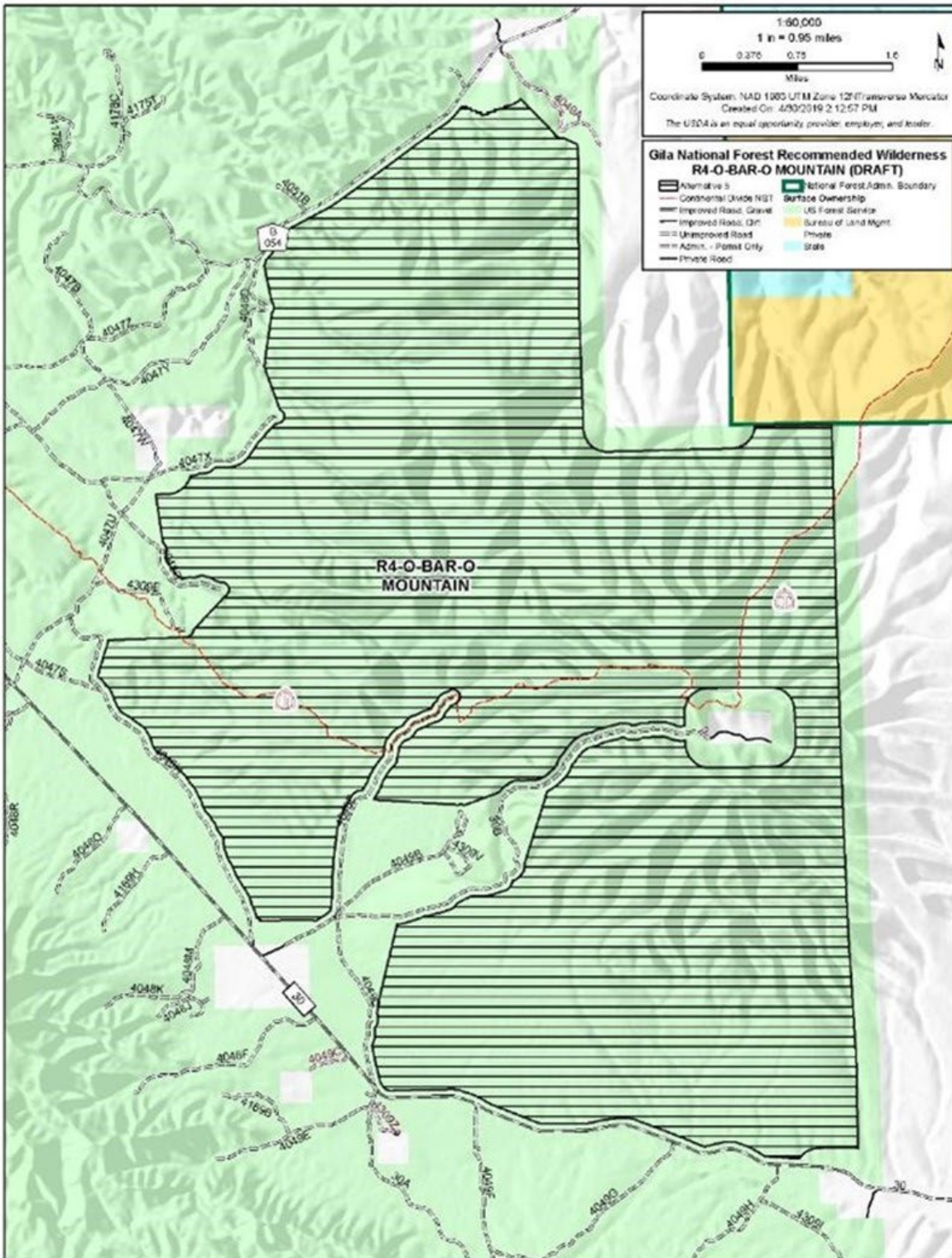


Figure H-19. Recommended wilderness by alternative for R4 – O-Bar-O Mountain

R9 – Wagon Tongue

An 11,463-acre area is recommended only by alternative 5. It is in the northeastern region of the Reserve Ranger District within Catron County, New Mexico. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-20.

Terrain in this area is moderate to very rugged with canyons, ridges, and mountains, including Wagontongue Mountain. Vegetation communities are dominated by pinyon-juniper woodlands and ponderosa pine. Mixed conifer is present on north-facing slopes and at higher elevations. A section of the Continental Divide National Scenic Trail passes through this area.

Most of the area is within inventoried roadless area and is managed to preserve roadless characteristics. Little management activity has occurred or is likely to occur in the future, mostly due to terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Govina and Dark Canyon grazing allotments. This is a remote area of the forest not easily accessed by those unfamiliar with it. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is low and there are good opportunities for solitude, except along the Continental Divide National Scenic Trail where visitor use is higher. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-18. Evaluated wilderness characteristics of the R9 – Wagon Tongue

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (SOLITUDE) MODERATE (RECREATION)	6
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	11.7

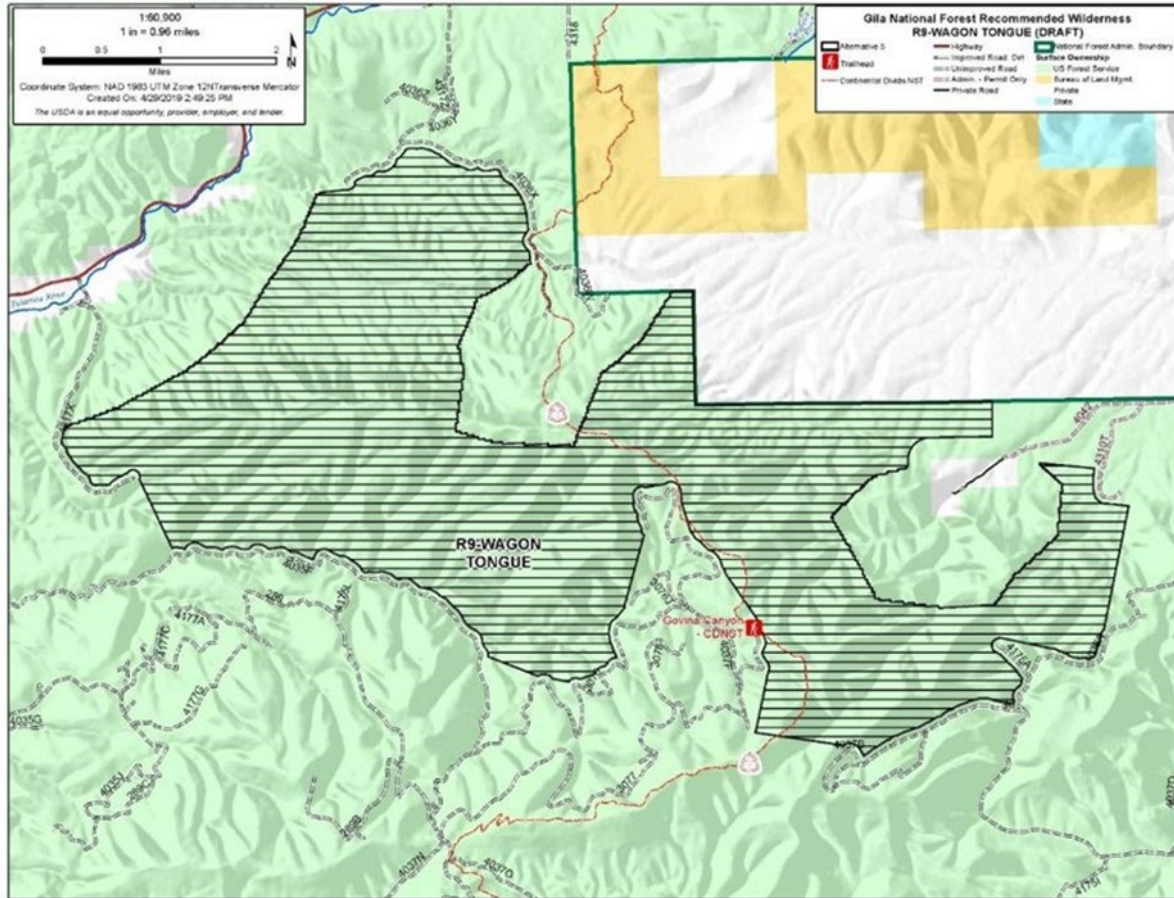


Figure H-20. Recommended wilderness by alternative for R9 – Wagon Tongue

R10a – Gila Addition North Reserve

This is a small area adjacent to Aeroplane Mesa Campground at the Gila Wilderness boundary in the southern portion of the Reserve Ranger District within Catron County, New Mexico. A 536-acre area is recommended by alternatives 3 and 5. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-21.

The entire area is within inventoried roadless areas and is managed to preserve roadless characteristics. Little management activity has occurred and is unlikely to occur in the future. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the T-Bar grazing allotment. Modern land management activity is only noticeable in some locations, particularly near the forest roads along the northern boundary. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-19. Evaluated wilderness characteristics of the R10a – Gila Addition North Reserve

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	4
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE(BOTH)	5
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	9

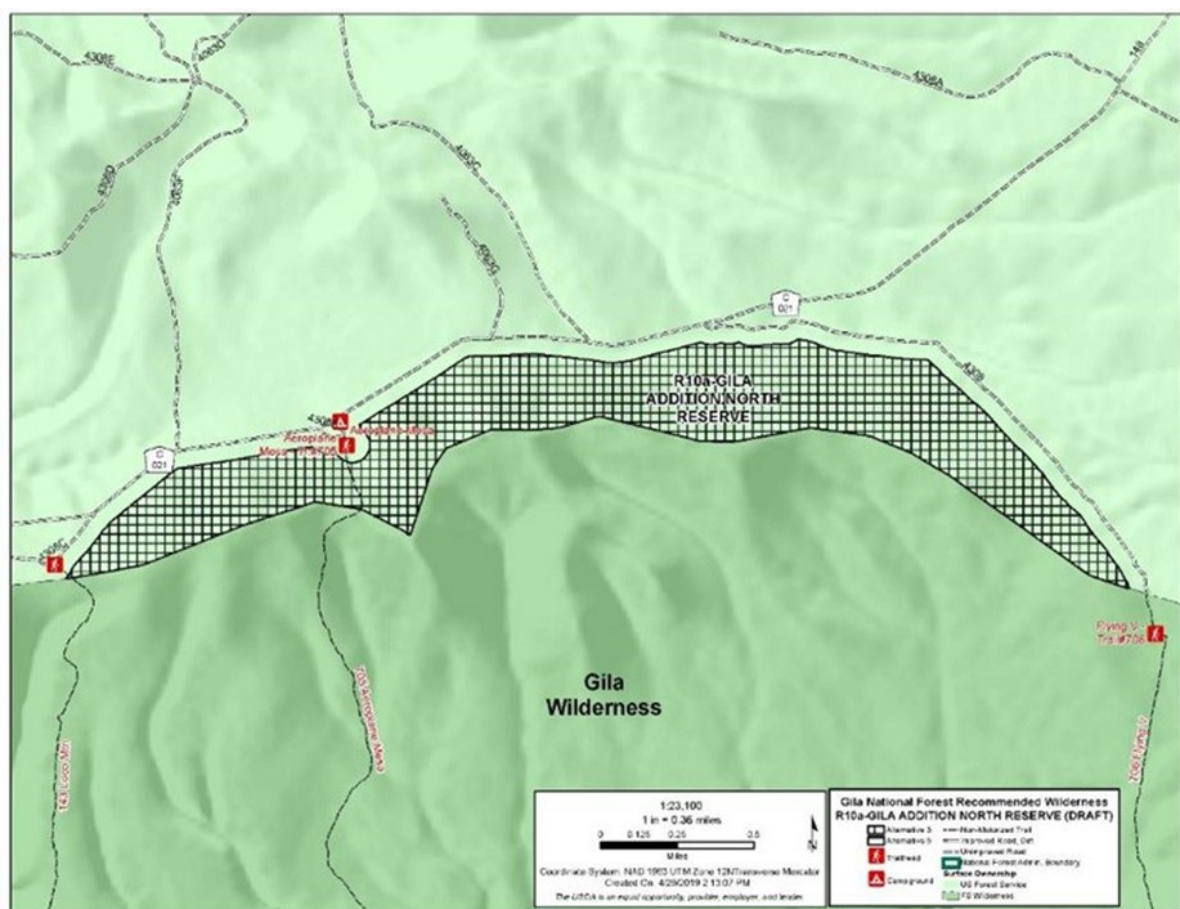


Figure H-21. Recommended wilderness by alternative for R10a – Gila Addition North Reserve

R10b – Gila Addition North Reserve

This moderately steep area is south of Snow Lake and adjacent the Gila Wilderness boundary in the southern portion of the Reserve Ranger District within Catron County, New Mexico. Snow Lake is a reservoir at the headwaters of the Middle Fork Gila River. A 657-acre area is recommended by alternatives 3 and 5. Alternative 4 recommends 207 acres. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-22.

This area is entirely within inventoried roadless area and is managed to preserve roadless characteristics. Very little management activity has occurred and is unlikely to occur in the future, mostly due to terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the T-Bar grazing allotment. Modern land management activity is only noticeable in some locations, particularly near the forest roads along the northern boundary. This limits opportunities for solitude as compared to the adjacent designated wilderness. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-20. Evaluated wilderness characteristics of the R10b – Gila Addition North Reserve

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	4
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE(BOTH)	5
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	9

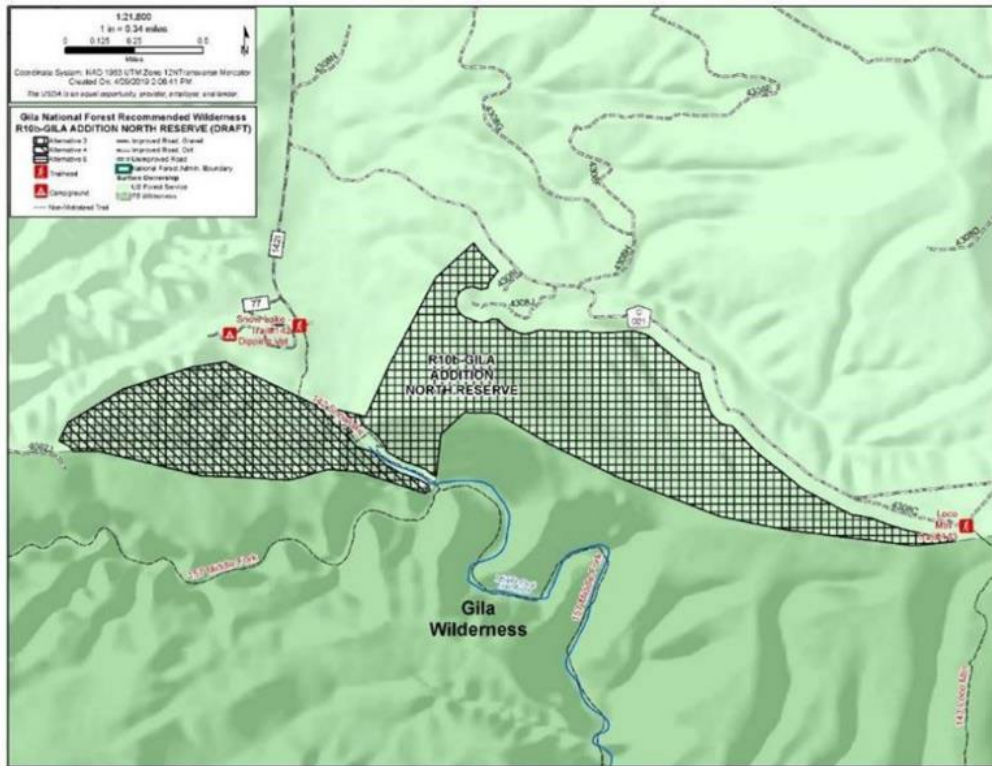


Figure H-22. Recommended wilderness by alternative for R10b – Gila Addition North Reserve

RB1 – East Elk Mountain

An 8,924-acre area is recommended only by alternative 5. It lies primarily in the southeastern region of the Reserve Ranger District within Catron County, New Mexico. A very small part of the area crosses the district boundary into the Black Range Ranger District. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-23.

The variable terrain includes rolling hills and steep mountain slopes. Terrain is particularly complex and rugged at East Elk Mountain. Vegetation communities are driven by elevation and aspect. Ponderosa pine and mixed conifer forests transition to pinyon-juniper woodlands and grasslands as elevation declines and the terrain becomes less steep. There are no inventoried roadless areas. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the O-Bar-O and Black Mountain grazing allotments. Modern land management activity is noticeable in some locations where improvements are concentrated, though the density of improvements is generally low. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is low and there are good opportunities for solitude. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-21. Evaluated wilderness characteristics of the RB1 – East Elk Mountain

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (BOTH)	5
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	10

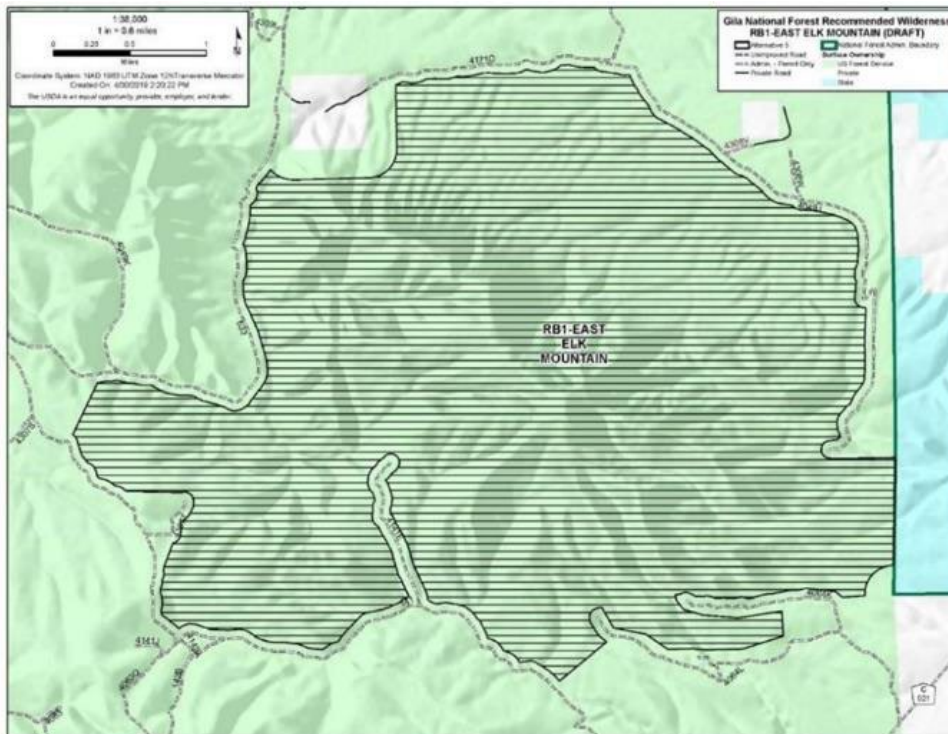


Figure H-23. Recommended wilderness by alternative for RB1 – East Elk Mountain

RG1 – Aspen Mountain

This area is in the northwestern portion of the Glenwood Ranger District within Catron County, New Mexico. It is near the designated Blue Range Wilderness, separated by an open forest system road. A 19,053-acre area is recommended by alternative 2. Alternative 5 recommends 21,895 acres. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-24.

Most of the terrain is steep and rugged, providing several high-quality scenic views. Near Pueblo Park Campground at the south-central boundary, the terrain is gentler. Dramatic views into the Blue Range Wilderness and within RG1-Aspen Mountain itself, and a concentration of prehistoric cultural sites near Pueblo Park are considered other features of value. Vegetation communities include ponderosa pine and mixed conifer forests, transitioning to pinyon-juniper woodlands at the lower elevations and southerly facing-slopes.

This area is almost entirely within inventoried roadless area and is managed to preserve roadless characteristics. Little management activity has occurred and is unlikely in the future, mostly due to terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Luna and Leggett grazing allotments. Relative to the size of the area, there are few improvements which are largely range infrastructure. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is low and there are good opportunities for solitude, especially in the western portion. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-22. Evaluated wilderness characteristics of the RG1 – Aspen Mountain

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (Both)	7
Step 5 – Other Features of Value	MODERATE	2
Overall Rank of Wilderness Characteristics	OUTSTANDING	16



RG2 – Devil’s Creek

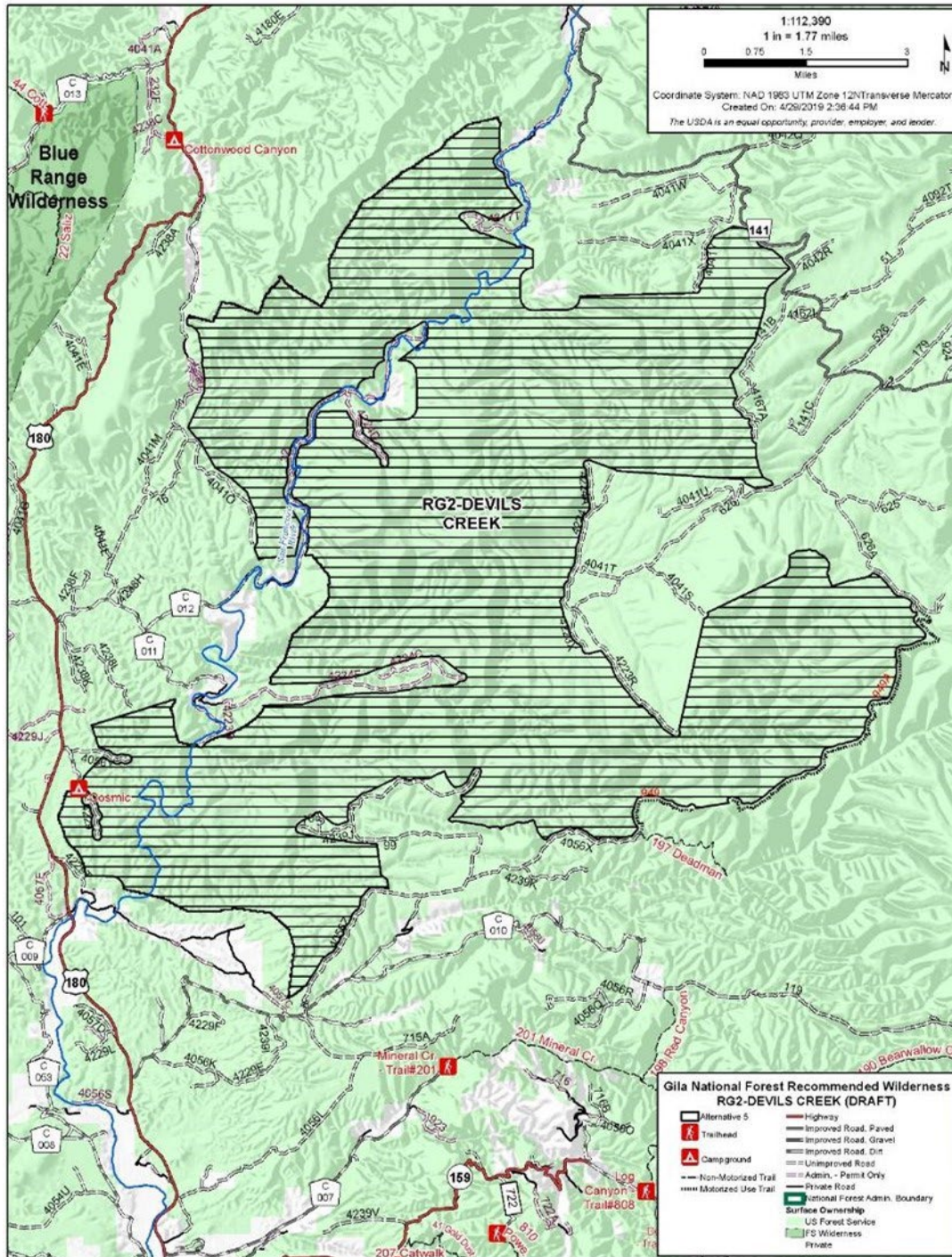
A 43,383-acre area is recommended only by alternative 5. Approximately half of the area is in the southwestern part of the Reserve Ranger District, the other half is in the northwestern part of the Glenwood Ranger District with the whole area being within Catron County, New Mexico. It is west of US 180, west-northwest of Cosmic Campground and generally southeast of the town of Reserve. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-25.

This is a large area of steep, rugged and complex terrain and deeply incised canyons draining into the San Francisco River. It offers scenic views of the river corridor and lies immediately adjacent to the Cosmic Campground International Dark Sky Sanctuary. It is the first International Dark Sky Sanctuary on National Forest System lands. International Dark Sky Sanctuaries are lands possessing an exceptional or distinguished quality of starry nights. This status would indicate that the Devil’s Creek area possesses similar dark sky characteristics. Views of the San Francisco River corridor and its tributaries, including secluded Saliz Canyon, dark skies and a concentration of prehistoric sites are considered other features of value. Piñon-juniper woodlands are the dominant vegetation community with ponderosa pine and riparian species in canyon bottoms.

Most of the area is inventoried roadless area and is being managed to preserve roadless characteristics. Little management activity has occurred and is unlikely in the future, mostly due to terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Leggett, Frisco Plaza, Negrito/Yeguas, Kelly, Devil’s Park, Alma, and Deep Creek grazing allotments. The density of improvements is generally low but are concentrated and noticeable in a few locations. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is low and there are good opportunities for solitude, especially in the southern portion. There are few limitations to the pursuit of various types of primitive and unconfined recreation, which include water-based recreation along the river and its tributaries.

Table H-23. Evaluated wilderness characteristics of the RG2 – Devil’s Creek

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	4
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	7
Step 5 – Other Features of Value	MODERATE	2
Overall Rank of Wilderness Characteristics	MODERATE/HIGH	13



RG4 – North Mogollon Mountains

A 20,398-acre area is recommended by alternative 5. A 11,584-acre area is recommended by alternative 3. Approximately half of the area is in the southwestern part of the Reserve Ranger District, the other half is in the northwestern part of the Glenwood Ranger District with the whole area being within Catron County, New Mexico. It is north-northwest of the Bearwallow Mountain lookout. The Hogan, Claremont, and Waterman cabins are all located outside the area boundaries to the southeast. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-26.

This steep, rugged area contains spruce-fir and mixed conifer forests, with ponderosa pine and pinyon-juniper at lower elevations and on warmer, drier sites. It is almost entirely within inventoried roadless areas and is managed to preserve roadless characteristics. Little management activity has occurred or is likely to occur in the future, mostly due to terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Deep Creek and Copper Creek grazing allotments. The density of improvements is generally low but are concentrated and noticeable in a few locations. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is low and there are good opportunities for solitude. There are few limitations to the pursuit of various types of primitive and unconfined recreation, which include water-based recreation along Devil's Creek.

Table H-24. Evaluated wilderness characteristics of the RG4 – North Mogollon Mountains

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	7
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE/HIGH	12

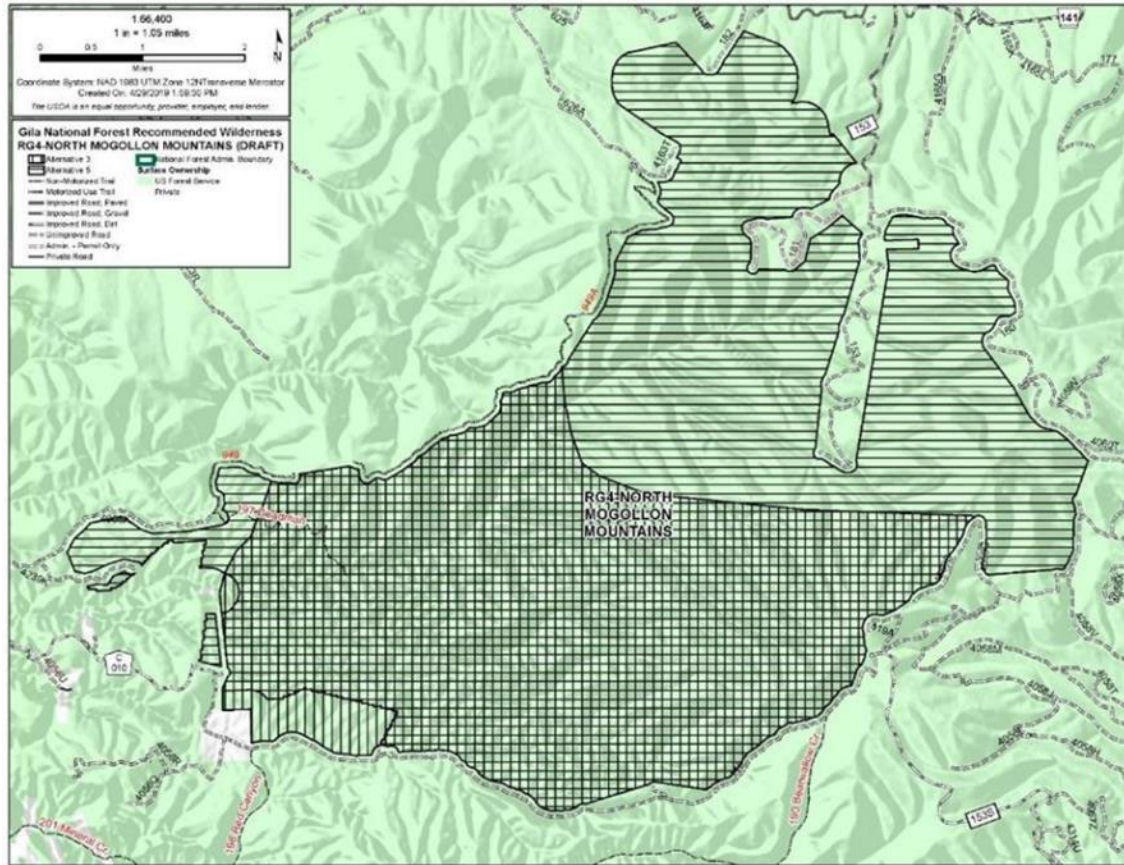


Figure H-26. Recommended wilderness by alternative for RG4 – North Mogollon Mountains

G1 – Mineral Creek

This area is in the northwestern part of the Glenwood Ranger District within Catron County, New Mexico. A 16,538-acre area is recommended by alternative 2. Alternative 3 recommends 16,540 acres and alternative 5 recommends 16,848 acres. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-27

The terrain is steep, complex, and rugged. Piñon-juniper woodlands are the dominant vegetation community with patches of ponderosa pine, aspen, and mixed conifer depending upon elevation and aspect. Much of the area was affected by the 2012 Whitewater Baldy Complex fire. Most of the area is within inventoried roadless areas and managed to preserve roadless characteristics. Very little management activity has occurred and is unlikely in the future, mostly due to terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Copper Creek grazing allotment. There is a lot of visible mining history, outstanding geological features, exceptional scenery, and representation of a wide range of plant communities, all of which are considered other features of value. This area has never been logged and evidence of modern land management is nearly non-existent. Improvements are not substantially noticeable and do not detract from apparent naturalness or contribute significantly to the historical character and cultural context of the area. Improvements include a few broken down historic cabins. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is low and there are outstanding opportunities for solitude. There are few limitations to the pursuit of various types of primitive and unconfined recreation. The area also provides environmental education opportunities and is used by a local charter school and the local university.

Table H-25. Evaluated wilderness characteristics of the G1 – Mineral Creek

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	OUTSTANDING	9.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	OUTSTANDING (Both)	10
Step 5 – Other Features of Value	OUTSTANDING	4
Overall Rank of Wilderness Characteristics	OUTSTANDING	23.3

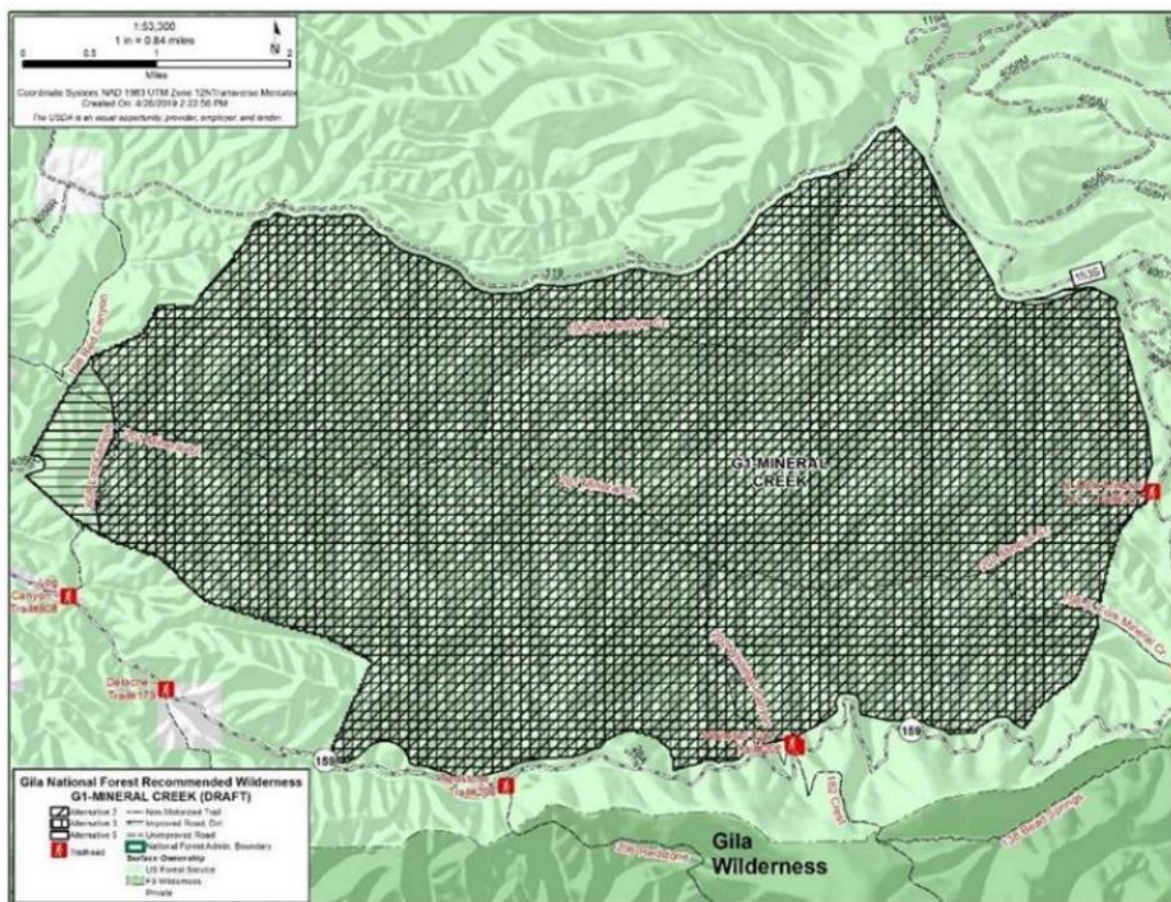


Figure H-27. Recommended wilderness by alternative for G1 – Mineral Creek

G3 – Gila Rain Creek Addition

This area is in the central part of the Glenwood Ranger District within Catron County, New Mexico. It is immediately adjacent the western boundary of the Gila Wilderness. Rain Creek and Forest Trail #186 both pass through the area, and Sacaton Cabin is just outside the area boundary to the northwest. A 374-acre area is recommended by alternative 3. Alternative 4 recommends 923 acres and alternative 5 recommends 1,095 acres. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-28.

This small area contains some steep, rugged areas and flat mesa tops. Piñon-juniper woodlands and ponderosa pine-oak forests are the dominant vegetation communities. Most of the area is within inventoried roadless areas and managed to preserve roadless characteristics. Very little management activity has occurred and is unlikely in the future, mostly due to terrain. However, historic vegetation management on the flat mesa tops remains noticeable. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Rain Creek/74 Mountain grazing allotment. The density of improvements is generally low, and they are concentrated in a few locations. The area offers moderate opportunities for solitude and primitive and unconfined recreation by comparison to areas nearby and elsewhere in the forest.

Table H-26. Evaluated wilderness characteristics of the G3 – Gila Rain Creek Addition

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (BOTH)	5
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	10.3

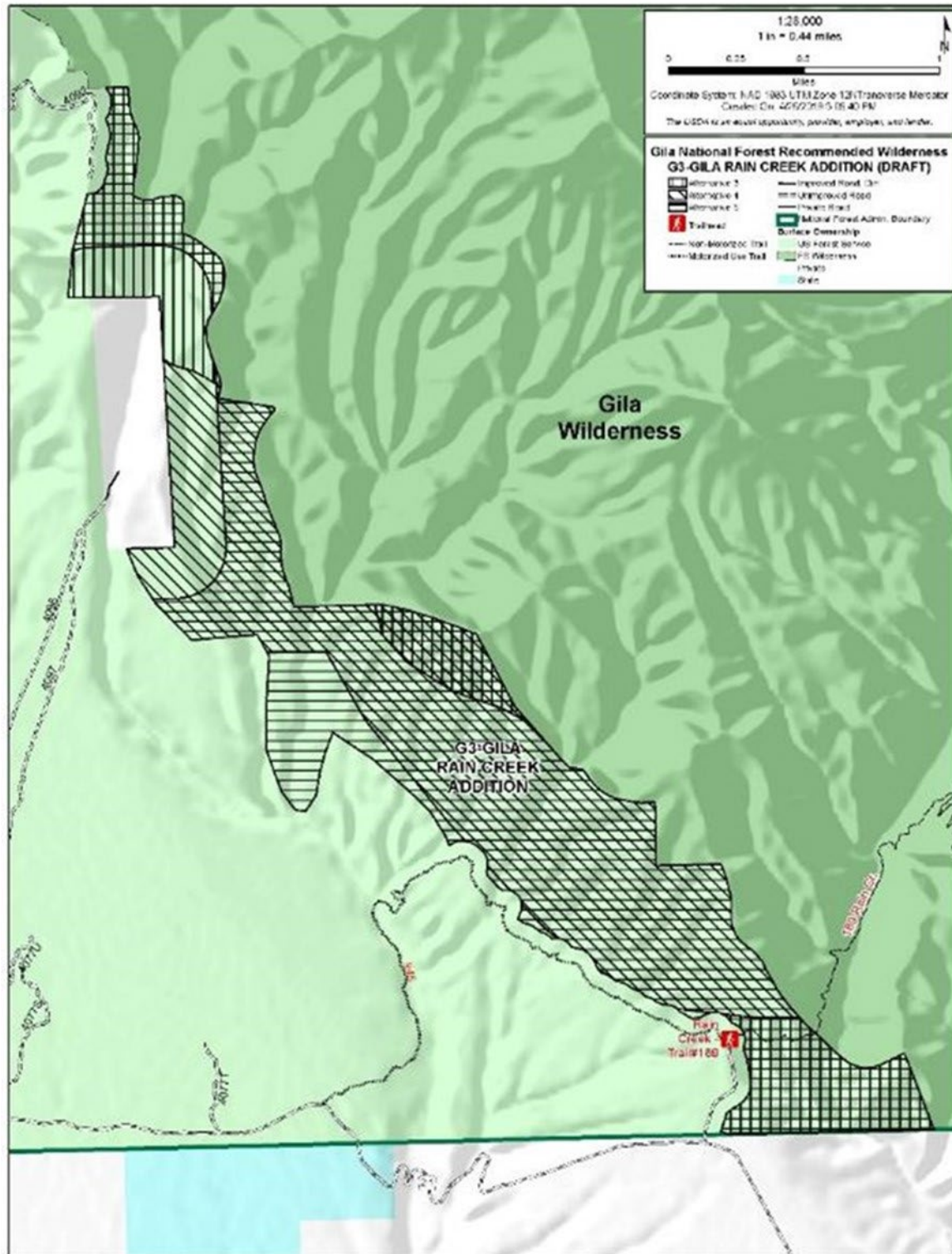


Figure H-28. Recommended wilderness by alternative for G3 – Gila Rain Creek Addition

G5 – Park Mountain

A 10,737-acre area is recommended only by alternative 5. It is in the central part of the Glenwood Ranger District within Catron County, New Mexico. It is north of Brushy Mountain lookout and the Lower San Francisco Wilderness Study Area, and west of the Glenwood Ranger Station and the community of Glenwood, New Mexico. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-29.

Terrain is variable and moderate with only a relatively small, steep area. Grasslands and pinyon-juniper woodlands are the dominant vegetation types. The San Francisco River flows through the area, with possible opportunities for water-based recreation such as river floating, but the canyon is steep and difficult to access. There is no inventoried roadless area. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Roberts Park, Harve Gulch, and Pleasanton grazing allotments. Evidence of modern land management activity is mostly limited to locations near the outside boundaries of the area. Improvements detract very little from apparent naturalness. While the steeper sections along the east side provide opportunities for solitude, there aren't many trails and access are difficult. Similarly, this section of the river is floatable, but there is no place to access the river within this area and there may be access issues with the nearest downstream take out location. Overall, the area offers moderate opportunities for solitude and primitive and unconfined recreation by comparison to areas nearby and elsewhere in the forest.

Table H-27. Evaluated wilderness characteristics of the G5 – Park Mountain

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (BOTH)	5
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	10.7

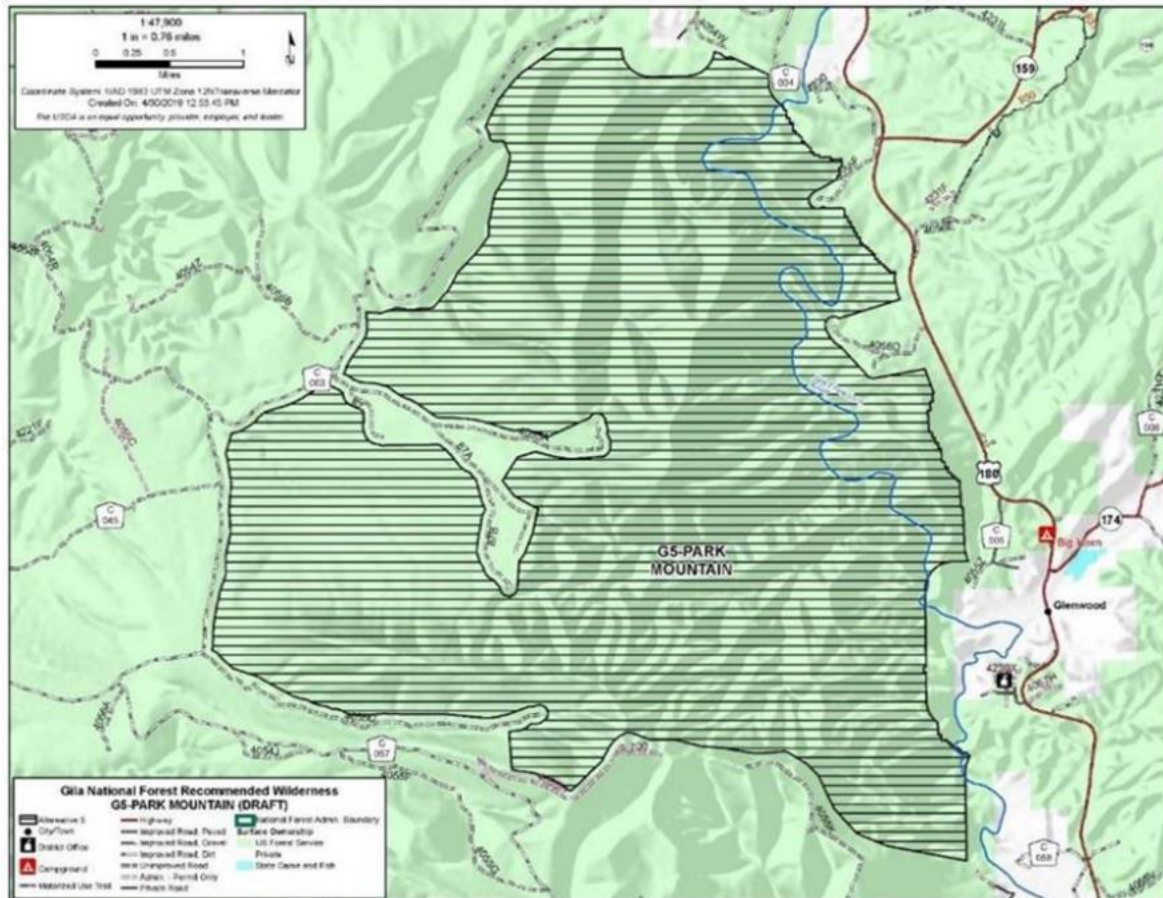


Figure H-29. Recommended wilderness by alternative for G5 – Park Mountain

G6 – Lower San Francisco

This area is in the west-central part of the Glenwood Ranger District within Catron and Grant counties, just south of the town of Glenwood, New Mexico. It is oriented roughly between Sundial Mountain just east of US 180 and where the San Francisco River crosses the state line into eastern Arizona. It includes the entire Lower San Francisco Study Area. The area was designated as such by Congress in 1980, evaluated and *not* recommended for wilderness designation during the 1986 plan development process. Alternative 4 recommends a 14,746-acre area and alternative 5 recommends a 21,018-acre area. The evaluation boundary was adjusted to meet the criteria for each alternative. For detailed boundary locations see Figure H-30.

This relatively large area contains moderate to steep and rugged terrain, including the gorge of the lower San Francisco River. Vegetation within the river gorge is riparian, and elsewhere is a mix of grasslands, pinyon-juniper woodlands, and ponderosa pine-oak forests. There are hot springs along the river that attract recreational use, and the San Francisco Hot Springs Trail #250 leads into the area. The recreational opportunities provided by the hot springs, scenery and interesting geology along the river corridor are considered other features of value. This stretch of the San Francisco River is also designated critical habitat for loach minnow and spikedace. Most of the area is also inventoried roadless area and is managed to preserve roadless characteristics. Very little management activity has occurred and is unlikely to occur in the future, due in part to terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Pleasanton and Potholes grazing allotments.

Conditions within the area reflect very little of any type of modern land management activity and improvements detract very little from apparent naturalness. Outside of hunting or antler gathering seasons the likelihood of encountering other visitors is exceptionally low. Some places within the area offer a high degree of solitude. There are few limitations to the pursuit of various types of primitive and unconfined recreation, which include water-based recreation along the river.

Table H-28. Evaluated wilderness characteristics of the G6 – Lower San Francisco

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	OUTSTANDING (RECREATION) HIGH (SOLITUDE)	9
Step 5 – Other Features of Value	HIGH	3
Overall Rank of Wilderness Characteristics	OUTSTANDING	18.3

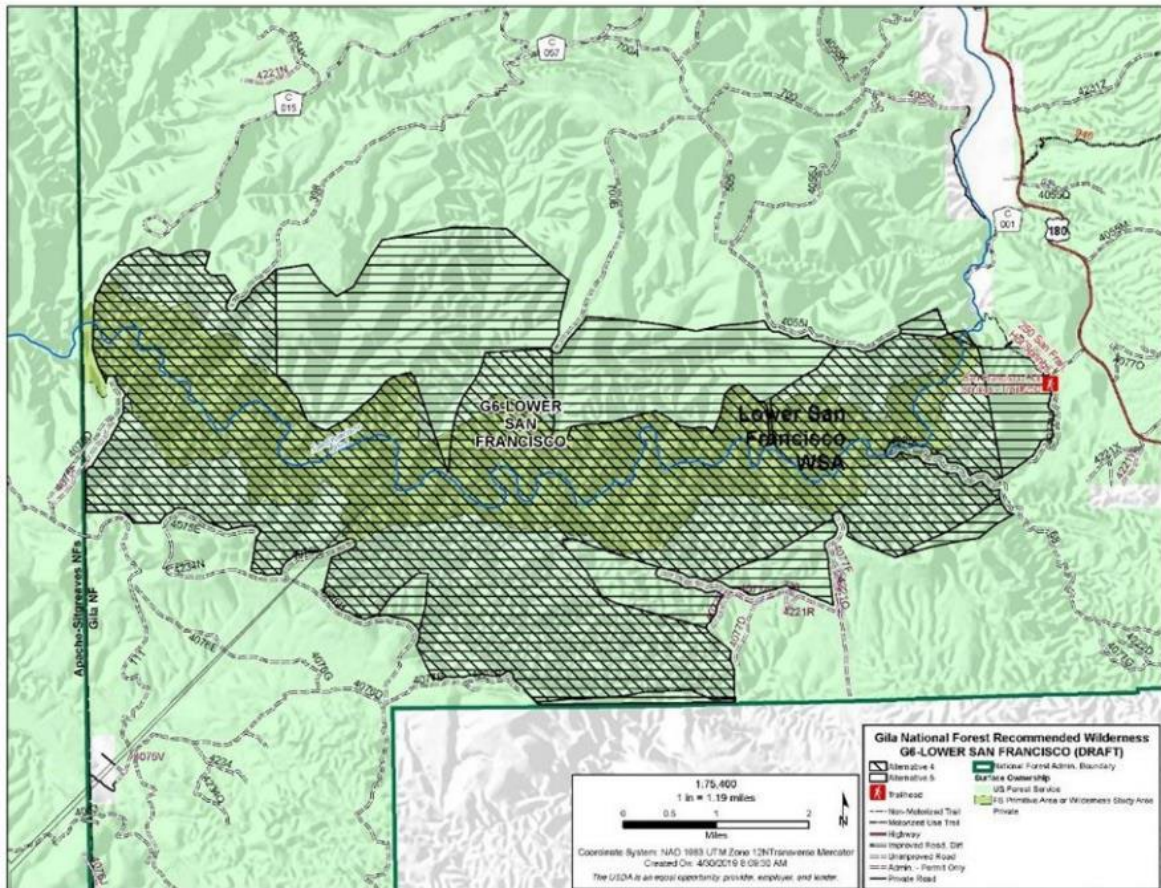


Figure H-30. Recommended wilderness by alternative for G6 – Lower San Francisco

G7 – Hell Hole

A 19,623-acre area is recommended only by alternative 5. It is in the southwestern part of the Glenwood Ranger District within Grant County, New Mexico. It contains the Hell Hole Wilderness Study Area. The area was designated as such by Congress in 1980, evaluated and *not* recommended for wilderness designation during the 1986 plan development process. The area is immediately adjacent the Hoverrocker Wilderness Study Area, managed by the Bureau of Land Management, which is a remnant of a much larger wilderness study area that once extended across the state line into Arizona. Most of that wilderness study area was released to other resource uses, but this remnant provides a contiguous link between the Hell Hole and Apache Box Wilderness Study Area, also managed by the Bureau of Land Management. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-31.

The southern portion of the area features deep, rugged canyons, rocky peaks, and steep cliffs. The northern portion of the area is primarily rolling hills. Vegetation varies greatly with elevation and aspect. The presence of ponderosa and Apache pine in the area is somewhat unusual, as it is rather scarce in surrounding areas. Its exceptional scenery is considered another feature of value. Most of the area is also inventoried roadless area and is being managed to preserve roadless characteristics. Very little management activity has occurred and is unlikely in the future, mostly due to terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Tennessee, Mule Creek, Winchester, Blue Creek, and Apache Creek grazing allotments. Modern land management activity is only noticeable in some locations, with very good opportunities for solitude outside of hunting and antler gathering seasons except at area boundaries near roads. There are few limitations to the pursuit of various types of primitive and unconfined recreation.

Table H-29. Evaluated wilderness characteristics of the G7 – Hell Hole

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (SOLITUDE) MODERATE (RECREATION)	7
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE	11

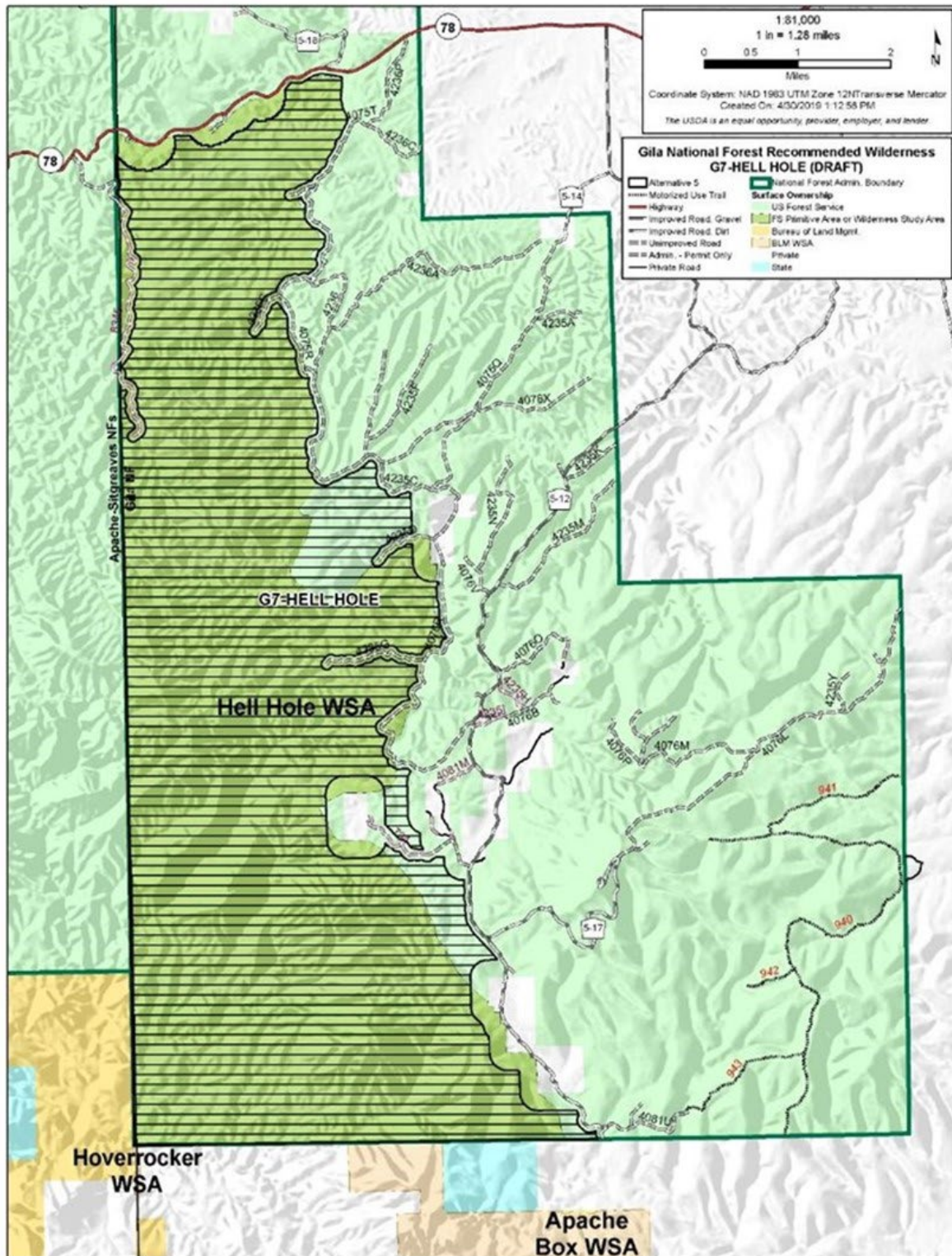


Figure H-31. Recommended wilderness by alternative for G7 – Hell Hole

G8 - Smoothing Iron Mesa

This area is in the southwestern part of the Glenwood Ranger District within Catron and Grant Counties, just south of the town of Glenwood, New Mexico. Its western boundary is the state line with Arizona. The Lower San Francisco Wilderness Study Area is to the south and southeast. Alternative 4 recommends a 3,152-acre area and alternative 5 recommends a 3,588-acre area. The evaluation boundary was adjusted to meet the criteria for each alternative. For detailed boundary locations Figure H-32.

The terrain is gentle, punctuated by deeply incised, narrow canyons in some locations. These canyons are considered other features of value. Vegetation is mostly pinyon-juniper woodlands and grasslands. This area was included in the inventory and evaluation despite its small size due to being part of an inventoried roadless area that extends into the Apache-Sitgreaves National Forests in Arizona. Inventoried roadless areas are managed to preserve roadless characteristics. Little management activity has occurred and is unlikely in the future. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Citizen and Pleasanton grazing allotments. Modern land management activity is only noticeable in some locations and improvements are few and not substantially noticeable. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is low and there are good opportunities for solitude. There are few limitations to the pursuit of various types of primitive and unconfined recreation, but opportunities are moderate compared to those available nearby and elsewhere in the forest.

Table H-30. Evaluated wilderness characteristics of the G8 – Smoothing Iron Mesa

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (SOLITUDE) MODERATE (RECREATION)	6
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE/HIGH	12.3

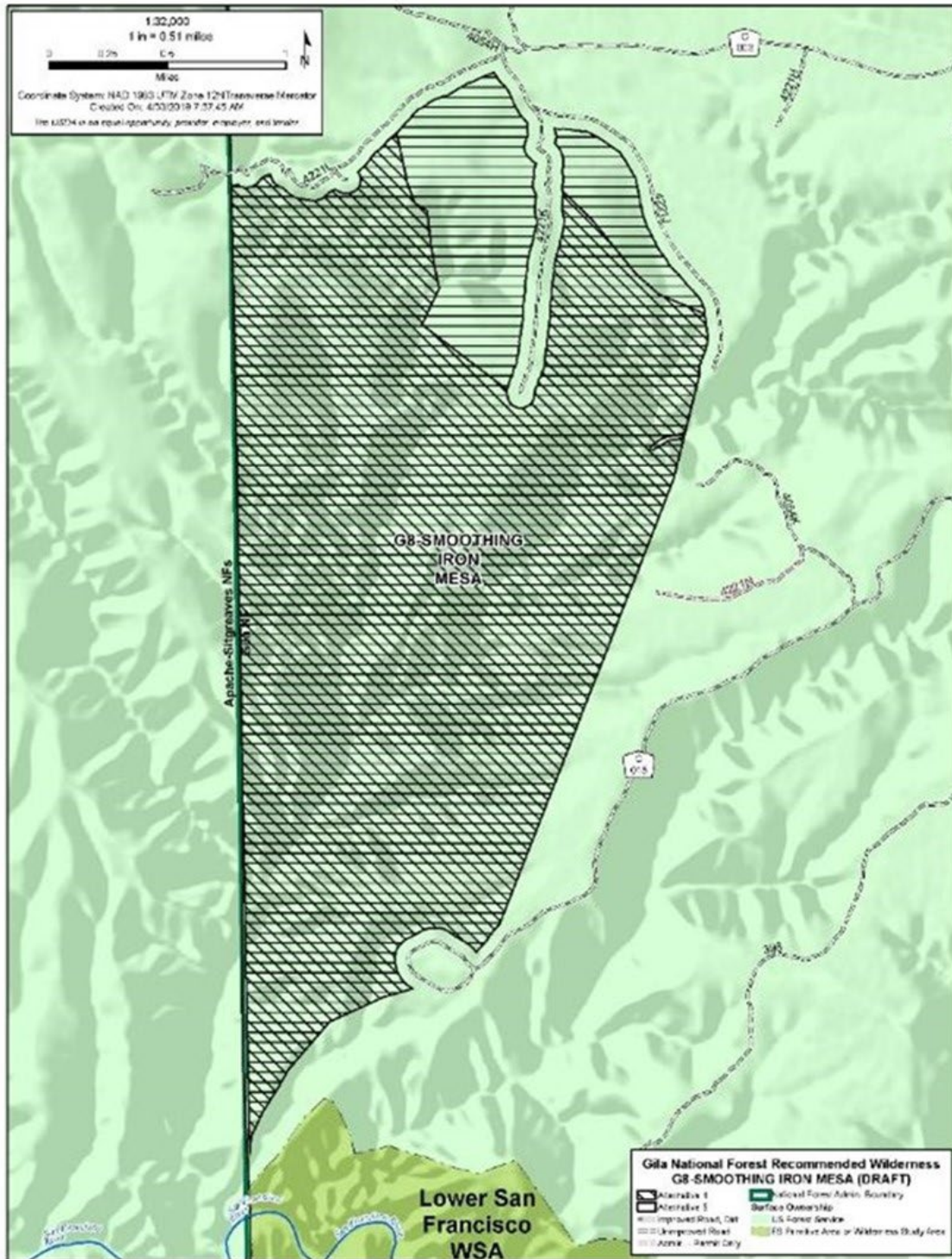


Figure H-32. Recommended wilderness by alternative for G8 – Smoothing Iron Mesa

G9 – Blue Range SE Addition

A 2,856-acre area is recommended only by alternative 5. It is in the western part of the Glenwood Ranger District within Catron County, New Mexico. It is adjacent the Blue Range Wilderness and near the state line with Arizona. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-33.

This small area consists of moderate to steep terrain, dominated by grasslands and pinyon-juniper woodlands. Part of it is within inventoried roadless area and managed to preserve roadless characteristics. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Pueblo Creek, Whiterocks, and Alma grazing allotments. Evidence of modern land management activities is limited and there are few improvements that are concentrated in some locations. There are moderate opportunities for solitude and primitive and unconfined recreation as compared with nearby areas and areas elsewhere in the forest.

Table H-31. Evaluated wilderness characteristics of the G9 – Blue Range SE Addition area

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (SOLITUDE) LOW (RECREATION)	3
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	6



G10 – Blue Range SW Addition

A 3,709-acre area is recommended only by alternative 5. It is in the western part of the Glenwood Ranger District within Catron County, New Mexico. It is adjacent the Blue Range Wilderness and near the state line with Arizona. The evaluation boundary was adjusted to meet the criteria for alternative 5. For detailed boundary locations see Figure H-34.

This is a small area dominated by pinyon-juniper woodlands and steep and moderately complex terrain. There are no inventoried roadless areas. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Whiterocks and Alma grazing allotments. Evidence of modern land management activities is limited and there are few improvements that are concentrated in some locations. Outside of hunting or antler gathering seasons the likelihood of encountering other visitors during is fairly low, providing moderate opportunities for solitude compared to nearby areas and areas elsewhere in the forest.

Table H-32. Evaluated wilderness characteristics of the G10 – Blue Range SW Addition

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	4
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (SOLITUDE) LOW (RECREATION)	4
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	8

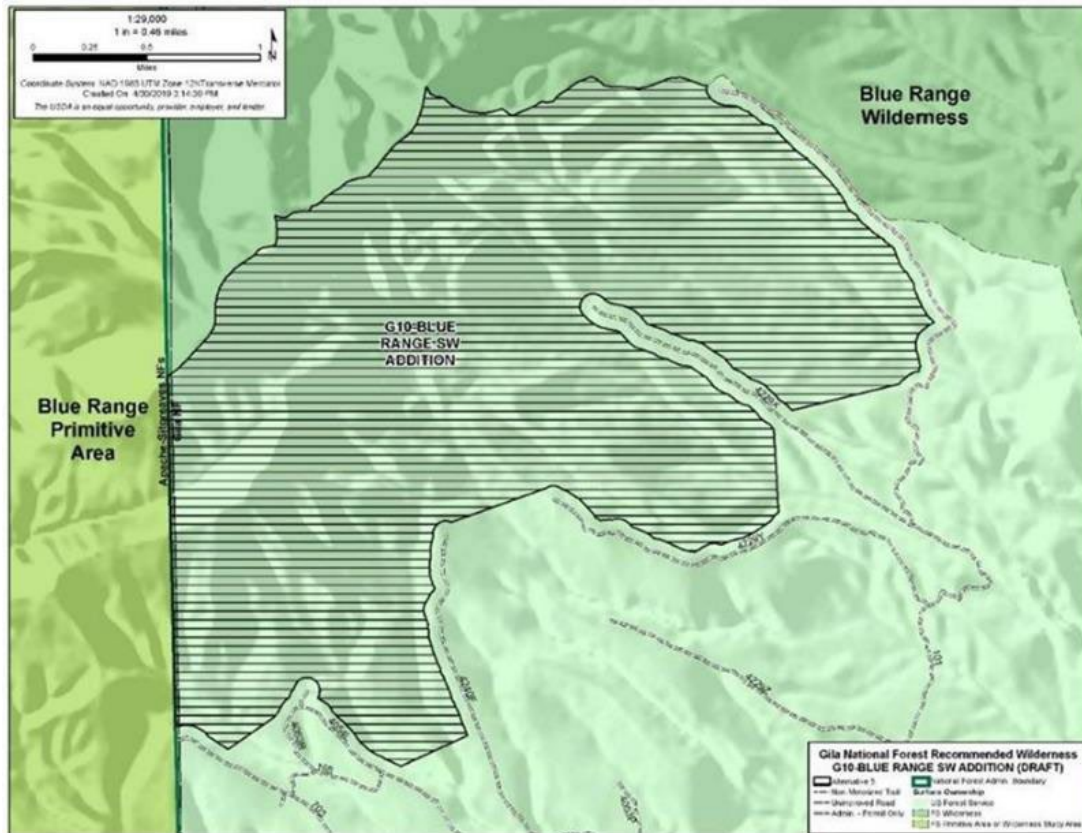


Figure H-34. Recommended wilderness by alternative for G10 – Blue Range SW Addition

G11 – Gila Dry Creeks Addition

This area is in the central portion of the Glenwood Ranger District within Catron County. The Gila Wilderness forms the northern and eastern boundaries. Alternative 3 recommends a 1,973-acre area. alternative 4 recommends a 373-acre area, and alternative 5 recommends a 2,827-acre area. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-35.

The steep terrain is dominated by pinyon-juniper woodlands, grasslands, and ponderosa pine-oak, often depending upon elevation and slope aspect. Dry Creek, Little Dry Creek, and the Little Dry Trail # 180 pass through the area. The area is entirely within inventoried roadless area and is managed to preserve roadless characteristics. Very little management activity has occurred or is likely to occur in the future due to terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Dry Creek grazing allotment. Existing improvements are predominantly range infrastructure and the degree to which they detract from apparent naturalness is moderate compared to the adjacent wilderness and other areas within the forest. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is exceptionally low. There are exceptional opportunities for solitude and few limitations to the pursuit or types of primitive and unconfined recreation.

Table H-33. Evaluated wilderness characteristics of the G11 – Gila Dry Creeks Addition

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	4.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	6
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	10.3

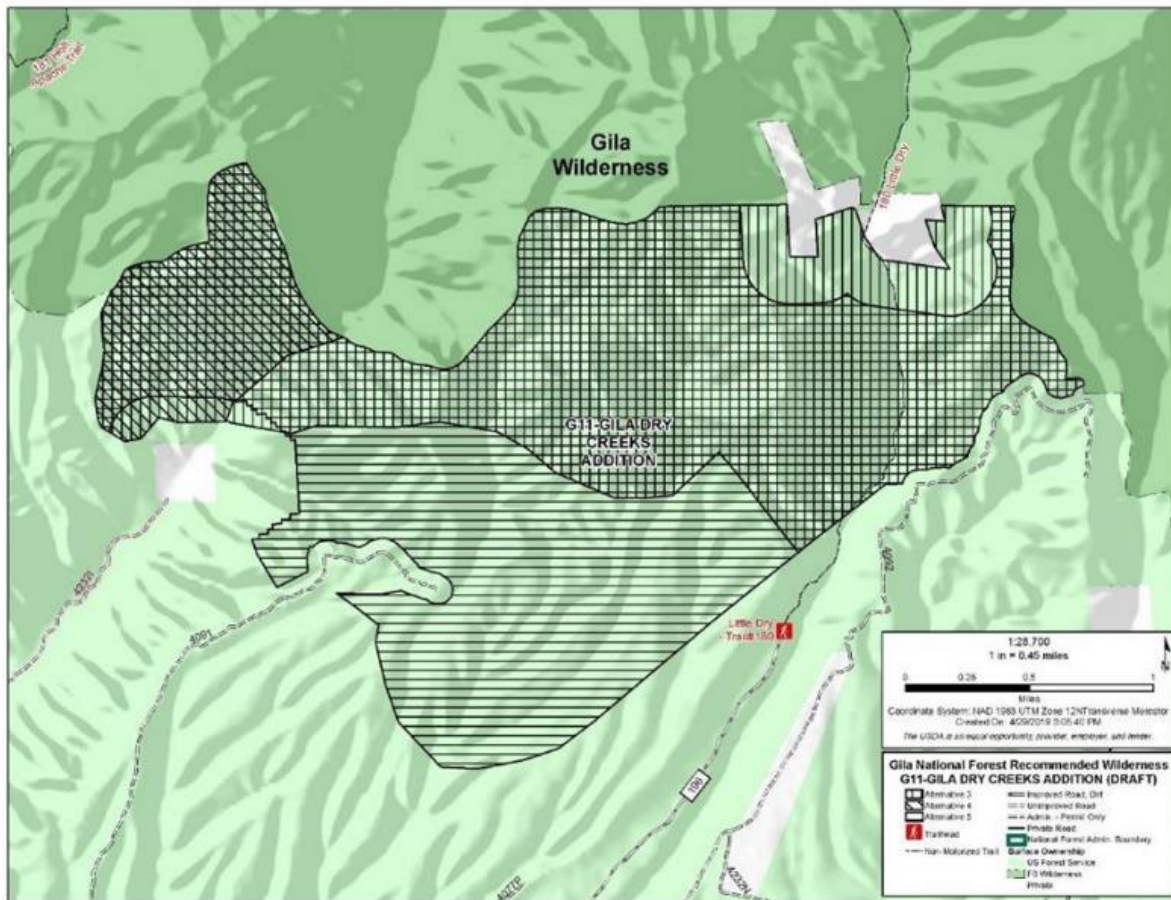


Figure H-35. Recommended wilderness by alternative for G11 – Gila Dry Creeks Addition

G12 – Gila Whitewater Addition

This area is in the central portion of the Glenwood Ranger District within Catron County. The Gila Wilderness forms the southern boundary. The Bursum Road roughly defines the northern boundary. Alternative 2 recommends a 1,960-acre area. Alternative 3 recommends a 3,116-acre area, and alternative 5 recommends a 2,223-acre area. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-36.

The terrain is very steep and challenging. It is entirely within inventoried roadless area and managed to preserve roadless characteristics. In alternatives 2, 3, and 5, this area creates continuity between the Gila Wilderness and the G1-Mineral Creek recommended area. Very little management activity has occurred in the area and is unlikely to occur in the future, mostly due to the terrain. Grazing is not currently permitted. Modern land management activity is only noticeable in some locations closest to the Bursum Road. There are few improvements that provide a limited contribution to the historical and cultural character and context of the area. Outside of hunting and antler gathering seasons the likelihood of encountering other visitors is very low. There are excellent opportunities for solitude and few limitations on the pursuit and types of primitive and unconfined recreation. There is access to many trails providing such opportunities.

Table H-34. Evaluated wilderness characteristics of the G12 – Gila Whitewater Addition

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	7
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE/HIGH	13.7

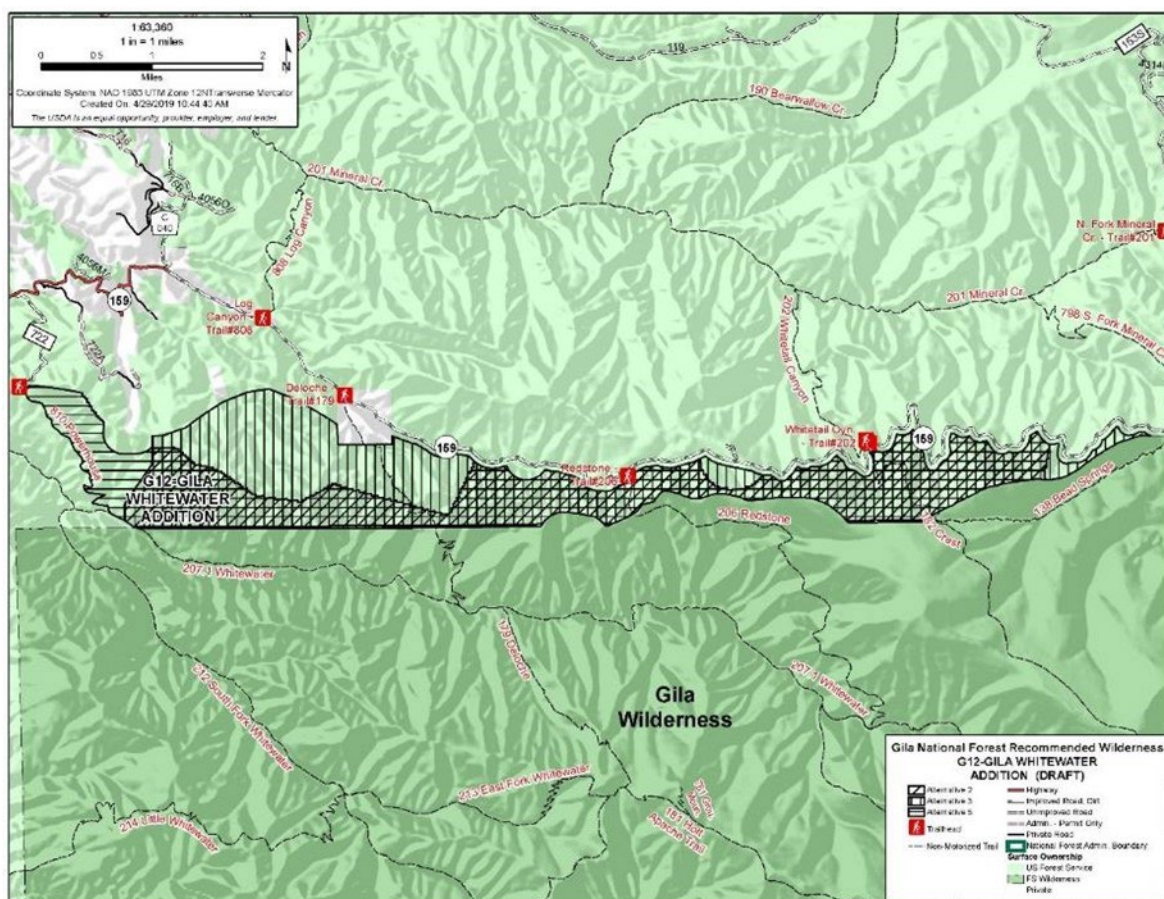


Figure H-36. Recommended wilderness by alternative for G12 – Gila Whitewater Addition

B1a – Aldo Leopold Seco Addition

This area is in the east-central portion of the Black Range Ranger District within Sierra County, New Mexico. It extends from Aldo Leopold Wilderness boundary in the west, to the forest boundary in the east. Alternative 2 recommends a 4,724-acre area, alternative 3 recommends 517-acre area, alternative 4 recommends 4,031-acre area, and alternative 5 a 5,741-acre area. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-37.

The terrain is moderately to very steep, complex and rugged. Vegetation communities include a mix pinyon-juniper woodlands and ponderosa pine and mixed conifer forests, depending on elevation and slope aspect. The excellent scenery and habitat for the federally listed Chiricahua leopard frog in Seco Creek are considered other features of value.

The area is almost entirely within an inventoried roadless area and is managed to preserve roadless characteristics. Very little management activity has occurred and is not likely to occur in the future primarily due to terrain. Permitted livestock grazing occurred historically but is not currently permitted. It lies within the Animas and Hermosa grazing allotments. There is only minor evidence of modern land management activity near the outside boundaries of the area. This includes a low density of improvements, mostly concentrated in localized areas near the boundaries, some of which impose limitations on apparent naturalness. Opportunities for solitude are high outside of hunting and antler gathering seasons as the likelihood of encountering other visitors is low. Opportunities for primitive and unconfined recreation are likewise very good.

Table H-35. Evaluated wilderness characteristics of the B1a – Aldo Leopold Seco Addition

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	7
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	HIGH	14.3

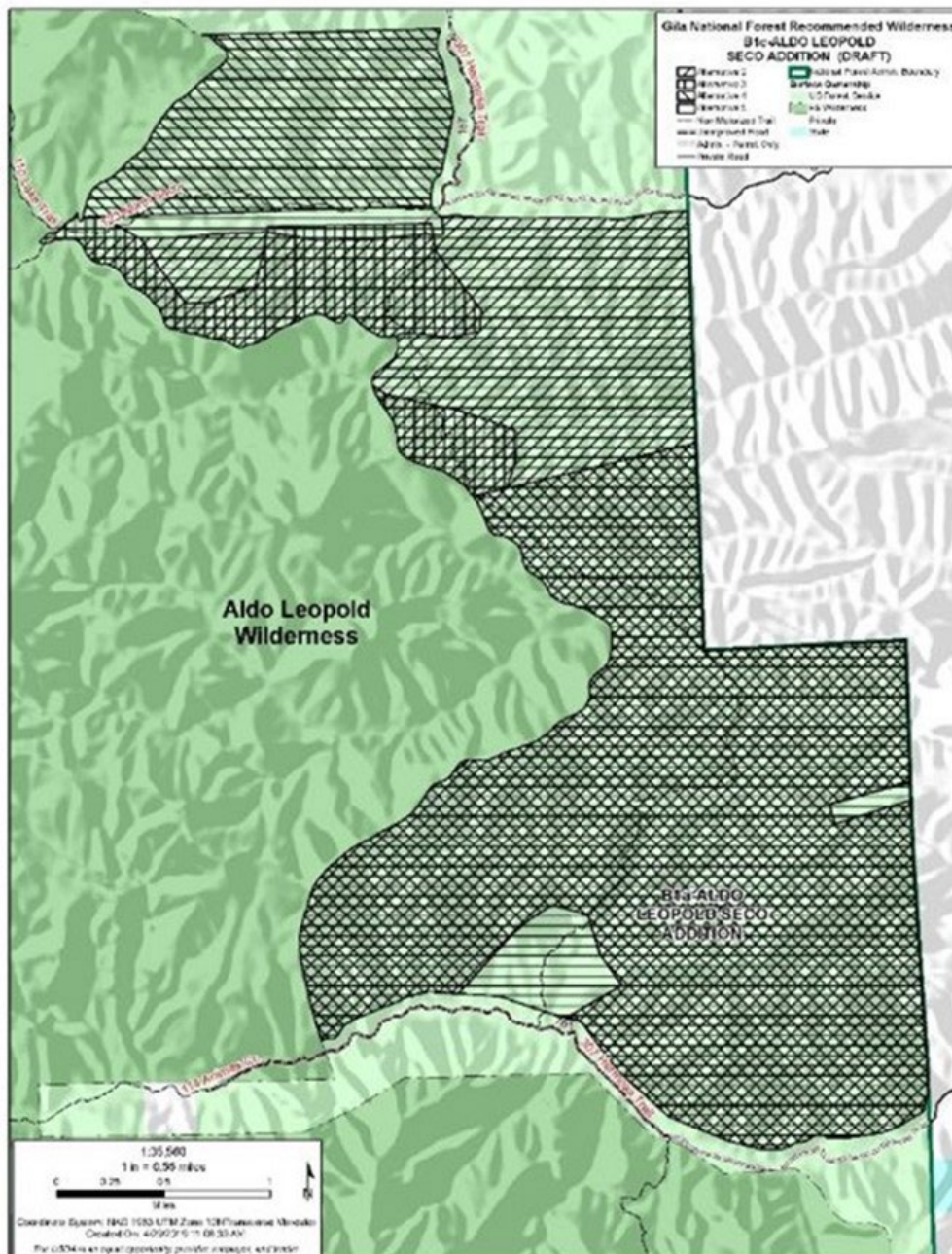


Figure H-37. Recommended wilderness by alternative for B1a – Aldo Leopold Seco Addition

B1b – Aldo Leopold Seco Addition

This area is in the east-central portion of the Black Range Ranger District within Sierra County, New Mexico. It shares boundaries with the Aldo Leopold Wilderness. Alternative 3 recommends a 208-acre area and alternative 5 recommends a 229-acre area. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-38.

The moderate to rugged terrain is vegetated by pinyon-juniper woodlands and ponderosa pine and mixed conifer forests, depending on elevation and slope aspect. Its excellent scenery is considered another feature of value. A portion of this area is within inventoried roadless area and managed to preserve roadless characteristics. Very little management activity has occurred and is not likely to occur in the

future primarily due to terrain. Permitted livestock grazing occurred historically but is not currently permitted. It lies within the Animas grazing allotment. There is only minor evidence of modern land management activity near the outside boundaries of the area. This includes a low density of improvements, mostly concentrated in localized areas near the boundaries, some of which impose limitations on apparent naturalness. Opportunities for solitude are high outside of hunting and antler gathering seasons as the likelihood of encountering other visitors is low. Opportunities for primitive and unconfined recreation are likewise very good.

Table H-36. Evaluated wilderness characteristics of the B1b – Aldo Leopold Seco Addition

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	7
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	HIGH	14.3

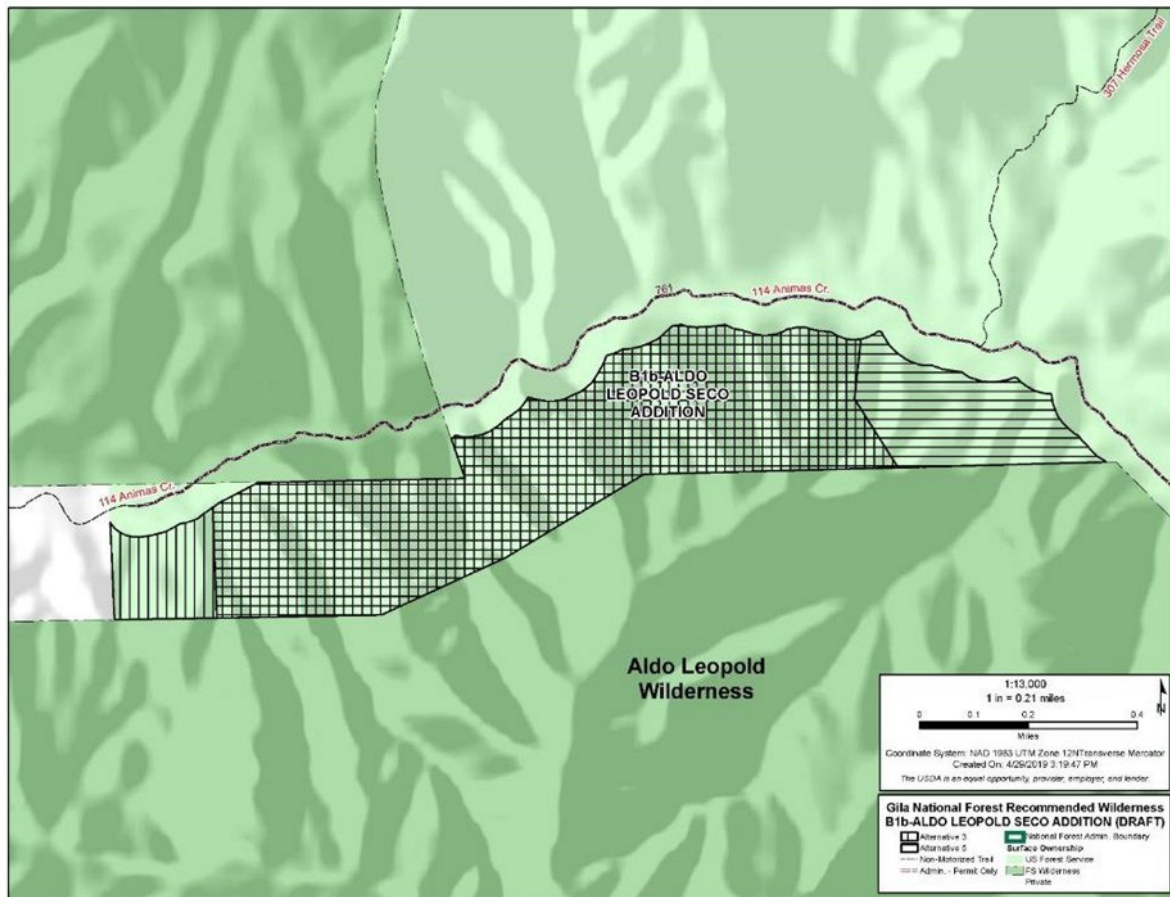


Figure H-38. Recommended wilderness by alternative for B1b – Aldo Leopold Seco Addition

B1c – Aldo Leopold Seco Addition

This area is in the east-central portion of the Black Range Ranger District within Sierra County, New Mexico. It is bounded by the Aldo Leopold Wilderness on three sides and a private property inholding on one side. Alternatives 2 and 5 recommend a 48-acre area, alternative 3 a 78-acre area, and alternative 4 a 40-acre area. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-39.

The moderate to rugged terrain is vegetated by pinyon-juniper woodlands and ponderosa pine and mixed conifer forests, depending on elevation and slope aspect. Its excellent scenery is considered another feature of value. There is no inventoried roadless area. However, very little management activity has occurred and is not likely to occur in the future primarily due to terrain. Permitted livestock grazing occurred historically but is not currently permitted. It lies within the Animas grazing allotment. There is only minor evidence of modern land management activity near the outside boundaries of the area. This includes a low density of improvements, mostly concentrated in localized areas near the boundaries, some of which impose limitations on apparent naturalness. Opportunities for solitude are high outside of hunting and antler gathering seasons as the likelihood of encountering other visitors is low. Opportunities for primitive and unconfined recreation are likewise very good.

Table H-37. Evaluated wilderness characteristics of the B1c – Aldo Leopold Seco Addition

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	7
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	HIGH	14.3

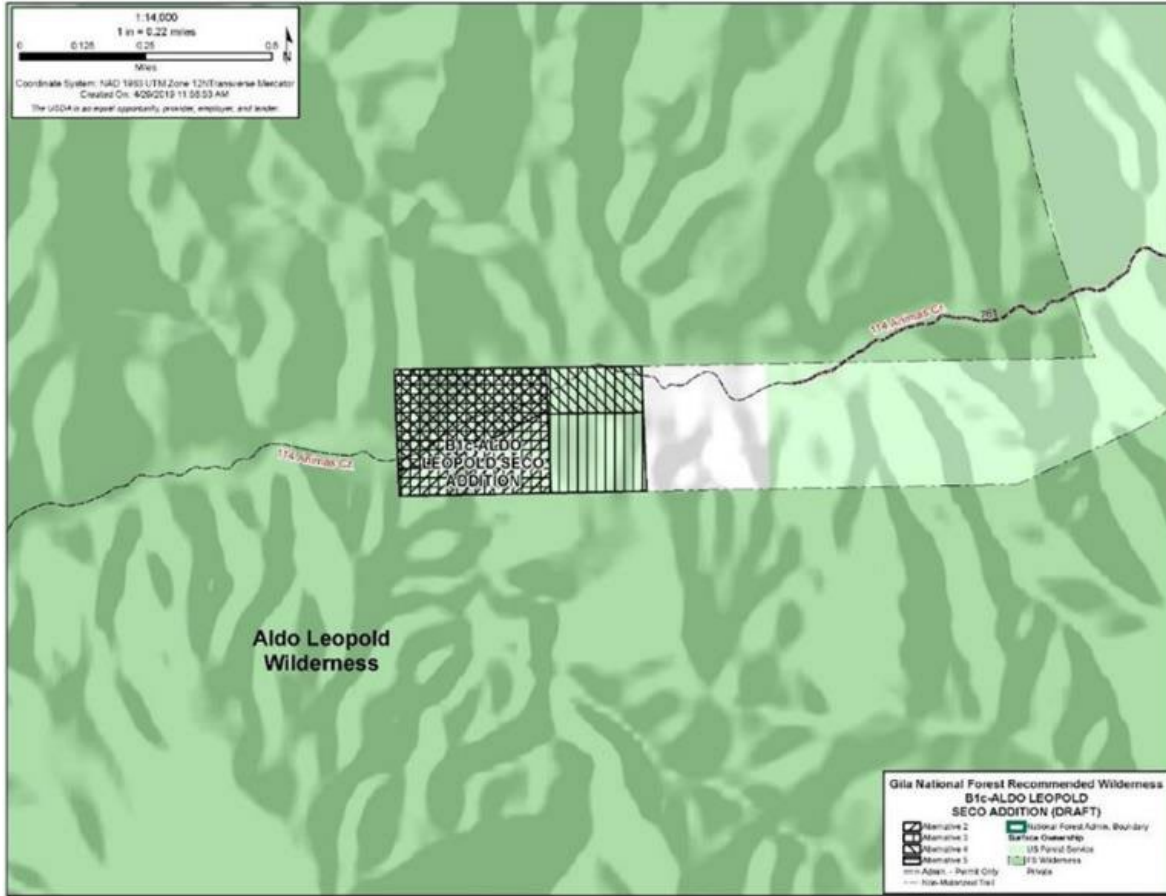


Figure H-39. Recommended wilderness by alternative for B1c – Aldo Leopold Seco Addition

B5 – Stone Creek

An 8,383-acre area is recommended by alternative 5 only. It is located along the northeastern forest boundary in the Black Range Ranger District within Catron County, New Mexico. For detailed boundary locations see Figure H-40.

The rugged and heavily dissected terrain is dominated by pinyon-juniper woodlands with ponderosa pine in drainages. It includes a short section of the Continental Divide National Scenic Trail. The area is mostly within inventoried roadless areas managed to preserve roadless characteristics. Very little management activity has occurred and is unlikely to occur in the future, mostly due to the terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the North Wahoo and South Wahoo grazing allotments. There is only minor evidence of modern land management activity. There are relatively few improvements, but they are concentrated in some locations. There is a low likelihood of encountering other visitors outside of hunting and antler gathering seasons, providing good opportunities for solitude. There are few limitations to the types and pursuit of primitive and unconfined recreation, although opportunities are moderate compared to areas nearby and elsewhere in the forest. Few trails, challenging terrain and adjacent private property make it difficult to access much of the area.

Table H-38. Evaluated wilderness characteristics of the B5 – Stone Creek

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (SOLITUDE) MODERATE (RECREATION)	6
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	11.3

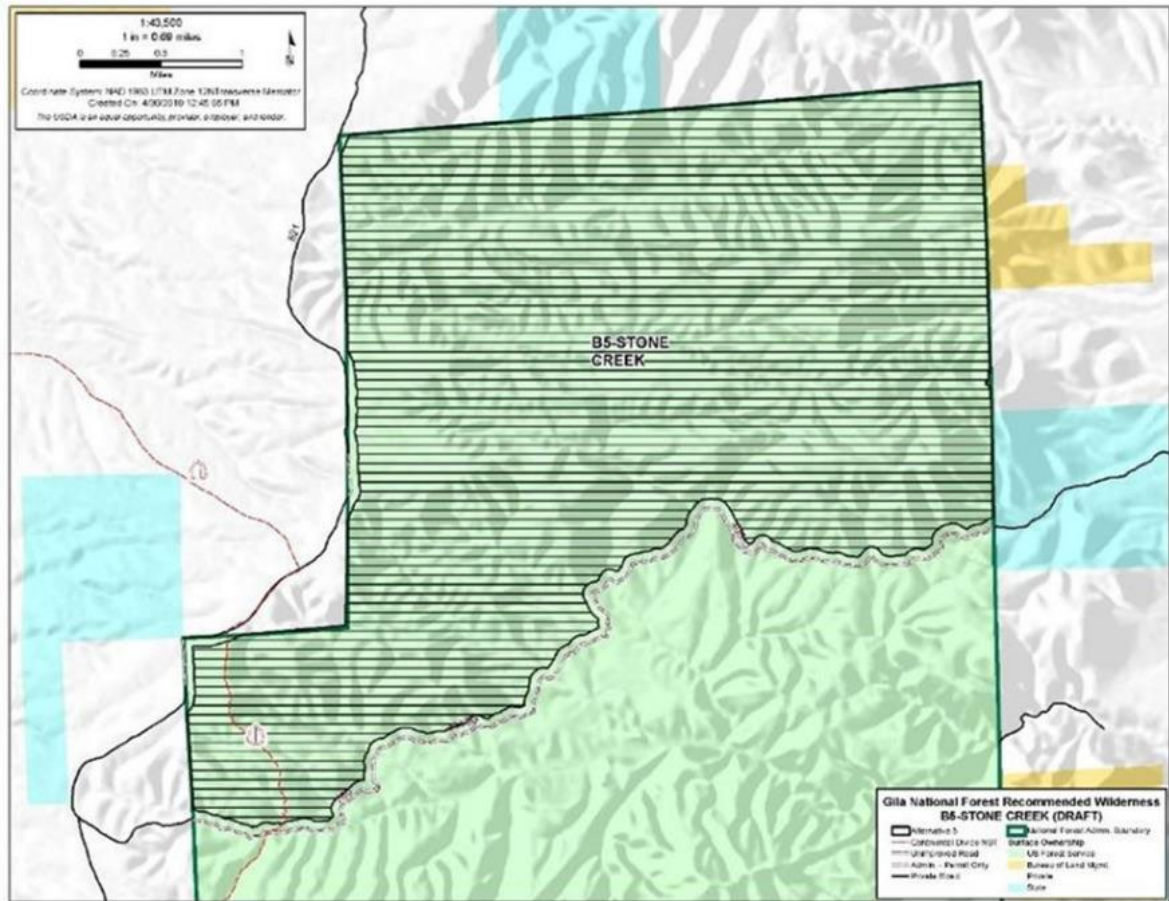


Figure H-40. Recommended wilderness by alternative for B5 – Stone Creek

B8 – Beaverhead

An 8,055-acre area is recommended by alternative 5 only. It is in the northwest portion of the Black Range Ranger District just north of New Mexico Highway 59 and the Beaverhead work center in Catron County, New Mexico. For detailed boundary locations see Figure H-41.

The moderately rugged and dissected terrain is dominated by grassland vegetation communities representing the southernmost extension of the Plains of San Agustin. These grasslands, extensive views to the Plains and the presence of pronghorn are considered other features of value. There are no

inventoried roadless areas. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Black Mountain grazing allotment. Modern land management activity is noticeable in some locations. There is a low density of improvements overall, but they are concentrated in some places. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is low and there are few limitations to the types and pursuits of primitive and unconfined recreation.

Table H-39. Evaluated wilderness characteristics of the B8 – Beaverhead

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (BOTH)	5
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE	9

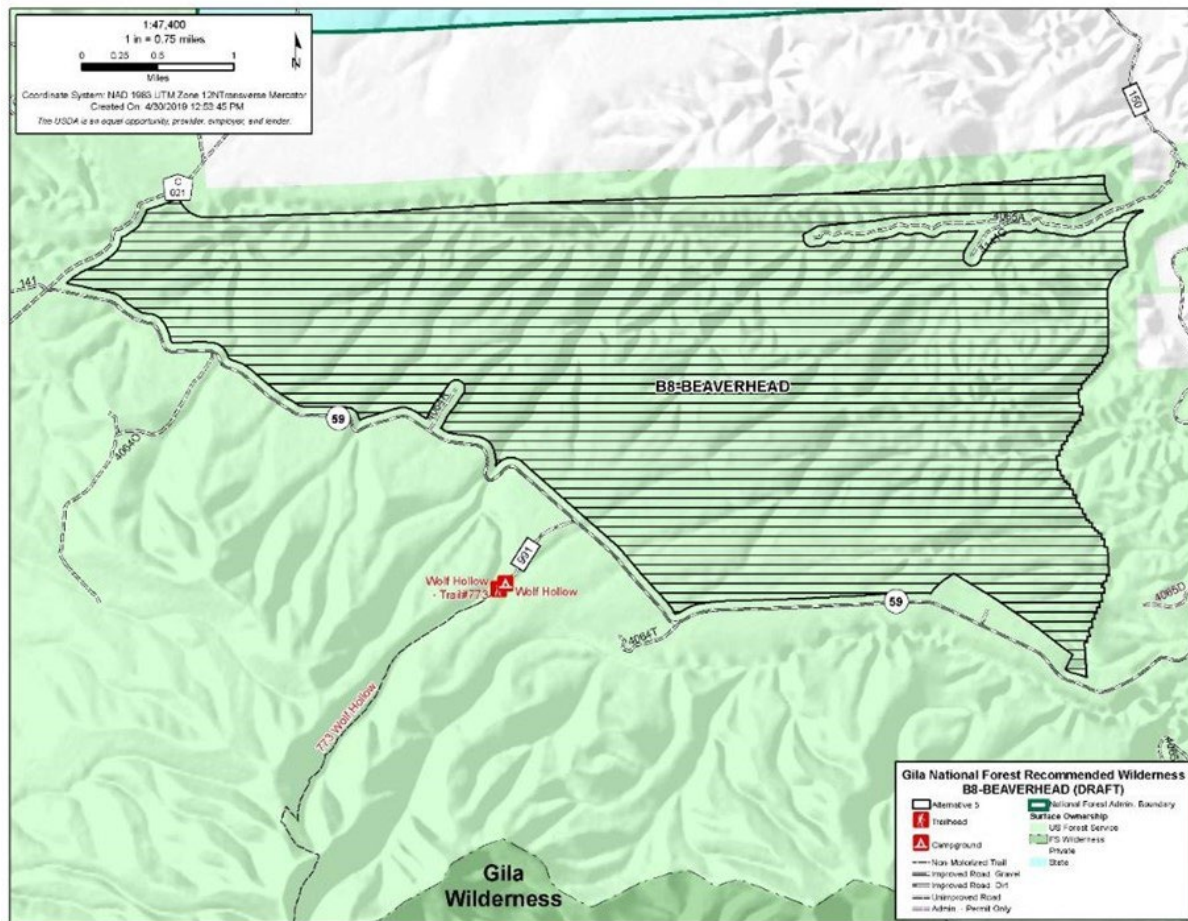


Figure H-41. Recommended wilderness by alternative for B8 – Beaverhead

B9 – Aldo Leopold Addition East

An 11,909-acre area is recommended by alternative 4 only. It is in the central Black Range Ranger District within Sierra County, New Mexico. Its western boundary is the Aldo Leopold Wilderness. For detailed boundary locations see Figure H-42.

This is a rugged, mountainous area dissected by drainages. Vegetation communities range from pinyon-juniper woodlands to ponderosa pine and mixed conifer forests, depending upon elevation and slope aspect. Parts of the area are deeply intruded by cherrystemmed roads and private property inholdings. The Circle Seven Trail #106, Rattlesnake Trail #107, and Spud Patch Trail #111 all pass through the area, as well as Morgan and Spud Patch Creeks.

Most of the area is inventoried roadless area managed to preserve roadless characteristics. Very little management activity has occurred or is likely to occur in the future, mostly due to terrain. Permitted livestock grazing is a historic and ongoing use in part of the area, which is part of the North Palomas and Hermosa grazing allotments. Modern land management activity is noticeable in some locations where improvements are concentrated and impose limitations on apparent naturalness. However, the density of improvements is low overall. There are moderate opportunities for primitive and unconfined recreation as compared to areas nearby and elsewhere in the forest.

Table H-40. Evaluated wilderness characteristics of the B9 – Aldo Leopold Addition East

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	LOW	2.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (RECREATION) LOW (SOLITUDE)	3
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	LOW	5.7

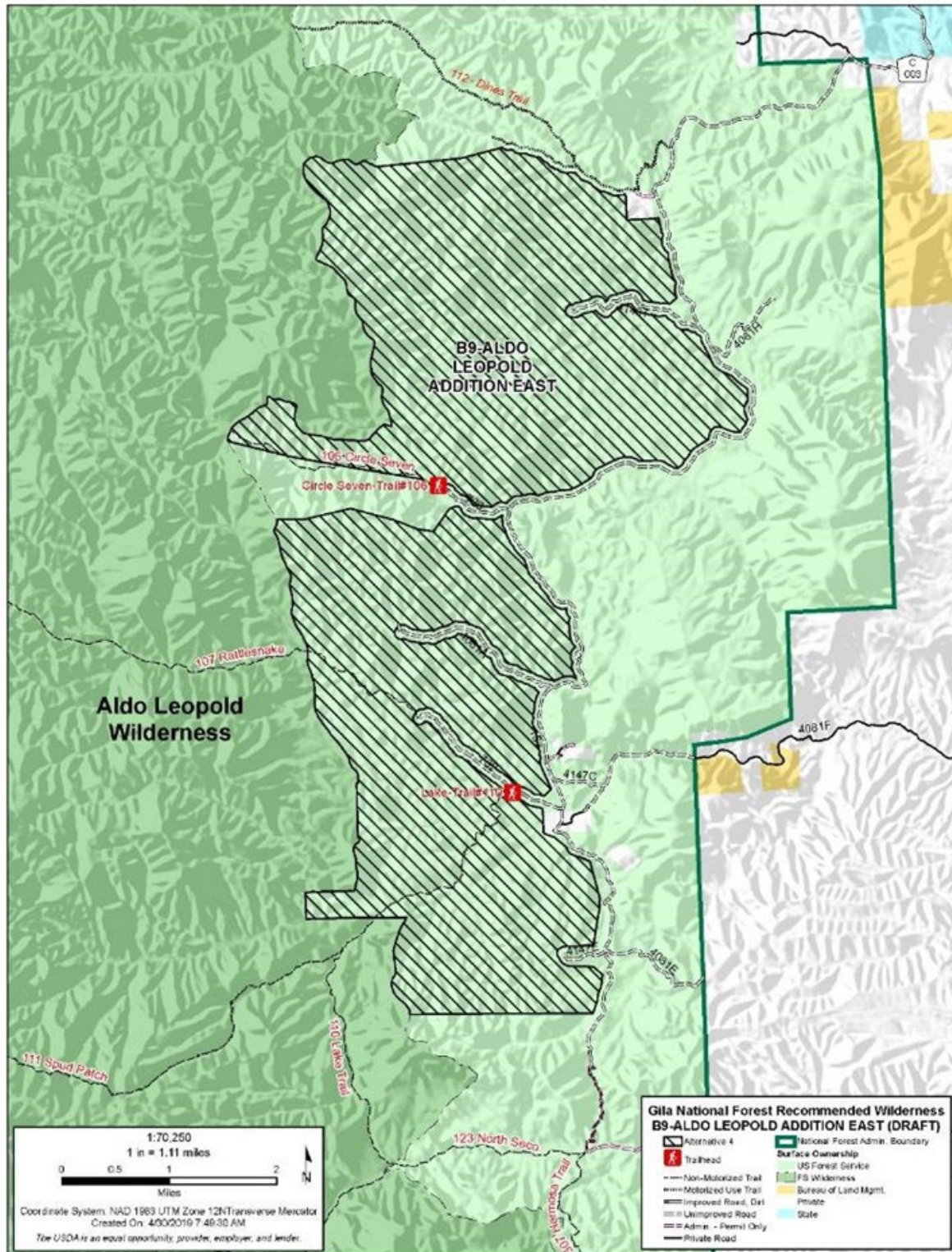


Figure H-42. Recommended wilderness by alternative for B9 – Aldo Leopold Addition East

B10 – Aldo Leopold Addition Northeast

This area lies between the north-northeastern boundary of the Aldo Leopold Wilderness and eastern forest boundary in the central portion of the Black Range Ranger District within Sierra County, New Mexico. Alternative 2 recommends an 8,381-acre area, alternative 3 recommends a 4,076-acre area, and alternative 5 recommends a 15,181-acre area. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-43.

This is a rugged, mountainous area dissected by drainages. Vegetation communities range from pinyon-juniper woodlands to ponderosa pine and mixed conifer forests, depending upon elevation and slope aspect. It contains a section of the Continental Divide National Scenic Trail and most of it lies within inventoried roadless area, managed to preserve roadless characteristics. In other locations, the area is deeply intruded by cherry stemmed roads and private property inholdings. However, very little management activity has occurred within the area and is not likely in the future, mostly due to terrain. Permitted livestock grazing is a historic and ongoing use. The area is part of the South Fork and Palomas grazing allotments. Other features of value include an active fire history and protected activity centers for the Mexican spotted owl. There is limited evidence of modern land management activity, mostly along the area's boundaries and cherry stemmed roads. There are few improvements, but there is a nearby mining complex just outside the boundary. Despite some impacts from cherry stemmed roads and private property inholdings, there are good opportunities for solitude and primitive or unconfined recreation.

Table H-41. Evaluated wilderness characteristics of the B10 – Aldo Leopold Addition Northeast

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	7
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	HIGH	14.3

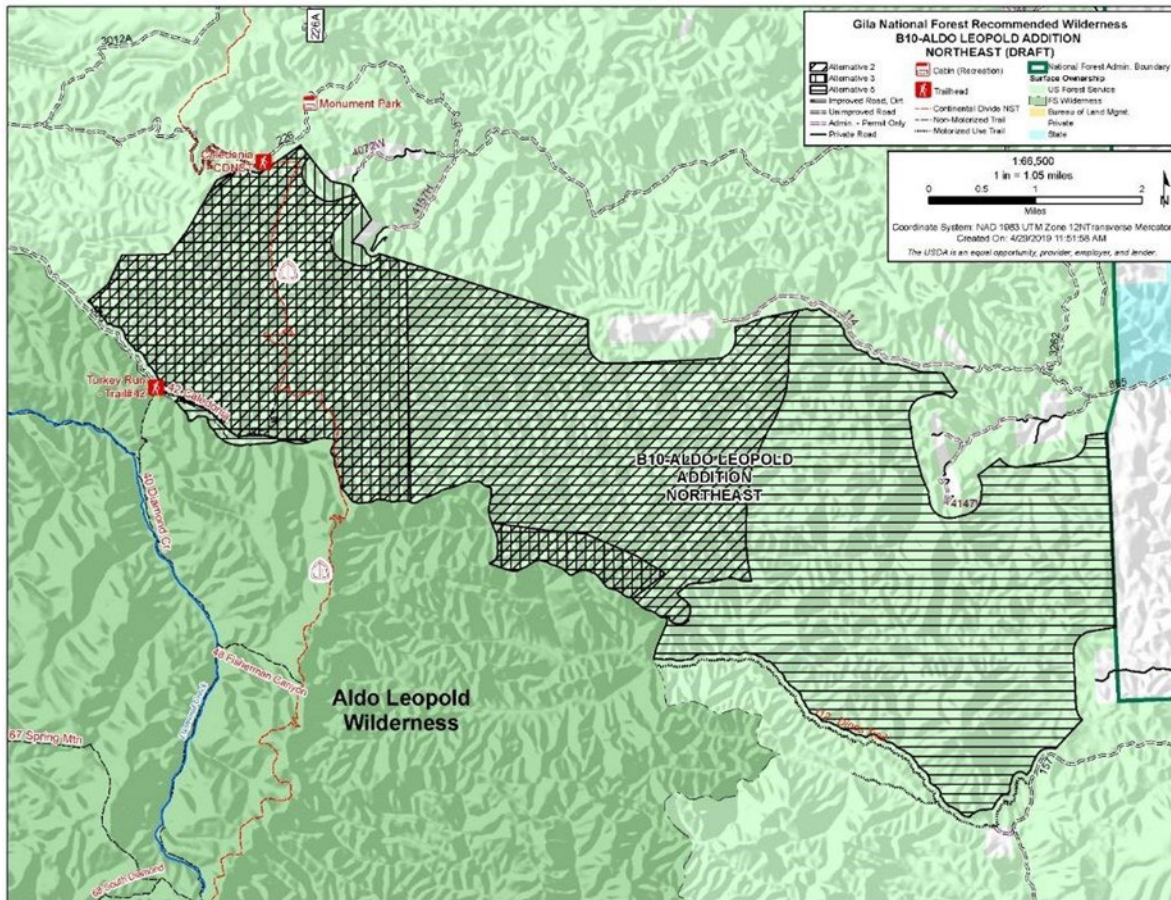


Figure H-43. Recommended wilderness by alternative for B10 – Aldo Leopold Addition Northeast

B11 – Aldo Leopold Addition Southeast

This area lies between the northeastern boundary of the Aldo Leopold Wilderness and eastern forest boundary in the central portion of the Black Range Ranger District within Sierra County, New Mexico. Alternative 2 recommends a 944-acre area, alternative 3 recommends a 943-acre area, alternative 4 recommends a 4,943-acre area, and alternative 5 recommends a 15,181-acre area. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see figure h-44.

This is a rugged, mountainous area dissected by drainages. Vegetation communities range from pinyon-juniper woodlands to ponderosa pine and mixed conifer forests, depending upon elevation and slope aspect. It lies mostly within inventoried roadless area, managed to preserve roadless characteristics. Long-range views from the #307 Hermosa trail and excellent scenery are considered other features of value. Very little management activity has occurred or is likely to occur in the future, mostly due to terrain. Permitted livestock grazing is a historic and ongoing use in the area, which is part of the Kingston grazing allotment. Evidence of modern land management activity noticeable in some locations close to the outside boundaries. There are few improvements, but are be concentrated in some locations, limiting apparent naturalness. Mining and reclamation activities within the area are visible from Bald Hill, but not the trail. There is very little range fencing as natural barriers provide this functionality. This area sees very little visitation, even during hunting and antler gathering seasons and there are very good opportunities for solitude and primitive or unconfined recreation year-round.

Table H-42. Evaluated wilderness characteristics of the B11 – Aldo Leopold Addition Southeast

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (Both)	6
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE/HIGH	12.7

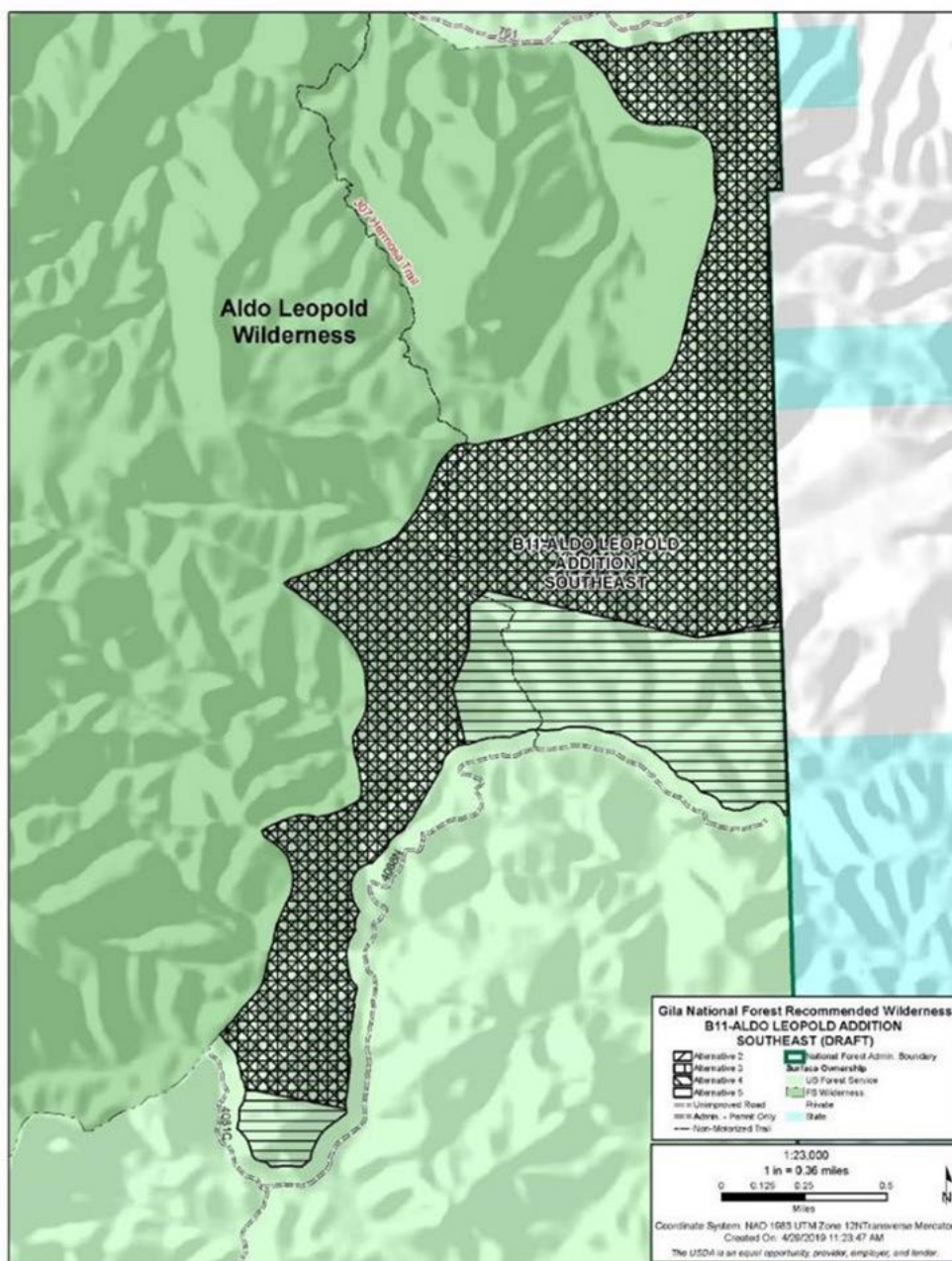


Figure H-44. Recommended wilderness by alternative for B11 – Aldo Leopold Addition Southeast

B13 – Wahoo North

A 19,737-acre area is recommended by alternative 5 only. It is located along the northeastern forest boundary in the Black Range Ranger District within Catron County, New Mexico. For detailed boundary locations see Figure H-45.

Highly variable and moderately rugged terrain pinyon-juniper woodland and ponderosa pine or mixed conifer, driven by elevation and slope aspect. It contains a section of the Continental Divide National Scenic and the Duck Canyon Trail #60. Prominent peaks in this area include Bear Mountain and Wahoo Mountain. Most of the area is within inventoried roadless area and is managed to preserve roadless characteristics. Very little management activity has occurred or is likely to occur in the future, mostly due to terrain. Permitted livestock grazing is a historic and ongoing use in the area, which is part of the Wahoo North, Wahoo South, V + T, and Silver Creek grazing allotments. Modern land management activity is noticeable in some locations, limiting apparent naturalness. There are moderate opportunities for solitude and high opportunities for primitive and unconfined recreation in comparison to other areas nearby and elsewhere in the forest.

Table H-43. Evaluated wilderness characteristics of the B13 – Wahoo North

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (RECREATION) MODERATE (SOLITUDE)	6
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	11.3

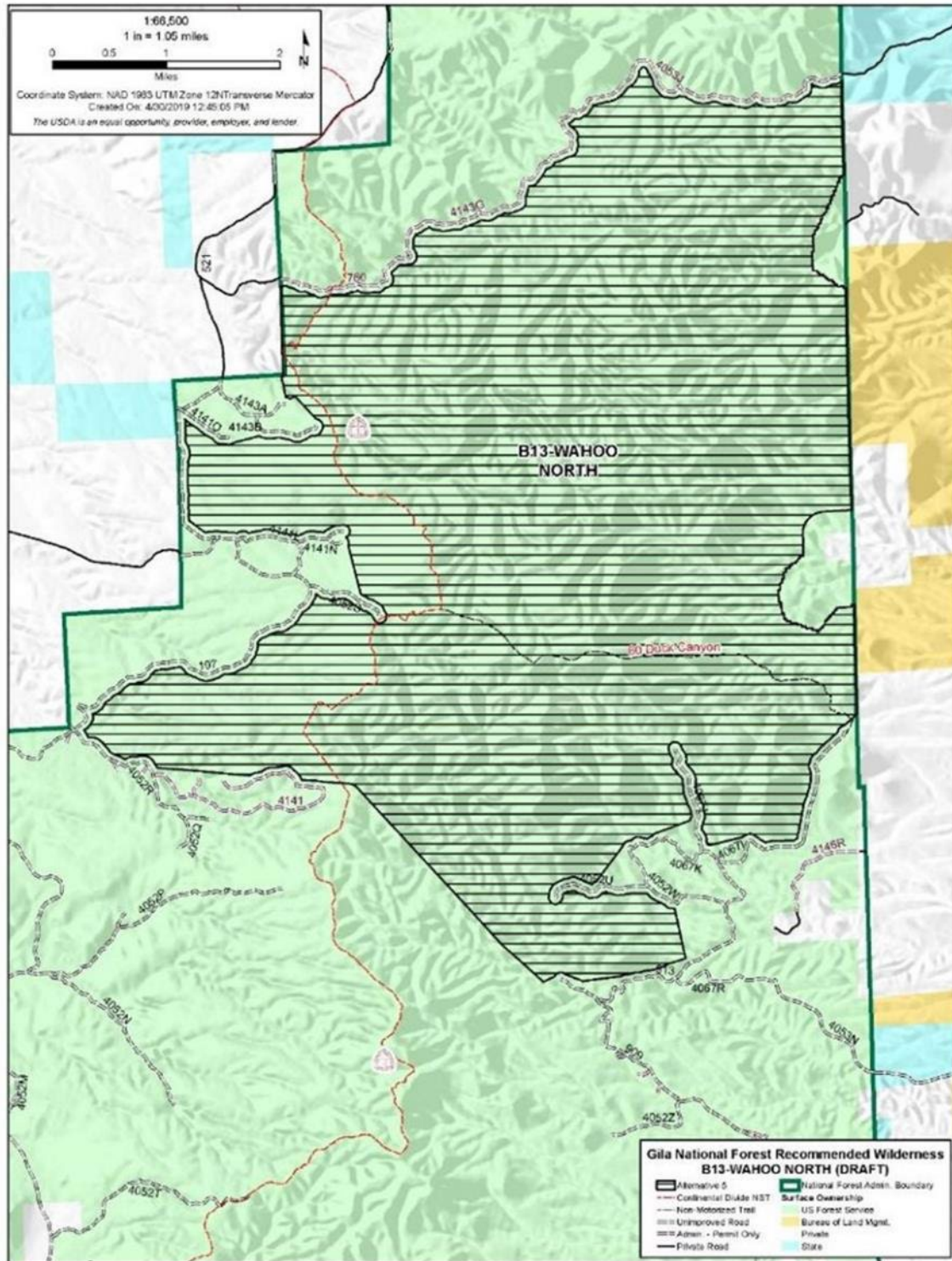


Figure H-45. Recommended wilderness by alternative for B13 – Wahoo North

B14 – Aldo Leopold Addition Carbonate Creek

This area contiguous to the Aldo Leopold Wilderness in the east-central portion of the Black Range Ranger District within Sierra County, New Mexico. Alternative 2 recommends a 2,819-acre area, alternative 3 a 3,592-acre area, and alternative 5 a 4,546-acre area. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-46

The area's rugged, mountainous terrain supports pinyon-juniper woodland and ponderosa pine or mixed conifer, driven by elevation and slope aspect. Less than half of the area is within inventoried roadless area and managed to preserve roadless characteristics. Parts of the area have seen mining activity in the past. There are private property inholdings and some prospecting activity, as well as private property and active mining adjacent to the area. However, very little management activity has occurred and is unlikely in the future, mostly due to terrain. Permitted grazing is a historic and ongoing use of the area, which is part of the Kingston grazing allotment. There is minor evidence of modern land management activity, mostly in locations close to the outside boundary. Improvements are few, not substantially noticeable, and not concentrated in any location. There are some constructed earthen tanks providing livestock water and old roadbeds, but there is not a lot of range fencing. The area does not see much visitation and there are very good opportunities for solitude. Opportunities for primitive and unconfined recreation are even better, with lots of trail access and excellent views.

Table H-44. Evaluated wilderness characteristics of the B14 – Aldo Leopold Addition Carbonate Creek

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	OUTSTANDING (RECREATION) HIGH (SOLITUDE)	8
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	HIGH	14

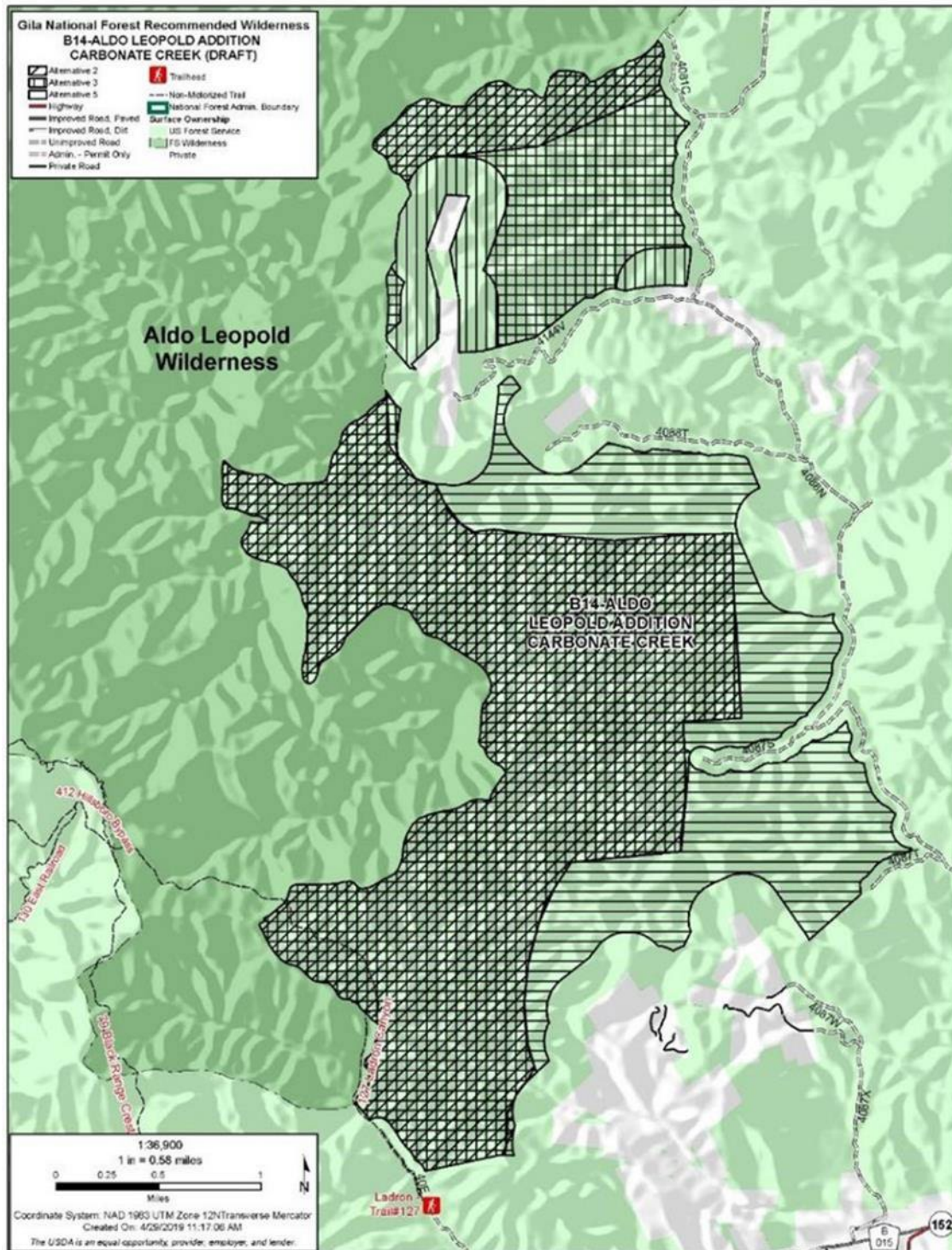


Figure H-46. Recommended wilderness by alternative for B14 – Aldo Leopold Addition Carbonate Creek

SB1 – Sawyer Peak

This area in the Black Range Mountains lies south of New Mexico State Highway 152 in the Silver City Ranger District and includes portions of Grant and Sierra Counties. Alternative 3 recommends a 21,007-acre area, alternative 4 a 23,353-acre area, and alternative 5 a 39,150-acre area. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-47.

The predominantly steep and rugged terrain supports pinyon-juniper woodland and ponderosa pine or mixed conifer, driven by elevation and slope aspect. Parts of the area were heavily impacted by the 2013 Silver Fire. It is almost entirely within inventoried roadless area, managed to preserve roadless characteristics. Very little management activity has occurred and is unlikely to occur in the future, largely due to terrain. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Gallinas, Cold/Hot Springs, Berenda, and Carrizo grazing allotments. There is a low density of improvements, with some providing a limited contribution to the historical character and cultural context of the area. Outside of hunting and antler gathering seasons, there is a low likelihood of encountering other visitors and there are excellent opportunities for solitude. There are few limitations to the types and pursuit of primitive and unconfined recreation opportunities with some trails providing access.

Table H-45. Evaluated wilderness characteristics of the SB1 – Sawyer Peak

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	OUTSTANDING (SOLITUDE) HIGH (RECREATION)	8
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE/HIGH	13.7

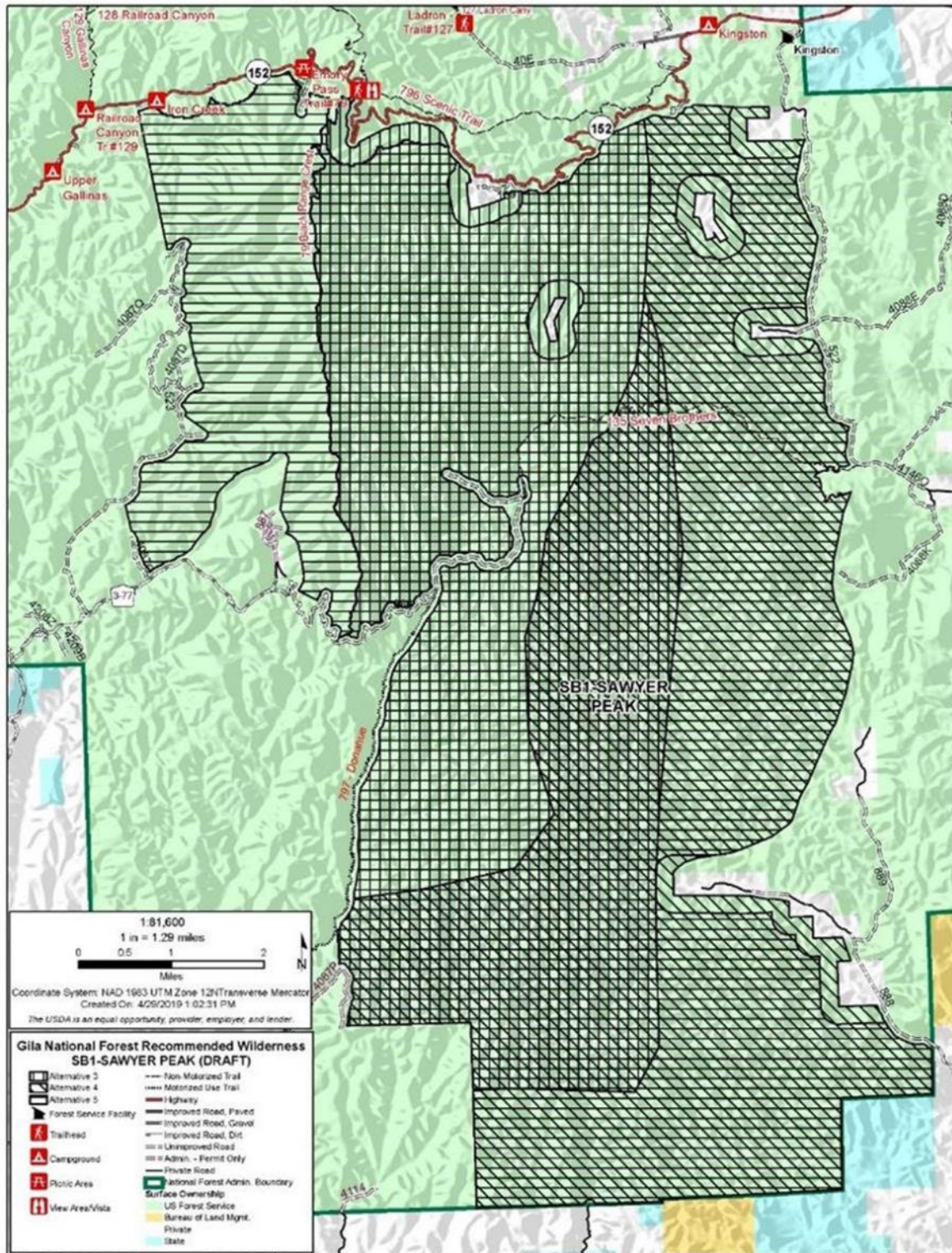


Figure H-47. Recommended wilderness by alternative for SB1 – Sawyer Peak

S1 – Mogollon Box/Tadpole Ridge

This area in the northern part of the Silver City Ranger District in Grant County, New Mexico. It shares a boundary with the Gila Wilderness. Alternative 3 recommends a 930-acre area, alternative 4 a 4,856-acre area, and alternative 5 a 46,437-acre area. Boundaries were adjusted for each alternative based on their respective criteria. For detailed boundary locations see Figure H-48.

Moderately steep to steep and rugged terrain, including deep canyons supports pinyon-juniper woodlands and ponderosa pine or mixed conifer forests, driven by elevation and slope aspect. The Gila River, Turkey Creek, Mogollon Creek, Bear Creek and Cherry Creek all pass through the larger area. The larger area also contains several trails including Tadpole Ridge #232, Sycamore Canyon #234, Goose Lake #238, and Dorsey Canyon #239. The entire area is within inventoried roadless area, managed to preserve roadless characteristics. Very little management activity has occurred and remains unlikely to occur in the future, mostly due to terrain. Permitted grazing is a historic and ongoing use of the area, which is part of the Watson Mountain, Brock Canyon, Spar Canyon, Reading Mountain, Bear Creek, and Walnut Creek grazing allotments. Watson Mountain and Brock Canyon have been closed to grazing by National Environmental Policy Act decisions.

The proposed Turkey Creek Research Natural Area, initially proposed in the 1986 plan and retained in alternatives 2 and 5, was digitally mapped here in error. The original documentation depicts the proposed area entirely within the existing Gila Wilderness. This documentation was used to correct the mapping mistake during the plan revision process. Scenic river bluffs, canyons, and rock formations provide habitat for bighorn sheep around the Gila River. Cherry Creek is also particularly scenic and is more accessible than other locations in the area. The larger area also provides important habitat for Mexican spotted owl and several other federally listed species.

Improvements are few, not substantially noticeable or concentrated in specific locations. In some instances, they provide a limited contribution to the historical and cultural context of the area. Areas of past logging and thinning are visible from Tadpole Ridge, north of the inventoried roadless area boundary. Due to its remoteness, limited roaded access and size of the larger area, there are very good opportunities for solitude in most places. System trails provide access to outstanding opportunities for solitude and very good opportunities for primitive and unconfined recreation.

Table H-46. Evaluated wilderness characteristics of the S1 – Mogollon Box/Tadpole Ridge

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	OUTSTANDING (SOLITUDE) HIGH (RECREATION)	8
Step 5 – Other Features of Value	HIGH	3
Overall Rank of Wilderness Characteristics	OUTSTANDING	17

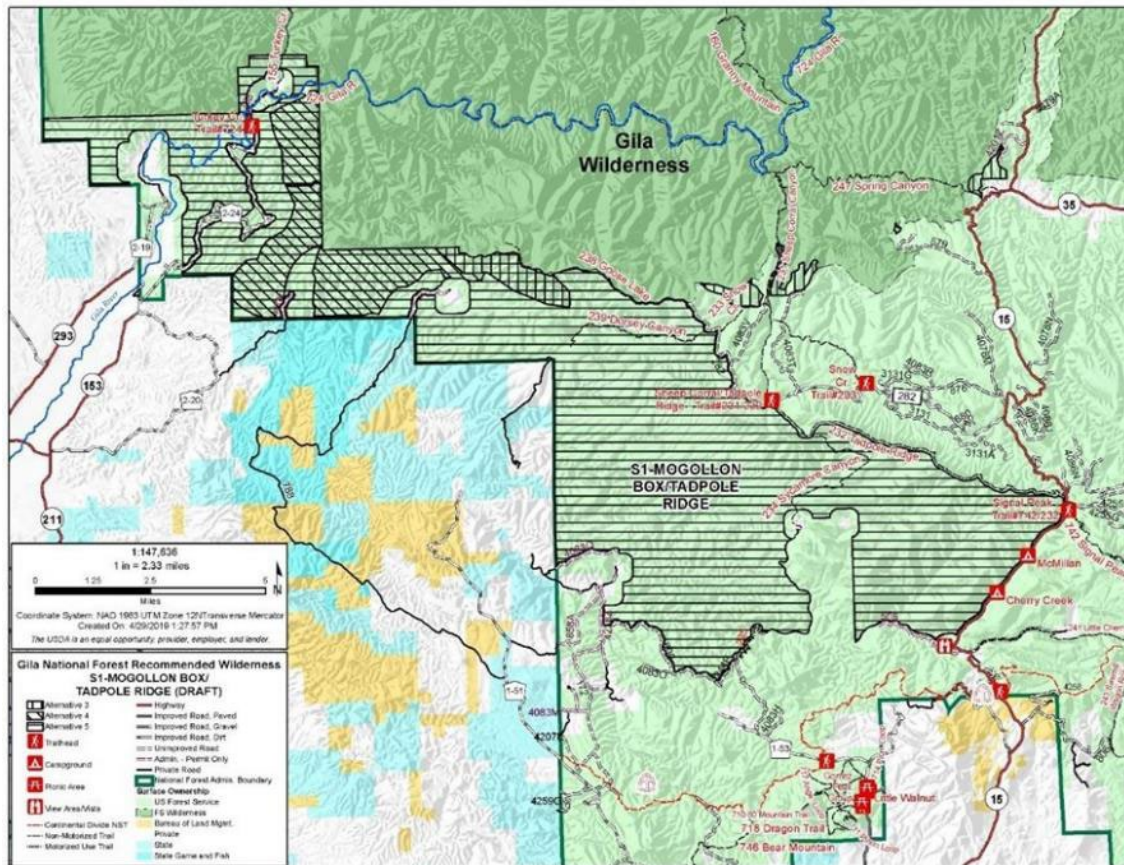


Figure H-48. Recommended wilderness by alternative for S1 – Mogollon Box/Tadpole Ridge

S2 – Gila Middle Box

This area is in the Big Burro Mountains in the southeastern part of the Silver City Ranger District within Grant County, New Mexico. Alternative 5 recommends a 24,523-acre area. For detailed boundary locations see Figure H-49.

The Gila River passes through this rugged area before leaving the forest and flowing into Arizona. The river corridor supports lush riparian vegetation communities, and the uplands are dominated by pinyon-juniper woodlands, semi-desert grasslands and shrublands. Other drainages support stringers of ponderosa pine. The Continental Divide National Scenic Trail passes through the area, and the Gila Bird Habitat Management Area and Bird Sanctuary Trail #745 follow the river corridor as far as Faucet Canyon. The designated Gila River Research Natural Area lies immediately downstream from the “Bird Area.” The area is almost all inventoried roadless area, managed to preserve roadless characteristics. Very little management activity has occurred and is unlikely to occur in the future, mostly due to limiting terrain. Permitted grazing is a historic and ongoing use of the area, which is part of the Gila River, Mangas/Silverdale, and Little Rough grazing allotments.

The outstanding whitewater boating opportunity (Class III), the Continental Divide National Scenic Trail, the research natural area, geologic formations along the river, riparian communities, scenic and cultural resources, and habitat for several federally listed species are considered other features of value. Modern land management activity is noticeable in some locations. While there are few improvements, they are generally concentrated in specific areas. Opportunities for solitude are moderate in comparison to those available nearby and elsewhere in the forest but are best within the river corridor. There are good

opportunities for primitive and unconfined recreation, especially the unique experience of boating through the box canyon. There is also good fishing.

Table H-47. Evaluated wilderness characteristics of the S2 – Gila Middle Box

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (PRIMITIVE/UNCONFINED REC)	7
Step 5 – Other Features of Value	OUTSTANDING	4
Overall Rank of Wilderness Characteristics	OUTSTANDING	16

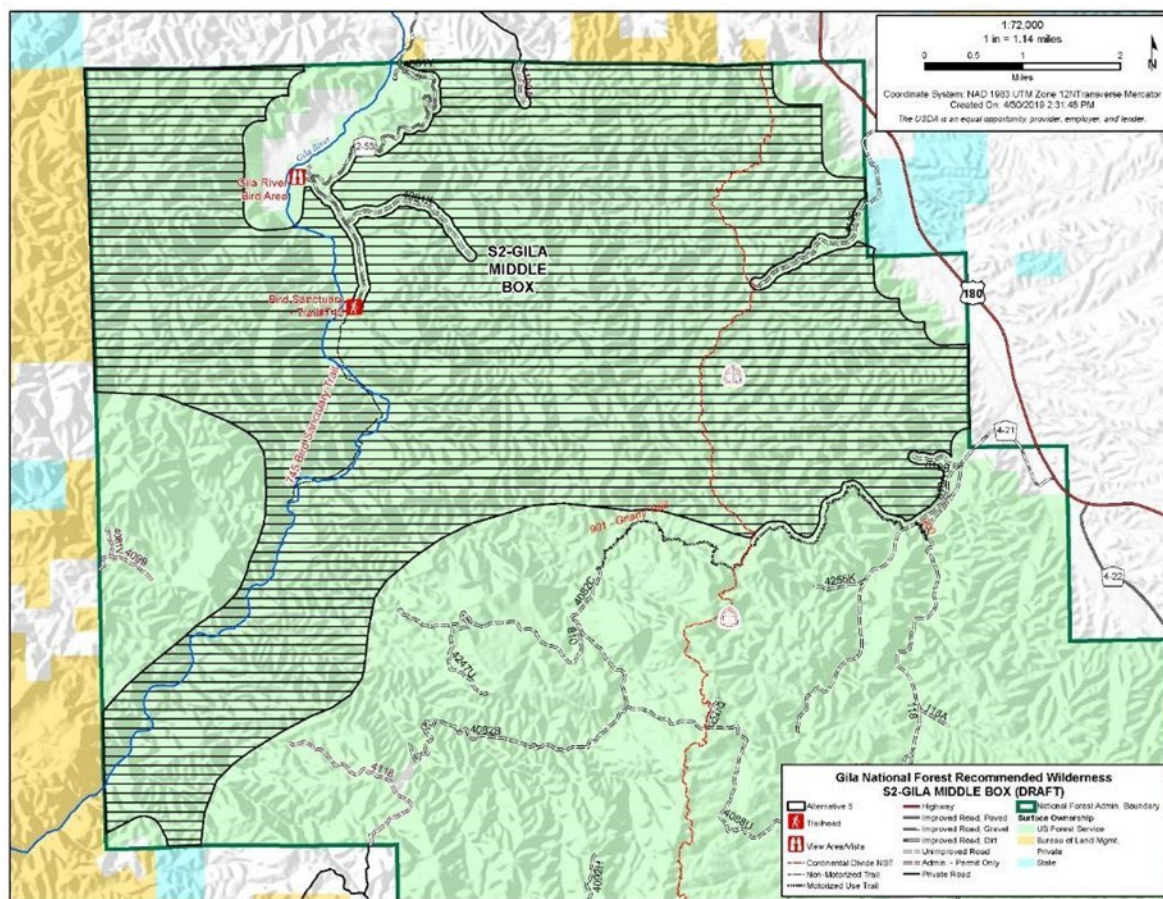


Figure H-49. Recommended wilderness by alternative for S2 – Gila Middle Box

S3 – Bear Mountain

Alternative 5 recommends a 10,056-acre area. It is in the eastern part of the Silver City Ranger District, just to the west of the Little Walnut Recreation Area in Grant County, New Mexico. The southeast boundary is the forest boundary. For detailed boundary locations see Figure H-50.

The area contains several prominent peaks, including Gomez Peak, Bear Mountain, and Stewart Peak, but much of it is open, gentle terrain. Piñon-juniper woodlands are the dominant vegetation community with ponderosa pine restricted to some drainage bottoms. Trail density is high in the eastern portion near the recreation area and Gomez Peak and includes a popular section of the Continental Divide National Scenic Trail. There are no inventoried roadless areas. Permitted grazing is a historic and ongoing use of the area which is part of the Bear Creek, Walnut Creek, and Silver City Watershed grazing allotments. The popular section of the Continental Divide National Scenic Trail, the scenic value of Bear Mountain and historic value of several Civilian Conservation Corps (CCC) erosion control features are considered other features of value. Modern land management activity is noticeable in some locations and although there are relatively few improvements, they tend to be concentrated. The area has moderate opportunities for solitude in comparison to what is available nearby and elsewhere in the forest. There are good opportunities for primitive and unconfined recreation with ample trail access.

Table H-48. Evaluated wilderness characteristics of the S3 – Bear Mountain

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (RECREATION) MODERATE (SOLITUDE)	5
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE	9

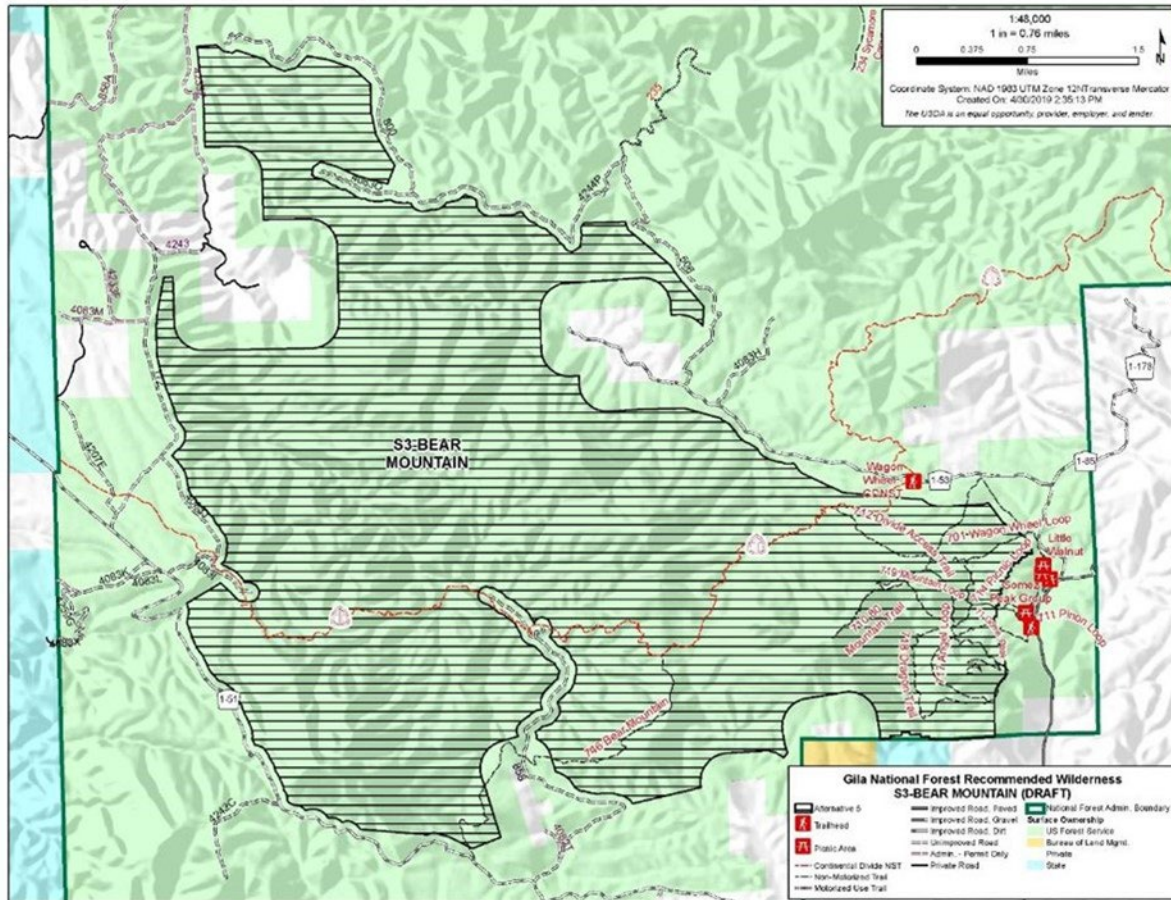


Figure H-50. Recommended wilderness by alternative for S3 – Bear Mountain

S4 – North Burros

Alternative 5 recommends a 15,556-acre area. This area is in the Big Burro Mountains on the Silver City Ranger District within Grant County, New Mexico. For detailed boundary locations see Figure H-51.

The moderate to very steep and rugged mountain and canyon terrain is dominated by pinyon-juniper woodlands with pockets of ponderosa pine. It also contains small areas of both Desert Willow and Little Walnut-Ponderosa Pine. These vegetation types are under-represented within currently designated wilderness in the forest. The Continental Divide National Scenic Trail passes through the eastern parts of the area. These under-represented vegetation types and the Trail are considered other features of value. There are no inventoried roadless areas. Permitted livestock grazing is a historic and ongoing use of the area which is part of the Bullard Peak grazing allotment. Modern land management activities are noticeable in some locations. Improvement density is generally low, and improvements are concentrated in some locations. Solitude and primitive and unconfined recreation opportunities are moderate in comparison to those available at nearby locations and elsewhere in the forest.

Table H-49. Evaluated wilderness characteristics of the S4 – North Burros

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (BOTH)	5
Step 5 – Other Features of Value	NONE	1
Overall Rank of Wilderness Characteristics	MODERATE	9

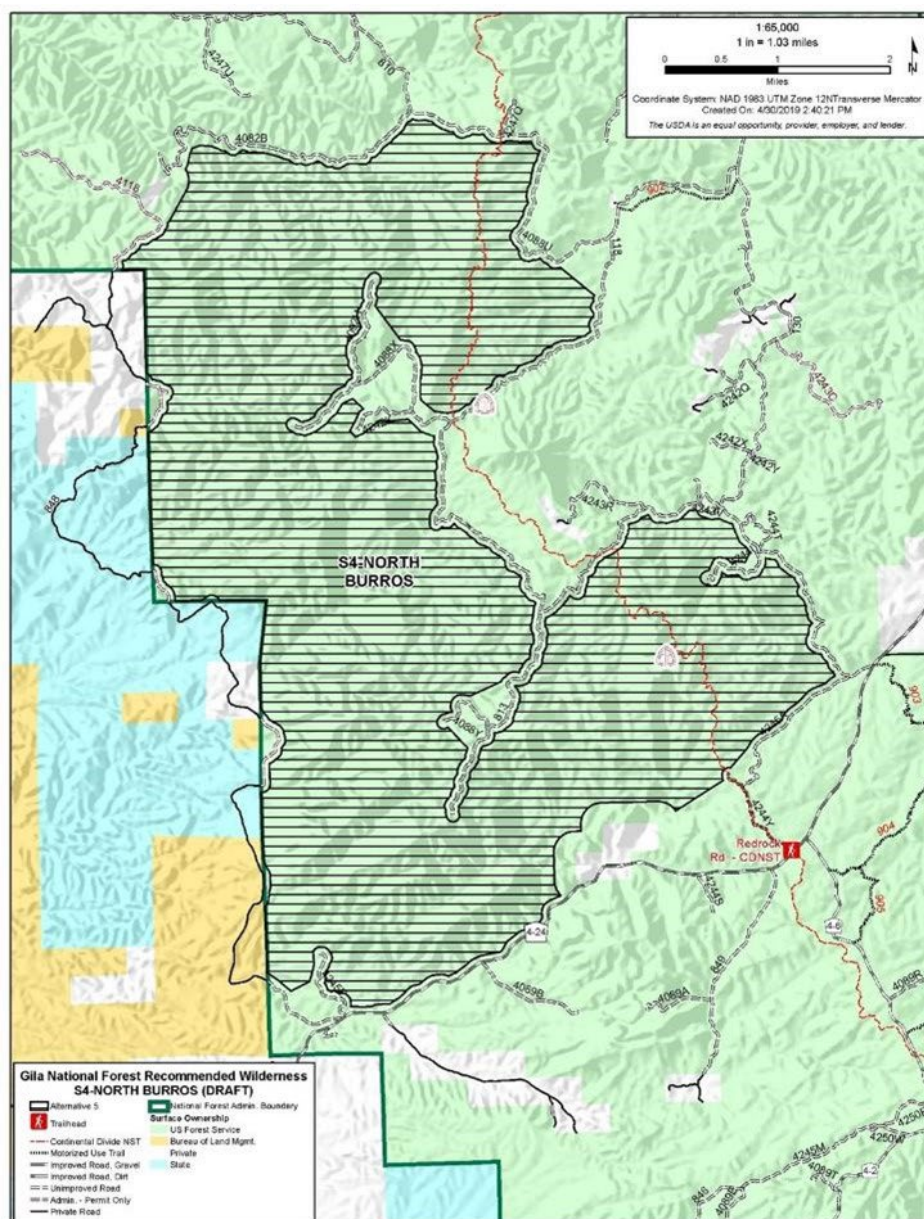


Figure H-51. Recommended wilderness by alternative for S4 – North Burros

S5 – Saddle Rock

Alternative 5 recommends a 6,519-acre area. It is in the Big Burro Mountains on the Silver City Ranger District to the east of the actual formation named Saddle Rock, in Grant County, New Mexico. For detailed boundary locations see Figure H-52. At the time the area boundaries were determined for the wilderness process, it was unclear whether the 1986 proposed Rabbit Trap research natural area would be carried forward through this plan revision. The area boundary was not adjusted to include the whole proposed Rabbit Trap research natural area. If this area is recommended to Congress for wilderness designation, the boundary may be adjusted to include Rabbit Trap at that time.

The very rugged terrain is dominated by pinyon-juniper woodlands with areas of Desert Willow. The presence of the proposed research natural area and Desert Willow vegetation communities are considered other features of value. There are no inventoried roadless areas. Permitted grazing is a historic and ongoing use of the area which is part of the Mangas/Silverdale and Bullard Peak grazing allotments. Improvement density is generally low, and improvements are concentrated in some locations. Solitude and primitive and unconfined recreation opportunities are moderate in comparison to those available at nearby locations and elsewhere in the forest.

Table H-50. Evaluated wilderness characteristics of the S5 – Saddle Rock

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (RECREATION) LOW (SOLITUDE)	3
Step 5 – Other Features of Value	NONE	1.5
Overall Rank of Wilderness Characteristics	MODERATE	9.8

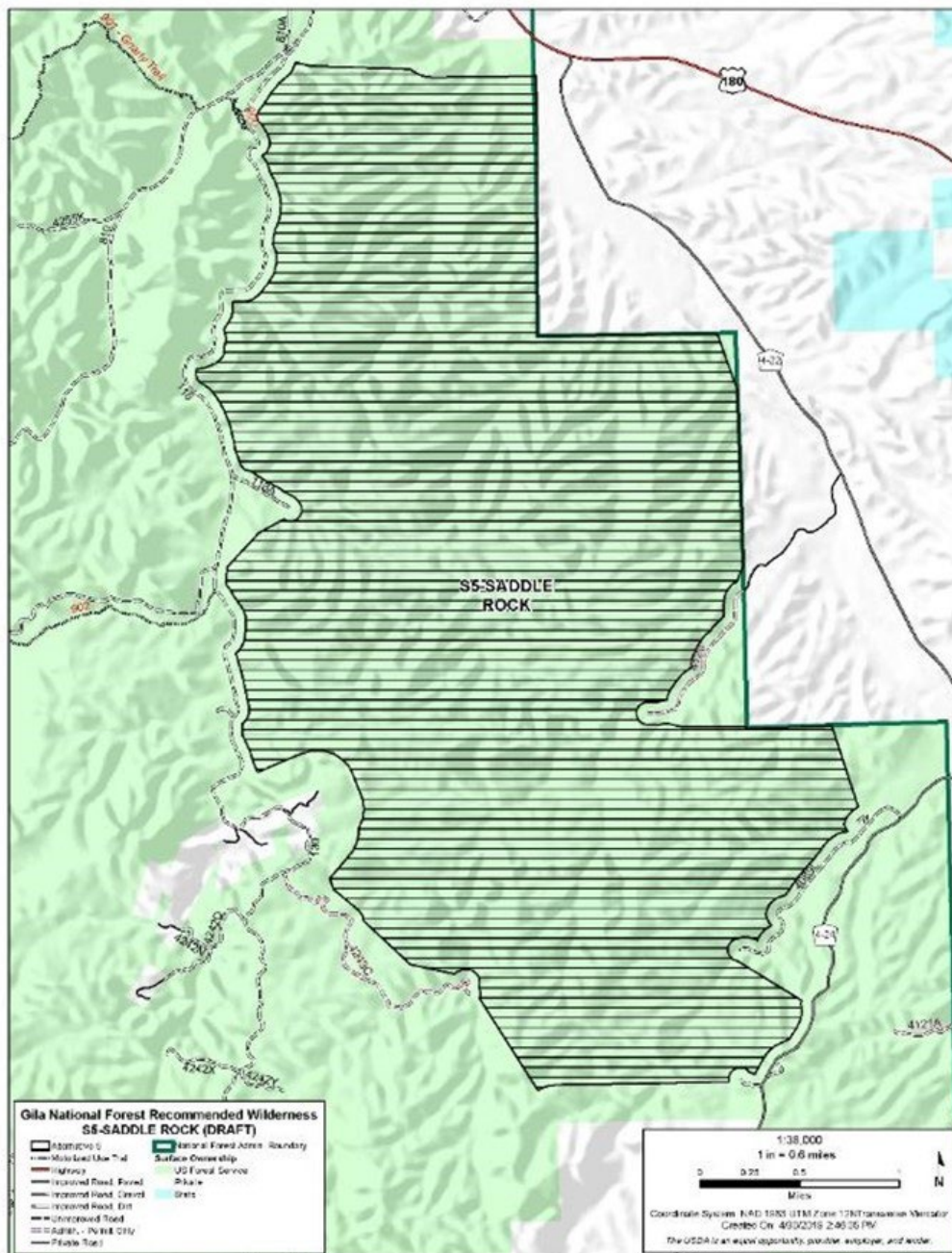


Figure H-52. Recommended wilderness by alternative for S5 – Saddle Rock

S6a – Gila Addition Southwest

This area is immediate adjacent the Gila Wilderness in the north-central portion of the Silver City Ranger District, Grant County, New Mexico. Alternative 3 recommends an 11-acre area, alternative 4 a 120-acre area, and alternative 5 a 447-acre area. Boundaries were adjusted based on the alternative-specific criteria. For detailed boundary locations see Figure H-53.

The moderate to very rugged terrain is dominated by pinyon-juniper woodlands and ponderosa pine-oak forests, depending upon elevation and slope aspect. It is entirely within inventoried roadless area and managed to preserve roadless characteristics, although part of the area has been affected by modern land

management activity. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the Redstone allotment. Improvement density is generally low, and improvements are concentrated in some locations. Opportunities for solitude are attainable, but there is substantial use during hunting season and the area is close to popular roaded dispersed camping areas. Terrain and lack of trails limits access.

Table H-51. Evaluated wilderness characteristics of the S6a – Gila Addition Southwest

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	4
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (BOTH)	5
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	9

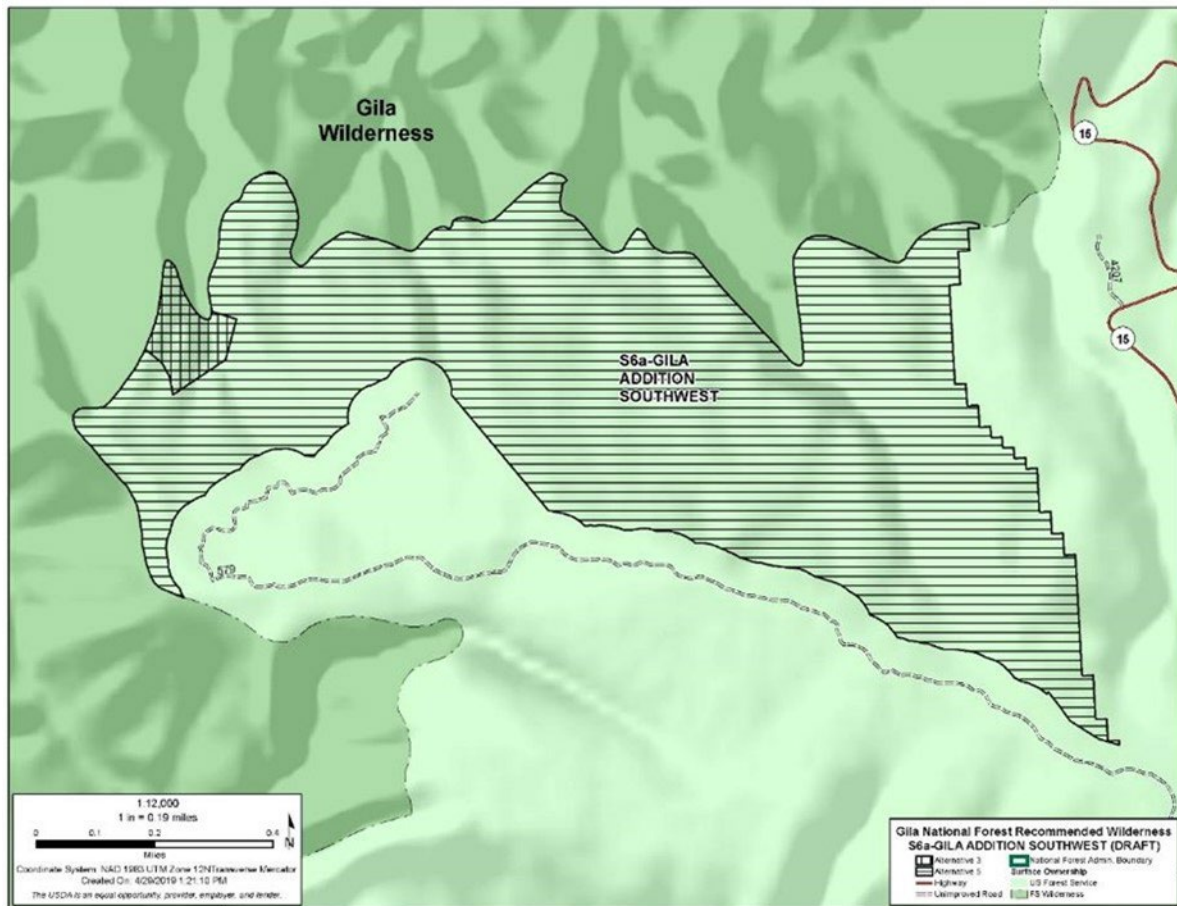


Figure H-53. Recommended wilderness by alternative for S6a – Gila Addition Southwest

S6b – Gila Addition Southwest

This area is immediate adjacent the Gila Wilderness in the north-central portion of the Silver City Ranger District, Grant County, New Mexico. Alternative 3 recommends a 270-acre area and alternative 5 a 4,558-acre area. Boundaries were adjusted based on alternative-specific criteria. For detailed boundary locations see Figure H-54.

The moderate to very rugged terrain is dominated by pinyon-juniper woodlands and ponderosa pine-oak forests, depending upon elevation and slope aspect. Cow and Trout creeks pass through this area, as does Snow Creek Trail #233. Less than half of this area is within inventoried roadless area managed to preserve roadless characteristics. Part of the area is affected by modern land management activity. Permitted grazing is a historic and ongoing use of the area, which is part of the Cow Creek and Redstone grazing allotments. Improvement density is generally low, and improvements are concentrated in some locations. Opportunities for solitude are attainable, but there is substantial use during hunting season and the area is close to popular roaded dispersed camping areas.

Table H-52. Evaluated wilderness characteristics of the S6b – Gila Addition Southwest

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	4
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (BOTH)	5
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	9

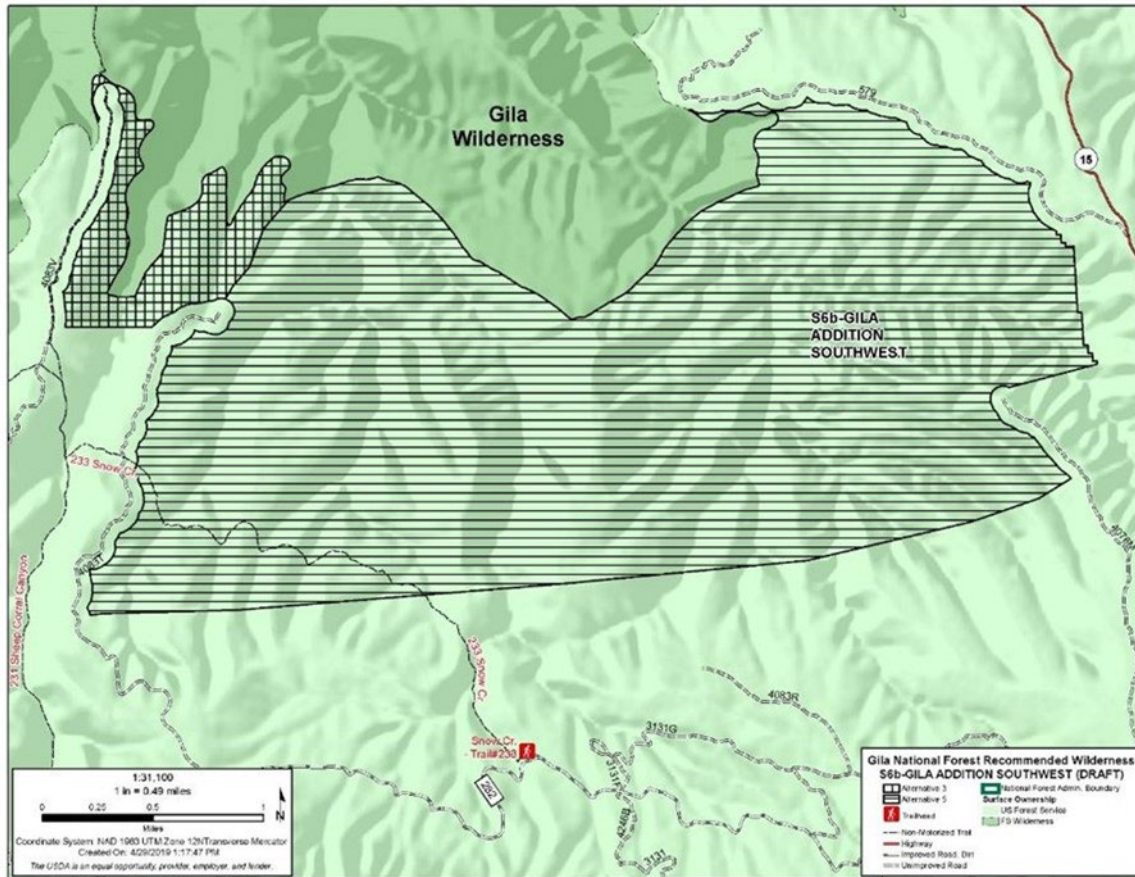


Figure H-54. Recommended wilderness by alternative for S6b – Gila Addition Southwest

S6d – Gila Addition Southwest

This area is immediate adjacent the Gila Wilderness in the north-central portion of the Silver City Ranger District, Grant County, New Mexico. Alternative 3 recommends a 248-acre area and alternative 5 a 1,040-acre area. Boundaries were adjusted for alternative-specific criteria. For detailed boundary locations see Figure H-55.

The moderate to very rugged terrain is dominated by pinyon-juniper woodlands and ponderosa pine-oak forests, depending upon elevation and slope aspect. Dorsey Canyon Trail #239 passes through the area. The area is almost entirely inventoried roadless area managed to preserve roadless characteristics, although some of is affected by modern land management activity. Permitted grazing is a historic and ongoing use of the area, which is part of the Cow Creek grazing allotment. Improvement density is generally low, and improvements are concentrated in some locations. Opportunities for solitude are attainable, but there is substantial use during hunting season and the area is close to popular roaded dispersed camping areas.

Table H-53. Evaluated wilderness characteristics of the S6d – Gila Addition Southwest

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	4
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (BOTH)	5
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	9

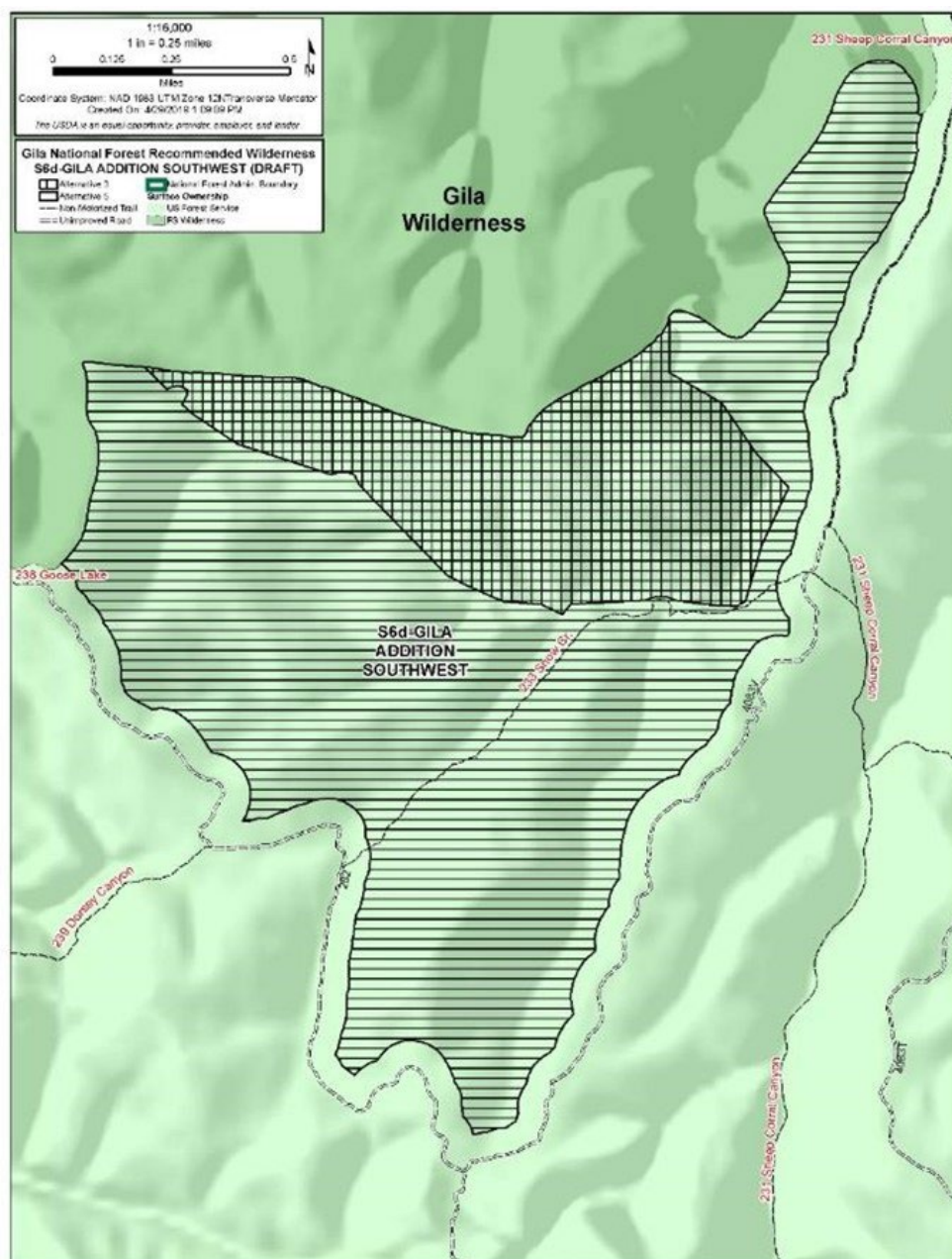


Figure H-55. Recommended wilderness by alternative for S6d – Gila Addition Southwest

S7 – Burro Peak

Alternative 5 recommends a 7,319-acre area. It is in the Big Burro Mountains on the Silver City Ranger District north of Jack's Peak in Grant County, New Mexico. The patented Ausmer/Amazon mine and the Burro Mountain Homestead inholding are also located just to the north. For detailed boundary locations see Figure H-56.

The rugged and often steep terrain dissected by deep canyons. Piñon-juniper woodlands are the dominant vegetation with desert willow in some drainages. The Continental Divide National Scenic Trail passes through the eastern portion of the area. The Trail and the presence of desert willow are considered other features of value. There are no inventoried roadless areas. Permitted grazing is a historic and ongoing use of the area which is part of the Burro Mountain, Ferguson Mountain, and White Signal grazing allotments. Modern land management activity is only noticeable in some locations. Improvement density is generally low and are concentrated in some locations. Solitude is attainable, but opportunities are low compared to those available nearby and elsewhere in the forest. Opportunities for primitive and unconfined recreation are also available but are very poor in comparison to those available nearby and elsewhere in the forest.

Table H-54. Evaluated wilderness characteristics of the S7 – Burro Peak

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	LOW (BOTH)	2
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE	6

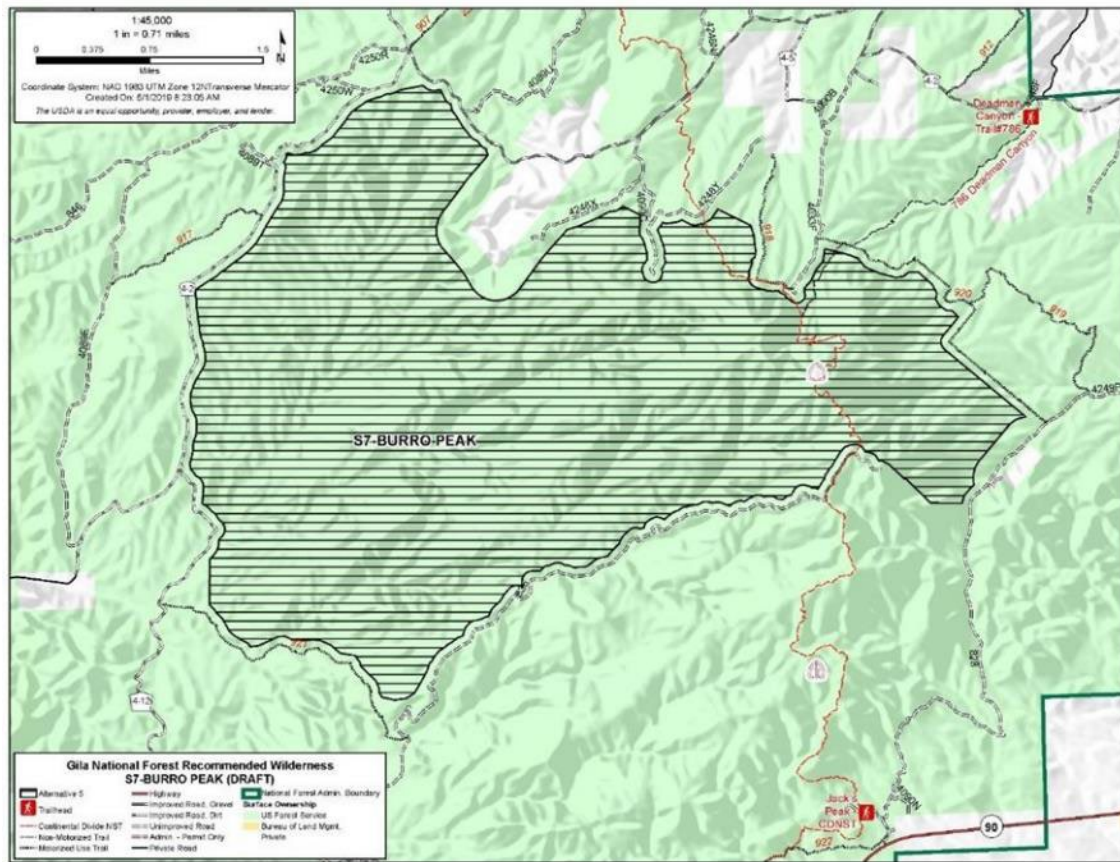


Figure H-56. Recommended wilderness by alternative for S7 – Burro Peak

S8 – Knight Peak

Alternative 5 recommends a 5,294-acre area. It is in the Big Burro Mountains of the Silver City Ranger District within Grant County, New Mexico. It is several miles west of the community of White Signal. For detailed boundary locations see Figure H-57.

Terrain is generally moderate with some steep mountain slopes, with Knight Peak being the most prominent topographic feature. Piñon-juniper woodlands are the dominant vegetation with desert willow in some drainages. The Continental Divide National Scenic Trail passes through the eastern portion of the area. The Trail and the presence of desert willow are considered other features of value. There is no inventoried roadless area. Permitted livestock grazing is a historic and ongoing use of the area, which is part of the White Signal and Walking X grazing allotments. Modern land management activity is only noticeable in some locations. Improvement density is generally low and are concentrated in some locations. Solitude is attainable, but opportunities are low compared to those available nearby and elsewhere in the forest. Opportunities for primitive and unconfined recreation are also available but are very poor in comparison to those available nearby and elsewhere in the forest.

Table H-55. Evaluated wilderness characteristics of the S8 – Knight Peak

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	3.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	LOW (BOTH)	2
Step 5 – Other Features of Value	NONE	1
Overall Rank of Wilderness Characteristics	MODERATE	6.3

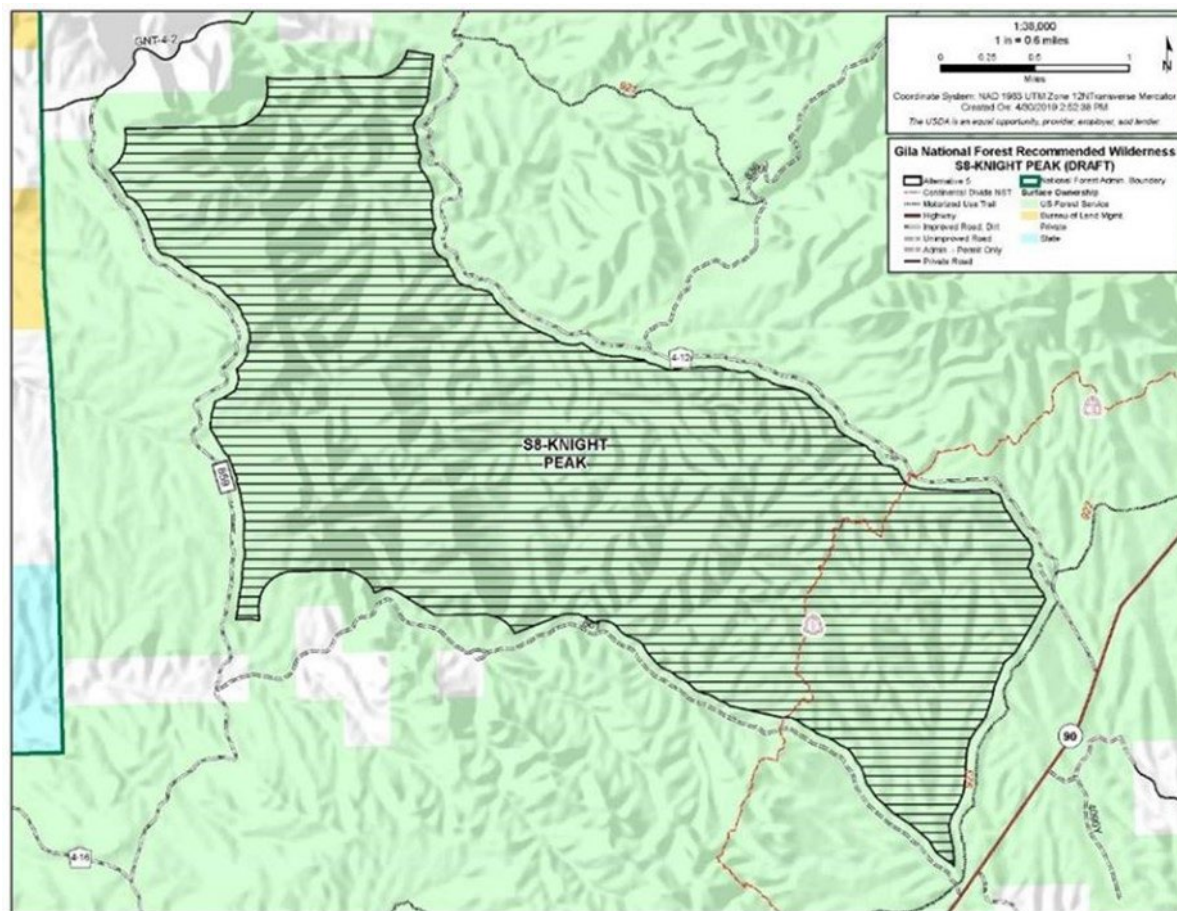


Figure H-57. Recommended wilderness by alternative for S8 – Knight Peak

S9 – Royal John

Alternative 5 recommends a 6,915-acre area. It is in the Black Range Mountains south of New Mexico State Highway 152 on the Silver City Ranger District, Grant County, New Mexico. For detailed boundary locations, see Figure H-58.

The terrain varies from moderately rugged to very steep and challenging. Vegetation communities are dominated by pinyon-juniper woodlands, ponderosa pine-oak forest and pockets of mixed conifer forest dependent on elevation and slope aspect. The historic Hot Springs Cabin is located within the area which

is entirely within inventoried roadless area being managed to preserve roadless characteristics. Very little management activity has occurred and is unlikely to occur in the future, mostly due to terrain. Permitted grazing is a historic and current use of the area, which is part of the Cold Springs/Hot Springs grazing allotment. Modern land management activity is not noticeable in most locations and there are very few improvements, most of which are concentrated around Hot Springs Cabin. The area is relatively remote and lightly visited outside of hunting season with good opportunities for solitude. Primitive and unconfined recreation opportunities are moderate as compared to those available nearby and elsewhere in the forest.

Table H-56. Evaluated wilderness characteristics of the S9 – Royal John

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (SOLITUDE) MODERATE (RECREATION)	6
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	11.7

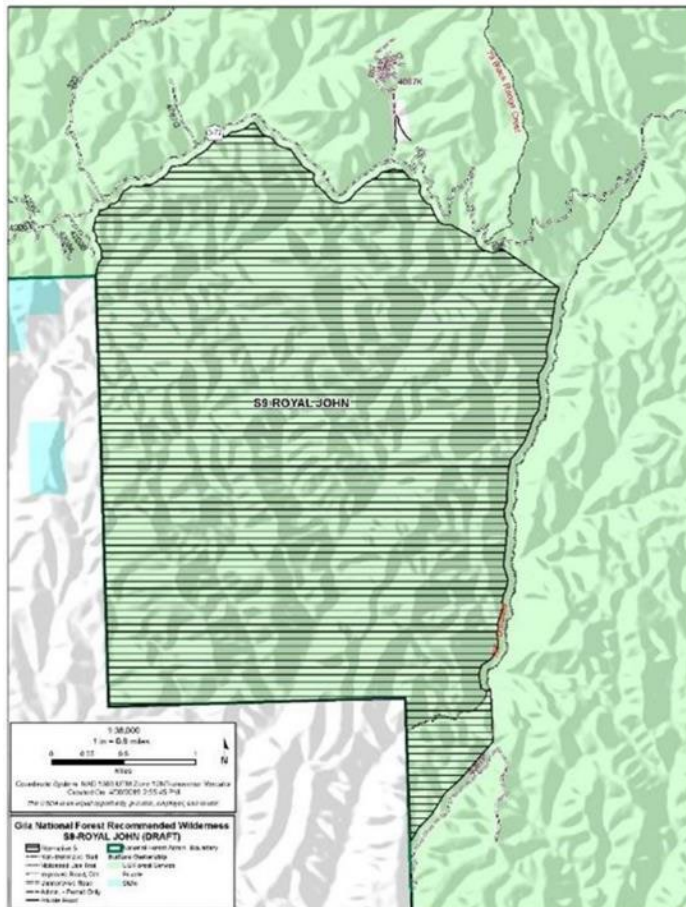


Figure H-58. Recommended wilderness by alternative for S9 – Royal John

S10 – Lower Gallinas Canyon

Alternative 5 recommends an 8,544-acre area. It is located in the Black Range Mountains south of New Mexico State Highway 152 within the Silver City Ranger District, Grant County, New Mexico. For detailed boundary locations, see Figure H-59.

This very steep and rugged steep terrain is dominated by pinyon-juniper woodlands, ponderosa pine-oak and mixed conifer forests depending on elevation and slope aspect. There is also riparian vegetation within Lower Gallinas Canyon. Just outside the area near the highway, Lower Gallinas Canyon also contains a permanently closed, low development campground with access to the area's single trail, Lower Gallinas #705. Haystack Mountain, one of the more prominent landscape features rises above the canyon. The entire area is within inventoried roadless area managed to preserve roadless characteristics. Very little management activity has occurred or is likely to occur in the future, mostly due to terrain. Permitted grazing is a historic and ongoing use of the area, which is part of the Gallinas and Cold Springs/Hot Springs grazing allotments. Modern land management activity is only noticeable from some locations nearest the highway. There are few improvements, and they are concentrated in a few locations. Due to its size and proximity to the highway, opportunities for solitude are considered moderate as compared to areas nearby and elsewhere in the forest. Opportunities are best away from the northern area boundary. Primitive and unconfined recreation opportunities are also considered moderate when compared to other areas.

Table H-57. Evaluated wilderness characteristics of the S10 – Lower Gallinas Canyon

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	3.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (BOTH)	5
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	8.7

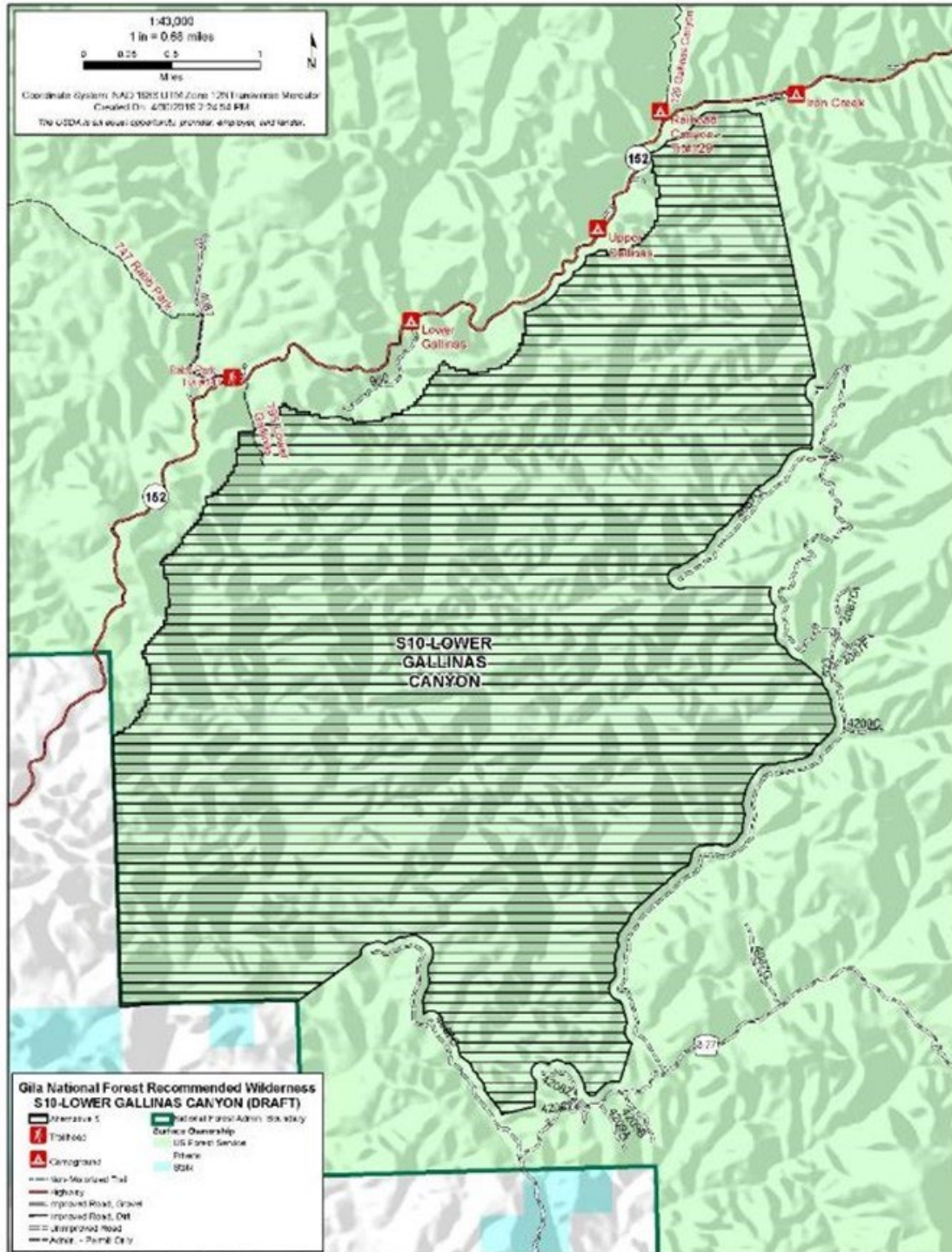


Figure H-59. Recommended wilderness by alternative for S10 – Lower Gallinas Canyon

SW1 – Gila Addition Sapillo

This area is immediately adjacent the Gila Wilderness and includes portions of the Wilderness and Silver City Ranger Districts in Grant County, New Mexico. New Mexico State Highway 15 lies to the southeast and helps define the area's southernmost boundary. Alternative 3 recommends a 186-acre area, alternative 4 a 256-acre area, and alternative 5 a 128-acre area. Boundaries were adjusted based on alternative-specific criteria. For detailed boundary locations see Figure H-60.

Moderately to very rugged terrain is dominated by pinyon-juniper woodlands and ponderosa pine-oak forests depending upon elevation and slope aspect. Spring Canyon Trail #247 and Sapillo Creek pass through the area, which is partly within inventoried roadless area managed to preserve roadless characteristics. Very little management activity has occurred or is likely to occur in the future, mostly due to terrain. Permitted grazing is a historic and ongoing use of the area, which is part of the Redstone grazing allotment. There is only minor evidence of modern land management activity in limited locations. Improvements are few, not substantially noticeable and do not detract from apparent naturalness. Due to the terrain and adjacency to designated wilderness, this area offers very good opportunities for solitude but only moderate opportunities for primitive and unconfined recreation as compared to areas nearby and elsewhere in the forest.

Table H-58. Evaluated wilderness characteristics of the SW1 – Gila Addition Sapillo

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (SOLITUDE) MODERATE (RECREATION)	6
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE/HIGH	12

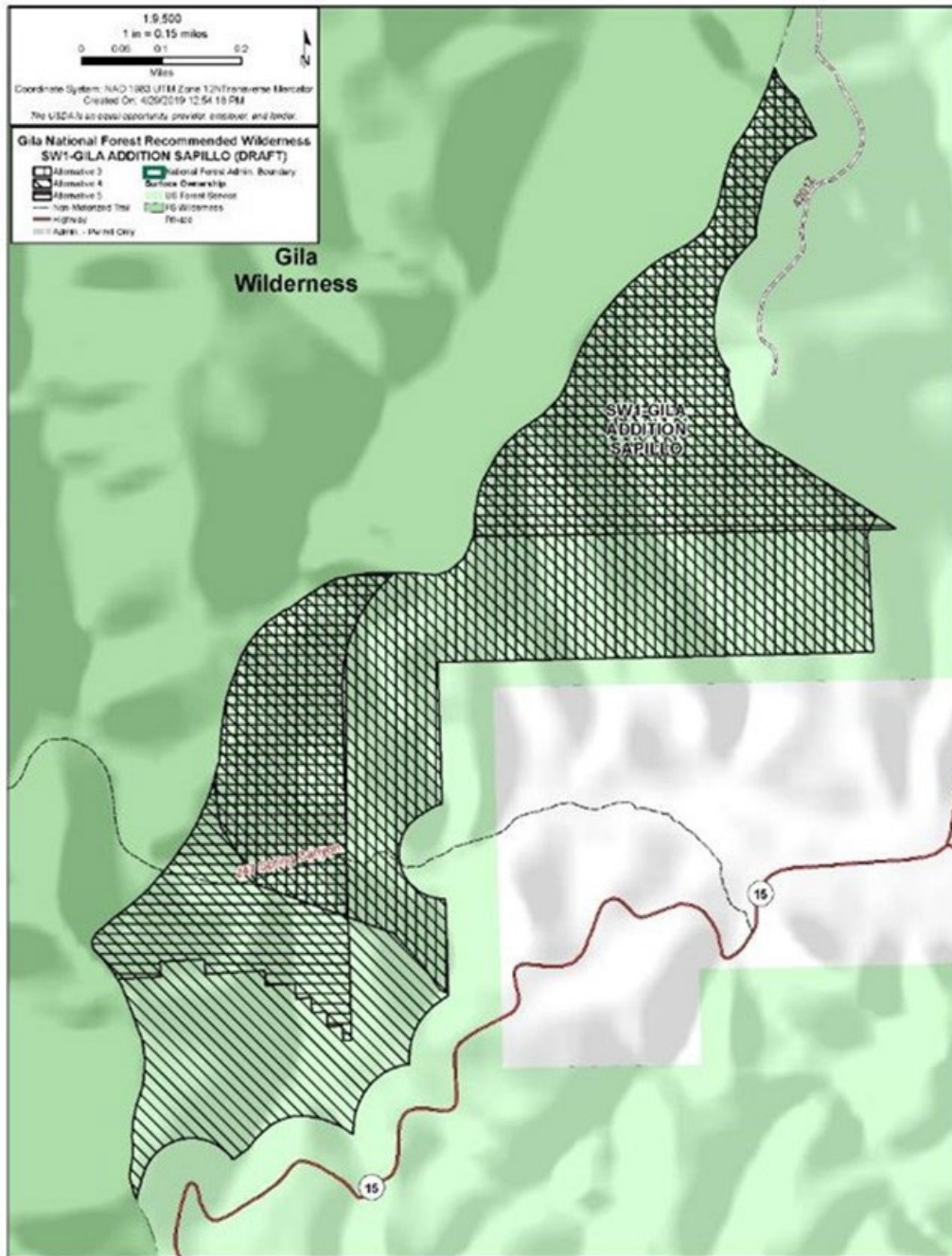


Figure H-60. Recommended wilderness by alternative for SW1 – Gila Addition Sapiello

W1c – Gila Addition Lake Roberts

This area lies between the Gila Wilderness and the community of Lake Roberts along New Mexico State Highway 35 in the southwestern portion of the Wilderness Ranger District, Grant County, New Mexico. Alternative 4 recommends a 691-acre area and alternative 5 recommends a 393-acre area. Boundaries were adjusted based on alternative-specific criteria. For detailed boundary locations see Figure H-61.

This small area consists of moderate to rugged terrain and is almost entirely within inventoried roadless area being managed to preserve roadless characteristics. Very little management activity has occurred and is unlikely to occur in the future. Permitted grazing is a historic and ongoing use of the area, which is part

of the Mimbres/Powderhorn/Sapillo grazing allotment. Only minor evidence of modern land management activity is noticeable, mostly along the outer boundary nearest the highway. Improvements are few and not substantially noticeable. Primitive and unconfined recreation opportunities are moderate compared to areas nearby and elsewhere in the forest.

Table H-59. Evaluated wilderness characteristics of the W1c – Gila Addition Lake Roberts

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (RECREATION) LOW (SOLITUDE)	4
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE	10

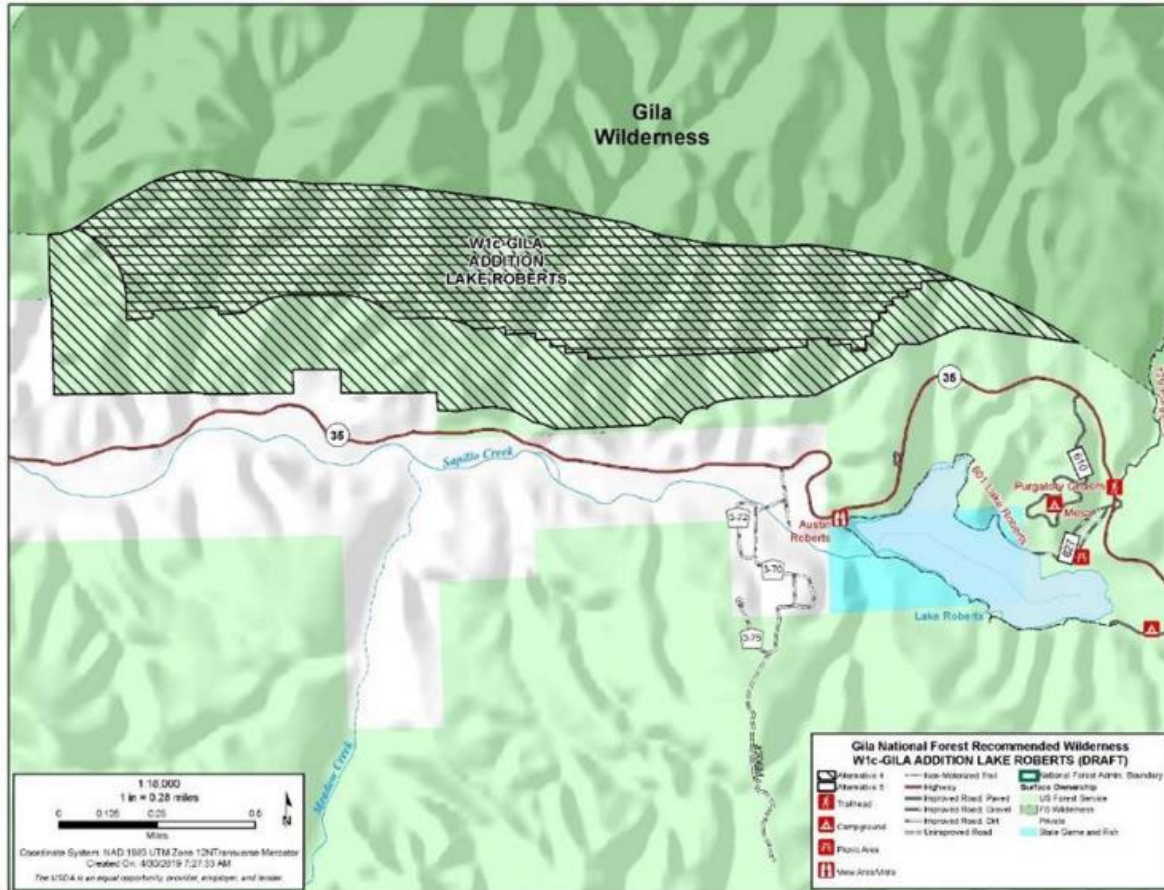


Figure H-61. Recommended wilderness by alternative for W1c – Gila Addition Lake Roberts

W3 – Aldo Leopold Addition West

This area is located between the Aldo Leopold Wilderness and Forest Road 150, northwest of Rocky Canyon Campground in the southcentral portion of the Wilderness Ranger District, Grant County New Mexico. Alternative 2 recommends a 1,110-acre area, alternative 3 a 1,109-acre area, and alternative 5 a 3,389-acre area. Boundaries were adjusted based on alternative-specific criteria. For detailed boundary locations see Figure H-62.

Moderately steep to steep rugged terrain is dominated by pinyon-juniper woodlands and ponderosa pine and mixed conifer forests, dependent upon elevation and slope aspect. It contains section of the Continental Divide National Scenic Trail. A portion of the area is inventoried roadless area managed to preserve roadless characteristics. Very little management activity has occurred or is likely to occur in the future, mostly due to terrain. Permitted grazing is a historic and ongoing use of the area, which is part of the Mimbres/Powderhorn/Sapillo grazing allotment. There is only minor evidence of modern land management activity, predominantly near the outer area boundaries near the forest road. Improvements are few, not substantially noticeable and detract little from apparent naturalness. Although adjacent to the forest road, outside of hunting and antler gathering seasons the likelihood of encountering other visitors is very low and there are excellent opportunities for solitude. There are few limitations to the types and pursuit of primitive and unconfined recreation. The area compliments and is enhanced by opportunities available in the adjacent wilderness.

Table H-60. Evaluated wilderness characteristics of the W3 – Aldo Leopold Addition West

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	6
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	MODERATE/HIGH	12

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W4 – Aldo Leopold Addition McKnight Canyon

This area is located along the southwestern boundary of the Aldo Leopold Wilderness area in the southcentral portion of the Wilderness Ranger District in Grant County, New Mexico. Alternative 2 recommends an 11,094-acre area, alternative 3 an 11,050-acre area, and alternative 5 a 12,459-acre area based on alternative-specific criteria. For detailed boundary locations see Figure H-63.

This area of the forest that receives little visitation outside of hunting seasons. The terrain is variable, with ridges, mesa tops, steep slopes and deep canyons. Vegetation communities are dominated by pinyon-juniper woodlands and ponderosa pine and mixed conifer forests, depending upon elevation and slope aspect. There are several trailheads and trails providing access. It is almost entirely inventoried roadless area being managed to preserve roadless characteristics. Very little management activity has occurred or is likely to occur in the future, mostly due to terrain. Permitted grazing is a historic and ongoing use of the area, which is part of the Mimbres/Powderhorn/Sapillo grazing allotment. There are outstanding opportunities for solitude, outside of hunting and antler gathering seasons, and high opportunities for primitive and unconfined recreation. Evidence of modern land management activity is nearly non-existent. Improvements are very few, are not concentrated, do not appear modern and contribute to the historical character and cultural context.

Table H-61. Evaluated wilderness characteristics of the W4 – Aldo Leopold Addition McKnight Canyon

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	OUTSTANDING	8.3
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	OUTSTANDING (SOLITUDE) HIGH (RECREATION)	8
Step 5 – Other Features of Value	NONE	0
Overall Rank of Wilderness Characteristics	OUTSTANDING	16.3

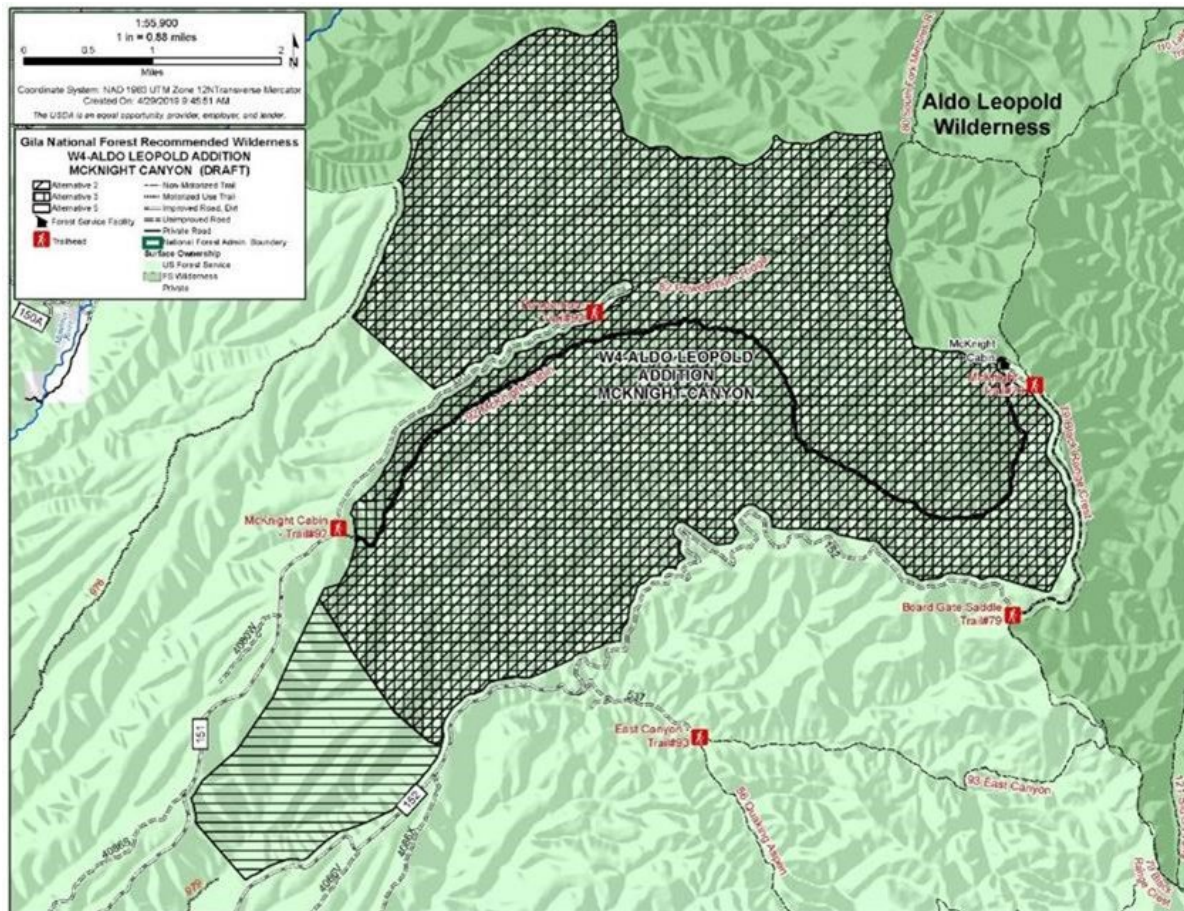


Figure H-63. Recommended wilderness by alternative for W4 – Aldo Leopold Addition McKnight Canyon

W7 – Gila Addition East

This area is known as the Links Ranch and is located on the Wilderness Ranger in Catron County, New Mexico between Forest Road 150 and the Gila Wilderness boundary. Alternative 4 recommends a 642-acre area and alternative 5 a 564-acre area with boundary adjustments based on alternative-specific criteria. For detailed boundary locations see Figure H-64.

Terrain is generally rugged, and the area is heavily dissected by drainages. Vegetation communities include pinyon-juniper woodlands and ponderosa pine-oak and mixed conifer forests, depending upon elevation and slope aspect. Diamond Creek flows through the area, as does the Links Trail #713. It is almost entirely within inventoried roadless areas managed to protect roadless characteristics. Very little management activity has occurred and is unlikely to occur in the future, mostly due to terrain. Permitted grazing was a historic but discontinued use of the area, which was part of the Diamond Bar grazing allotment. Critical habitat for several federally listed species is considered another feature of value. Evidence of modern land management activity is nearly non-existent. Improvements are very few, not concentrated in location and detract very little from apparent naturalness. Opportunities for solitude and primitive or unconfined recreation area moderate to low in comparison to those available nearby and elsewhere in the forest.

Table H-62. Evaluated wilderness characteristics of the W7 – Gila Addition East

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (RECREATION) LOW (SOLITUDE)	4
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE	11

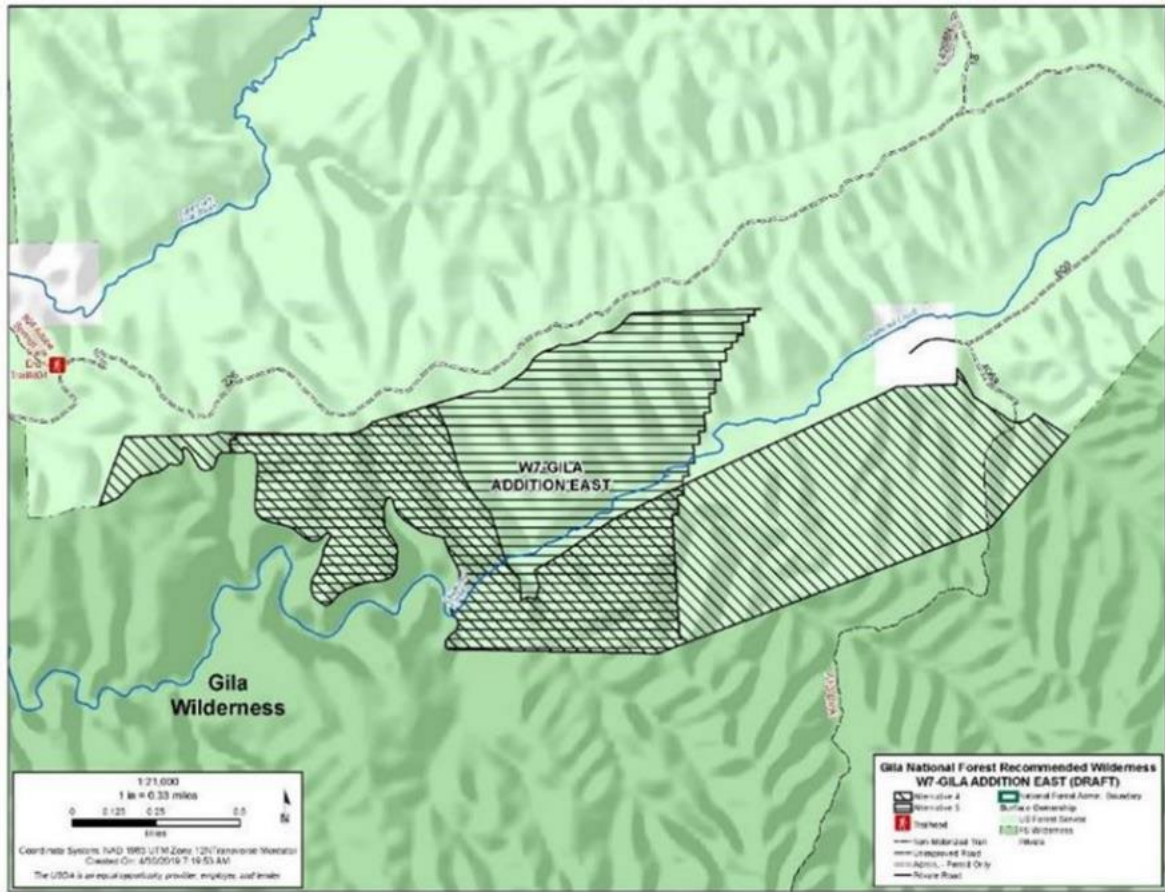


Figure H-64. Recommended wilderness by alternative for W7 – Gila Addition East

WB1 – Taylor Creek

This area is adjacent the northern boundary of the Aldo Leopold Wilderness in the northcentral portion of the Black Range Ranger District in Sierra County, New Mexico. Alternative 2 recommends a 10,012-acre area, alternative 3 a 6,672-acre area, and alternative 5 a 26,852-acre area. Boundaries are adjusted for alternative-specific criteria. For detailed boundary locations see Figure H-65.

The moderately steep to steep and rugged terrain is dissected by deep canyons and features mesa tops and mountain peak. Vegetation communities include pinyon-juniper woodlands and ponderosa pine and mixed conifer forests, depending upon elevation and slope aspect. The larger area is almost entirely

inventoried roadless area managed to preserve roadless characteristics. The exceptionally scenic character of the canyon bluffs, geology, expansive views of the Mogollon Mountains and cultural resources that include prehistoric rock shelters and historic mining and military sites are considered other features of value. Permitted grazing is a historic and ongoing use of the area, which is part of the Taylor Creek grazing allotment.

There is evidence of modern land management activities included past logging and there are populations of noxious weeds in some areas. There are very few improvements, and they are not concentrated or substantially noticeable. Range infrastructure is limited as natural barriers serve livestock management. Opportunities for solitude and primitive or unconfined recreation are high as compared to other areas nearby and elsewhere in the forest.

Table H-63. Evaluated wilderness characteristics of the WB1 – Taylor Creek

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (BOTH)	7
Step 5 – Other Features of Value	HIGH	3
Overall Rank of Wilderness Characteristics	HIGH	15

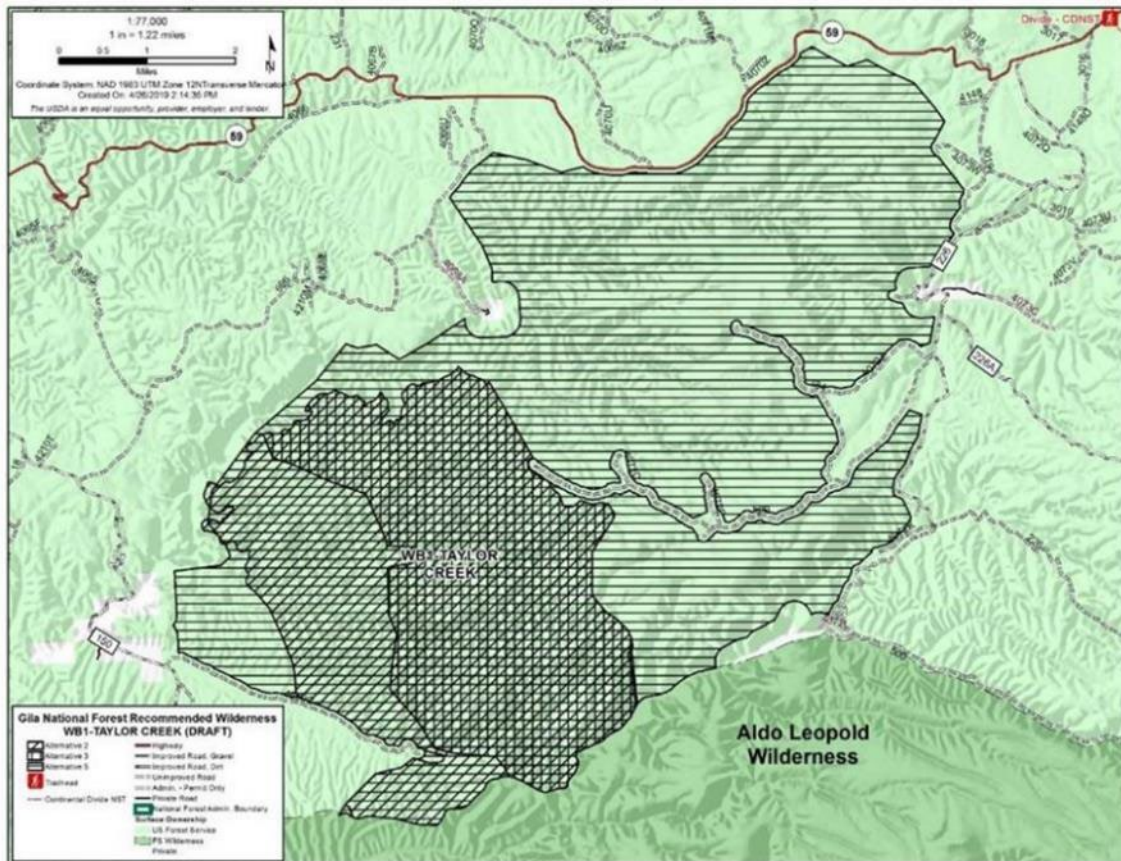


Figure H-65. Recommended wilderness by alternative for WB1 – Taylor Creek

WB2 – Gila Addition East

This area encompasses parts of the Black Range and Wilderness Ranger Districts in Catron County, New Mexico, with the Gila Wilderness forming its western boundary. Alternative 3 recommends a 1,434-acre area, alternative 4 a 4,443-acre area, and alternative 5 a 3,919-acre area with boundary adjustments based on alternative-specific criteria. For detailed boundary locations see Figure H-66.

This moderately rugged area is dominated by pinyon-juniper woodlands and ponderosa pine and mixed conifer forests, depending upon elevation and slope aspect. The East Fork of the Gila flows through the southern portion of the larger area. Prehistoric and historic sites are considered another feature of value. It is almost entirely within inventoried roadless area and managed to preserve roadless characteristics. Permitted grazing is a historical and ongoing of the area, which is part of the Jordan Mesa grazing allotment. There is very little evidence of modern land management activity and there are very good opportunities for solitude outside of hunting and antler gathering seasons. Opportunities for primitive and unconfined recreation are moderate compared to other locations nearby and elsewhere in the forest.

Table H-64. Evaluated wilderness characteristics of the WB2 – Gila Addition East

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (SOLITUDE) MODERATE (RECREATION)	7
Step 5 – Other Features of Value	MODERATE	2
Overall Rank of Wilderness Characteristics	HIGH	14

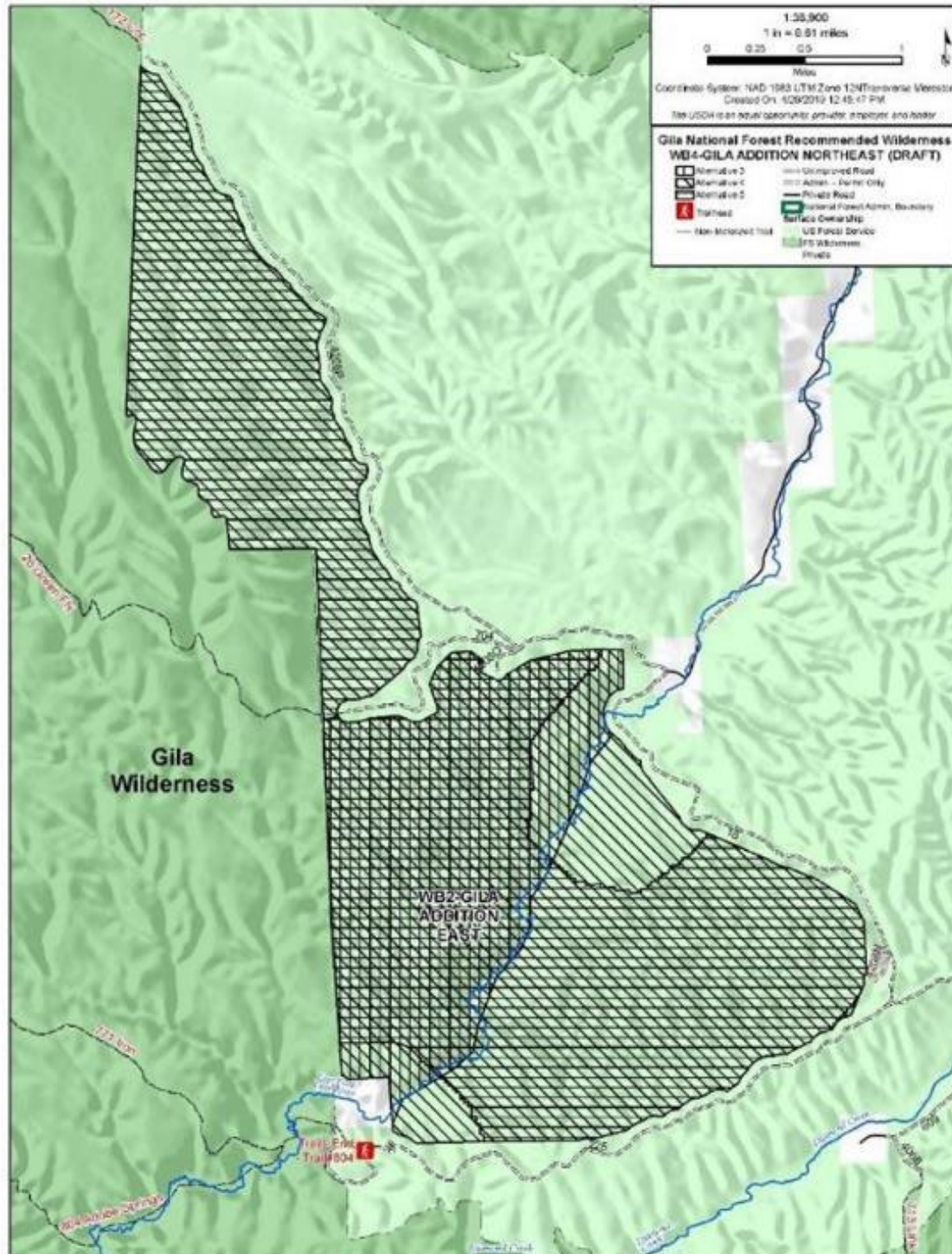


Figure H-66. Recommended wilderness by alternative for WB2 – Gila Addition East

WB4 – Gila Addition Northeast

This area lies within the northeastern Wilderness and western Black Range Ranger Districts in Catron County, New Mexico. It shares a boundary with the Gila Wilderness. The Wolf Hollow Campground and Beaverhead work center lie to the north. Alternative 3 recommends a 9,230-acre area and alternative 5 a 13,862-acre area based on alternative-specific criteria. For detailed boundary locations see Figure H-67.

The moderate to steep mountain terrain hosts a variety of vegetation communities from grasslands in the lower elevations to mixed conifer forests in the higher elevations. Meadow Trail #53, Christie Trail #806, Wolf Hollow Trail #773, and Beaver Creek all pass through the area, which is mostly inventoried roadless area managed to preserve roadless characteristics. A National Historic Landmark and other cultural resources are considered other features of value. Permitted grazing is a historic and ongoing use of the area, which is part of the Black Mountain grazing allotment. There is evidence of modern land management activity, but it is not noticeable in most locations. There are moderate opportunities for solitude compared to areas nearby and elsewhere in the forest. Opportunities for primitive and unconfined recreation are good and enhanced by the adjacent Gila Wilderness.

Table H-65. Evaluated wilderness characteristics of the WB4 – Gila Addition Northeast

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	3.7
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	HIGH (PRIMITIVE REC) MODERATE (SOLITUDE)	6
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE	10.7

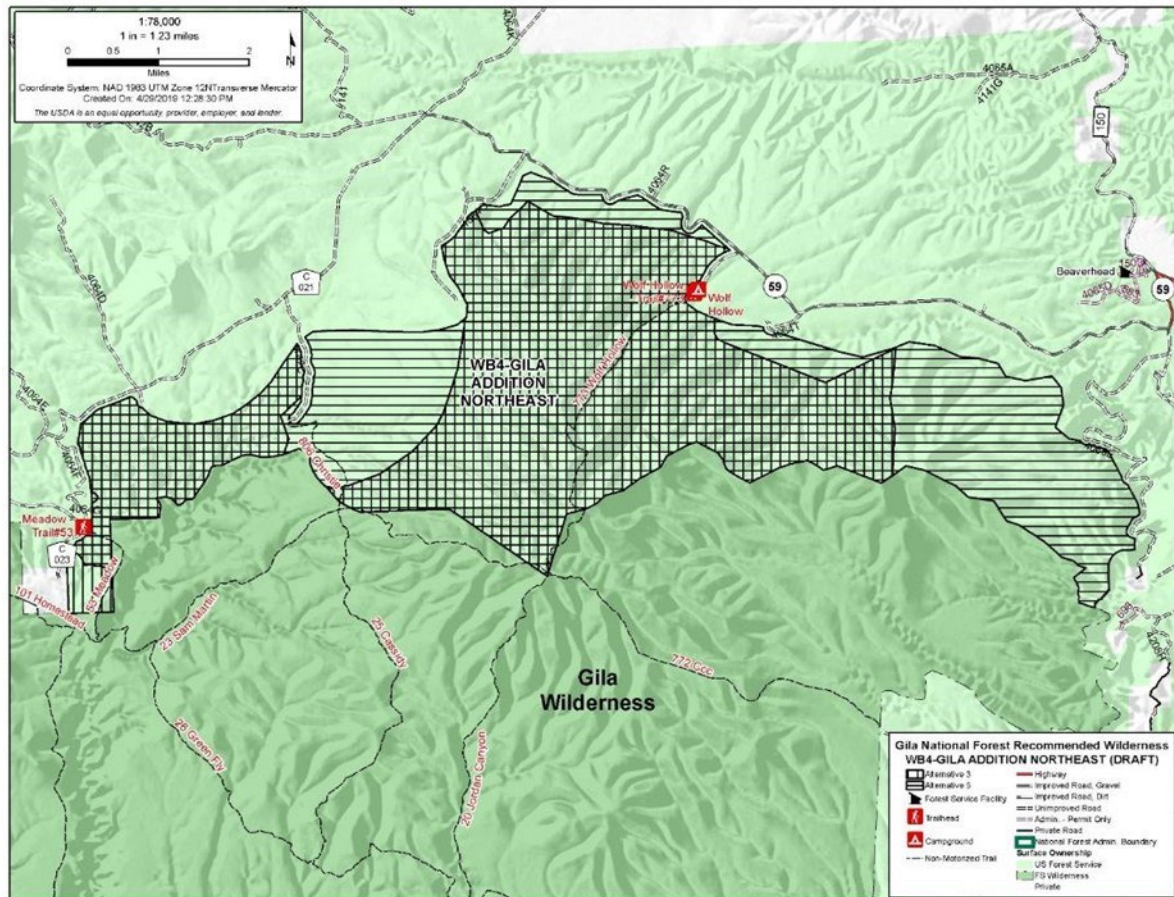


Figure H-67. Recommended wilderness by alternative for WB4 – Gila Addition Northeast

WB6 – Gila Addition Beaver Creek

This area lies within the norther Wilderness and western Black Range Ranger Districts in Catron County, New Mexico. It shares a boundary with the Gila Wilderness. Alternative 4 recommends a 2,273-acre area and alternative 5 a 4,252-acre area with boundary adjustments based on alternative-specific criteria. For detailed boundary locations see Figure H-68.

Moderate to rugged, mountainous terrain, supports vegetation communities ranging from pinyon-juniper woodlands to ponderosa pine-oak and mixed conifer forests, depending upon elevation and slope aspect. Beaver Creek flows through this area which is mostly inventoried roadless area managed to preserve roadless characteristics. Permitted grazing is a historic and ongoing use of the area, which is part of the Taylor Creek and Jordan Mesa grazing allotments. Critical habitat for federally listed species is considered another feature of value. Modern land management activity is only noticeable in some locations. Improvements are few and may be concentrated in some locations. Opportunities for solitude and primitive and unconfined recreation are moderate by comparison to areas nearby and elsewhere on the forest.

Table H-66. Evaluated wilderness characteristics of the WB6 – Gila Addition Beaver Creek

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	SUFFICIENT SIZE	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	MODERATE	5
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	MODERATE (BOTH)	5
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	MODERATE	11



WSB1 – Rabb Park

This area is adjacent to the southwest boundary of the Aldo Leopold Wilderness in the southwest portion of the Wilderness Ranger District and northeast portion of the Silver City Ranger District. It shares a boundary with the Aldo Leopold Wilderness. It is north of New Mexico State Highway 152 where it passes through Gallinas Canyon and Emery Pass in Grant County. Alternative 2 recommends a 27,002-acre area, alternative 3 a 25,984-acre area, and alternative 5 a 42,878-acre area with boundary adjustments based on alternative-specific criteria. For detailed boundary locations see Figure H-69.

The highly variable terrain ranges from moderate to very challenging with steep slopes, long ridgelines and deep canyons. It supports vegetation communities ranging from pinyon-juniper woodlands to ponderosa pine-oak and mixed conifer forests, depending upon elevation and slope aspect. Many non-motorized trails provide access to and through the area including East Canyon #93, Quaking Aspen #86, Rabb Park #747, Gallinas Canyon #129, Black Range Crest #79, Railroad Canyon #128, East Railroad Canyon #130, and Hillsboro Bypass #412. The Hillsboro Peak Lookout is just northeast of the area which is partially within inventoried roadless area managed to preserve roadless characteristics. There is an area between the inventoried roadless areas and the Aldo Leopold Wilderness that would have been identified as inventoried roadless area if it were not for a mapping error that has since been corrected. At the time the roadless inventory was done, the agencies datasets showed this area as being within the Aldo Leopold Wilderness. Very little management activity has occurred and is unlikely to occur in the future, mostly due to terrain. Permitted grazing is a historic and ongoing use of the area, which is part of the Mimbres/Powderhorn/Sapillo, East Canyon, Noonday, Sheppard, and Gallinas grazing allotments. The area has prehistoric and historical cultural significance, including the Hillsboro site, which is listed on the National Register of Historic Places. These resources are considered other features of value. Modern land management activity is only noticeable in some locations, primarily closer to the highway at the area boundaries. There are few improvements, and they are generally not concentrated and do not appear modern, detracting very little from apparent naturalness. Outside of hunting and antler gathering seasons, the likelihood of encountering other visitors is low and there are very good opportunities for solitude. There are few limitations to the types and pursuits of primitive and unconfined recreation and there is good trail access to facilitate those activities. Access is blocked along some of the western boundary by private lands.

Table H-67. Evaluated wilderness characteristics of the WSB1 – Rabb Park

Wilderness Characteristic	Evaluation Ranking	Score
Size if less than 5,000 acres	Not applicable – Greater than 5,000 acres	Not applicable
Manageability to protect wilderness characteristics	MANAGEABLE	Not applicable
Apparent Naturalness	HIGH	6
Solitude or Primitive or Unconfined Recreation (both are ranked, but highest score is counted)	OUTSTANDING (RECREATION) HIGH (SOLITUDE)	8
Step 5 – Other Features of Value	LOW	1
Overall Rank of Wilderness Characteristics	HIGH	15

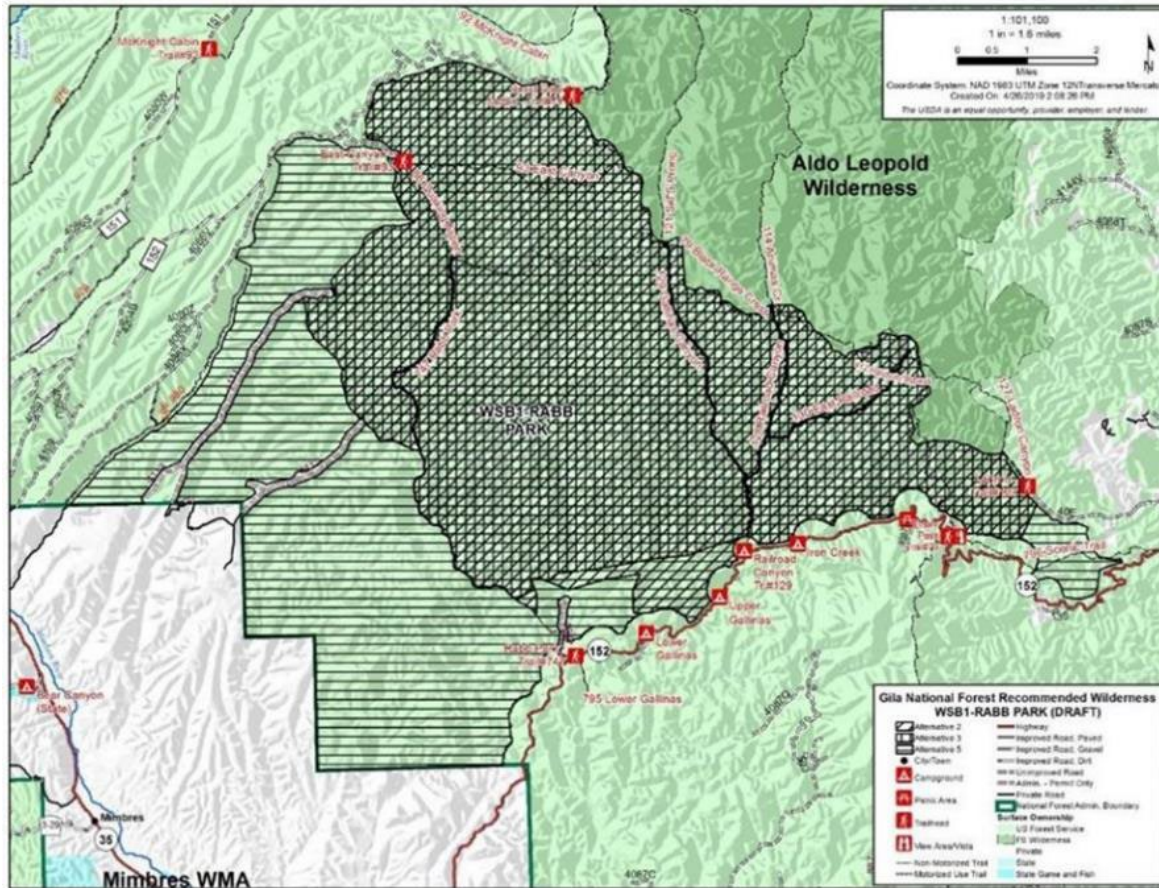


Figure H-69. Recommended wilderness by alternative for WSB1 – Rabb Park

2022 Black Fire Changed Circumstances Analysis

The human-caused 2022 Black Fire impacted nine areas analyzed as part of one or more alternative. This subsection serves to describe changes to the characteristics that made each of these areas suitable for wilderness recommendation. Fire-related changes could impact apparent naturalness if fire effects are outside what would be expected under the fire regimes for specific vegetation communities. Fires could also impact other features of value such as cultural sites. However, because other features of value are not required to be present for an area to be suitable, changes to these values will not impact the area's suitability for recommendation.

The impacted areas include: B10-Aldo Leopold Addition Northeast, B1a-Aldo Leopold Seco Addition, B1c-Aldo Leopold Seco Addition, B9-Aldo Leopold Addition East, B11-Aldo Leopold Addition Southeast, W3-Aldo Leopold Addition West, W4-Aldo Leopold Addition McKnight Canyon, WB1-Taylor Creek, and WSB1-Rabb Park. Monitoring Trends in Burn Severity data are not yet available for the Black Fire; therefore, this analysis relies on data from Rapid Assessment of Vegetation Condition After Wildfire data. While this analysis may reach conclusions that no substantial loss of apparent naturalness occurred in a given area, we want to acknowledge that some undesirable post-fire watershed effects from an exceptionally active monsoon season have occurred. Downslope and downstream values have been negatively impacted. In no way do we intend to minimize those values or those impacts. In the following subsections, the amount of each area by severity class is displayed and discussed in terms of the impacts to apparent naturalness and other features of values where they are or were present.

B1a – Aldo Leopold Seco Addition

Alternative	Total Recommended Acres	High Severity	Moderate Severity	Low Severity	Unchanged or Outside Fire Perimeter
2	4,724	<1%	10%	56%	34%
3	517	<1%	10%	17%	73%
4	4,031	<1%	10%	66%	24%
5	5,741	<1%	9%	52%	39%

There was very little high and moderate severity in this area. The amount and distribution of these severities are generally consistent with natural fire regimes of the affected vegetation types and topography. The Black Fire did not detract from apparent naturalness. Other features of value include scenery and Chiricahua leopard frog habitat. There are likely impacts to Chiricahua leopard frog habitat, either from the fire or from subsequent flooding. However, the habitat remains of value even though habitat loss or alteration may have occurred. Forest staff will continue to work with the U.S. Fish and Wildlife Service to implement the recovery plan and restore habitat conditions. While the scenery may have changed in some locations, its value has not been reduced because the area and severity of burned landscape is consistent with the fire regime after a lightning-caused fire.

B1c – Aldo Leopold Seco Addition

Alternative(s)	Total Recommended Acres	High Severity	Moderate Severity	Low Severity	Unchanged or Outside Fire Perimeter
2 and 5	48	0	2%	42%	56%
3	78	0	3%	35%	62%
4	40	0	5%	53%	42%

There was no high and very little moderate severity in this area and the impacts to wilderness characteristics are like those described for B1a-Aldo Leopold Seco Addition.

B9 – Aldo Leopold Addition East

Alternative(s)	Total Recommended Acres	High Severity	Moderate Severity	Low Severity	Unchanged or Outside Fire Perimeter
4	11,909	<1%	1%	22%	77%

There was very little high and moderate severity in this area. The amount and distribution of these severities are mostly consistent with natural fire regimes of the affected vegetation types and topography. Approximately half of the 163 acres of burned at high and moderate severities are in riparian zones, for which there is very little information to support an understanding of natural fire regimes (see Riparian and Aquatic Ecosystems Affected Environment section in volume I of the environmental impact statement). These severities did not occur in a single patch, but as small patches in several different drainages. There is no information to suggest that the Black Fire had substantial impacts on apparent naturalness, and there were no other features of value identified.

B10 – Aldo Leopold Addition Northeast

Alternative	Total Recommended Acres	High Severity	Moderate Severity	Low Severity	Unchanged or Outside Fire Perimeter
2	8,381	2%	13%	30%	55%
3	4,076	4%	19%	46%	31%
5	15,181	1%	7%	19%	73%

While most of the area experienced low severity or did not burn, there was more high and moderate severity fire than in the three areas previously discussed. While most of the severity occurred in patterns and vegetation types that would be consistent with natural fire regimes, a substantial amount occurred in dry mixed conifer. Dry mixed conifer is believed to have had a predominantly frequent and low severity fire regime. However, there is some uncertainty related to the available information to describe the natural fire regime (see Upland Vegetation, Fire Ecology and Fuels Effects to Mixed Conifer-Frequent Fire in volume I of the environmental impact statement). With this uncertainty, and the relatively patchy nature of severity across the area, a conclusion that a substantial impact to apparent naturalness cannot be drawn. That fire as an active natural process was considered another feature of value in this area supports a conclusion that apparent naturalness remains high. However, high and moderate burn severities likely impacted Mexican spotted owl habitat, another feature of value. Those impacts to Mexican spotted owl habitat would not change the overall evaluation score and the area remains highly suitable for recommendation.

B11 – Aldo Leopold Addition Southeast

Alternative	Total Recommended Acres	High Severity	Moderate Severity	Low Severity	Unchanged or Outside Fire Perimeter
2	944	0	<1%	27%	73%
3	943	0	2%	27%	73%
4	4,943	0	<1%	5%	95%
5	15,181	0	<1%	2%	98%

There was no high and very little moderate burn severity in this area and the impacts to wilderness characteristics are like those described for B1a-Aldo Leopold Seco Addition.

W3 – Aldo Leopold Addition West

Alternative	Total Recommended Acres	High Severity	Moderate Severity	Low Severity	Unchanged or Outside Fire Perimeter
2	1,110	3%	38%	54%	5%
3	1,109	3%	38%	54%	5%
5	3,389	1%	20%	61%	18%

While most of the area experienced low severity or did not burn, there was more high and moderate severities in this area than areas previously discussed. More than half of this severity is consistent with the natural fire regimes of the vegetation types affected. The other half occurred in dry mixed conifer and

the discussion related to that fire regime for B10-Aldo Leopold Addition Northeast applies here. The severity distribution is likely consistent with what could have occurred historically given the topography and fire weather conditions. There is nothing to suggest a substantial impact to apparent naturalness. No other features of value were identified.

W4 – Aldo Leopold Addition McKnight Canyon

Alternative	Total Recommended Acres	High Severity	Moderate Severity	Low Severity	Unchanged or Outside Fire Perimeter
2	11,094	6%	19%	51%	24%
3	11,050	6%	19%	52%	23%
5	12,459	5%	18%	54%	26%

This area experienced the most high and moderate severity of all the impacted areas. In the woodlands, ponderosa pine-oak, and wetter mixed conifer vegetation communities, these severities would be expected under natural fire regimes. In some woodland areas, these severities may not have been expected historically, but have helped the woodland areas move toward the desired conditions described in the revised plan and enhanced apparent naturalness (see Upland Vegetation Fire Ecology and Fuels Pinyon Juniper Woodland and Pinyon Juniper Grass and Juniper Grass Woodlands in volume I of the environmental impact statement). The ponderosa pine forest without a significant evergreen oak component likely experienced fire severities outside the natural fire regime. Low severity fire is typical for this vegetation type. High and moderate severities are not. The dry mixed conifer discussion for B10-Aldo Leopold Addition Northeast applies here since the area experienced a substantial amount of high and moderate severity in this vegetation type. The riparian zones in this area experience burn severity like those discussed for B9-Aldo Leopold Addition East. The largest severity patch occurred in the headwaters of McKnight Canyon, in vegetation communities that evolved with stand-replacement fire, and in vegetation communities where the information supporting our understanding of natural fire regimes doesn't include all the relevant site characteristics that drive fire. Overall, it is difficult to conclude that the Black Fire substantially reduced apparent naturalness of the area from the time of the evaluation.

WB1 – Taylor Creek

Alternative	Total Recommended Acres	High Severity	Moderate Severity	Low Severity	Unchanged or Outside Fire Perimeter
2	10,012	<1%	6%	60%	34%
3	6,672	<1%	5%	57%	38%
5	26,852	<1%	5%	55%	40%

There was very little moderate or high burn severity in this area and the impacts to wilderness characteristics are like those described for B1a-Aldo Leopold Seco Addition.

WSB1 – Rabb Park

Alternative	Total Recommended Acres	High Severity	Moderate Severity	Low Severity	Unchanged or Outside Fire Perimeter
2	27,002	<1%	2%	23%	75%
3	25,984	<1%	2%	23%	75%
5	42,878	<1%	3%	18%	79%

There was very little moderate or high burn severity in this area and the impacts to wilderness characteristics are like those described for B1a-Aldo Leopold Seco Addition.

Step Four: Recommendation

The forest supervisor will consider the perspectives voiced by the public and other stakeholders and the analysis in environmental impact statement before deciding about which lands, if any, will ultimately be recommended to Congress for designation as wilderness. This decision and the reasoning supporting it will be included in the decision document released with the final plan and environmental analysis. The forest supervisor's recommendation is subject to further review and possible modification by the Chief of the Forest Service, Secretary of Agriculture, and the President of the United States, but only Congress has the authority to designate or release recommended lands. Lands recommended to Congress for designation will be managed to maintain or enhance the characteristics that made them suitable for recommendation until such time that Congress designates or releases them to other uses.

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Appendix I. Documentation of the Wild and Scenic River Eligibility Study

Background

The National Wild and Scenic Rivers System was enacted by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) to preserve certain rivers with outstanding remarkable values for the enjoyment of present and future generations. To be eligible for designation, the river segment must be “free-flowing” as defined by section 16(b) of the Wild and Scenic Rivers Act and have one or more outstandingly remarkable values as defined by section 1(b) of the act. Designation requires an act of Congress or, if certain requirements are met, the Secretaries of the Interior or Agriculture as appropriate. Once designated under the Wild and Scenic Rivers Act, rivers must be managed to protect and enhance the values that made them eligible for designation without limiting other uses that do not substantially interfere with public use and enjoyment of those values.

Section 5(d)(1) of the Wild and Scenic Rivers Act requires all federal agencies evaluate if there are rivers that may be eligible for inclusion in the National System during land management planning. To meet this requirement, the Gila National Forest conducted an eligibility study concurrent with forest plan revision under the guidance provided by the Forest Service’s final directives for implementing the 2012 planning rule (FSH 1909.12 chapter 80). An eligibility study is a systematic evaluation to determine whether there are free-flowing river segments with one or more outstandingly remarkable value that could qualify for inclusion in the National System.

The determinations of the eligibility study are not a recommendation for Congress to designate. A suitability study is the mechanism for federal agencies to make those recommendations. A suitability study is another systematic evaluation to determine that a river segment should be recommended. There is no requirement that a suitability study be conducted during forest plan revision.

The Wild and Scenic Rivers Act section 2(b) also requires that designated rivers be classified as wild, scenic or recreational. Management is based on the classification. Wild rivers are those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watershed or shorelines essentially primitive and waters unpolluted. Scenic river areas are those that are free of impoundments, with shorelines or watershed that are still largely primitive and undeveloped, but accessible in places by roads. Recreational rivers are those that are readily accessible by road or railroad, may have some development along their shorelines, and may have undergone some impoundment or diversion in the past. While not a designation, or recommendation for designation, the eligibility study must include a preliminary classification for each eligible river segment.

This appendix serves to document process employed to reach eligibility determinations and the findings for each of the 245 segments evaluated.

Process

A 2002 amendment to the 1986 forest plan included an eligibility study of some river segments within the forest and incorporated management direction for those that were eligible for wild and scenic status. This study did not include all river segments within the forest. Since the time that eligibility study was completed, the forest experienced significant change. On this basis, Gila National Forest staff were directed by the forest supervisor to evaluate all segments not studied for eligibility and review those previously studied rivers for changed circumstances. Changed circumstances are anything affecting the

free-flowing nature or outstandingly remarkable value(s) within a river corridor and new information (FSH 1909.12 chapter 80 section 82.4).

A total of 245 river segments evaluated during this process, all of which are required to be included because they are named on a U.S. Geological Society 7.5-minute quadrangle map (FSH 1909.12 chapter 80 section 82.2). Of these, 158 had not been evaluated in the previous study. The other 87^a stream segments were included in the previous study and reviewed for changed circumstances. Improved geospatial information systems and tools resulted in small changes to some river segment lengths during the review. These changes are described in the documentation section for each river segment later in this appendix.

Between the time the draft environmental analysis was released to the public and preparation of the final analysis, the 2022 Black Fire impacted several streams that were found eligible during this study. These streams include Las Animas, Holden Prong, Diamond Creek and South Diamond Creek. The interdisciplinary team was again convened to evaluate impacted stream segments for changed circumstances.

Free-Flowing Determination

The intent of the Wild and Scenic Rivers Act is to preserve free-flowing rivers in their natural condition. Free-flowing is defined in section 16(b) of the act as applied to any river or section of a river as being “...in a natural condition without impoundment, diversion, straightening, riprapping, or other modification of the waterway.” This section of the act also states that the existence of low dams, diversion works, or other minor structures does not automatically bar consideration.

Impoundment is defined as, “A body of water formed by any manmade structure.” (947 FR 39456 (Sept. 7, 1982)) Modification of the waterway may include any project that involves “a measurable alteration of the bed and banks of the river” (Sierra Club North Star Chapter v. Pena, 1 F Supp. 2d 971 (D. Minn. 1998)); however, there is no clear threshold for when a project may adversely affect a river’s free-flowing characteristics (Wild and Scenic Rivers Act section 7, p. 37) and Congress has “implicitly delegated the task of deciding what constitutes a ‘water resources project’ to the [agency]” (Sierra Club North Star Chapter v. Pena, 1 F Supp. 2d 971 (D. Minn. 1998)).

For this evaluation, any damming, diversion, channelization, or other confinement or rerouting of the channel was considered in the context of the river system. To be considered free-flowing, a river needed to maintain its natural stream functions, including a natural flood regime, natural sinuosity and channel shifting, natural bank erosion, and natural bed load and debris movement. Modifications of the stream channel, such as a fish barrier, affect free-flowing characteristics, but may or may not do so to the extent that the river system is affected. Modifications that mimic natural river processes, restore more natural river function, and are otherwise consistent with the river’s eligibility are acceptable. Throughout this evaluation, modifications that affect free-flow but do not cause a river to not be free-flowing are noted because of their influence on the appropriate classification of eligible river segments. There is no requirement for a minimum flow or the continuity of flow over time and space. Flow must only be sufficient to sustain or compliment the outstandingly remarkable values that make it eligible for wild and scenic status.

^a The 2002 record of decision stated that 99 rivers were studied, but evaluations for only 87 were found in the project record. While we don’t know which 12 stream segments are missing documentation in the 2002 project record, they would most likely be addressed in this study since it includes all streams named on a U.S. Geological Society 7.5-minute quadrangle map. If those 12 segments were unnamed, there is no requirement to evaluate them.

Outstandingly Remarkable Value Determination

The river and its adjacent land area must have one or more outstandingly remarkable scenic, recreational, geologic, fish, wildlife, historic, cultural, or other similar value to be eligible for wild and scenic status. “Outstandingly remarkable” means the value must be a unique, rare, or exemplary feature that is a conspicuous example or among the best representatives of that feature, within a region or the nation when compared to similar rivers.

The value should also be directly river-related and should meet at least one of the following criteria:

1. Be in the river or its corridor,
2. Contribute substantially to the functioning of the river ecosystem, or
3. Be river-dependent and owe their location or existence to the presence of the river.

The determination that a river area does or does not contain one or more outstandingly remarkable values is a professional judgement on the part of the forest supervisor, informed by the interdisciplinary team, best available science and public participation (FSH 1909.12 chapter 80 section 82.73).

Being rare or unique does not alone make a value outstandingly remarkable. It must also be conspicuously dissimilar from the class of feature to which it belongs. Just being an example of a type of feature that is remarkable is not sufficient, it must be outstandingly remarkable in comparison to similar rivers. For example, river-based recreation opportunities are rare in the arid Southwest. To be outstandingly remarkable, the opportunity must be an unusually exemplary example among arid rivers. Every archeological site is inherently unique and irreplaceable. To be outstandingly remarkable, a site must be of a quality or extent such that it is among the best examples of a historical resource.

Similar rivers define the “region of comparison”. The region of comparison may vary for different categories of outstandingly remarkable values and thus, multiple regions of comparison may be used to evaluate a single river. The appropriate region of comparison is developed by the interdisciplinary team, with input from the public, and ultimately approved by the forest supervisor.

Regions of Comparison

Regions of comparison should be large enough to incorporate similar rivers with a wide range of values so that outstandingly remarkable values can be recognized.

Scenery

The region of comparison for scenic values encompasses the Gila National Forest, the Apache-Sitgreaves National Forests, the Magdalena and Mount Taylor ranger districts of the Cibola National Forest, the Safford ranger district, and lower elevations of the Douglas ranger district of the Coronado National Forest, including the New Mexico “bootheel” and the public lands between these National Forest System lands. Rivers within this region of comparison lie east of the Rio Grande River corridor and share similar landscape elements, vegetation, water, color, visual contrast, and related factors.

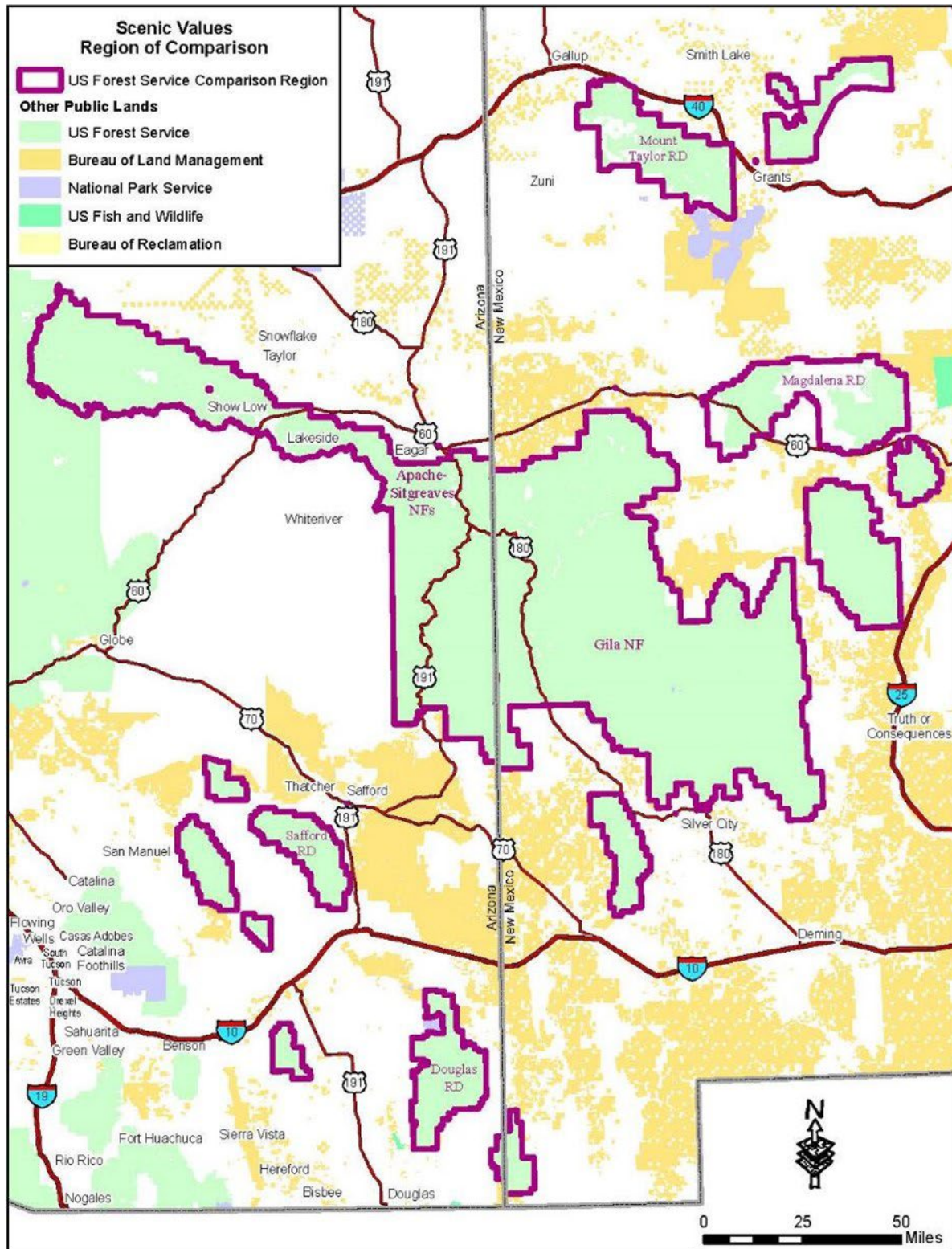


Figure I-1. Region of comparison for scenic values

Recreation

The region of comparison for recreational values is the Gila National Forest, the adjacent Magdalena district of the Cibola National Forest and the other public lands between them. Rivers in this region of comparison share similar landscape settings, flow regimes, stream sizes, biological characteristics, vegetation types, accessibility, visitation and demographics. This provides for similar recreation opportunities for hiking, canyoneering, river floating, paddling, fishing, wildlife viewing, and nature study.

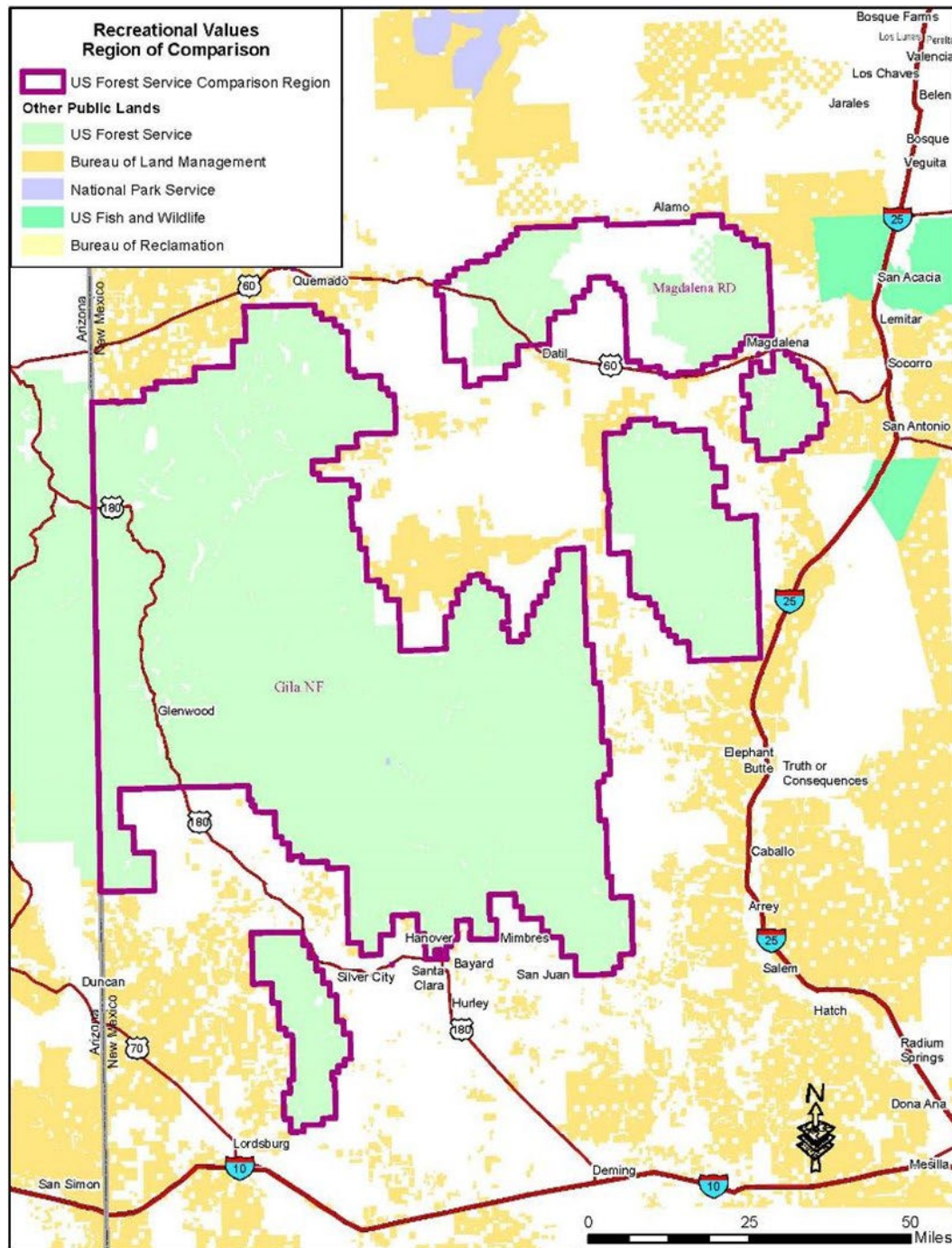


Figure I-2. Region of comparison for recreation values

Geology

The region of comparison for geologic values encompasses the Gila National Forest, the adjacent Apache-Sitgreaves National Forest and the public lands between them. This geology of this area has similar origin and physiography.

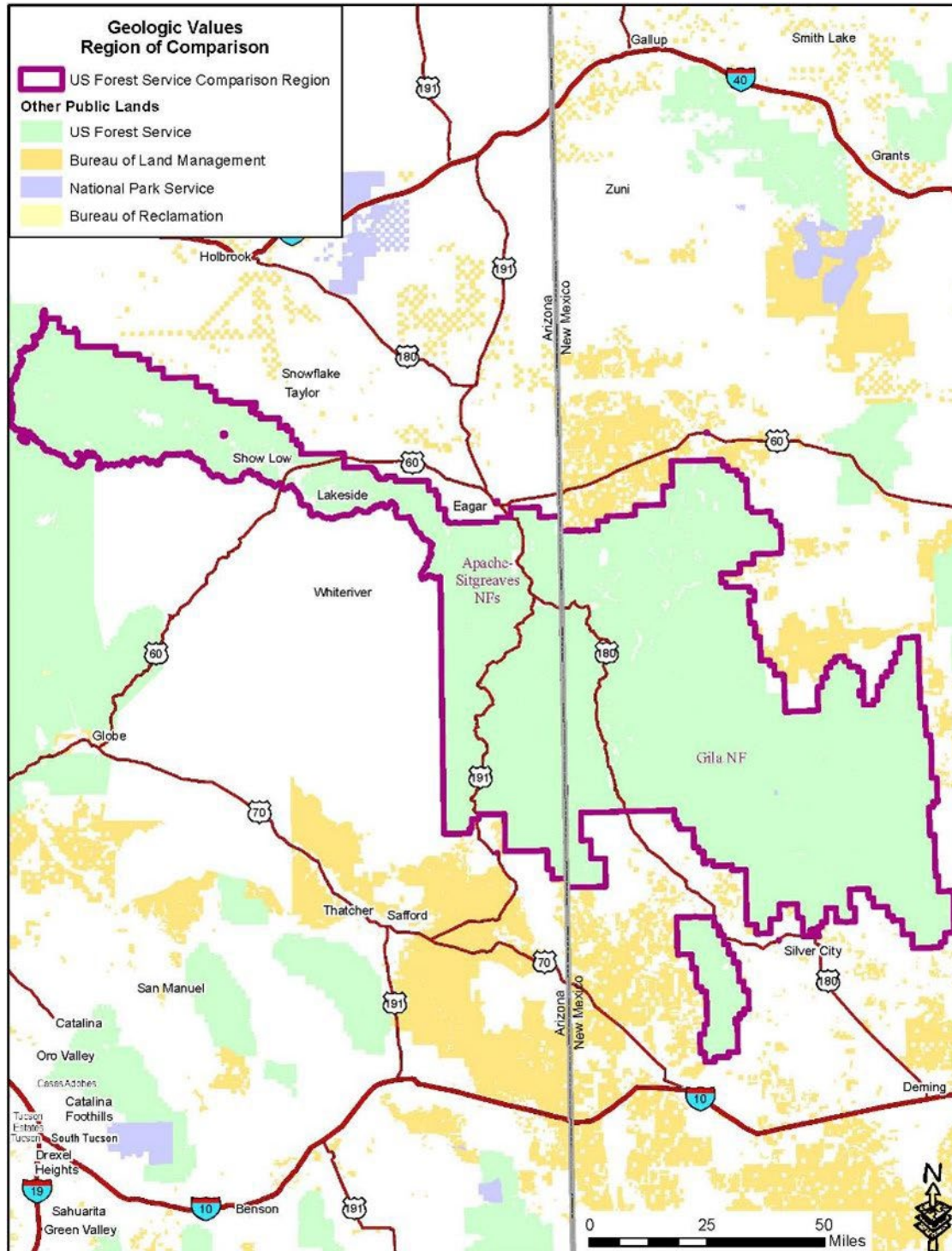


Figure I-3. Region of comparison for geologic values

Fish

The region of comparison for fisheries values encompasses the entirety of the Upper Gila and subregion (2nd level watershed) in Arizona and New Mexico and the Rio Grande-Mimbres subregion (2nd level watershed) in New Mexico. Rivers in this area are relatively similar in terms of habitat availability, quality and connectivity. Rivers are also relatively similar in terms of their species and species assemblages, including the presence of species, or lineages of species that do not occur outside the area.

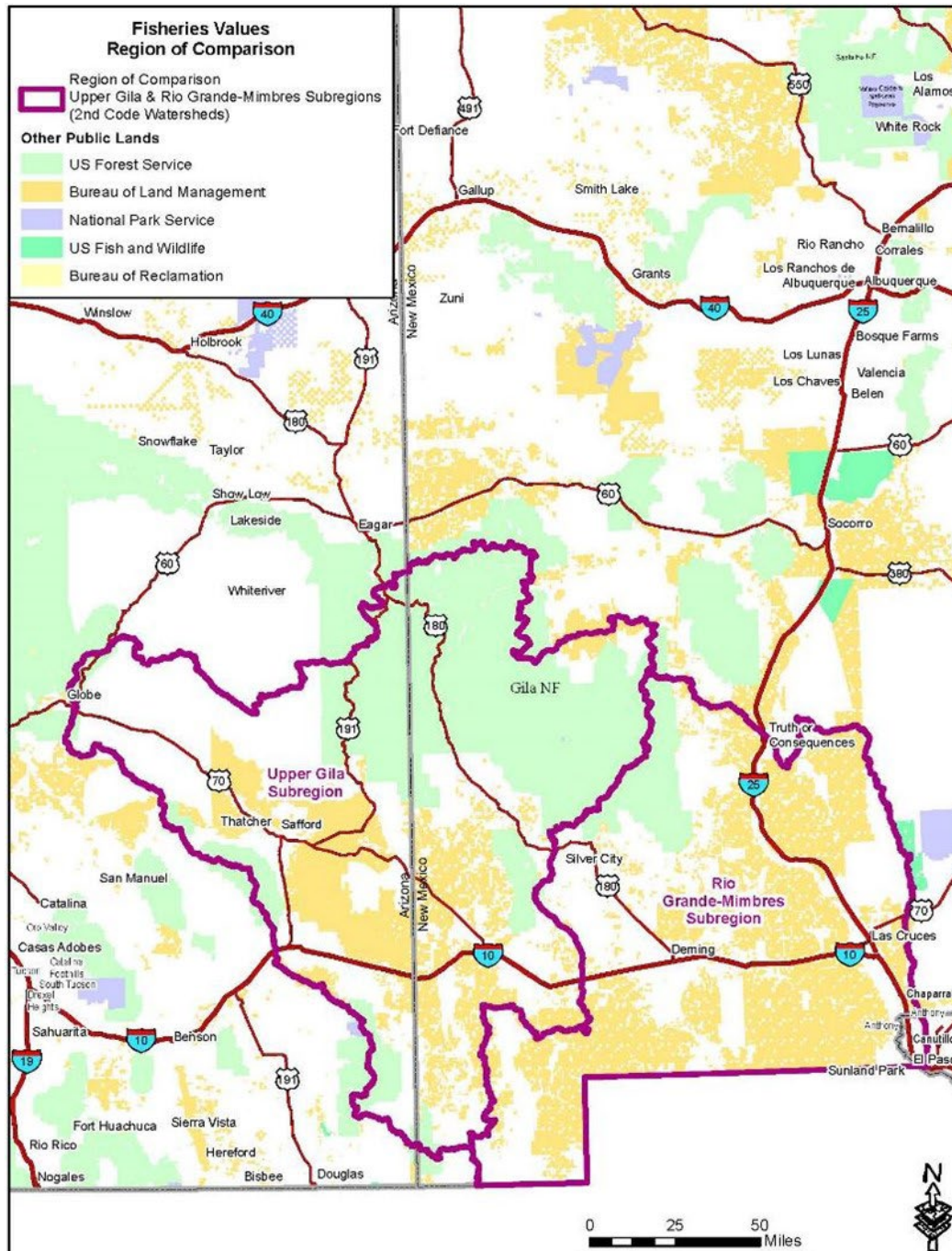


Figure I-4. Region of comparison for fisheries values

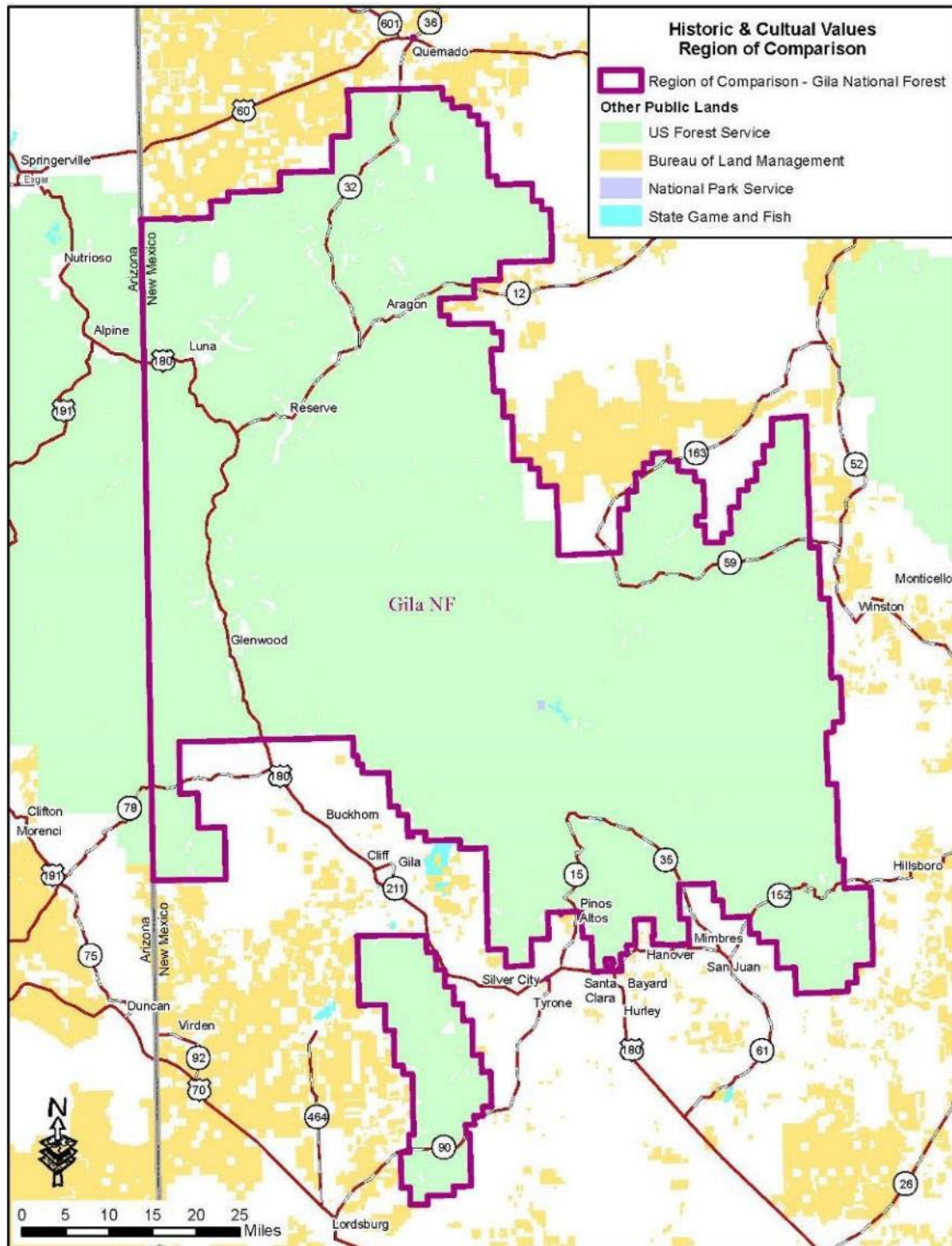


Figure I-6. Region of comparison for historic and cultural values

Criteria to Establish Outstandingly Remarkable Value

The final directives for implementing the 2012 Planning Rule establishes baseline criteria for evaluating river-related values that foster greater consistency within the Forest Service and with other federal agencies. These criteria may be refined to make them more meaningful in the region of comparison. The interdisciplinary team added more specificity to the criteria, based on the direction

provided by the forest supervisor and public input, to facilitate a more meaningful comparison between rivers within the regions of comparison. Ultimately, the determination that a resource value is outstandingly remarkable is a professional judgement by the forest supervisor that it meets the definition as described in the agency directives. The value should be directly river-related or be river-dependent and owe its location or existence to the presence of the river. Table I-1 compares the baseline criteria with the Gila-specific criteria used to establish outstandingly remarkable value.

Table I-1. Criteria used for establishing outstandingly remarkable values (ORVs)

ORV	Recommendations for Eligibility Evaluation Criteria	Gila-Specific Eligibility Evaluation Criteria
Scenery	Landscape elements of landform, vegetation, water, color, and related factors result in notable or exemplary visual features or attractions. Additional factors, such as seasonal variations in vegetation, scale of cultural modifications, and the length of time negative intrusions are viewed, may be considered. Scenery and visual attractions may be highly diverse over different parts of the river or river segment. Outstandingly remarkable scenic features may occupy only a small portion of a river corridor.	Vast, expansive viewsheds are possible in certain stretches within the river corridor. Air quality and natural night sky are important values.
Recreation	Recreational opportunities are high quality and attract, or have the potential to attract, visitors from throughout or beyond the region of comparison; or the recreational opportunities are unique or rare within the region. River-related recreational opportunities include, but are not limited to, sightseeing, interpretation, wildlife observation, camping, photography, hiking, fishing, hunting, and boating. The river may provide settings for national or regional use or competitive events.	Consider exceptional opportunities for solitude, birdwatching, fishing for endemic species like Gila trout, canyoneering, rafting or hot springs, gold panning, and ecotourism.
Geology	The river corridor contains one or more examples of a geologic feature, process, or phenomenon that is unique, rare or exemplary within the region of comparison. The feature(s) may be in an unusually active stage of development, represent a "textbook" example, or represent a unique, rare or exemplary combination of geologic features (erosional, volcanic, glacial, or other geologic structures).	Consider caves and hot springs as geologic features.
Fish	Fish values may be judged on the relative merits of either fish populations or habitat, or a combination of these river-related conditions. <i>a. Populations.</i> The river is nationally or regionally an important producer of resident and/or anadromous fish species. Of particular significance are a diversity of fish species or the presence of wild stocks and/or federal or state-listed or candidate threatened, endangered, or species of conservation concern. <i>b. Habitat.</i> The river provides uniquely diverse or high quality habitat for fish species indigenous to the region of comparison. Of particular significance is exemplary habitat for wild stocks and/or federal or state-listed or candidate threatened or endangered species, or species of conservation concern. Consider also rare and unique habitats within the corridor.	Irreplaceable populations, distinct lineages and diverse assemblages of multiple threatened and endangered species.

ORV	Recommendations for Eligibility Evaluation Criteria	Gila-Specific Eligibility Evaluation Criteria
Wildlife	Wildlife values may be judged on the relative merits of either terrestrial or aquatic wildlife populations or habitat, or a combination of these conditions. <i>a. Populations.</i> The river, or area within the river corridor, contains nationally or regionally important populations of indigenous wildlife species. Of particular significance are species diversity, species considered to be unique, and/or populations of federal or state-listed or candidate threatened or endangered species, or species of conservation concern. <i>b. Habitat.</i> The river, or area within the river corridor, provides uniquely diverse or high quality habitat for wildlife of national or regional significance, and/or may provide unique habitat or a critical link in habitat conditions for federal or state-listed or candidate threatened or endangered species, or species of conservation concern. Contiguous habitat conditions are such that the biological needs of the species are met.	Irreplaceable populations* and diverse, unique assemblages of multiple threatened and endangered species.
Historic and Cultural Values	The river, or area within the river corridor, contains important evidence of historic or pre-historic occupation or use by humans. Sites may have national or regional importance for interpreting history or prehistory. <i>a. History.</i> Sites or features are associated with a significant event, an important person, or a cultural activity of the past that is now rare or unique in the region. A historic site or feature, in most cases, is 50 years old or older. <i>b. Prehistory.</i> Sites of prehistoric human use or occupation may have unique or rare characteristics or exemplary anthropological value such as evidence of prehistoric human practices and modes of living. Areas within the river corridor may have been used for rare sacred purposes or represent the origin or conflict of cultures.	The standard requires that typical visitors would generally find their visit enhanced significantly by the presence of these resources (e.g., through seeing rock art, cliff dwellings, or other readily apparent sites). Interpretive value does not require interpretation but indicates the area and river corridor's significance beyond the normal "background" level of cultural resources in the analysis area.
Other similar river-related values	None identified	Not applicable

*Gila trout are native to higher elevation streams in portions of the Gila River and San Francisco River drainage basins in New Mexico and Arizona. They are considered rare in the Southwest and nationally. However, they occur in many streams in the region of comparison. Most of these streams also contain non-native trout species (i.e., brown and rainbow trout) that interbreed and compete with Gila trout. On the Gila National Forest, Gila trout populations are only considered an outstandingly remarkable value where one of the five remnant lineages (Main Diamond, South Diamond, Whiskey Creek, Iron Creek, and Spruce Creek) are present. Streams throughout the Gila River, San Francisco and other drainage basins in the region of comparison also commonly contain other rare native fishes. These assemblages are only considered an outstandingly remarkable value when they are distinctly unique.

Changed Circumstances

All the river segments that were studied in 2002 were reviewed for changed circumstances, whether they had been found eligible for wild and scenic status or not. A second review of changed circumstances was conducted after the 2022 Black Fire. Only those streams that had been found eligible earlier in this study which possessed outstandingly remarkable fisheries values potentially affected by the fire and post-fire flood events were reviewed. The interdisciplinary team concluded that while these values had been impacted, there was insufficient information to determine the status of these values. The interdisciplinary team considered the worst-case scenario and concluded that even if fish were no longer present, these

streams still contain important habitat and future work would be directed toward recovering those outstandingly remarkable values.

Classification of Eligible Rivers

Wild and scenic rivers are classified as wild, scenic or recreation (Wild and Scenic Rivers Act section 2(b)). Classifications are based on levels of different degrees development that warrant certain management under the Wild and Scenic Rivers Act. Each river found eligible must be assigned a preliminary classification. The intent of the act is to protect a river's free-flowing condition and protect and enhance the outstandingly remarkable values and applies equally to all eligible rivers regardless of classification. Management of an eligible river must maintain the river's preliminary classification. Table I-2 displays the criteria used to develop classifications.

Various things were considered regarding classification including shoreline development, accessibility, water quality, special lands uses (such as utility corridors and other special use permits), livestock grazing, and past management activities (such as timber harvesting, or exploration and development of oil and gas). The interdisciplinary team referred to maps and geographic information systems data to look at the level of development and access to the area. However, the interdisciplinary team did not take expected future development, or other changes along the river corridor, into consideration. Table I-3 shows the preliminary classifications. A final classification will be assigned if the river is designated by Congress.

Table I-2. Classification criteria for wild, scenic, and recreational rivers

ATTRIBUTE	WILD	SCENIC	RECREATIONAL
Water Resource Development	Free of impoundment.	Free of impoundment.	Some existing impoundments or diversion. The existence of low dams, diversions, or other modifications of the waterway is acceptable, provided the waterway remains generally natural and riverine in appearance.
Shoreline Development	Essentially primitive. Little or no evidence of human activity. The presence of a few inconspicuous structures, particularly those of historic or cultural value, is acceptable. A limited amount of domestic livestock grazing or hay production is acceptable. Little or no evidence of past timber harvest. No ongoing timber harvest.	Largely primitive and undeveloped. No substantial evidence of human activity. The presence of small communities or dispersed dwellings or farm structures is acceptable. The presence of grazing, hay production, or row crops is acceptable. Evidence of past or ongoing timber harvest is acceptable, provided the forest appears natural from the riverbank.	Some development. Substantial evidence of human activity. The presence of extensive residential development and a few commercial structures is acceptable. Lands may have been developed for the full range of agricultural and forestry uses. May show evidence of past and ongoing timber harvest.

ATTRIBUTE	WILD	SCENIC	RECREATIONAL
Accessibility	Generally inaccessible except by trail. No roads, railroads, or other provision for vehicular travel within the river area. A few existing roads leading to the boundary of the area are acceptable.	Accessible in places by road. Roads may occasionally reach or bridge the river. The existence of short stretches of conspicuous or longer stretches of inconspicuous roads or railroads is acceptable.	Readily accessible by road or railroad. The existence of parallel roads or railroads on one or both banks as well as bridge crossings and other river access points is acceptable.
Water Quality	Meets, or exceeds criteria, or federally approved state standards for aesthetics, for propagation of fish, and wildlife normally adapted to the habitat of the river, and for primary contact recreation (swimming) except where exceeded by natural conditions.	No criteria are prescribed by the Wild and Scenic Rivers Act. The Federal Water Pollution Control Act Amendments of 1972 have made it a national goal that all waters of the United States are made fishable and swimmable. Therefore, rivers will not be precluded from scenic or recreational classification because of poor water quality at the time of their study, provided a water quality improvement plan exists, or is being developed in compliance with applicable federal and state laws.	

Determinations

Summary of Eligible Rivers

Table I-3 displays the eligible rivers, summarizes their outstandingly remarkable values, total segment lengths and preliminary classification segment lengths. More information on eligible and ineligible rivers can be found in the next section.

Table I-3. Eligible wild and scenic rivers within the Gila National Forest

River Name	Outstanding Remarkable Values	Total Miles	Classification (# of miles)
Diamond Creek	Fish, Historic and Cultural	23.80	Wild (22.12) Scenic (1.68)
Middle Box of the Gila River	Wildlife, Scenic, Recreation, Fish, Historic and Cultural	8.90	Recreational (1.34) Wild (7.56)
Middle Fork Gila River	Scenic	35.54	Wild (35.54)
West Fork Gila River	Scenic, Historic	30.01	Wild (30.01)
Wilderness Run of the Gila River	Geologic, Scenic, Recreation, Historic, Wildlife	40.39	Wild (33.67) Recreational (6.72)
Holden Prong	Fish	7.27	Wild (7.27)
Iron Creek	Fish	3.53	Wild (3.53)
Las Animas Creek	Fish, Historic	7.35	Wild (2.53) Scenic (4.82)
Mineral Creek	Fish, Recreation	8.71	Wild (8.71)
Mule Creek	Geologic	4.33	Scenic (4.33)
Lower Box of the San Francisco River	Scenic, Recreation, Wildlife	17.02	Scenic (2.43) Wild (14.59)
Upper Box of the San Francisco River	Scenic, Recreation	5.70	Scenic (3.78) Wild (1.92)
South Diamond Creek	Fish	8.05	Wild (8.05)
Spruce Creek	Fish	3.74	Wild (3.74)
Whitewater Creek	Recreation, Historic	14.73	Wild (11.79) Recreational (2.94)
Willow Creek	Recreation	4.95	Recreational (4.95)
Total Eligible River Miles:		224.11	

All Studied Rivers

This section documents the determinations for all 245 studied rivers. First, eligible rivers and the rationale behind the interdisciplinary team's determinations are summarized. Some of those rivers are broken into multiple segments with different eligibility or classification. For example, a road may parallel the bottom half of a river but not the upper section. Both sections may be found eligible, but the classification of the upper half may be wild and the lower half recreational. Thus, one river was evaluated and found eligible. Then the two river sections were evaluated separately, and both found eligible, and assigned different preliminary classifications based on levels of development. Next, rivers determined to be ineligible for wild and scenic status because the values present are not outstandingly remarkable are listed. Finally, a series of maps displays location information.

Table I-4. Descriptions of eligible wild and scenic rivers within the Gila National Forest

Eligible Wild and Scenic Rivers within the Gila National Forest
<p>River name: <i>Diamond Creek</i></p> <p>Process notes: Found eligible in 2002. No relevant changed circumstances at draft. Adjustments made to segment lengths based on updated location information for its outstandingly remarkable values. Before finalizing the study, the 2022 Black Fire resulted in changed circumstances. Insufficient information exists to determine the status of the fisheries value. Regardless of status, future work would restore or enhance the fisheries value.</p> <p>Segment name: Upper Wild Start point: Headwaters End point: Boundary with private wilderness inholding Miles: 13.31 Preliminary classification: Wild Outstandingly Remarkable Value: Fish Description of Outstandingly Remarkable Value(s): There is an original, relict population of Gila trout with a distinct genetically pure lineage. This segment supports the only known source population of the Main Diamond lineage.</p> <p>Segment name: Middle Wild Start point: Boundary with private wilderness inholding End point: Aldo Leopold Wilderness boundary Miles: 4.75 Preliminary classification: Wild Outstandingly Remarkable Value: Historic and Cultural Description of Outstandingly Remarkable Value(s): Contains a concentration of prehistoric Mimbres-Mogollon cultural sites that is unique and outstandingly remarkable. It is a classic river-based community at high elevation, remarkable for its isolation from the desert roots of the Mimbres culture in the Mimbres and Gila-Cliff valleys. Sites recorded to date include late Mimbres Classic villages, pueblos, farmsteads, field houses, rock shelters and a few late pit house period villages that pre-date the Mimbres Classic period.</p> <p>Segment name: Scenic Start point: Below private property at Links Ranch End point: Gila Wilderness boundary Miles: 1.68 Preliminary classification: Scenic Outstandingly Remarkable Value: Historic and Cultural Description of Outstandingly Remarkable Value(s): Contains a concentration of prehistoric Mimbres-Mogollon cultural sites that is unique and outstandingly remarkable. It is a classic river-based community at high elevation, remarkable for its isolation from the desert roots of the Mimbres culture in the Mimbres and Gila-Cliff valleys. Sites recorded to date include late Mimbres Classic villages, pueblos, farmsteads, field houses, rock shelters and a few late pit house period villages that pre-date the Mimbres Classic period.</p>

Eligible Wild and Scenic Rivers within the Gila National Forest
<p>Segment name: Lower Wild Start point: Gila Wilderness boundary End point: Confluence with East Fork Gila River Miles: 4.06 Preliminary classification: Wild Outstandingly Remarkable Value: Historic and Cultural Description of Outstandingly Remarkable Value(s): Contains a concentration of prehistoric Mimbres-Mogollon cultural sites that is unique and outstandingly remarkable. It is a classic river-based community at high elevation, remarkable for its isolation from the desert roots of the Mimbres culture in the Mimbres and Gila-Cliff valleys. Sites recorded to date include late Mimbres Classic villages, pueblos, farmsteads, field houses, rock shelters and a few late pit house period villages that pre-date the Mimbres Classic period.</p>
<p>River name: Middle Box of the Gila River</p> <p>Process notes: The Middle Box of the Gila River was not included in the 2002 study, although it was included in the 1982 Nationwide Rivers Inventory.</p> <p>Segment name: Middle Box Start point: Forest boundary at Gila River Bird Area End point: Gila River Bird Area at southern trailhead and parking area Miles: 1.34 Preliminary classification: Recreational Outstandingly Remarkable Value: Scenic, Recreation, Fish, Wildlife, Historic and Cultural Description of Outstandingly Remarkable Value(s): This segment was differentiated from the Middle Box Run due to a road and developments on private land that are evident for the first 1.34 miles. The outstandingly remarkable values are the same for both segments of the river.</p> <p>Segment name: Middle Box Run Start point: Gila River Bird Area at southern trailhead and parking area End point: Forest boundary Miles: 7.56 Preliminary classification: Wild Outstandingly Remarkable Value: Scenic, Recreation, Fish, Wildlife, Historic and Cultural Description of Outstandingly Remarkable Value(s): Portion of the Gila River encompasses the river valley as it transitions from a wide riparian floodplain to where it enters the middle gorge in the Big Burro Mountains. Provides a well-developed example of riparian cottonwood ecosystem in New Mexico and provides high-quality bird habitat. Renowned for its rich and unique birdlife, with 231 species representing 43 percent of the verified bird species documented in the state (Shook 2015). Some of these species are at the northern edge of their historic range.</p> <p>The river also flows through a research natural area established for the study of birds and provides habitat for the federally listed narrow-headed gartersnake.</p> <p>Considered a source area population for the federally listed, narrow endemic fish species spikedace and loach minnow (D. Myers pers. comm.). These fishes are regularly found in large numbers here, but irregularly elsewhere in the river basin (Paroz and Propst 2007). Recent genetic studies show that these two fish species that are found elsewhere have genetic ties to his population, suggesting it is responsible for a significant portion of the migration and establishment of</p>

Eligible Wild and Scenic Rivers within the Gila National Forest
<p>other populations (Pilger et al. 2015).</p> <p>Less than an hour drive from Silver City, the Bird Area is readily accessible and becoming more popular for recreational uses such as hiking, birdwatching, river access and dispersed camping. Under the right conditions, the river is periodically boatable and features Class II to III+ boulder garden rapids.</p> <p>This river corridor was an important travel route for Native American peoples. It contains numerous important prehistoric Native American sites, including depressions in riverside rock outcrops used to grind maize. There are also numerous historic mining and ranching sites.</p>
<p>River name: <i>Middle Fork of the Gila River</i></p> <p>Process notes: Found eligible in the 2002 study. No relevant changes in circumstance affect its free-flow or the status of its outstandingly remarkable values. Adjustments were made to segment lengths to better reflect the actual river miles using more accurate geospatial information system data and tools.</p> <p>Segment name: Middle Fork Gila River Start point: Gila Wilderness boundary below Snow Lake End point: Gila Wilderness boundary at T12 S, R14 W, Section 23 Miles: 35.54 Preliminary classification: Wild Outstandingly Remarkable Value: Scenery Description of Outstandingly Remarkable Value(s): The Middle Fork of the Gila River is one of the most visited locations in the Gila Wilderness, the first designated wilderness in the world. It has outstanding views of rock formations along the middle third of its length. The Gila conglomerate rock has been weathered into pinnacle formations in some locations and sheer rock walls of several hundred feet depth in others. The entire length has a rich and diverse riparian vegetation community intermixed with ponderosa pine and occasional stringers of mixed conifers. The riparian species, along with Virginia creeper and a diversity of wildflowers adds considerable fall color. The trail in the canyon bottom crosses the meandering river about four times per mile. Rugged topography and steep cliffs create very few entry and exit opportunities along the canyon.</p>

Eligible Wild and Scenic Rivers within the Gila National Forest
<p>River name: <i>West Fork of the Gila River</i></p> <p>Process notes: Found eligible in the 2002 study. No relevant changes in circumstance affect its free-flow or the status of its outstandingly remarkable values. Adjustments were made to segment lengths to better reflect the actual river miles using more accurate geospatial information system data and tools.</p> <p>Segment name: West Fork Gila River Start point: Headwaters End point: North boundary of the Gila Cliff Dwellings National Monument Miles: 30.01 Preliminary classification: Wild Outstandingly Remarkable Value: Scenery, Historic, and Cultural Description of Outstandingly Remarkable Value(s): The West Fork Gila River is the most visited location in the Gila Wilderness, the first designated wilderness in the world. Its biggest attraction is the scenery. In the upper portions, there are sheer rock cliffs about 500 feet tall. At other locations, the cliffs have been worked into pinnacle formations. The entire length has a rich and diverse riparian vegetation community intermixed with ponderosa pine and occasional stringers of mixed conifers. The riparian species, along with Virginia creeper and a diversity of wildflowers adds considerable fall color. The trail in the canyon bottom crosses the meandering river about four times per mile. Rugged topography and steep cliffs create very few entry and exit opportunities along the canyon.</p> <p>White Creek Cabin, within the upper reaches of the West Fork, is eligible for the National Register of Historic Places. There are more than 50 outstandingly remarkable sites associated with the prehistoric Mimbres-Mogollon, Archaic, and Apache cultures along the lower reaches of the river, including pueblos, farmsteads, fieldhouses, agricultural fields, rock art, rock shelters, cliff dwellings, and campsites.</p>
<p>River name: <i>Wilderness Run of the Gila River</i></p> <p>Process notes: Wilderness Run of the Gila River was not included in the 2002 study. It was included in the 1982 Nationwide Rivers Inventory. This study determined it is eligible for wild and scenic status.</p> <p>Segment name: Wilderness Run of the Gila River Upper Start point: Grapevine Bridge End point: Gila Wilderness boundary Miles: 33.67 Preliminary classification: Wild Outstandingly Remarkable Value: Scenic, Geologic, Historical and Cultural, Wildlife, Recreation Description of Outstandingly Remarkable Value(s): The meandering river and its well-developed riparian corridor is set against the backdrop of starkly arid ridges, rugged mountains and cliffs is particularly scenic. Other unique scenic and geologic features include vents and exposures of the Alum Mountain eruptive volcanic complex. This includes a colorful area of geothermically altered rock from the Alum Mountain eruptive volcanic complex. The volcanic center of the Copperas Creek Volcano is also exposed along the river downstream from the Grapevine Bridge at Alum Mountain (Ratte et al. 2014).</p> <p>The river features many outstanding historic and cultural resources, including cliff dwellings, granaries, rock art and historic mining. Many of these features are readily visible from the river.</p>

Eligible Wild and Scenic Rivers within the Gila National Forest
<p>This river is a stronghold for common blackhawks and bighorn sheep as well as federally listed southwestern willow flycatcher, yellow-billed cuckoo, migratory birds and narrow endemic springsnails.</p> <p>Under the right conditions, this reach is periodically boatable and commonly referred to as the “Wilderness Run.” It involves a multiday float through the Gila Wilderness. There are hot springs near Alum Mountain that are accessible by non-motorized trail, which is popular with hikers.</p> <p>Segment name: Wilderness Run of the Gila River Lower Start point: Gila Wilderness boundary End point: Forest boundary near USGS gage above the Mogollon Box Miles: 6.72 Preliminary classification: Recreational Outstandingly Remarkable Value: Scenic, Geologic, Historical and Cultural, Wildlife, Recreation Description of Outstandingly Remarkable Value(s): This segment was differentiated from the upper segment based on level of development. After the river leaves the wilderness, there is road access to the river between the confluence with Turkey Creek, on which there is a private property inholding. This area is also a very popular recreational area with many hardened dispersed campsites along the river.</p>
<p>River name: Holden Prong</p> <p>Process notes: Found eligible in the 2002 study. No relevant changes in circumstances affecting its free-flow or outstandingly remarkable value were present when this study was draft. Adjustments were made to segment lengths to better reflect the actual river miles using more accurate geospatial information system data and tools. Before finalizing the draft study, the 2022 Black Fire resulted in changed circumstances. Insufficient information exists to determine the status of the fisheries value. Regardless of status, future work would restore or enhance the fisheries value.</p> <p>Segment name: Holden Prong Start point: Headwaters End point: Confluence with Las Animas Creek Miles: 7.27 Preliminary classification: Wild Outstandingly Remarkable Value: Fish Description of Outstandingly Remarkable Value(s): The outstandingly remarkable values of the upper segment are present in this segment.</p> <p>This river contains a species assemblage that is only found here and, in Las Animas Creek, which it joins. It is found nowhere else in the world. Historically, the southernmost population of Rio Grande cutthroat trout in New Mexico, it is a lower-elevation fishery unlike most Rio Grande cutthroat trout streams. It also hosts Rio Grande sucker and Rio Grande chub.</p>

Eligible Wild and Scenic Rivers within the Gila National Forest
<p>River name: <i>Iron Creek</i></p> <p>Process notes: Found ineligible in the 2002 study. However, new information confirmed an outstandingly remarkable fisheries value. This river was found eligible by this study.</p> <p>Segment name: Iron Creek Start point: Headwaters End point: Fish barrier Miles: 3.53 Preliminary classification: Wild Outstandingly Remarkable Value: Fish Description of Outstandingly Remarkable Value(s): An intact population of Gila trout was discovered in the 1970s in the upper reach of Iron Creek, which eventually resulted in the construction of the fish barrier to prevent hybridization and competition with non-native trout (Propst et al. 1992). Initial genetic testing later suggested that the Gila trout in Iron Creek were not pure and had hybridized with rainbow trout (USFWS 2003). This genetically compromised population was not viewed as contributing to the recovery of the species, which represents a more important evolutionary history and local environmental adaptation. More recent genetic work now indicates the Iron Creek population is not only a pure strain of Gila trout, but a unique genetic lineage (USFWS 2015).</p>
<p>River name: <i>Las Animas Creek</i></p> <p>Process notes: Found eligible in the 2002 study. An error was made in documenting preliminary classifications for the two segments, which was corrected by this study. The upper segment was classified scenic and should have been wild. The lower segment was classified as wild and should have been scenic. Adjustments were made to segment lengths to better reflect the actual river miles using more accurate geospatial information system data and tools. No relevant changes in circumstances affected its free-flow or outstandingly remarkable value when the draft of this study was completed. Prior to finalizing the study, the 2022 Black Fire resulted in changed circumstances. Insufficient information exists to determine the status of the fisheries value. Regardless of status, future work will restore or enhance the fisheries value.</p> <p>Segment name: Las Animas Creek Start point: Confluence of Water Canyon and Holden Prong End point: Aldo Leopold Wilderness boundary Miles: 2.53 Preliminary classification: Wild Outstandingly Remarkable Value: Fish, Historic, and Cultural Description of Outstandingly Remarkable Value(s): Las Animas Creek is historically significant as the location of a battle between the US Army 9th Cavalry Buffalo Soldiers and Victorio's band of Chiricahua Warm Springs Apache. This battle occurred in September 1879 and two men received the Congressional Medal of Honor for their heroism. Soldiers are buried at the site. It is marked by a monument commemorating the Battle of Las Animas. This place is considered important to the Fort Sill Warm Springs Apache's living descendants of the Indian people who fought there. It is a destination for those interested in the Indian Wars period of American History.</p> <p>Segment name: Las Animas Creek—Upper Scenic Start point: Aldo Leopold Wilderness boundary End point: Private property inholding boundary</p>

Eligible Wild and Scenic Rivers within the Gila National Forest
<p>Miles: 4.27 Preliminary classification: Scenic Outstandingly Remarkable Value: Fish, Historic, and Cultural Description of Outstandingly Remarkable Value(s): This river contains a species assemblage that is only found here and in its headwater tributary, Holden Prong. It is found nowhere else in the world. Historically the southernmost population of Rio Grande cutthroat trout in New Mexico, it is a lower elevation fishery unlike most Rio Grande cutthroat trout streams. It also hosts Rio Grande sucker and Rio Grande chub.</p> <p>Segment name: Las Animas Creek–Lower Scenic Start point: Private property inholding boundary End point: Forest boundary Miles: 0.55 Preliminary classification: Scenic Outstandingly Remarkable Value: Fish, Historic, and Cultural Description of Outstandingly Remarkable Value(s): This river contains a species assemblage that is only found here and in its headwater tributary, Holden Prong. It is found nowhere else in the world. Historically the southernmost population of Rio Grande cutthroat trout in New Mexico, it is a lower elevation fishery unlike most Rio Grande cutthroat trout streams. It also hosts Rio Grande sucker and Rio Grande chub.</p>
<p>River name: Mineral Creek</p> <p>Process notes: Determined ineligible by the 2002 study due to the absence of outstandingly remarkable values. Changed circumstances have established an outstandingly remarkable value. It was found eligible by this study.</p> <p>Segment name: Mineral Creek Start point: Headwaters End point: 0.08 mile from private property boundary Miles: 8.71 Preliminary classification: Wild Outstandingly Remarkable Value: Fish, Recreation Description of Outstandingly Remarkable Value(s): Mineral Creek was stocked with Gila trout from the important Whiskey Creek lineage in 2016. The Whiskey Creek lineage is currently one of the least replicated as the relict population is gone from Whiskey Creek because of the 2012 Whitewater Baldy Complex Fire. Coincidentally, this same fire made Mineral Creek suitable for native trout reintroduction by removing non-native fishes. Although the watershed is still recovering, there is enough intact habitat to support the repatriated Gila trout. There are now angling opportunities for Gila trout. The scenic canyon is also a popular destination for hikers.</p>

Eligible Wild and Scenic Rivers within the Gila National Forest
<p>River name: Mule Creek</p> <p>Process notes: Found ineligible in the 2002 study due to an absence of outstandingly remarkable values. A recent geologic survey revealed the presence of an outstandingly remarkable value. It was found eligible by this study.</p> <p>Segment name: Mule Creek Start point: Forest boundary north of New Mexico Highway 78 End point: Confluence with the San Francisco River Miles: 4.33 Preliminary classification: Scenic Outstandingly Remarkable Value: Geology Description of Outstandingly Remarkable Value(s): There is a spectacular exposure of the Mule Creek vent along the stream that is considered an exemplary feature in the region. This exposure likely rates as a world class geologic exposure of a rhyolite eruptive vent in cross section (Ratte 2004).</p>
<p>River name: Lower Box of the San Francisco River</p> <p>Process notes: This river was not included in the 2002 study. It was included in a 1982 Nationwide Rivers Inventory. It was found eligible by this study.</p> <p>Segment name: Lower Box of the San Francisco River Start point: Forest boundary End point: Junction with the terminus of Forest Road 68 as identified in the 2013 Travel Management decision Miles: 2.43 Preliminary classification: Scenic Outstandingly Remarkable Value: Scenic, Recreation, Wildlife Description of Outstandingly Remarkable Value(s): Beginning at the confluence with Big Dry Creek, the canyon corridor is dramatically scenic. It is a popular hiking area with access to numerous hot springs, swimming holes and great fishing opportunities. When conditions are right, it is also an excellent whitewater floating experience. It provides habitat for big horn sheep and supports federally listed southwestern willow flycatcher and yellow-billed cuckoo.</p> <p>Segment name: Lower Box of the San Francisco River Start point: Junction with the terminus of Forest Road 68 as identified in the 2013 Travel Management decision End point: Arizona-New Mexico state line Miles: 14.59 Preliminary classification: Wild Outstandingly Remarkable Value: Scenic, Recreation, Wildlife Description of Outstandingly Remarkable Value(s): This segment was differentiated from the upper segment because it lacks any sign of development. The outstandingly remarkable values present in the upper segment are also present in this segment.</p>

Eligible Wild and Scenic Rivers within the Gila National Forest
<p>River name: Upper Box of the San Francisco River</p> <p>Process notes: This river was not included in the 2002 study. It was included in a 1982 Nationwide Rivers Inventory. It was found eligible by this study.</p> <p>Segment name: Upper Box of the San Francisco River</p> <p>Start point: Boundary from private</p> <p>End point: Entrance to Upper Frisco Box Canyon</p> <p>Miles: 3.78</p> <p>Preliminary classification: Scenic</p> <p>Outstandingly Remarkable Value: Scenic, Recreation</p> <p>Description of Outstandingly Remarkable Value(s): The soaring, sheer walls of the Upper Box of the San Francisco, or “Frisco Box” rise to a thousand feet above the San Francisco River and are visible for miles around. Often, clouds interact with the drainage in interesting and notable ways where it appears that there is a cloud waterfall spilling out of the canyon. The river corridor provides outstanding hiking opportunities, particularly to the upper Frisco Hot Springs from the north and at the south approach to the canyon.</p> <p>Segment name: Lower Box of the San Francisco River</p> <p>Start point: Entrance to Upper Frisco Box Canyon</p> <p>End point: Pipeline above private property</p> <p>Miles: 1.92</p> <p>Preliminary classification: Wild</p> <p>Outstandingly Remarkable Value: Scenic, Recreation</p> <p>Description of Outstandingly Remarkable Value(s): The soaring, sheer walls of the Upper Box of the San Francisco, or “Frisco Box” rise to a thousand feet above the San Francisco River and are visible for miles around. Often, clouds interact with the drainage in interesting and notable ways where it appears that there is a cloud waterfall spilling out of the canyon. The river corridor provides outstanding hiking opportunities, particularly to the upper Frisco Hot Springs from the north and at the south approach to the canyon. The canyon section also provides outstanding canyoneering opportunities that are unique to the area. The American Canyoneering Association has rated this stretch of the canyon as a 2c III route.</p>
<p>River name: South Diamond Creek</p> <p>Process notes: Found eligible in the 2002 study. Adjustments were made to segment lengths to better reflect the actual river miles using more accurate geospatial information system data and tools. No relevant changes in circumstances affected its free-flow or outstandingly remarkable value when the draft of this study was completed. Before finalizing the study, the 2022 Black Fire resulted in changed circumstances. Insufficient information exists to determine the status of the fisheries value. Regardless of status, future work would restore or enhance the fisheries value.</p> <p>Segment name: South Diamond Creek</p> <p>Start point: Headwaters</p> <p>End point: Junction of Trails #707 and #68 in T12 S, R11 W, Section 35</p> <p>Miles: 8.05</p> <p>Preliminary classification: Wild</p> <p>Outstandingly Remarkable Value: Fish</p> <p>Description of Outstandingly Remarkable Value(s): This river holds a relict population of a genetically distinct Gila trout. It is the only known source population of the South Diamond lineage of Gila trout.</p>

Eligible Wild and Scenic Rivers within the Gila National Forest
<p>River name: Spruce Creek</p> <p>Process notes: Found eligible in the 2002 study. Adjustments were made to segment lengths to better reflect the actual river miles using more accurate geospatial information system data and tools. While its outstandingly remarkable values were impacted by the 2012 Whitewater Baldy Complex fire, they are present and being restored. No changes in circumstances affected its free-flowing nature.</p> <p>Segment name: Spruce Creek Start point: Headwaters End point: Confluence with Big Dry Creek Miles: 3.74 Preliminary classification: Wild Outstandingly Remarkable Value: Fish Description of Outstandingly Remarkable Value(s): This river holds a relict population of a genetically distinct Gila trout. It is the only known source population of the Spruce Creek lineage of Gila trout.</p>
<p>River name: Whitewater Creek</p> <p>Process notes: Found eligible in the 2002 study. Adjustments were made to segment lengths to better reflect the actual river miles using more accurate geospatial information system data and tools. While its outstandingly remarkable values were impacted by the 2012 Whitewater Baldy Complex fire, they are present and being restored. No changes in circumstances affected its free-flowing nature.</p> <p>Segment name: Whitewater Creek Start point: Headwaters End point: Trail #810 Miles: 11.79 Preliminary classification: Wild Outstandingly Remarkable Value: Historic and Cultural, Recreation Description of Outstandingly Remarkable Value(s): Whitewater Creek is historically significant as the location of numerous mining related materials dating to the 1890s or earlier. It includes the remains of the town of Graham and the remains of a water pipeline running for approximately 4 miles upstream from the terminus of the lower segment. CCC activities are also represented and the modern engineering feat of hanging the catwalk in the canyon, which draws many visitors to the area. Together, these materials form a unique historic district that is eligible for the National Register of Historic Places. It is interpreted on site by the Gila National Forest.</p> <p>It is a destination for many people interested in 19th century mining history and the geology of the region. The cool and colorful canyon is home to the Catwalk National Recreation Trail and the Whitewater Picnic Area. It is stocked with a legally fishable population of Gila trout and provides a unique, high-quality, and accessible recreational fishing opportunity.</p> <p>Segment name: Whitewater Creek Start point: Trail #810 End point: Forest boundary at T11 S, R19 W, Section 6 Miles: 2.94 Preliminary classification: Recreational Outstandingly Remarkable Value: Historic and Cultural, Recreation Description of Outstandingly Remarkable Value(s): Segments were differentiated based on level of development below Trail #810. The outstandingly remarkable values are present in both segments.</p>

Eligible Wild and Scenic Rivers within the Gila National Forest
<p>River name: Willow Creek</p> <p>Process notes: Found ineligible in the 2002 study due the absence of outstandingly remarkable values. Changed circumstances have introduced an outstandingly remarkable value. It was found eligible in this study.</p> <p>Segment name: Upper Willow Creek Start point: Crest Trail End point: Bead Spring Trailhead Miles: 2.86 Preliminary classification: Recreational Outstandingly Remarkable Value: Recreation Description of Outstandingly Remarkable Value(s): Willow Creek is a remote, yet easily accessible stream that hosts popular campgrounds adjacent a unique fishing opportunity. After the Whitewater Baldy Complex Fire removed non-native fishes, Willow Creek was stocked with Gila trout. Habitat restoration and improvement projects are ongoing. It remains one of the few, easily accessible locations with opportunities to fish for Gila trout.</p> <p>Segment name: Lower Willow Creek Start point: Private property inholding boundary End point: Confluence with Gilita Creek Miles: 2.09 Preliminary classification: Recreational Outstandingly Remarkable Value: Recreation Description of Outstandingly Remarkable Value(s): Willow Creek is a remote, yet easily accessible stream that hosts popular campgrounds adjacent a unique fishing opportunity. After the Whitewater Baldy Complex Fire removed non-native fishes, Willow Creek was stocked with Gila trout. Habitat restoration and improvement projects are ongoing. It remains one of the few, easily accessible locations with opportunities to fish for Gila trout.</p>

Table I-5. List of ineligible rivers: values present are not outstandingly remarkable in the regions of comparison

River Name							
Agua Fria Creek	Carbonate Creek	Dry Diamond Creek	Johnson Canyon	Mimbres River	Rawmeat Creek	Slate Creek	Tige Canyon
Allie Canyon	Cave Canyon	East Canyon	Karruth Creek	Monument Creek	Rico Arroyo	Smith Creek	Trail Creek
Ansones Creek	Cave Creek	East Diamond Creek	Keller Canyon	Moore Canyon	Rocker Canyon	Snow Creek	Trap Corral Canyon
Apache Creek	Centerfire Creek	East Draw	Langstroth Canyon	Morgan Creek	Rocky Canyon	South Fork Cuchillo Negro Creek	Trout Creek
Apache Creek #2	Centerfire Tributary-Ruyle Place	East Fork Centerfire Creek	Largo Canyon	Negrito Creek	Romero Creek	South Fork Mimbres River	Trout Creek #2
Apache Creek #3	Cherry Creek	East Fork Gila River	Largo Creek	Noland Creek	S A Creek	South Fork Mineral Creek	Tularosa River
Aspen Canyon	Cherry Creek #2	East Fork Mimbres River (McKnight Creek)	Lawson Canyon	Noonday Canyon	Sacaton Creek	South Fork Mogollon Creek	Turkey Creek
Baily Creek	Cherry Creek #3	East Fork Whitewater Creek	Little Bear Creek	North Dry Creek	Saliz Canyon	South Fork Negrito Creek	Turkey Creek #2
Bear Canyon	Chloride Creek	East Stephens Creek	Little Cherry Creek	North Fork Mineral Creek	Salt Creek	South Fork Palomas Creek	Turkey Creek #3
Bear Canyon #2	Cienega Canyon	Escondido Creek	Little Creek	North Fork Negrito Creek	San Francisco River - Stateline to Bridges	South Fork Silver Creek	Turkey Run
Bear Canyon #3	Circle Seven Creek	Foxtail Creek	Little Deep Creek	North Fork Palomas Creek	San Francisco River – Bridges to Head of the Ditch	South Fork Whitewater Creek	Turkey Feather Creek
Bear Creek	Clayton Creek	Frieborn Canyon	Little Dry Creek	North Fork Tennessee Creek	San Francisco River – Devil's Creek	South Percha Creek	Twin Sisters Creek
Beartooth Creek	Clear Creek	Gallinas Canyon	Little Mineral Creek	North Fork Walnut Creek	San Francisco River – Luna to Upper Frisco Box	South Seco Creek	Upper Cottonwood Canyon

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River Name							
Bearwallow Creek	Coal Creek	Gavilan Arroyo	Little Turkey Creek	North Percha Creek	San Francisco River – US 180 at Salinas to Big Dry	Spider Creek	Walnut Creek
Beaver Creek	Copper Creek	Gavilan Creek	Little Turkey Creek #2	North Prong Circle Seven Creek	Sand Creek	Spring Branch	Walnut Creek #2
Berrenda Creek	Copperas Creek	Gilita Creek	Little Whitewater Creek	North Seco Creek	Sandy Wash	Spud Patch Creek	West Fork Centerfire Creek
Big Dry Creek	Corduoy Canyon	Grande Arroyo	Mangas Creek	Oak Grove Creek	Santa Rita Creek	Squaw Creek	West Fork Mimbres River
Black Canyon	Cottonwood Creek	Hardcastle Canyon	Mangas Creek #2	Pace Creek	Sapillo Creek	Squaw Creek #2	West Fork Mogollon Creek
Blue Creek	Cow Creek	Harden Cienega Creek	Manzanita Creek	Packsaddle Canyon	Sawmill Creek	Starkweather Canyon	West Fork Pueblo Creek
Blue River	Coyote Creek	Harden Cienega Creek	Marshall Creek	Patton Creek	Sawmill Creek #2	Stephens Creek	West Fork Snow Creek
Bonner Canyon	Davis Canyon	Headwater Canyon	McKenna Creek	Pine Canyon	Scales Canyon	Stiver Canyon	Whiskey Creek
Burro Cienega	Deep Creek	Hells Hole	Meadow Creek	Pine Cienega Creek	Sheep Corral Canyon	Stone Creek	Whiskey Creek #2
Byers Run	Demetrio Creek	Hoyt Canyon	Middle Diamond Creek	Pine Creek	Sheep Creek	Stoner Creek	-
Cameron Creek	Devils Creek	Indian Creek	Middle Percha Creek	Poverty Creek	Shelley Canyon	Sycamore Creek	-
Camp Creek	Dillman Creek	Indian Creek #2	Middle Seco Creek	Prior Creek	Sheridan Gulch	Taylor Creek	-
Campbell Blue Creek	Drumm Canyon	Indian Creek #3	Mill Creek	Pueblo Creek	Sids Prong	Taylor Creek #2	-
Canovas Creek	Dry Creek	Iron Creek #2	Mineral Creek #2 (North)	Quaking Aspen Creek	Silver Creek	Tennessee Creek	-
Canyon Creek	Dry Blue River	Jenkins Creek	Mineral Creek #2 (South)	Rain Creek	Skates Canyon	Tierra Blanca Creek	-

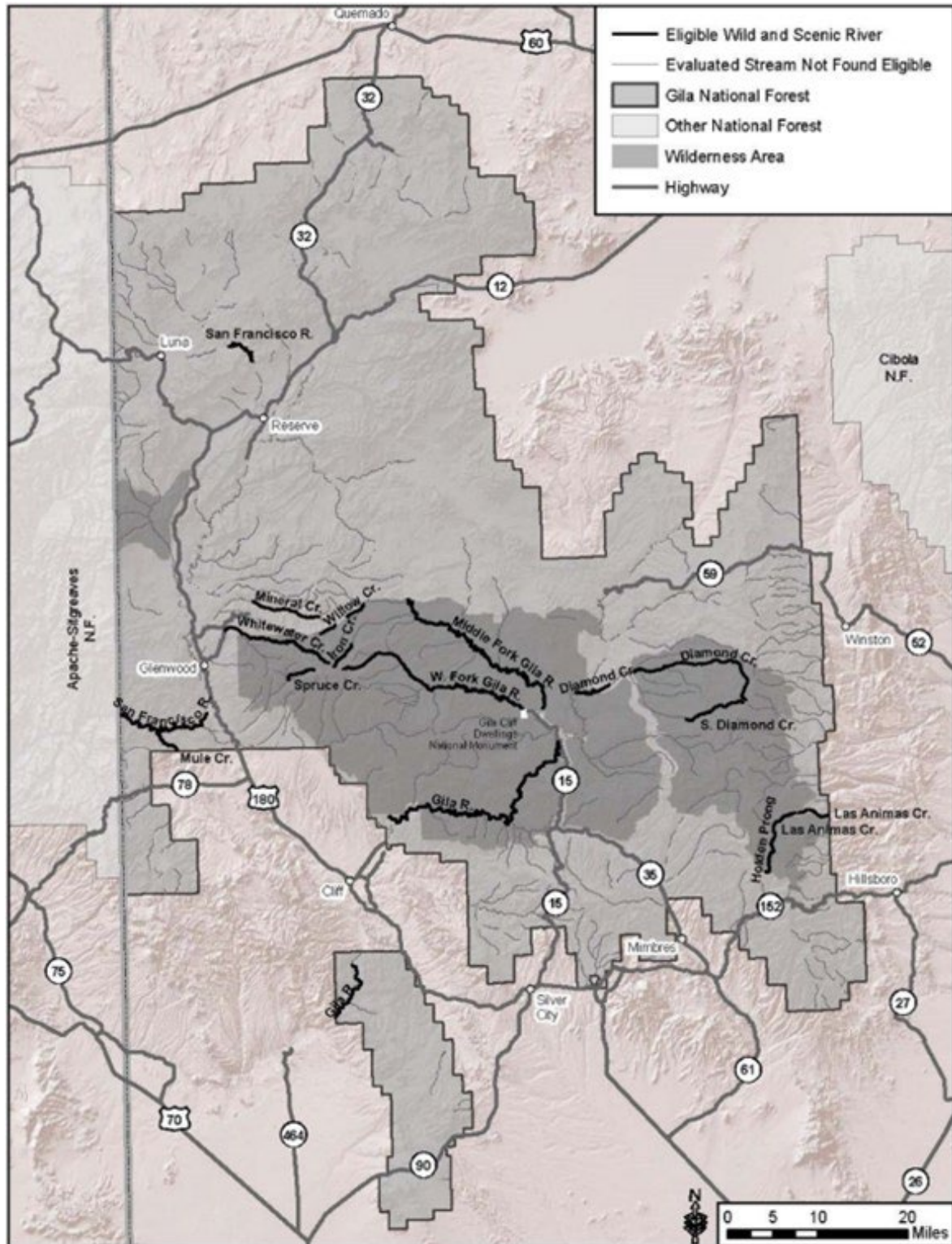


Figure I-7. Eligible and ineligible river segments for the National Wild and Scenic Rivers System

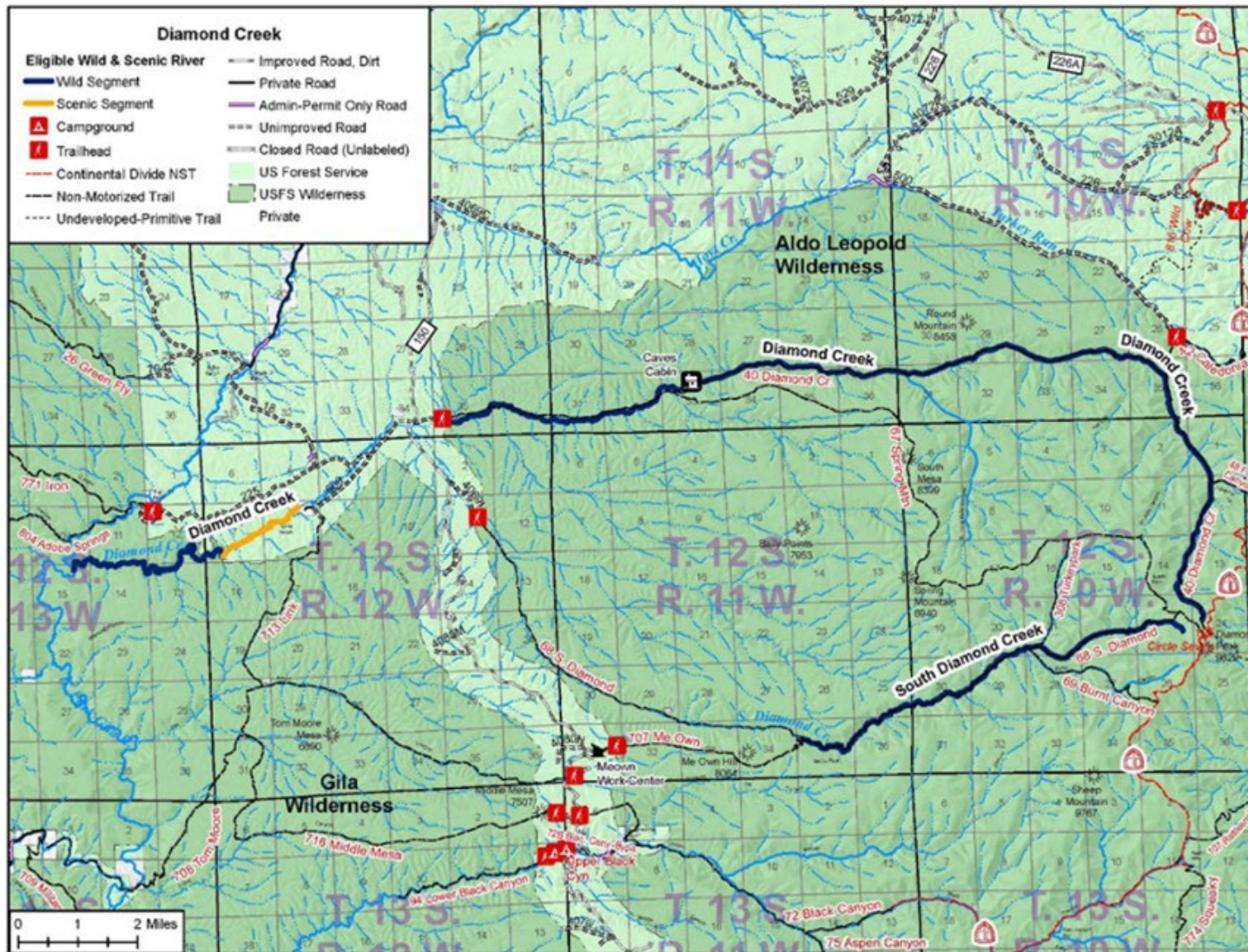


Figure I-8. Vicinity and preliminary classification for eligible segments of Diamond Creek

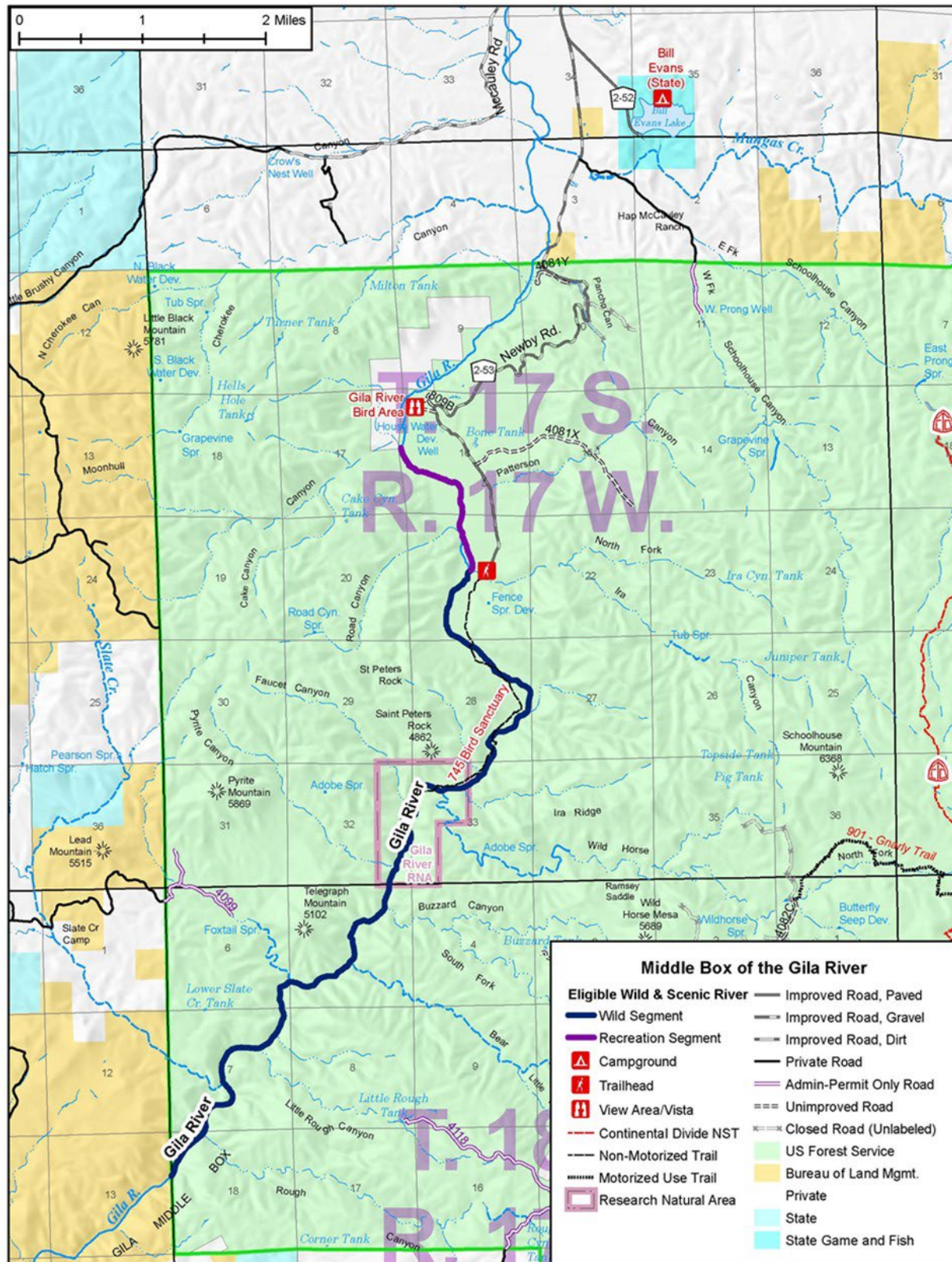


Figure I-9. Vicinity and preliminary classification for eligible segments of Middle Box of the Gila River

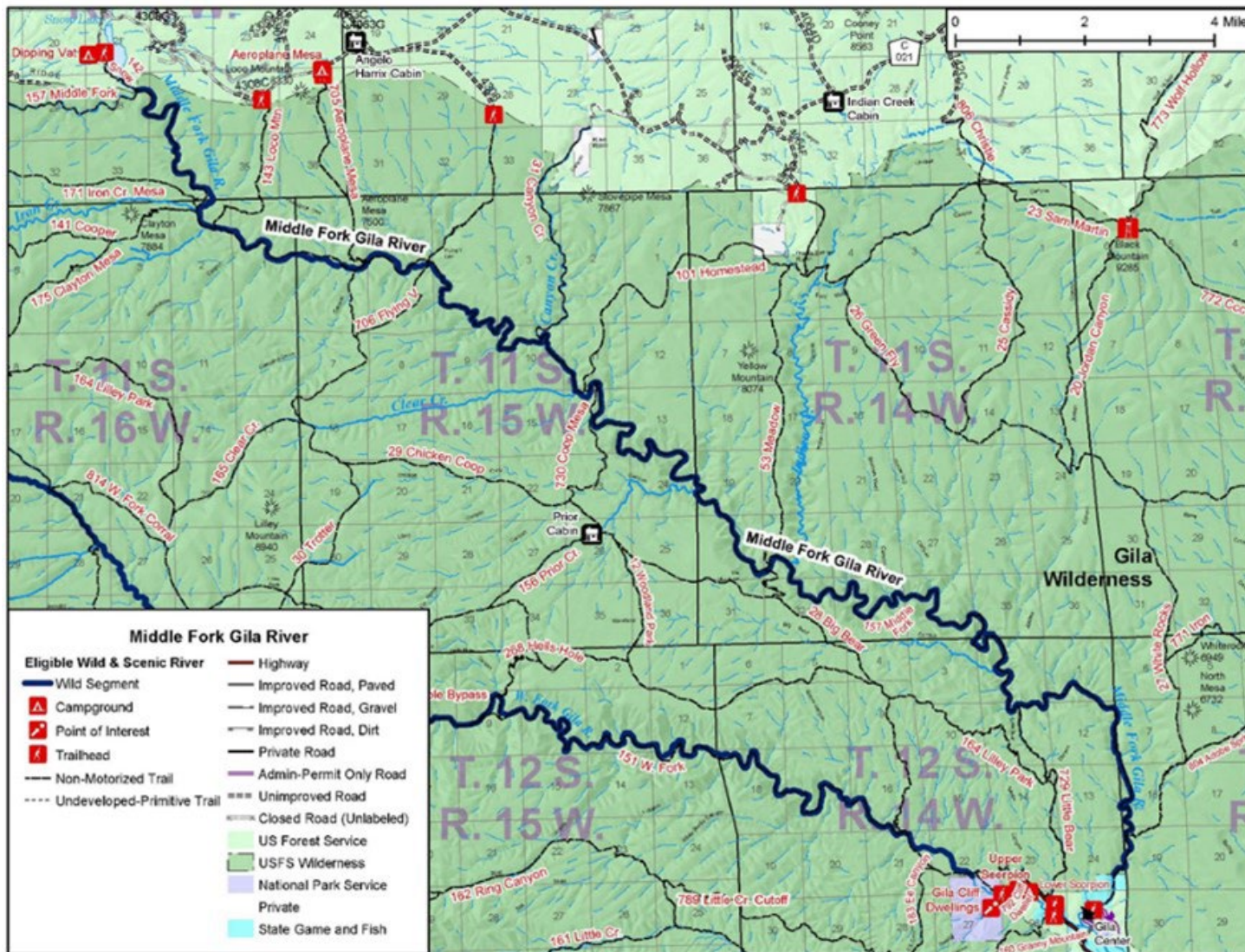


Figure I-10. Vicinity and preliminary classification for eligible segments of the Middle Fork Gila River

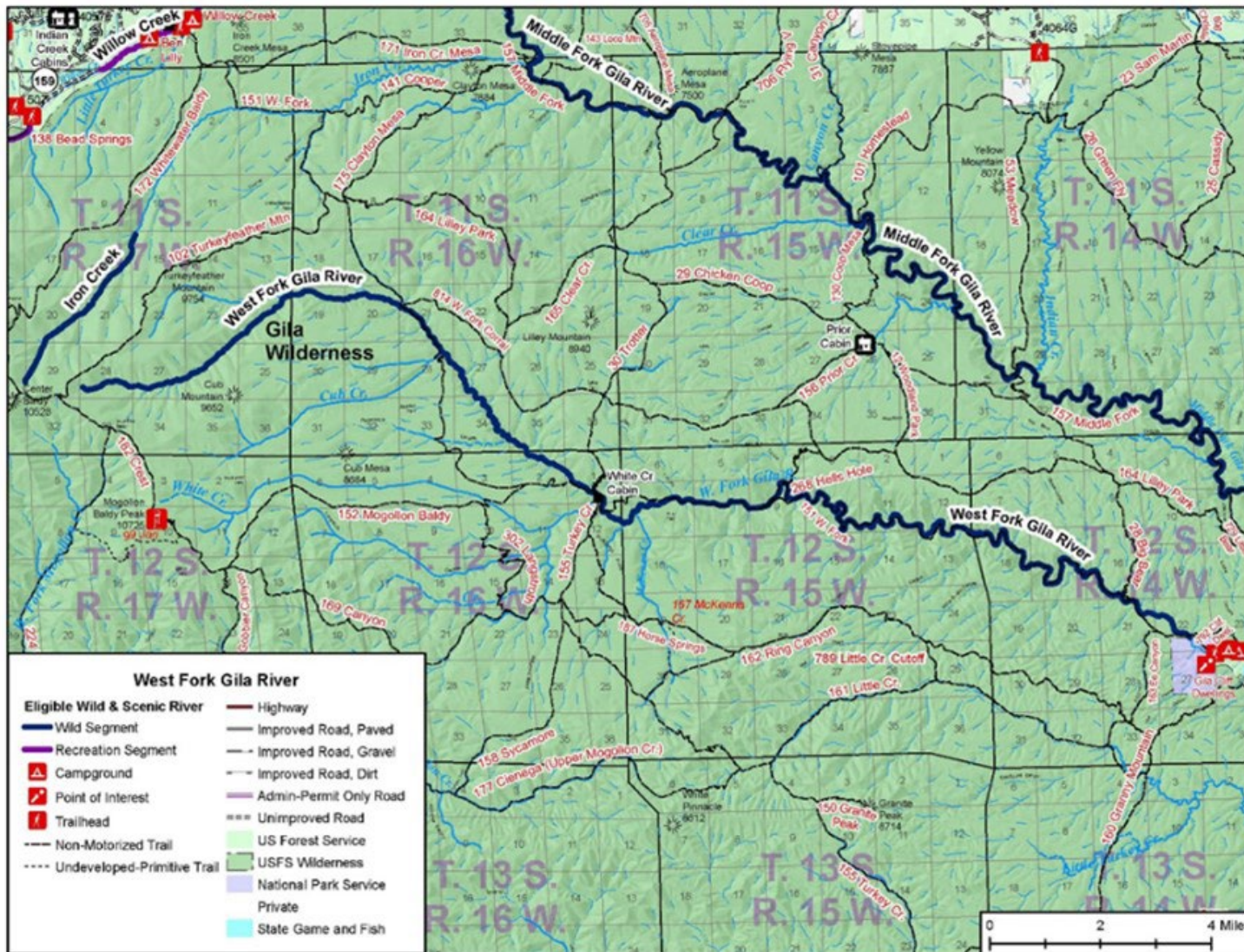


Figure I-11. Vicinity and preliminary classification for eligible segments of West Fork Gila River

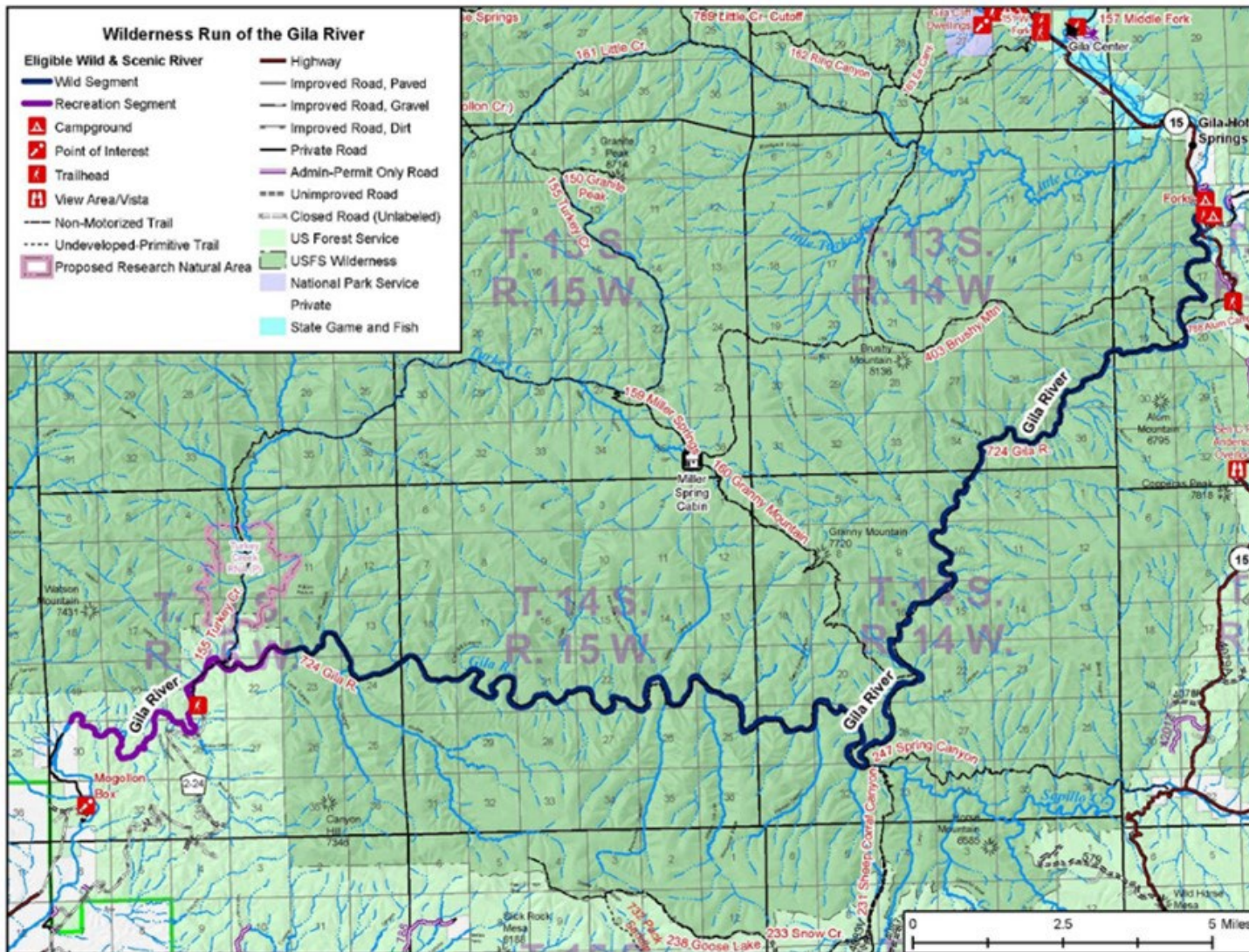
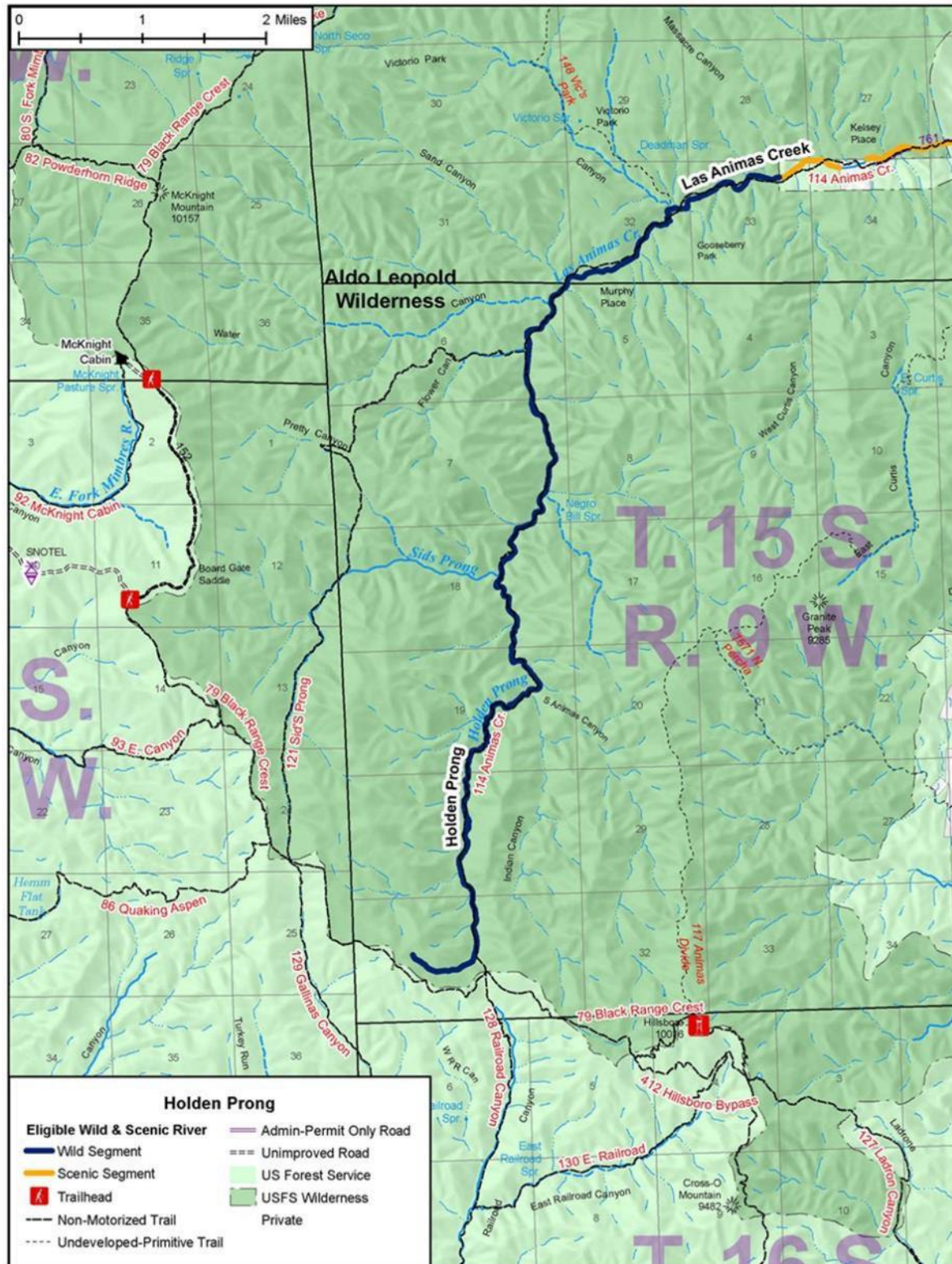


Figure I-12. Vicinity and preliminary classification for eligible segments of Wilderness Run of the Gila River



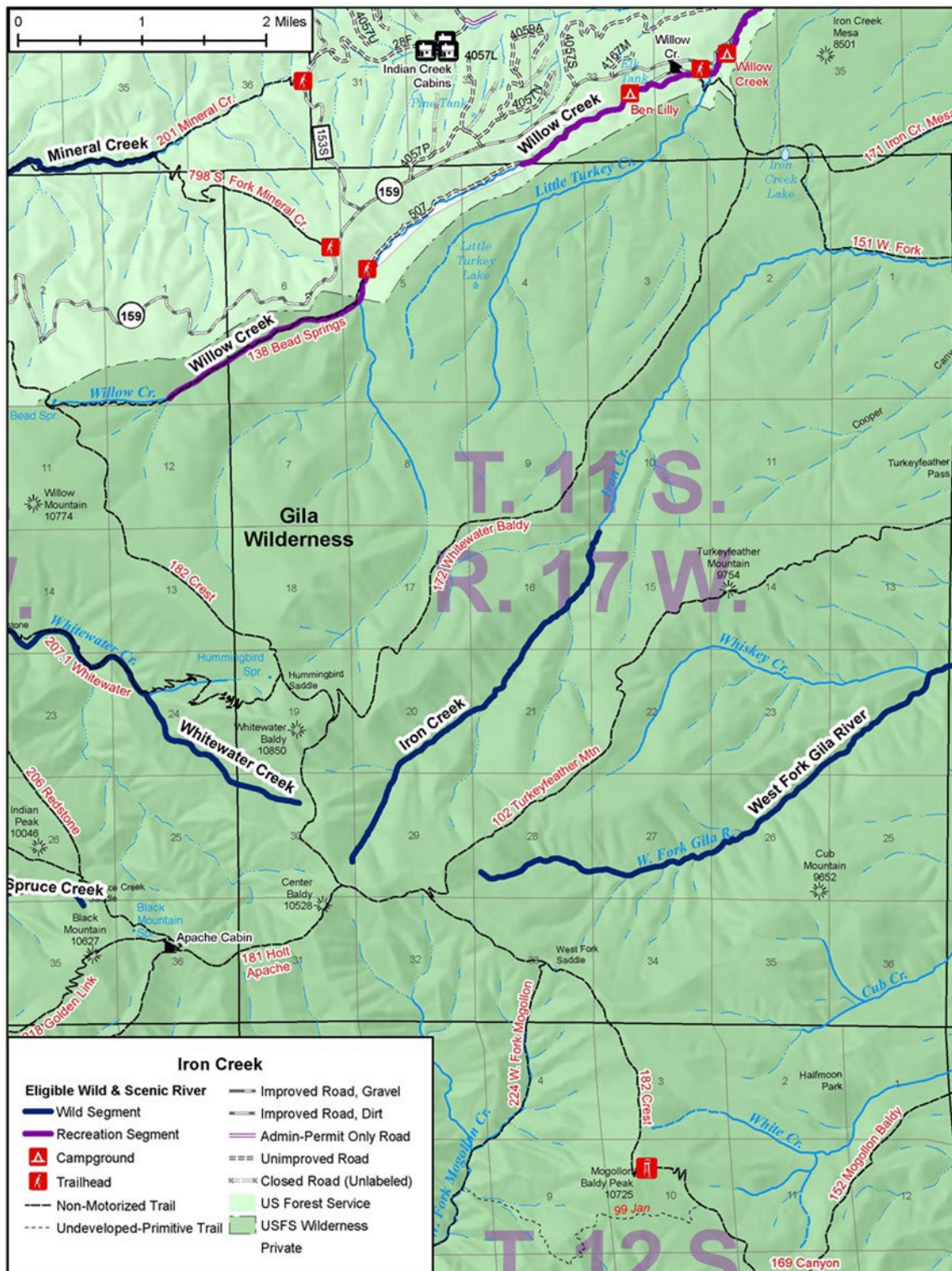


Figure I-14. Vicinity and preliminary classification for eligible segments of Iron Creek

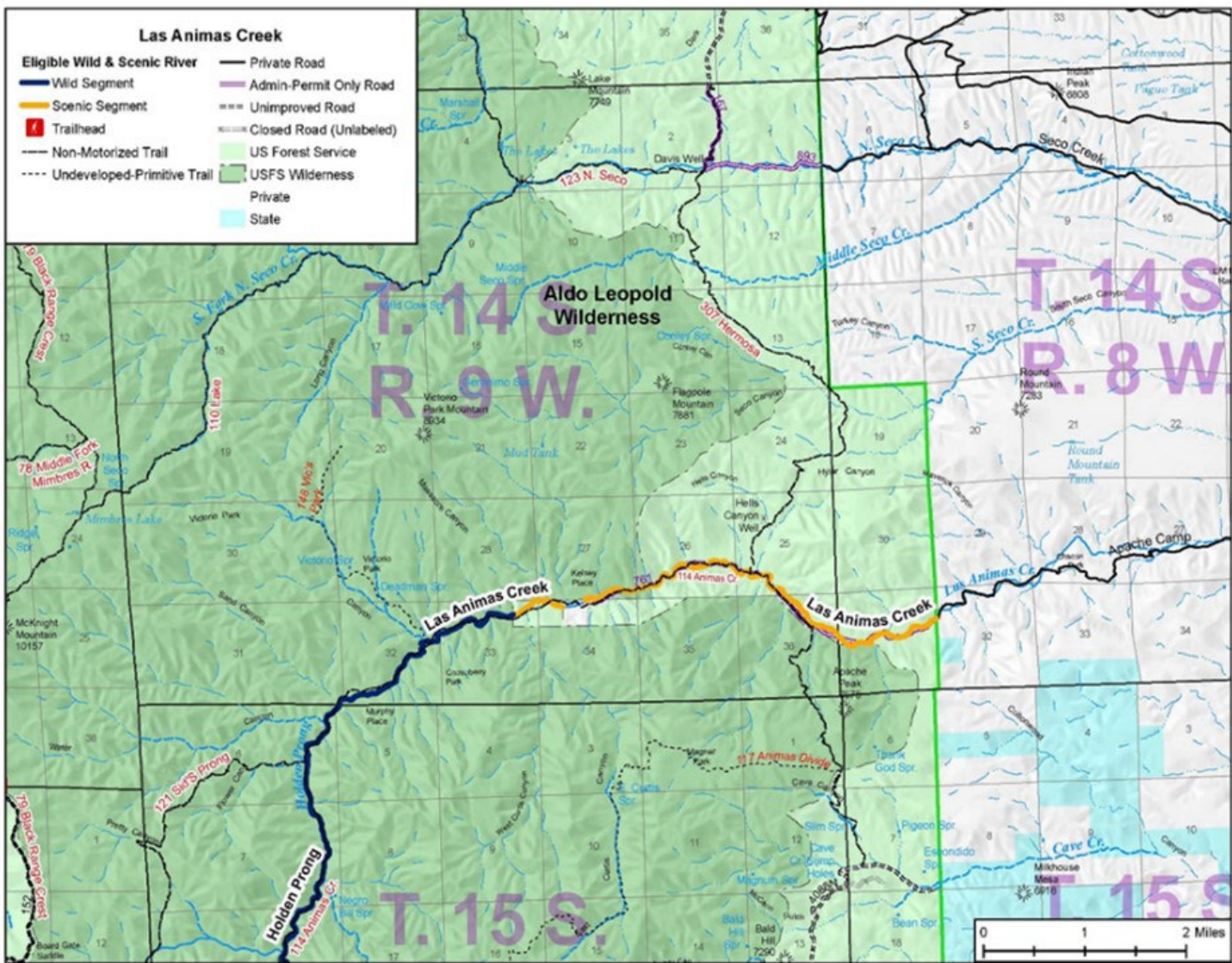


Figure I-15. Vicinity and preliminary classification for eligible segments of Las Animas Creek

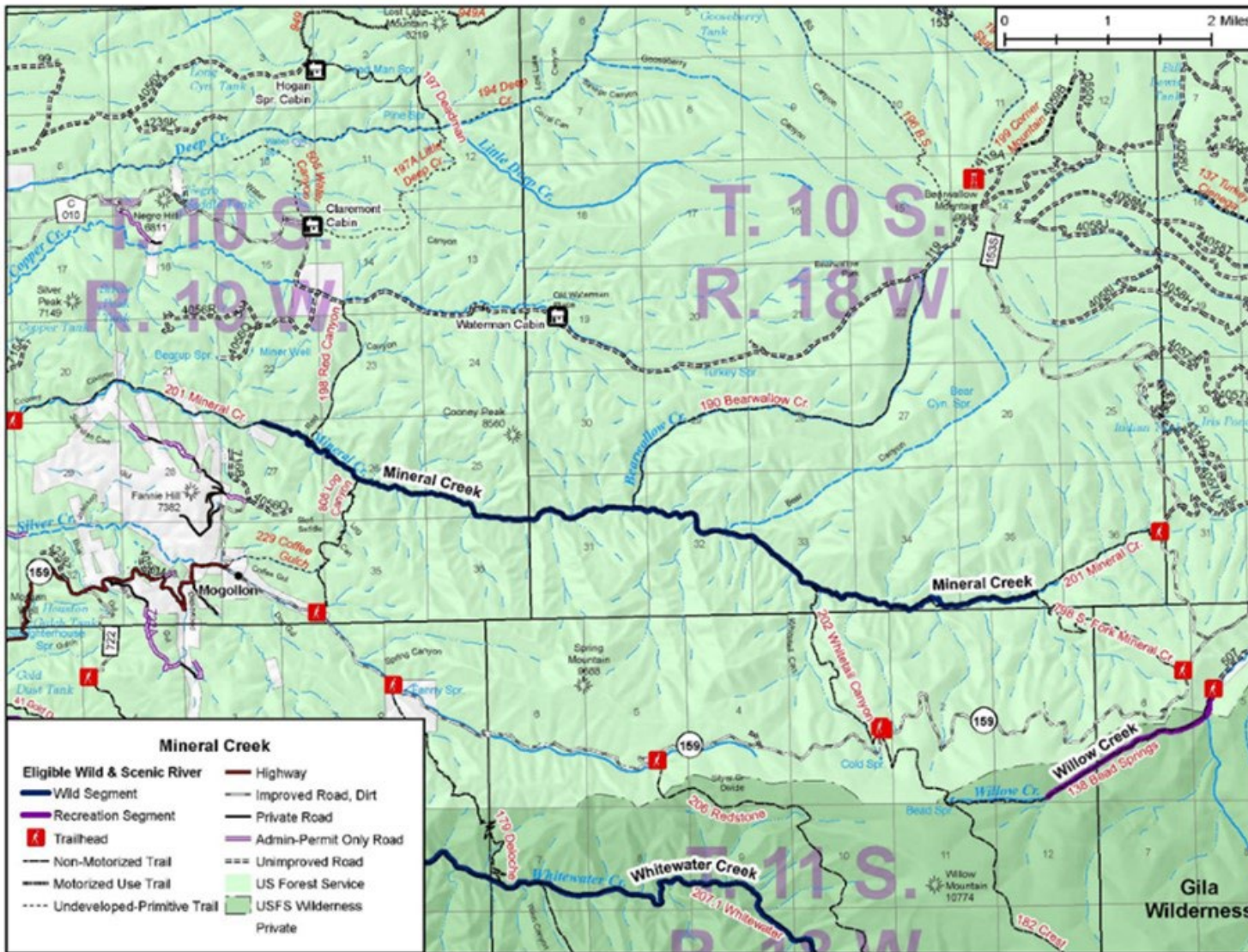


Figure I-16. Vicinity and preliminary classification for eligible segments of Mineral Creek

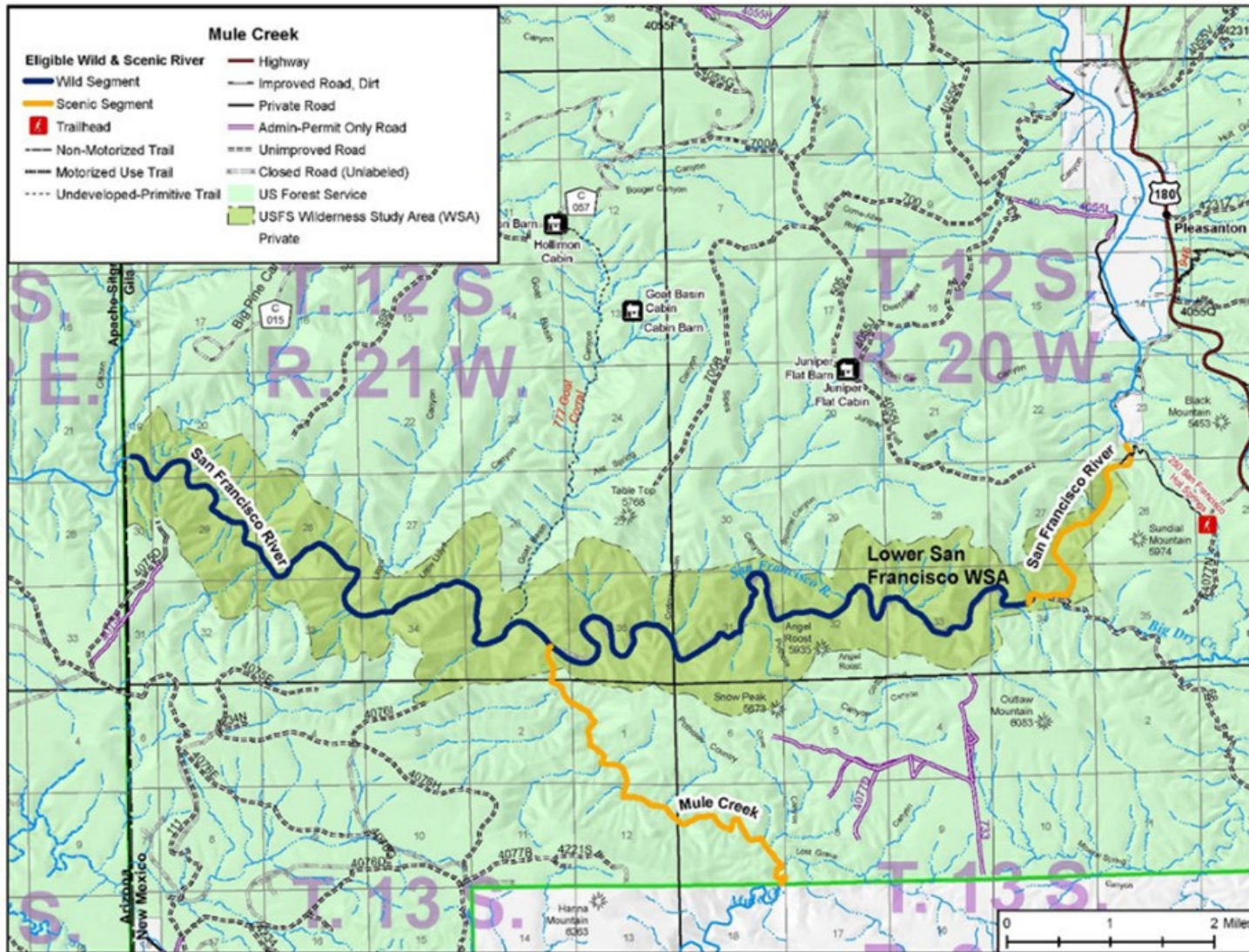


Figure I-17. Vicinity and preliminary classification for eligible segments of Mule Creek

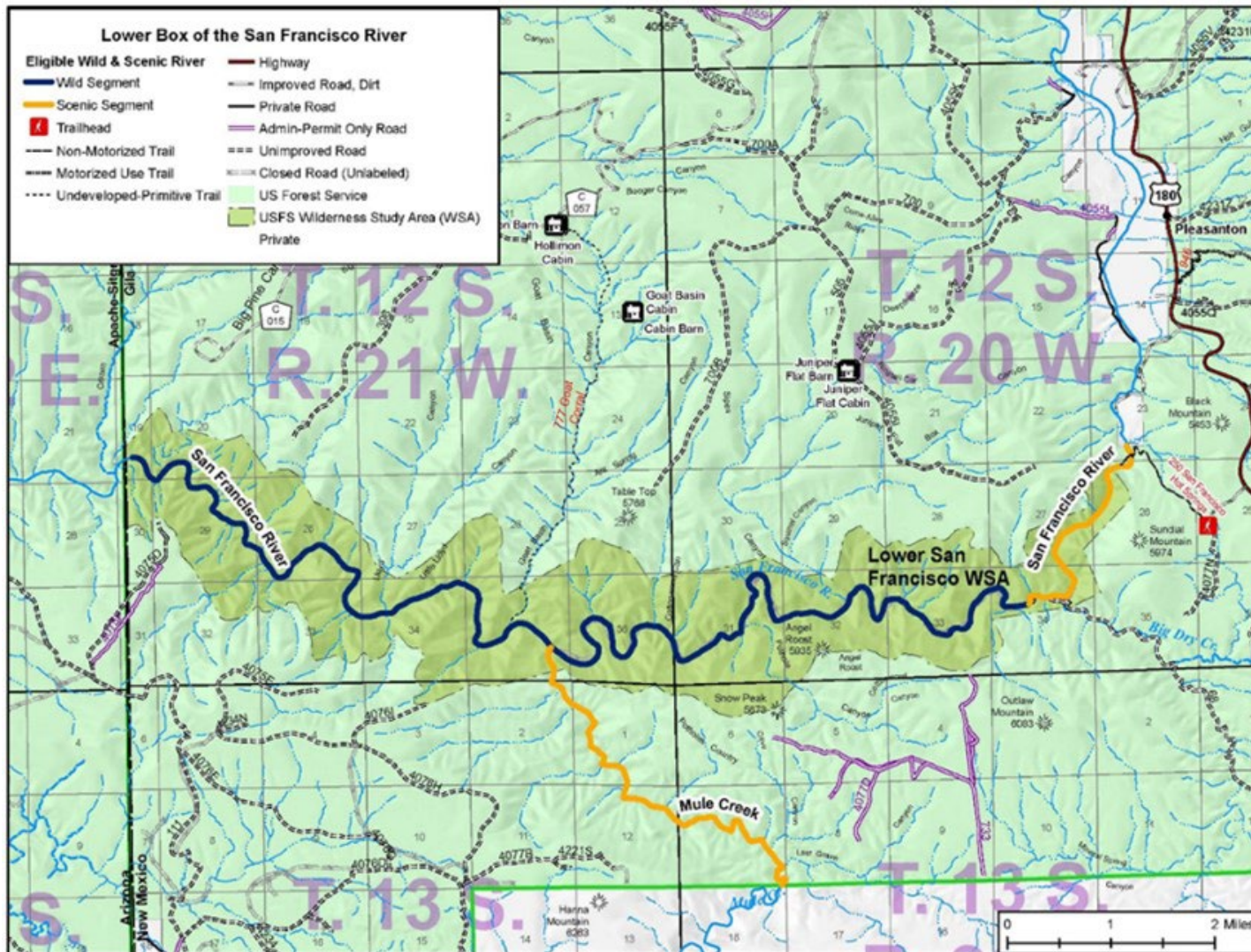


Figure I-18. Vicinity and preliminary classification for eligible segments of Lower Box of the San Francisco River





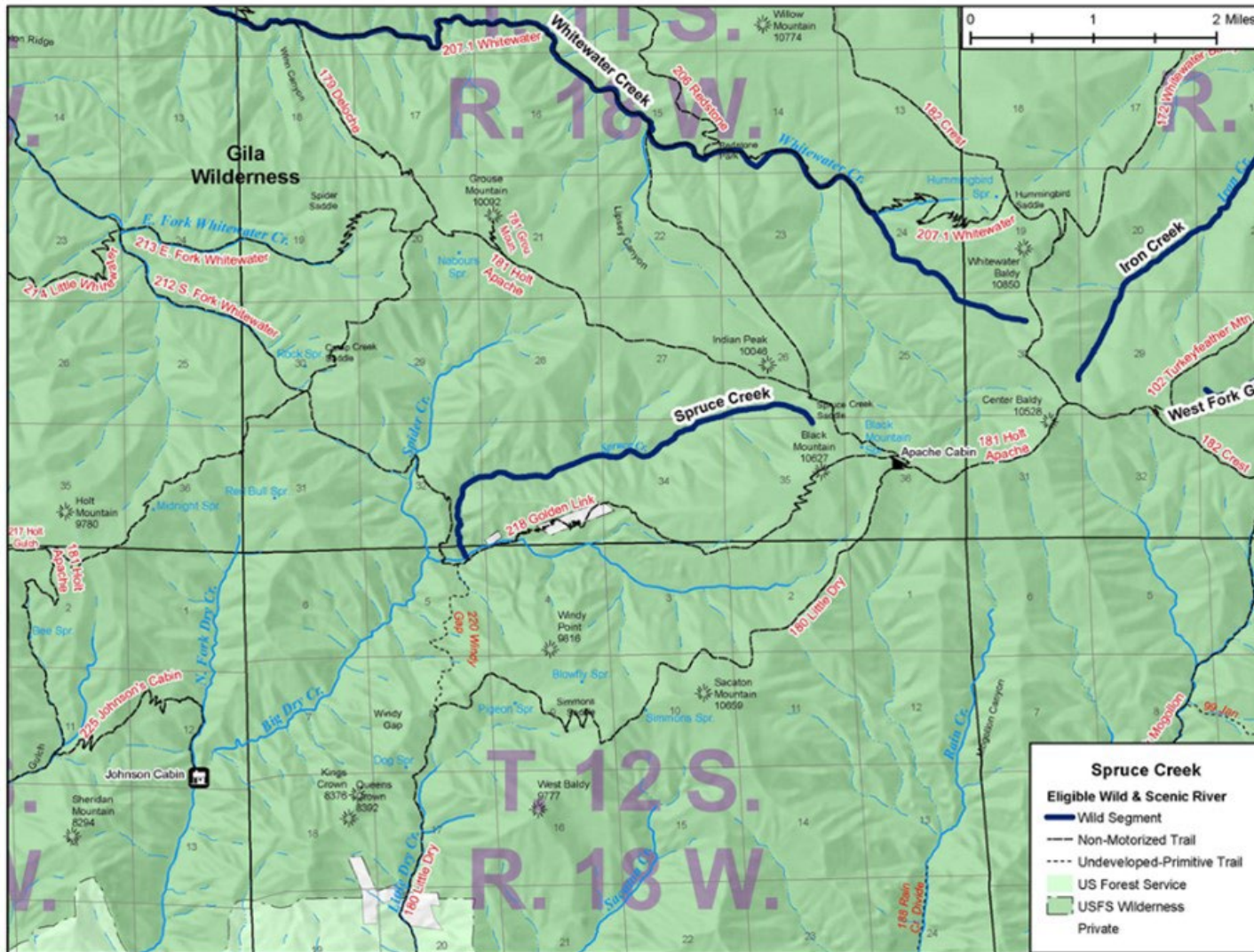


Figure I-21. Vicinity and preliminary classification for eligible segments of Spruce Creek

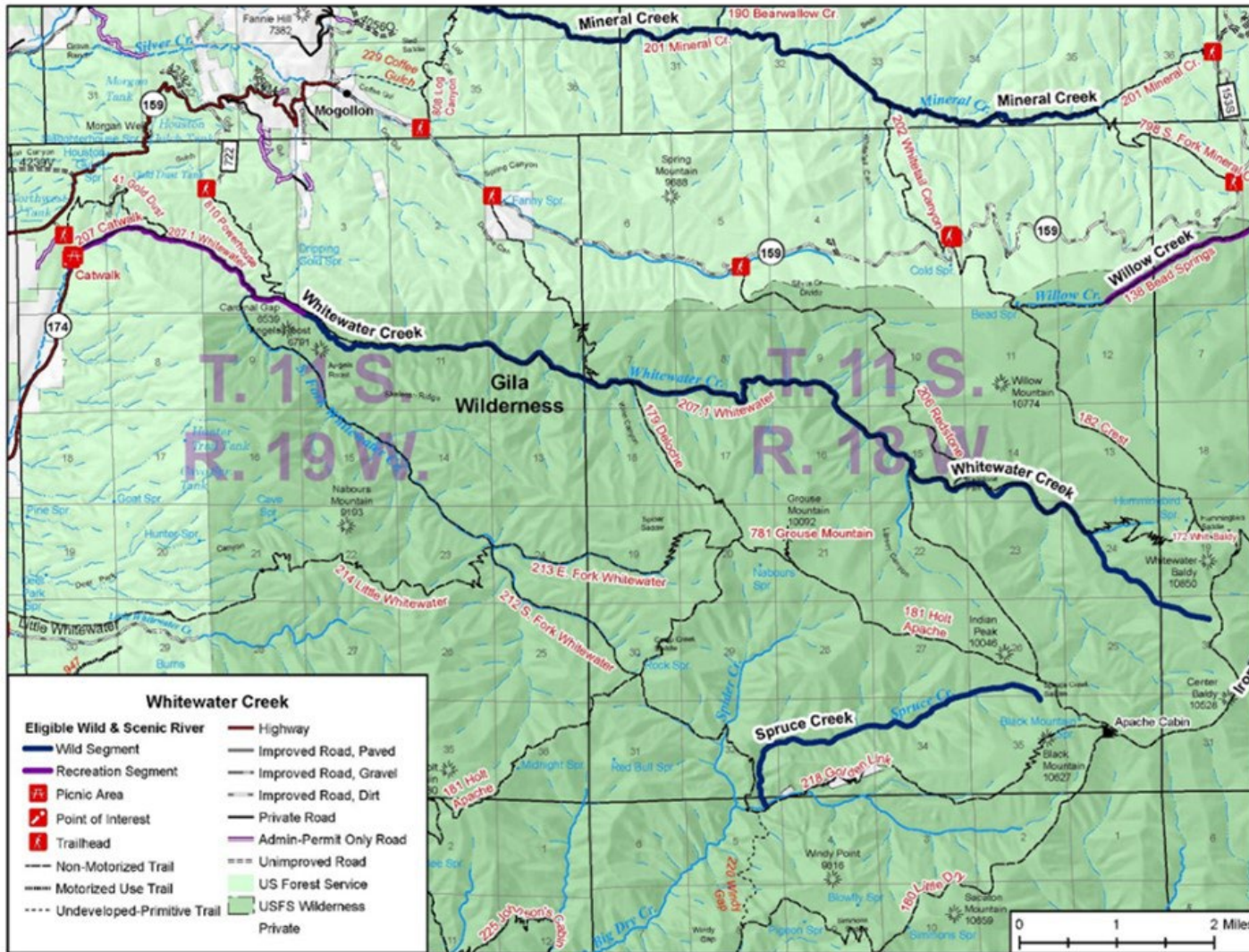


Figure I-22. Vicinity and preliminary classification for eligible segments of Whitewater Creek

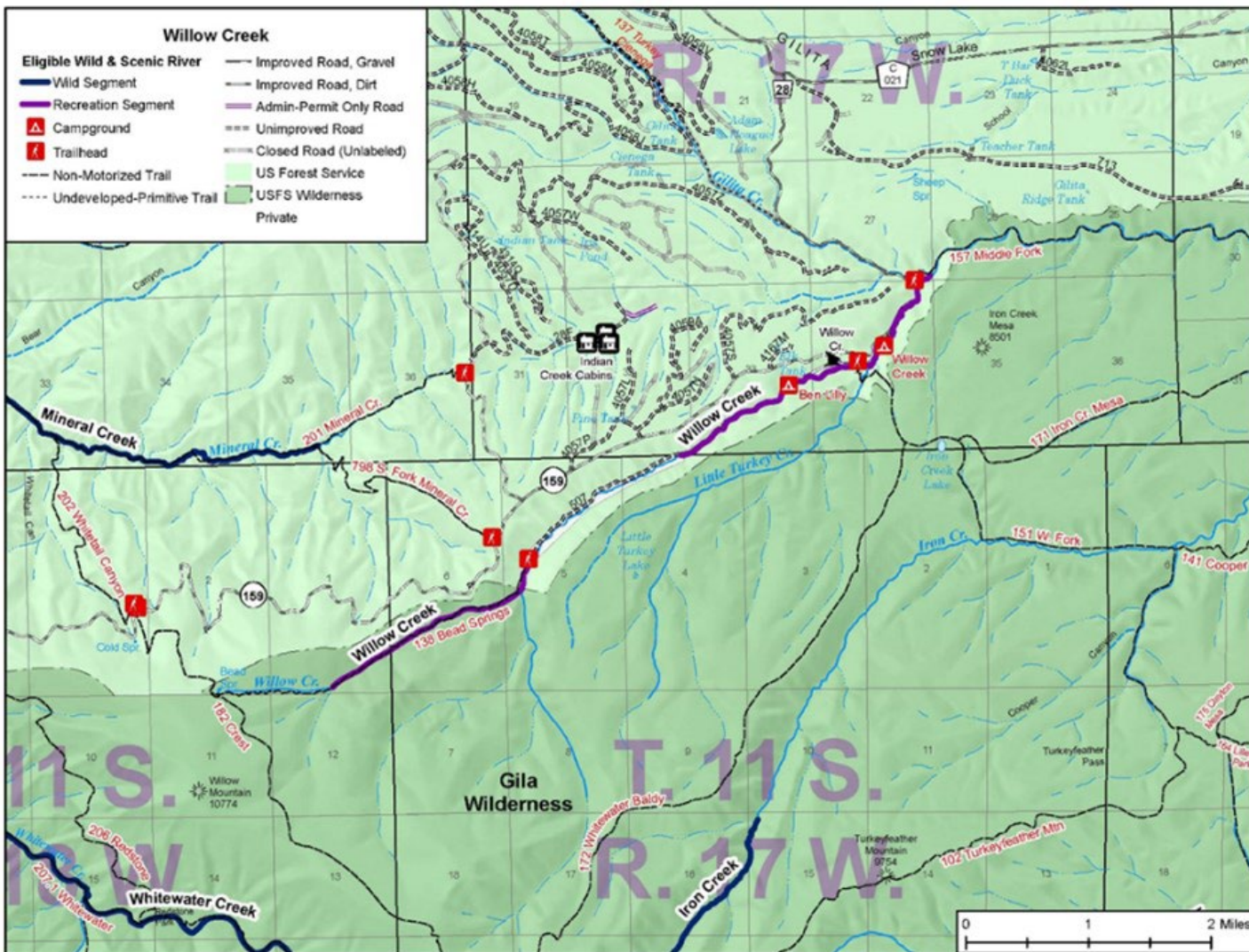


Figure I-23. Vicinity and preliminary classification for eligible segments of Willow Creek

Appendix J. Documentation of the Research Natural Area Evaluation Process

Background

A research natural area (RNA) is a type of special area within the National Forest System designated for their unique or special characteristics ([FSM 1905 – Definitions](#)). RNAs are defined as “physical or biological units in which current natural conditions are maintained insofar as possible. These conditions are ordinarily achieved by allowing natural physical and biological processes to prevail without human intervention. Research natural areas are principally for non-manipulative research, observation, and study ([FSM 4063](#)). They are designated to “maintain a wide spectrum of high-quality representative areas that represent the major forms of variability found in forest, shrubland, grassland, alpine, and natural situations that have scientific interest and importance that, in combination, form a national network of ecological areas for research education, and maintenance of biological diversity” (FSM 4063.02). Management of each individual RNA must support and promote the objectives and purposes for which it was established and comply with the following standards in FSM 4063.3.

Designated area recommendations are part of the forest plan. Therefore, it is appropriate to evaluate conditions and management direction for establishment or disestablishment of RNAs. Any proposals for designation of new, or previously proposed RNAs may be made during revision at the forest supervisor’s discretion. Formal RNA establishment would have to be handled in a subsequent site-specific establishment report and NEPA process.

The Southwestern Region’s RNA Work Group’s Research Natural Area Process for Forest Plan Revision under the 2012 Planning Rule Provisions(2015d) was used by an interdisciplinary team of Gila National Forest staff to complete this evaluation. The forest supervisor reviewed the evaluation to develop his proposal(s) to the regional forester. The regional forester is the responsible official for coordinating with a research station director on final RNA designation (FSM 4063.04b).

Regional RNA Inventory and Needs Assessment

A region-wide RNA inventory identified all existing designated and proposed RNAs. This information was then used to evaluate what ecosystem types were underrepresented among the region’s currently established RNAs and assigned a “need” rating between 1 and 3. A rating of “1” reflects the least degree of need according to the regional needs assessment and corresponds to ecosystem types that is well-represented. A rating of “2” indicates moderate representation, but additional representation across the region may be warranted. A rating of “3” reflects little to no representation in the existing RNAs. In this assessment, need ratings of 2 and 3 may be considered for RNA recommendations. Table J-1 displays the Gila National Forest’s ecological response units (ERUs) with need ratings of 2 and 3.

Table J-1. Gila National Forest ERUs and riparian ERU groups that may be considered for RNA recommendation

ERU Name	RNA Need Rating
Ponderosa Pine Forest	2
Pinyon Juniper Evergreen Shrub (lumped with Pinyon Juniper Woodland)	2
Pinyon Juniper Woodland	2
Mountain Mahogany Mixed Shrubland	3
Juniper Grass Woodland	3
Semidesert Grassland	2
Wetland (Cieñega) Riparian ERU Group	2
Montane-Conifer Willow Group	2

Summary of Evaluation Process

This summary is intended to provide an overview of the regionally established process to evaluate RNAs. First, existing designated RNAs and their associated 1986 plan direction are evaluated against defined criteria to determine if conditions have changed such that the RNA is no longer able to serve the function for which it was originally created, or if there is a need for new, additional, or corrective management direction (FSM 4063.03).

The evaluation criteria for designated RNAs are:

1. Does current plan direction protect the RNA from human-caused environmental disruptions?
2. What are the threats that may affect the RNA?
3. Does the RNA continue to be managed in a manner that maintains current natural conditions to the extent possible?
4. Are ecological processes being allowed to prevail without human intervention? If not, is deliberate manipulation consistent with maintaining the unique feature(s) for which the RNA was established to protect?
5. What is the status of mineral entry in the RNA?

Next, existing and new proposed RNAs are evaluated against a second set of criteria to determine if they qualify for proposal. The evaluation criteria for proposed RNAs are:

1. Does the area contain ERU classes with need rankings of 2 or 3 and/or is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?
2. Does the area contribute to a wide spectrum of high quality, representative areas of the major forms of ecological variability and natural situations of scientific interest or importance that in combination form a national network of areas for research, education and maintenance of biological diversity?
3. Does the area contribute to the preservation and maintenance of genetic diversity, including threatened, endangered and species of conservation concern and/or aquatic systems?
4. Does the area serve as a baseline or reference area for the study of long-term biological, disturbance, hydrologic or other processes or climate change?
5. Does the area serve as a control for comparing results from manipulative research?

6. Is the area large enough to provide essentially unmodified conditions within its interior, maintain ecological processes and the features or qualities for which the RNA is proposed?
7. Does the area show little to no evidence of major disturbances by humans? (Have activities affected the area beyond its ability to recover? Is there evidence of timber cutting in the past 50 years?)
8. Does the area reflect its original, near-pristine condition as closely as possible?
9. Does the area represent the best available, qualified area?

Finally, the evaluation is reviewed by the forest supervisor who determines what proposals to present to the regional forester.

Candidate RNAs

Candidate RNAs include one existing designated RNA (Gila River RNA), four existing proposed RNAs and seven areas identified in the 1986 forest plan for evaluation. The existing proposed RNAs include Turkey Creek, Rabbit Trap, Agua Fria, and Largo Mesa. The seven areas identified in the 1986 forest plan for evaluation are Mule Creek, Lower San Francisco, Mineral Creek, Tillie Hall, Rocky Canyon, Eagle Peak, and the Piños Altos Mountains.

No public comment suggesting areas for RNA status have been received. No further recommendations by forest staff have been brought forward, although some have voiced support for Mule Creek and the Lower San Francisco.

Evaluation

These following subsections contain the evaluations for all candidate RNAs.

Gila River Designated RNA

The Gila River RNA was the first RNA in the state of New Mexico and was established in 1972. It consists of 393 acres near the Gila River Bird Area in the northern Burro Mountains on the Silver City District. It is a high-quality example of Cottonwood Group ERUs, which is well-represented within the Southwestern Region's research natural areas. The primary purpose of its establishment was to protect bird habitat. As of 2015, the greater Gila River bird area supports 231 species of birds representing 43 percent of the verified bird species documented in New Mexico (Shook 2015).

1. Does current plan direction protect the RNA from human-caused environmental disruptions?

Yes. Current plan direction includes the following provisions to protect all RNAs.

- ◆ Protect RNA values and manage for scientific and baseline studies
- ◆ Visual Quality Objective of Preservation
- ◆ Manage dispersed recreation at a low intensity reduced service level
- ◆ ORV use prohibited
- ◆ Manage Recreation Opportunity Spectrum (ROS) according to existing inventory
- ◆ Post all boundaries outside wilderness
- ◆ No new range developments will be authorized which might change the existing character of the area
- ◆ No permits for fuelwood or other wood products will be issued

- ♦ Work toward withdrawing from mineral entry
- ♦ Unplanned ignition will receive appropriate suppression action
- ♦ Wildfires burning outside the area, which threatens the area will be suppressed

2. What are the threats that may affect the RNA?

Threats to this RNA include potential diversion, livestock use, increased recreational use and OHV and ATV use. Although a recent proposal for a Gila River diversion has been de-funded, the potential for future proposals remains real. Such proposals have the potential to alter the hydrologic processes that sustain riparian and aquatic systems (Gori et al. 2014). Excess livestock and associated use have been documented, but issues have been resolved relatively quickly and impacts on natural processes have been minimal. The area has grown in popularity with hikers, birders, and other recreationists since its designation. Although recreational use is not excessive, it may be inconsistent with provisions in the establishment record to limit human entry to the west side of the river. OHV and ATV use remains a threat as potential access points exist but is not known to have occurred.

Noxious plant species are another threat. Populations of noxious plants have been documented upstream. Similarly, there are non-native fish present in the Gila River, both upstream and downstream. Non-native birds such as starling, Eurasian collared doves and house sparrows likely use this area.

3. Does the RNA continue to be managed in a manner that maintains current natural conditions to the extent possible?

Yes. Under current management, natural ecological processes are the dominant influences on the riparian system.

4. Are ecological processes being allowed to prevail without human intervention? If not, is deliberate manipulation consistent with maintaining the unique feature(s) for which the RNA was established to protect?

Yes. No deliberate manipulation is occurring, and natural processes are the dominant influences on the riparian system.

5. What is the status of mineral entry in the RNA?

The RNA is not currently withdrawn from mineral entry.

Existing Proposed RNAs

Turkey Creek

The proposed Turkey Creek RNA was identified during the last planning phase. There is some uncertainty associated with its precise location given description conflicts between the original proposal and what is currently in the forest's geospatial data. It consists of 1,200 acres^a within the Gila Wilderness near its southwestern boundary, south of the Turkey Creek hot springs. The area was originally proposed for its geologic features and to protect riparian and aquatic habitat associated with the Turkey Creek and Skeleton Canyon drainages. Intentions for the establishment record were to exclude the area from livestock grazing and withdraw it from mineral entry. There is some documentation indicating it contains an old mining claim.

^a According to work supporting the original proposal, it was calculated to be 1,337 acres. However, when digitizing the proposed RNA boundary from the original hardcopy maps using 200-ft contours as a guide, it came out at 1,200 acres.

1. Does the area contain ERU classes with need rankings of 2 or 3 and/or is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?

Yes. The RNA contains Mountain Mahogany Mixed Shrubland (need rank 3), Ponderosa Pine-Evergreen Oak and Mixed Conifer-Frequent Fire (need rank 1), as well as Pinyon Juniper Woodland (need rank 2). It also includes portions of the Turkey Creek and Skeleton Canyon drainages. These are perennial streams supporting outstanding examples of Cottonwood Group riparian vegetation (Sycamore-Fremont Cottonwood and Narrowleaf Cottonwood/Shrub ERUs), which is well-represented in the Southwestern Region's network of RNAs.

2. Does the area contribute to a wide spectrum of high quality, representative areas of the major forms of ecological variability and natural situations of scientific interest or importance that in combination form a national network of areas for research, education and maintenance of biological diversity?

Yes. This area would contribute to the regional and national network and fills two identified needs (see previous).

3. Does the area contribute to the preservation and maintenance of genetic diversity, including threatened, endangered and species of conservation concern and/or aquatic systems?

Yes. Because there is no readily available information related to the genetic diversity of most species present, it is assumed that the area contributes to the preservation and maintenance of genetic diversity. Narrow-headed garter snakes have been documented in the vicinity. It also supports the roundtail chub (*Gila chub*), Chiricahua leopard frog, and Mexican spotted owl. No unique, rare or endemic plant species are documented, but local knowledge indicates Chihuahua pine (*Pinus chihuahuana* Engelman) is present. This pine species is indicative of a Madrean influence. The area has not had a rigorous botanical inventory.

4. Does the area serve as a baseline or reference area for the study of long-term biological, disturbance, hydrologic or other processes or climate change?

Yes. Due to its topography and remoteness, human influence has been minimal. It would serve as a baseline or reference area for any of these purposes.

5. Does the area serve as a control for comparing results from manipulative research?

Yes. Due to its topography and remoteness, human influence has been minimal. It would serve as a control for a variety of purposes.

6. Is the area large enough to provide essentially unmodified conditions within its interior, maintain ecological processes and the features or qualities for which the RNA is proposed?

Yes. However, there may be potential for impacts associated with future proposals to divert the Gila River (Gori et al. 2014).

7. Does the area show little to no evidence of major disturbances by humans?

Yes. See previous.

8. Does the area reflect its original, near-pristine condition as closely as possible?

Yes. See previous.

Historically, livestock use in the uplands was probably light due to topographic influence on animal behavior. At present, there is no permitted livestock use as it lies within the old Glenn allotment

which was last permitted to the New Mexico Game and Fish Department in the 1950s to support the reintroduction of elk. It has not been permitted for livestock grazing for many decades. However, self-sustaining populations of unauthorized, unbranded livestock are known to occupy areas in the Turkey Creek drainage upstream of the proposed RNA. Given several miles and a series of waterfalls that serve as barriers to livestock movement between where livestock impacts are known and the proposed RNA, impacts seemed unlikely. However, recent activities to remove unauthorized, unbranded livestock from the wilderness has involved driving them down the Gila River past the confluence with Turkey Creek. Any animals that escaped removal efforts are now able to access the proposed RNA from below those barriers. What impacts may be occurring in the proposed RNA would require field validation. The intent expressed in the draft establishment record, which was never finalized, was to exclude the area from livestock grazing. Livestock impacts, should they be evident, are not irretrievable. Infrastructure is limited to a non-motorized trail, which is located primarily in the drainage bottom.

9. Does the area represent the best available, qualified area?

Yes. This area is a high-quality candidate for RNA status. Current plan direction related to fire is not necessarily consistent with dominance and maintenance of the natural ecological processes that would occur in the upland systems associated with the proposed RNA boundaries.

Rabbit Trap

The proposed Rabbit Trap RNA was identified during the last planning phase. It consists of 300 acres in the northeastern Burro Mountains near Saddle Rock. The area has been excluded from livestock grazing since the 1940s. It is adjacent to a historic mining claim. It was originally proposed during the last planning cycle for as an example of ecological status and watershed recovery in a landscape that was historically overgrazed and continues to experience grazing impacts.

1. Does the area contain ERU classes with need rankings of 2 or 3 and/or is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?

Yes. The proposed RNA is primarily mapped as Mountain Mahogany Mixed Shrubland (need ranking 3), with a component of Desert Willow in the major drainage along the southeastern side of the area. However, it is not aligned with the central concept of Mountain Mahogany Mixed Shrubland as it contains relatively large areas more characteristic of Semidesert Grassland (need ranking 3). There are no aquatic systems associated with Desert Willow.

2. Does the area contribute to a wide spectrum of high quality, representative areas of the major forms of ecological variability and natural situations of scientific interest or importance that in combination form a national network of areas for research, education, and maintenance of biological diversity?

Yes. This area would contribute to national and regional networks, filling two identified needs.

3. Does the area contribute to the preservation and maintenance of genetic diversity, including threatened, endangered and species of conservation concern and/or aquatic systems?

Yes. Because there is no readily available information related to the genetic diversity of the species present, it is assumed that the area contributes to the preservation and maintenance of genetic diversity. It also supports Davidson's cliff carrot, which is currently on the species of conservation concern list.

4. Does the area serve as a baseline or reference area for the study of long-term biological, disturbance, hydrologic or other processes or climate change?

Yes. While it may not serve as an ecological reference site, it has and could continue to serve as a baseline for ecological status and watershed recovery from grazing impacts, as well as climate change.

5. Does the area serve as a control for comparing results from manipulative research?

Yes. It has and could continue to serve as a control for range management. It could also be useful as a control for research involving climate change and range management.

6. Is the area large enough to provide essentially unmodified conditions within its interior, maintain ecological processes and the features or qualities for which the RNA is proposed?

Yes. The area is large enough to maintain ecological processes and the qualities for which it was proposed. It has been excluded from livestock grazing since the 1940s. There have been issues in recent years with maintaining the exclosure fence and incidental livestock use as a result.

7. Does the area show little to no evidence of major disturbances by humans?

No. Evidence of gully erosion resulting from historical grazing impacts is still visible, although it is not active, and gullies have been healing for decades.

8. Does the area reflect its original, near-pristine condition as closely as possible?

Yes. Given the history of livestock grazing in this landscape, this area represents the closest to an original or pristine condition as possible.

9. Does the area represent the best available, qualified area?

Yes. See previous. However, current direction related to fire is not consistent with dominance and maintenance of the natural ecological processes that would occur in these systems.

Largo Mesa

The proposed Largo Mesa RNA is located on Largo Mesa roughly 2 miles northwest of Castle Rock on the Quemado Ranger District. It is approximately 178 acres and was originally proposed in the last planning cycle as a response to an identified need in the region for pinyon-juniper woodland study sites.

1. Does the area contain ERU classes with need rankings of 2 or 3 and/or is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?

Yes. The area contains Pinyon Juniper Woodland (need rank 2) and Pinyon Juniper Grass (no need rank). However, given the area lacks the soil or topographic diversity to support both a closed-canopy, infrequent fire woodland (Pinyon Juniper Woodland) immediately adjacent to a open-canopy, frequent fire woodland (Pinyon Juniper Grass). The area represents a departure from the reference condition. Specifically, tree density increases resulting from historic overgrazing and fire suppression, maintained by current livestock grazing. The area does not contain aquatic habitat.

2. Does the area contribute to a wide spectrum of high quality, representative areas of the major forms of ecological variability and natural situations of scientific interest or importance that in combination form a national network of areas for research, education and maintenance of biological diversity?

No. This area is not a high-quality representative area for either Pinyon Juniper Woodland or Pinyon Juniper Grass due to the reasons stated above.

3. Does the area contribute to the preservation and maintenance of genetic diversity, including threatened, endangered and species of conservation concern and/or aquatic systems?

Yes. Because there is no readily available information related to the genetic diversity of the species present, it is assumed that the area contributes to the preservation and maintenance of genetic diversity. However, it is not known to support any at-risk species or rare or endemic plants and there is no evidence to suggest it supports genetic diversity to any degree greater than the surrounding landscape. A rigorous botanical inventory specific to this area has not been conducted.

4. Does the area serve as a baseline or reference area for the study of long-term biological, disturbance, hydrologic or other processes or climate change?

No. The area represents a departure from the reference condition. Ecological processes and disturbance regimes have been altered. Livestock grazing is active and expected to continue.

5. Does the area serve as a control for comparing results from manipulative research?

Yes. It could serve as a control for manipulative research related to mechanical vegetation management and climate change. No mechanical treatments on the mesa are documented and none are currently planned.

6. Is the area large enough to provide essentially unmodified conditions within its interior, maintain ecological processes and the features or qualities for which the RNA is proposed?

Yes. It is of sufficient size. It is larger than some designated RNAs being managed successfully (Rabbit Trap). However, conditions are already modified. See previous.

7. Does the area show little to no evidence of major disturbances by humans?

No. While the area could recover from grazing and fire suppression impacts, deliberate and intensive manipulation of the existing vegetation either with mechanical treatments or high severity fire would be required for it to represent its “original” condition.

8. Does the area reflect its original, near-pristine condition as closely as possible?

No. See previous.

9. Does the area represent the best available, qualified area?

No. See previous.

Agua Fria

The proposed Agua Fria RNA is located on Agua Fria Mountain approximately 1.5 miles southwest of Castle Rock on the Quemado Ranger District. It contains approximately 266 acres on the northern summit and steep upper slopes of the mountain. It was originally proposed in the last planning cycle but documentation on the features or qualities it was proposed for were not found in the records. For this evaluation, it is assumed this area was identified for the same reasons as Largo Mesa.

1. Does the area contain ERU classes with need rankings of 2 or 3 and/or is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?

Yes. The proposed RNA contains areas mapped as Pinyon Juniper Woodland (need rank 2) and Colorado Plateau-Great Basin Grassland (no need rank). It does not contain any aquatic habitat.

2. Does the area contribute to a wide spectrum of high quality, representative areas of the major forms of ecological variability and natural situations of scientific interest or importance that in combination form a national network of areas for research, education, and maintenance of biological diversity?

Yes. Given the steepness of the side slopes on which Pinyon Juniper Woodland occurs, the area represents high quality representation of that ERU; management activities have been restricted by the terrain. However, the grassland component is not high quality. Woody species encroachment is evident, representing a departure from the reference condition. Tree density increases are the result of historic overgrazing and fire suppression. Disruption of natural ecological processes and existing conditions is maintained by current livestock grazing.

3. Does the area contribute to the preservation and maintenance of genetic diversity, including threatened, endangered and species of conservation concern and/or aquatic systems?

Yes. Because there is no readily available information related to the genetic diversity of the species present, it is assumed that the area contributes to the preservation and maintenance of genetic diversity. However, it is not known to support any at-risk species or rare or endemic plants and there is no evidence to suggest it supports genetic diversity to any degree greater than the surrounding landscape. A rigorous botanical inventory specific to this area has not been conducted.

4. Does the area serve as a baseline or reference area for the study of long-term biological, disturbance, hydrologic or other processes or climate change?

Yes. In terms of the Pinyon Juniper Woodland component, it could serve as a baseline or reference area. In terms of the grassland, it is not well-suited to that purpose.

5. Does the area serve as a control for comparing results from manipulative research?

No. The steepness of the slopes on which the Pinyon Juniper Woodland component is present is subject to different types and/or rates of background geomorphic processes than would typically be present in areas targeted by manipulative research. Manipulative research in woodland systems typically targets slopes less than 40 percent rise. It also typically targets areas of departure in open canopy, frequent fire woodlands. Not closed canopy, infrequent fire woodlands such as this. It is unlikely to serve as a control. In terms of the grassland component, it could serve as a control for manipulative research related to mechanical vegetation management and climate change. No mechanical treatments have occurred in the grassland, and none are currently planned as access is somewhat limited. However, there is no reason this area would be selected for this type of research over any other similar areas across the forest.

6. Is the area large enough to provide essentially unmodified conditions within its interior, maintain ecological processes and the features or qualities for which the RNA is proposed?

Yes. It is of sufficient size. It is larger than some designated RNAs being managed successfully. The Pinyon Juniper Woodland processes are essentially unmodified, but those in the grassland component are already modified.

7. Does the area show little to no evidence of major disturbances by humans?

Yes. Particularly on the Pinyon Juniper Woodland slopes. While the grassland component could recover from grazing and fire suppression impacts, deliberate and intensive manipulation of the existing vegetation either with mechanical treatments or high severity fire would be required for it to represent its “original” condition.

8. Does the area reflect its original, near-pristine condition as closely as possible?

Yes and No. Yes for the Pinyon Juniper Woodland component due to reasons in the answers to the preceding question. No for the grassland component. Near-pristine conditions in Colorado Plateau-Great Basin grasslands, both within this area and across the regional distribution of this ERU are difficult to find.

9. Does the area represent the best available, qualified area?

No. There are likely areas of similar or better quality to represent Pinyon Juniper Woodland in the RNA network and on the forest. Regardless, the terrain may intensify the resources needed to comply with 1986 plan direction that requires these areas to be fenced.

Plan Recommended Areas of Evaluation

Lower San Francisco River

The Lower San Francisco River area recommended for RNA evaluation is currently designated as a wilderness study area and is part of the Lower San Francisco Inventoried Roadless Area. The features and qualities for which evaluation was recommended are tied to riparian and aquatic habitat. This evaluation includes the entire wilderness study area.

1. Does the area contain ERU classes with need rankings of 2 or 3 and/or is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?

Yes. The riparian is mapped as part of the Cottonwood Group, which is well-represented in the regional RNA network. The canyon slopes contain Mountain Mahogany Mixed Shrubland and Juniper Grass Woodland (both need rank 3).

2. Does the area contribute to a wide spectrum of high quality, representative areas of the major forms of ecological variability and natural situations of scientific interest or importance that in combination form a national network of areas for research, education and maintenance of biological diversity?

Yes. This area is a high quality, representative area of the region's Cottonwood Group and associated aquatic habitat. The surrounding uplands contain high quality representation of Mountain Mahogany Mixed Shrubland and Juniper Grass Woodland that have experienced little human influence due to the terrain.

3. Does the area contribute to the preservation and maintenance of genetic diversity, including threatened, endangered and species of conservation concern and/or aquatic systems?

Yes. Because there is no readily available information related to the genetic diversity of the species present, it is assumed that the area contributes to the preservation and maintenance of diversity. The area contains proposed critical habitat for loach minnow and spike dace. However, nonnative fish species dominate the system and native fish species have been severely reduced to the point of extirpation for some. Nonnative bullfrogs and saltcedar are also present. A rigorous botanical survey has not been conducted.

4. Does the area serve as a baseline or reference area for the study of long-term biological, disturbance, hydrologic or other processes or climate change?

Yes. This area could serve as a baseline or reference area for long-term studies related to ecological processes and climate change as human influence has been limited.

5. Does the area serve as a control for comparing results from manipulative research?

Yes and No. The Juniper Grass and Mountain Mahogany Mixed Shrubland component would likely not be good controls given that manipulative research typically requires more accessible terrain where the types and/or rates of background geomorphic processes are different. The riparian would be better suited as a control.

6. Is the area large enough to provide essentially unmodified conditions within its interior, maintain ecological processes and the features or qualities for which the RNA is proposed?

Yes. The area is large enough. It is larger than some designated RNAs being managed successfully. However, like the designated Gila River RNA, there is potential for proposals to divert the San Francisco River to impact natural processes.

7. Does the area show little to no evidence of major disturbances by humans?

Yes. Aside from recoverable evidence of illegal OHV and ATV use in the riparian, there is no evidence of human influence due to the terrain. The river has been excluded from livestock grazing since the mid-to late 1990s. Although livestock grazing is active in the adjacent uplands, impacts are generally light due to topographic influence on animal behavior. Work to remove non-native species is ongoing, including herbicide applications for saltcedar.

8. Does the area reflect its original, near-pristine condition as closely as possible?

Yes and No. The uplands reflect “original,” near-pristine conditions, as human influence has been limited by terrain. Again, there is evidence of ongoing illegal OHV and ATV use in the stream corridor, but the system could recover if this issue is resolved.

9. Does the area represent the best available, qualified area?

No for the riparian and aquatic ecosystems. **Yes** for the upland ecosystems. The Mountain Mahogany Mixed Shrubland and Juniper Grass Woodlands do represent best available, qualified areas given human influence is limited by the terrain. Current plan direction related to fire in the uplands may not be consistent with allowing natural ecological processes to prevail.

Mule Creek

The Mule Creek area recommended for evaluation as part of the last planning cycle is located immediately adjacent the Lower San Francisco River candidate RNA at the confluence of the San Francisco River and Mule Creek. It is not part of the wilderness study area, but it is part of the Lower San Francisco Inventoried Roadless Area. The features and qualities for which evaluation was recommended are tied to riparian and aquatic habitat. This evaluation includes the area draining into Mule Creek from the proximate forest boundary, northwest to the confluence with the San Francisco River.

1. Does the area contain ERU classes with need rankings of 2 or 3 and/or is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?

Yes. The riparian is predominantly mapped as Sycamore-Fremont Cottonwood (Cottonwood Group need rank 1), but there is a strong alder component which would indicate the Montane Conifer-Willow Group (need rank 2). The uplands contain Mountain Mahogany Mixed Shrubland (need rank 3), Juniper Grass (need rank 3) and small areas of Pinyon Juniper Woodland (need rank 2).

2. Does the area contribute to a wide spectrum of high quality, representative areas of the major forms of ecological variability and natural situations of scientific interest or importance that in combination form a national network of areas for research, education, and maintenance of biological diversity?

Yes. Although well-represented in the regional RNA network, the Cottonwood Group riparian is a high-quality representation, as are the upland ERUs.

3. Does the area contribute to the preservation and maintenance of genetic diversity, including threatened, endangered and species of conservation concern and/or aquatic systems?

Yes. Because there is no readily available information related to the genetic diversity of the species present, it is assumed that the area contributes to the preservation and maintenance of genetic diversity. The area supports Gila chub and provides important habitat for other terrestrial, aquatic, and semi-aquatic species. Nonnative fishes are present, but other nonnative species have not been documented. A rigorous botanical inventory has not been conducted.

4. Does the area serve as a baseline or reference area for the study of long-term biological, disturbance, hydrologic or other processes or climate change?

Yes. This area could serve as a baseline or reference area for long-term studies related to ecological processes and climate change as human influence has been limited. Current plan direction related to fire in the uplands may not be consistent with allowing natural ecological processes to prevail.

5. Does the area serve as a control for comparing results from manipulative research?

Yes and No. The Juniper Grass and Mountain Mahogany Mixed Shrubland component would likely not be good controls given that manipulative research typically requires more accessible terrain where the types and/or rates of background geomorphic processes are different. The riparian corridor has more potential to act as a control.

6. Is the area large enough to provide essentially unmodified conditions within its interior, maintain ecological processes and the features or qualities for which the RNA is proposed?

Yes. It is large enough and ecological processes are intact due to terrain limited human influence. It is larger than some designated RNAs being managed successfully.

7. Does the area show little to no evidence of major disturbances by humans?

Yes. Terrain limits human influence. Although livestock grazing is active in the area, impacts are generally light due to topographic influence on animal behavior.

8. Does the area reflect its original, near-pristine condition as closely as possible?

Yes. See previous.

9. Does the area represent the best available, qualified area?

Yes. The Cottonwood Group is well-represented in the regional RNA network, but this area is a high-quality representation. The Mountain Mahogany Mixed Shrubland and Juniper Grass Woodlands do represent best available, qualified areas given human influence is limited by the terrain. Pinyon Juniper Woodland is present in such few, small areas that it would not likely make a significant contribution to that identified need. Current plan direction related to fire in the uplands may not be consistent with allowing natural ecological processes to prevail.

Tillie Hall

The Tillie Hall area is in the Hell Hole Wilderness Study Area and Inventoried Roadless Area. It was recommended for RNA evaluation in the last planning cycle for the Madrean influence on the local floristics, which includes three varieties of piñon pine: two-needle piñon, Mexican piñon and Arizona piñon.

- 1. Does the area contain ERU classes with need rankings of 2 or 3 and/or is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?**

Yes. The area contains areas mapped as Pinyon Juniper Woodland (need rank 2), Ponderosa Pine Forest (need rank 2) as well as the Madrean Pinyon-Oak Woodland and Pinyon Juniper Grass Woodland (no need ranks) and the Madrean influenced Ponderosa Pine-Evergreen Oak (need rank 1). There is no riparian habitat mapped in the area.

- 2. Does the area contribute to a wide spectrum of high quality, representative areas of the major forms of ecological variability and natural situations of scientific interest or importance that in combination form a national network of areas for research, education and maintenance of biological diversity?**

Yes. The area contains 2 vegetation types with identified needs and may be of special interest due to Madrean influenced ecological variability and potential deviation from central tendencies of current ecological classifications. This area is a broad-scale ecotone and may therefore be of interest for climate change research.

- 3. Does the area contribute to the preservation and maintenance of genetic diversity, including threatened, endangered and species of conservation concern and/or aquatic systems?**

Yes. Because there is no readily available information related to the genetic diversity of the species present, it is assumed that the area contributes to the preservation and maintenance of genetic diversity. Given that the area represents part of the northern limits of Mexican and Arizona piñon pine, there may be stronger argument that this area contributes significantly to the genetic diversity of these species. The area contains portions of two northern goshawk post fledging areas (PFAs).

- 4. Does the area serve as a baseline or reference area for the study of long-term biological, disturbance, hydrologic or other processes or climate change?**

Yes. This area does not represent the central tendencies of current ecological classifications and may provide opportunities to expand the scientific understanding of biophysical settings and reference conditions. It would be a good baseline for vegetation changes related to climate change as ecotones the body of science suggests changes are anticipated to occur sooner in such areas.

- 5. Does the area serve as a control for comparing results from manipulative research?**

No. This area is generally not representative of the landscape settings and types and/or rates of geomorphic processes that manipulative research typically targets. While it is large enough to provide for paired watershed studies, its status as an inventoried roadless area does not make such research practical.

- 6. Is the area large enough to provide essentially unmodified conditions within its interior, maintain ecological processes and the features or qualities for which the RNA is proposed?**

Yes. It is larger than some designated RNAs being managed successfully.

7. Does the area show little to no evidence of major disturbances by humans?

Yes. It is in a wilderness study area and inventoried roadless area. It qualified for these designations because terrain limits human influence. Livestock grazing is active and expected to continue. According to the 2016 Watershed Condition Classification range condition is generally fair with some areas in good condition. A prevalence of illegal firewood gathering, and an extensive network of user-created routes are factors on the east side of the area, but Tillie Hall Canyon itself is in the southwestern extent of the area.

8. Does the area reflect its original, near-pristine condition as closely as possible?

Yes. Although it does not fit the central tendency of the current ecological classification, Madrean Pinyon-Oak Woodland, which comprises a large portion of the area, has a low departure from the reference condition according to the plan revision assessment. See also previous.

9. Does the area represent the best available, qualified area?

Yes. The area fills several identified needs and might add to the range of biophysical settings for research in Madrean Pinyon-Oak Woodland. Human influence is limited by terrain, although livestock grazing has and is expected to continue. However, current direction related to fire is not consistent with dominance and maintenance of the natural ecological processes that would occur in these systems.

Mineral Creek

The plan recommendation to evaluate the Mineral Creek “area” does not specify what features or qualities might contribute to the RNA network. For this evaluation, the area considered includes the portions of the Mineral Creek watershed contained within Inventoried Roadless Areas because it has experienced less human influence than the remainder of the watershed and there are fewer potential multiple-use conflicts.

1. Does the area contain ERU classes with need rankings of 2 or 3 and/or is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?

Yes. It contains areas mapped as Ponderosa Pine Forest (need rank 2), Mountain Mahogany Mixed Shrubland (need rank 3), Montane-Conifer Willow Group (need rank 2), specifically the Arizona Alder-Willow ERU. It also contains Cottonwood Group riparian ERUs (Narrowleaf Cottonwood/Shrub), Mixed Conifer-Frequent Fire and Mixed Conifer with Aspen which are well represented in the RNA network.

2. Does the area contribute to a wide spectrum of high quality, representative areas of the major forms of ecological variability and natural situations of scientific interest or importance that in combination form a national network of areas for research, education and maintenance of biological diversity?

Yes. Quality might be higher if seral state diversity was more representative of reference conditions, although there may be greater topographic influences on fire regimes than is reflected by the research locations the reference conditions are based on. On the other hand, there is substantial scientific interest in fire and climate facilitated vegetation changes.

3. Does the area contribute to the preservation and maintenance of genetic diversity, including threatened, endangered and species of conservation concern and/or aquatic systems?

Yes. Because there is no readily available information related to the genetic diversity of the species present, it is assumed that the area contributes to the preservation and maintenance of genetic diversity. The area is occupied critical habitat for Mexican spotted owl and contains over a dozen Protected Activity Centers. Mineral Creek is occupied recovery habitat for Gila trout. A rigorous

botanical inventory has not been conducted; however, several rare and endemic plant species have been documented, some of which are on the current species of conservation list. These species include Gooding's onion, Mogollon Mountain lousewort and Mogollon death camas.

4. Does the area serve as a baseline or reference area for the study of long-term biological, disturbance, hydrologic or other processes or climate change?

Yes. The area could serve as a post-fire baseline or reference condition for long-term research related to all ecological processes and climate change.

5. Does the area serve as a control for comparing results from manipulative research?

Yes. It could serve as a control for research related to reforestation and climate change research.

6. Is the area large enough to provide essentially unmodified conditions within its interior, maintain ecological processes and the features or qualities for which the RNA is proposed?

Yes. The area is larger than some designated RNAs that are managed successfully.

7. Does the area show little to no evidence of major disturbances by humans?

Yes. Due to the terrain, this area has never been logged. Livestock grazing impacts are localized to riparian areas and are recoverable. In fact, Mineral Creek was found eligible for Wild and Scenic River status and the outstandingly remarkable values present are present under current livestock grazing management.

8. Does the area reflect its original, near-pristine condition as closely as possible?

Maybe. If research is looking for near-pristine late-seral vegetation conditions, the answer is no. If research is looking for near-pristine early seral vegetation condition, the answer is maybe. Most of the area burned at high severity in the 2012 Whitewater Baldy Fire and was aerially seeded, mulched, or both due to downstream values-at-risk. Certified weed-free seed and agricultural straw were used.

9. Does the area represent the best available, qualified area?

Maybe. The area is qualified although there are plenty of other areas on the forest that could serve similar research purposes just as well. Most of these other areas are located within designated wilderness, which poses some restrictions on instrumentation. This area may have an advantage over wilderness locations due to the adjacent access along the Hwy 159 and the Bursum Road with fewer restrictions on research instrumentation. It is an area considered for wilderness recommendation as part of the plan revision process. Current (1986) plan direction related to fire is not necessarily consistent with dominance and maintenance of the natural ecological processes that would occur in these systems.

Rocky Canyon

Rocky Canyon is located almost entirely within designated wilderness. The area was recommended for RNA evaluation during the last planning cycle based on the Madrean influence and the presence of Arizona (aka Apache) pine. This evaluation considered the area northwest of Forest Road 4079C, west of Forest Road 150, northeast of New Mexico Highway 35 and south of the Mimbres/Powderhorn/Sapillo and Diamond Bar allotment boundary fence.

1. Does the area contain ERU classes with need rankings of 2 or 3 and/or is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?

Somewhat. The area is dominated by the Madrean-influenced Ponderosa Pine-Evergreen Oak (need rank 1), but also contains some Ponderosa Pine Forest (need rank 1), Pinyon Juniper Woodland (need rank 2) and Pinyon Juniper Grass Woodland (no need rank).

- 2. Does the area contribute to a wide spectrum of high quality, representative areas of the major forms of ecological variability and natural situations of scientific interest or importance that in combination form a national network of areas for research, education and maintenance of biological diversity?**

Yes. Although the dominant ERU has a need ranking of 1, the southern portion of the Gila National Forest represents part of the northern most limits of Arizona pine (aka Apache pine). The distribution of this species is not restricted to this area, but there is a higher greater concentration of Arizona pine than most other places. This area is a broad-scale ecotone and may therefore be of interest for climate change research.

- 3. Does the area contribute to the preservation and maintenance of genetic diversity, including threatened, endangered and species of conservation concern and/or aquatic systems?**

Yes. Because there is no readily available information related to the genetic diversity of the species present, it is assumed that the area contributes to the preservation and maintenance of genetic diversity. Given that the area represents part of the northern limits of Arizona pine, there may be stronger argument that this area contributes significantly to the genetic diversity of this species. A rigorous botanical inventory has not been conducted. The area contains occupied critical habitat for Mexican spotted owl and Rocky Canyon contains populations of the Rio Grande sucker. The Rio Grande sucker is on the Regional Forester's Sensitive Species list and the Region is negotiating a conservation agreement with multiple agencies and states for this species. No nonnative fish species are present in Rocky Canyon.

- 4. Does the area serve as a baseline or reference area for the study of long-term biological, disturbance, hydrologic or other processes or climate change?**

Yes. Due to its location in designated wilderness, human influence has been limited. It is part of the Mimbres/Powderhorn/Sapillo allotment, which has received light to no use for almost two decades. Range conditions are generally good.

- 5. Does the area serve as a control for comparing results from manipulative research?**

Yes. Portions of this watershed contain areas where the types and rates of geomorphic processes are like those areas typically targeted by manipulative research.

- 6. Is the area large enough to provide essentially unmodified conditions within its interior, maintain ecological processes and the features or qualities for which the RNA is proposed?**

Yes. The area is larger than some designated RNAs that have been managed successfully.

- 7. Does the area show little to no evidence of major disturbances by humans?**

Yes. Other than a relatively small area where Forest Road 150 bisects the Gila and Aldo Leopold Wildernesses, no manipulative management has occurred since the area was designated wilderness. The area adjacent the road also contains a low-capacity designated campground.

- 8. Does the area reflect its original, near-pristine condition as closely as possible?**

Yes. See previous.

9. Does the area represent the best available, qualified area?

Yes. The area fills an identified need and might add to the range of biophysical settings for research in ponderosa pine types. The presence of the Rio Grande sucker and absence of nonnative fishes adds additional merit to this area. Human influence is limited by wilderness designation, and in some cases by terrain. Livestock use has been light to absent for almost two decades. Pasture division fences may provide opportunities to balance future multiple-use considerations. The North Brannon pasture contains a relatively higher density of pine, although it would not include any of the aquatic values present in the area evaluated. Current direction for RNAs related to fire is not consistent with dominance and maintenance of the natural ecological processes that would occur in these systems.

Piños Altos Mountains

The Piños Altos Mountains are located immediate north of Silver City, New Mexico. The area was recommended for RNA evaluation during the last planning cycle based on the Madrean influence and the presence of Arizona (aka Apache) pine. This evaluation considered the entire mountain range, most of which is an inventoried roadless area. It also contains many private inholdings, although most are relatively small. There is a higher density of urban interface in and adjacent the range than there is in the rest of the forest.

1. Does the area contain ERU classes with need rankings of 2 or 3 and/or is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?

Yes. The area contains Mountain Mahogany Mixed Shrubland (need rank 3), Pinyon Juniper Woodland (need rank 2), Juniper Grass (need rank 3) and Ponderosa Pine Forest (need rank 2). It also contains Ponderosa Pine-Evergreen Oak, Mixed Conifer-Frequent Fire (both need rank 1), and Pinyon Juniper Grass (no need rank). It also contains small areas of Cottonwood Group riparian, which are well represented in the regional RNA network.

2. Does the area contribute to a wide spectrum of high quality, representative areas of the major forms of ecological variability and natural situations of scientific interest or importance that in combination form a national network of areas for research, education and maintenance of biological diversity?

Yes. It fulfills four identified needs (see previous) and may expand representation of biophysical settings for well-represented ERUs.

3. Does the area contribute to the preservation and maintenance of genetic diversity, including threatened, endangered and species of conservation concern and/or aquatic systems?

Yes. Because there is no readily available information related to the genetic diversity of the species present, it is assumed that the area contributes to the preservation and maintenance of genetic diversity. Given that the area represents part of the northern limits of Arizona pine, there may be stronger argument that this area contributes significantly to the genetic diversity of this species. A rigorous botanical inventory has not been conducted, but several rare and/or endemic plant species on the draft Species of Conservation Concern list that have been documented in area. Which species depends on which area of the mountain range. The area also contains several northern goshawk post fledging areas (PFAs), occupied Mexican spotted owl critical habitat and protected activity centers (PACs), and occupied recovery habitat for Gila trout.

4. Does the area serve as a baseline or reference area for the study of long-term biological, disturbance, hydrologic or other processes or climate change?

Yes and No. It depends on the type of research. There are areas that could serve as a baseline or reference condition, particularly in the Mountain Mahogany Mixed Shrubland or where forest and

woodland types occur on steep slopes. However, woodland types in terrain not limiting to livestock use most likely represent a departure from the reference condition. Specifically, tree density increases resulting from historic overgrazing and fire suppression, maintained by current livestock grazing. Even within inventoried roadless areas, historic harvest of wood products to supply area residents was extensive. Much of the area was completely cut over. However, this may not limit its value to climate change related research.

5. Does the area serve as a control for comparing results from manipulative research?

No. It contains areas both representative of the landscape settings and types and/or rates of geomorphic processes that manipulative research typically targets, and areas that are not. While it is large enough to provide for paired watershed studies, large tracts of inventoried roadless area could be limiting to that type of research.

6. Is the area large enough to provide essentially unmodified conditions within its interior, maintain ecological processes and the features or qualities for which the RNA is proposed?

Yes. The area is larger than some designated RNAs that have been managed successfully.

7. Does the area show little to no evidence of major disturbances by humans?

Yes and No. Yes, where Mountain Mahogany Mixed Shrubland and forest or woodland types occur on steep slopes there is little to no evidence of major human disturbance. Elsewhere, there is. See previous.

8. Does the area reflect its original, near-pristine condition as closely as possible?

Yes and No. Yes, where Mountain Mahogany Mixed Shrubland and forest or woodland types occur on steep slopes. Elsewhere, it does not. See previous.

9. Does the area represent the best available, qualified area?

No. In general, the answer is no, based on answers to previous questions. However, it may contain areas that are the best available, qualified area for Mountain Mahogany Mixed Shrubland. If specific interest in locating such an area within the Piños Altos Range was brought forward, it might be worth the investment of time to locate such an area within the inventoried roadless area, given the need rank of 3. Outside the inventoried roadless area, proximity to wildland-urban interface values may be a consideration given the limitations RNA status could introduce to management's ability to protect those values.

Eagle Peak

Eagle Peak is in the Tularosa Mountains approximately 10 miles east of Reserve, New Mexico. The area was recommended for RNA evaluation during the last planning cycle based on the presence of late seral mixed conifer, mature aspen stands and common juniper. The mountain itself has tribal significance. The area considered for this evaluation corresponds with the Eagle Peak Inventoried Roadless Area.

1. Does the area contain ERU classes with need rankings of 2 or 3 and/or is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?

Yes. The area contains Pinyon Juniper Woodland and Ponderosa Pine Forest (both need rank 2), as well as Pinyon Juniper Grass Woodland (no need rank), Ponderosa Pine-Evergreen Oak, Mixed Conifer-Frequent Fire and Mixed Conifer with Aspen (all need rank 1). Mixed conifer types have a high vulnerability to climate change on the Gila National Forest. It does not contain riparian or aquatic habitat, although there is relatively poor-quality Montane-Conifer Willow (need rank 2) representation just outside its boundaries.

- 2. Does the area contribute to a wide spectrum of high quality, representative areas of the major forms of ecological variability and natural situations of scientific interest or importance that in combination form a national network of areas for research, education and maintenance of biological diversity?**

Yes and No. While the area contains ERUs associated with identified needs, they are not high quality as is demonstrated in the answers to the remaining questions. On the other hand, there is substantial scientific interest in fire and climate facilitated vegetation changes. Given the disturbance history on Eagle Peak, it may be of scientific interest for that purpose.

- 3. Does the area contribute to the preservation and maintenance of genetic diversity, including threatened, endangered and species of conservation concern and/or aquatic systems?**

Yes. Because there is no readily available information related to the genetic diversity of the species present, it is assumed that the area contributes to the preservation and maintenance of genetic diversity. Given the limited distribution of common juniper (*Juniperus communis* L.) on the forest, there may be a stronger argument that it contributes significantly to the genetic diversity of that species. No rigorous botanical survey has been completed, but there are documented populations of Gooding's onion, which is currently a species of conservation concern. The area also contains critical habitat for Mexican spotted owl and many protected activity centers (PACs).

- 4. Does the area serve as a baseline or reference area for the study of long-term biological, disturbance, hydrologic or other processes or climate change?**

Yes and No. The area would not be a good baseline or reference for many types of research. Forest and woodland systems have been substantially influenced by wood product harvest and livestock grazing. However, this may not limit its use as a baseline or reference area for climate change research.

- 5. Does the area serve as a control for comparing results from manipulative research?**

Yes and No. There may be areas in forested systems that could serve as controls for reforestation and climate related research depending on the study design, however most of the area has already been manipulated and would not be well-suited as a control.

- 6. Is the area large enough to provide essentially unmodified conditions within its interior, maintain ecological processes and the features or qualities for which the RNA is proposed?**

Yes. The area is larger than some designated RNAs that have been managed successfully.

- 7. Does the area show little to no evidence of major disturbances by humans?**

No. The northern part of the area has seen more firewood harvest, logging, pinyon-juniper pushes, and thinning vegetation treatments. Because of rugged terrain, there has been less activity in the southern half of this area. There are still cable logging trails visible in some areas. Livestock grazing impacts are evident outside the mixed conifer. Specifically, tree density increases resulting from historic overgrazing and fire suppression, maintained by current livestock grazing.

- 8. Does the area reflect its original, near-pristine condition as closely as possible?**

No. See previous.

- 9. Does the area represent the best available, qualified area?**

No. While research could certainly be conducted in this area, the pervasiveness of human influence makes it ill-suited for RNA status.

Summary and Recommendations to the Forest Supervisor

The existing designated Gila River RNA remains a high-quality representation of the Cottonwood Group ERUs. There is no reason for disestablishment currently. However, current plan direction and its implementation may be inadequate to provide for the features and qualities it was designated for. The establishment record indicates the intention to close the west side of the river to human entry. There is currently no plan direction or implementation mechanism in place discouraging recreationists along the trail and river corridor from doing so.

Of the RNAs proposed in the last planning cycle, Turkey Creek and Rabbit Trap are high quality areas, fill regionally identified needs and had support of a station director during the last planning cycle. This evaluation identified no reason to release their proposals. However, it is recommended that Largo Mesa and Agua Fria areas be released from proposal because they are not high-quality areas representing intact ecological processes, regardless of support from the station director during the last planning cycle. Largo Mesa does not fill an identified need. It represents a departure from reference condition and restoration would require manipulative management. Agua Fria does fill an identified need, but also contains a substantial component that does not. Restoration of that component would likely require manipulative management, but such management would be unlikely to affect the portion of the area that fills an identified need. RNA status for both areas could conflict with continuing multiple-use management.

Of the areas recommended for RNA evaluation in the last planning cycle, this evaluation finds pros and cons related to the merit of each of them. Both Lower San Francisco River and Mule Creek areas were identified for evaluation based on their riparian and aquatic ecosystems. However, those high-quality riparian systems do not fill an identified need. The pervasiveness of non-native aquatic species in the aquatic ecosystem associated with the San Francisco River are a substantial factor detracting from its quality. The upland ecosystems in these areas do fill identified needs, are of high quality and RNA status would have little impact on multiple uses.

The Tillie Hall area fills several identified needs and might add to the range of biophysical settings for research in Madrean Pinyon-Oak Woodland but are potential conflicts with livestock grazing. The Mineral Creek area fills two identified needs and may be of scientific interest related to fire regimes, reforestation, and climate change. The area is qualified, although there are plenty of other areas on the forest that could serve similar research purposes just as well. On the other hand, many of these other areas are located within designated wilderness, which poses some restrictions on instrumentation; Mineral Creek may have an advantage over wilderness locations due to the adjacent access along the Hwy 159 and the Bursum Road and fewer restrictions on research instrumentation. RNA status would also have little impact on multiple uses.

Rocky Canyon fills an identified need, might add to the range of biophysical settings for research in ponderosa pine types, and could be of interest in climate change studies. On the other hand, the status of ecological processes is preserved under its wilderness designation. Wilderness designation poses some restrictions on instrumentation, but it does not preclude research.

The Piños Altos Mountains may fill several identified needs and expand the range of biophysical settings for research in ponderosa pine and dry mixed conifer types. However, the area contains high quality and poor-quality areas. High quality settings are primarily restricted to steep slopes, where human influence has been minimal due to terrain. The Eagle Peak area may be of interest to research but does not qualify for RNA status based on the degree of human influence.

Finally, there may be issues associated with current RNA plan direction for fire and recreation management. Current recreation related direction is unclear and inconsistent with at least the Gila River RNA's establishment record. Current direction for fire is also unclear and maybe inappropriate with

maintaining natural ecological processes in the uplands. It is recommended that plan direction be clarified to demonstrate consistency with establishment records and maintenance of natural processes.

Forest Supervisor Proposals for the Regional Forester

Although the Cottonwood Group ERUs are well represented in the region, the Gila River RNA is a high-quality example, supports an exceptionally diverse bird population, and the work to establish this area as an RNA is complete. Therefore, I propose to retain the designated Gila River RNA. I propose to withdraw the existing proposals submitted in 1986 for Largo Mesa, Agua Fria, Turkey Creek, and Rabbit Trap.

The Largo Mesa and Agua Fria proposals are withdrawn because they are not high-quality areas representing intact ecological processes, regardless of support from the Station Director during the last planning cycle. Largo Mesa does not fill an identified need and represents a departure from reference condition. Restoration would require manipulative management. Similarly, Agua Fria contains a substantial amount of area that does not fill an identified need. RNA status for both areas could conflict with continuing multiple-use management.

The Turkey Creek proposal is entirely within designated wilderness. While its establishment would add value to the regional network of research natural areas, it is a highly popular area for wilderness recreation pursuits, and I do not want to discourage its recreational use. Rabbit Trap has been excluded from livestock grazing in the allotment decision which protects the at-risk species Davidson's cliff carrot. Rabbit Trap may be eligible for research natural area status and fill identified needs in the regional network, but like the other proposals associated with the 1986 plan, interest has not been expressed in doing research in these areas since 1986, and the establishment process was never completed. I do not find a compelling reason to do so now.

The 1986 plan also identified some general landscape areas that were to be examined for future RNA proposals. These include the Rocky Canyon, Eagle Peak, Piños Altos Mountains, Mineral Creek, Tillie Hall, Lower San Francisco River, and Mule Creek areas. While there may be smaller areas within these large landscapes that could add value to the regional network, I have wildland-urban interface, multiple-use management, non-native invasive species concerns, or a combination of these concerns, in all these areas. Again, with no research interest in these areas in over 35 years, I do not find a compelling reason to pursue proposal development any further.

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Appendix K. Documentation of the Botanical Area Evaluation Process

Background

The land management planning process may include consideration of administratively designated areas (36 CFR 219.19). Some designated areas may be formally designated or established by the forest plan decision, while others have an additional formal process. Special recreation area designations established for the purpose of enhancing public use and enjoyment (FSM 2372.02). A botanical area is a type of special recreation area that may be designated through the plan based on the presence of plant specimens, groups or communities that are significant because of their form, color, occurrence, habitat, location, life history, arrangement, ecology, rarity, or other features (FSM 2372.05).

Stakeholder Proposals and Alternative Development

Throughout the planning process, the public has been encouraged to engage in the development of the new plan. There were two suggestions for creating special areas based on plant species. One suggestion was to create a special area for a Chihuahua pine and madrone community on Bear Mountain Road near Silver City to address a chronic littering problem. This suggestion was reviewed but given the relatively low density of Chihuahua pine and absence of madrone^a, planning staff advised the Forest Supervisor that there wasn't a strong case for a designated area based on plant community composition. Littering is a law enforcement issue and not something that can be addressed by the forest plan. The second suggestion for establishing botanical areas was provided by the Gila Native Plant Society on June 12, 2017, in their scoping comments. More specifically, the Gila Native Plant Society proposed:

“...the creation of “Special Botanical Areas” as a means of meeting the obligations of the forest planning process to maintain viable populations of species of concern. We urge the Forest Service to analyze the eight important plant areas identified in the Gila National Forest and use these data as the foundation of establishing areas for administrative special area designation.”

This proposal was based on work done by the [New Mexico Rare Plant Conservation Strategy](#) released in 2017. A spatial data file of eight important plant areas developed as part of this strategy was provided by Daniela Roth, the now former state botanist, on November 21, 2017. The important plant areas are based on spatial modeling of species observations in a geospatial database in combination with botanical expert review. Some of these areas were greater than 100,000 acres in size, which the planning team initially believed added complexity to the designation process because areas of this size require approval from the Secretary of Agriculture (Figure K-1).

^a The plant present is a species of manzanita, which is a relatively common plant on rhyolitic and tuffaceous soils across the southern half of the forest.

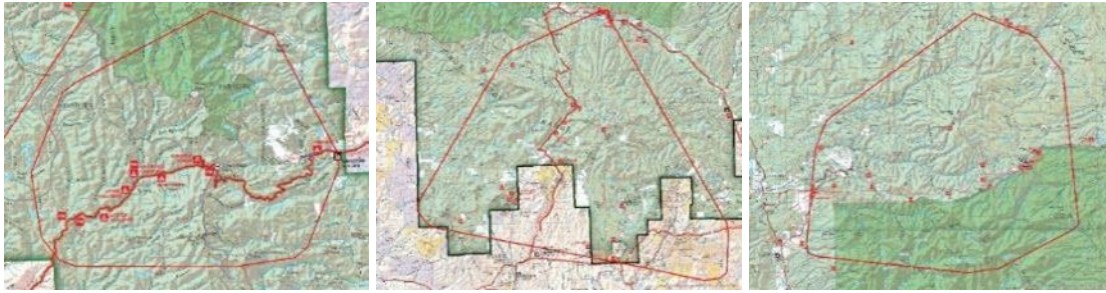


Figure K-1. Original botanical area proposal from the Gila Native Plant Society (left to right: Mogollon Mtns. equals 163,009 acres; Piños Altos equals 155,021 acres; Emory Pass equals 52,850 acres)

This was relayed to Patrice Mutchnick of the Gila Native Plant Society, who later provided planning staff with an updated proposal. Three areas were included in this proposal based on identification of highly clustered concentrations of rare and endemic plant species (figure k-2). The proposal also included recommended plan direction.

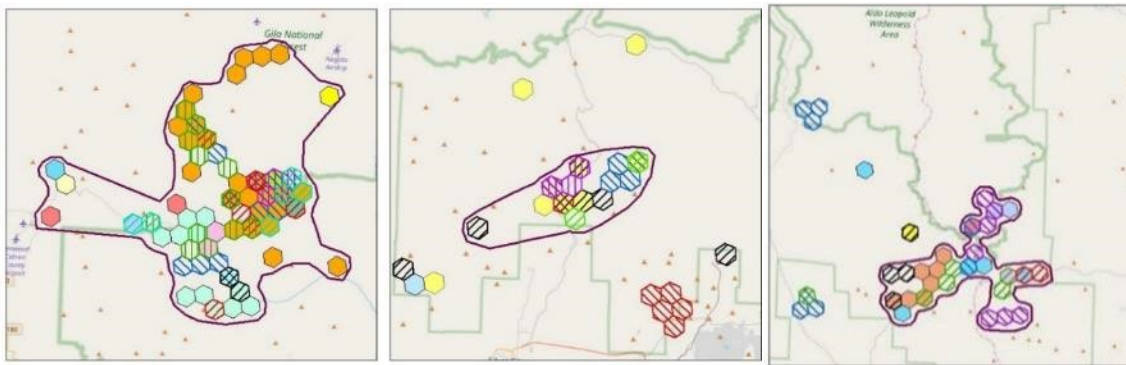


Figure K-2. Updated botanical area proposal from the Gila Native Plant Society (left to right: Mogollon Mountains equals 98,510 acres; Piños Altos Mountains and Signal Peak equal 20,930 acres; Emory Pass and Black Range equal 31,150 acres)

These areas were then reviewed by the planning team and discussed with the forest supervisor. The forest supervisor concluded there would be merit in formally considering this proposal because the areas are popular with forest visitors and there are opportunities to increase awareness of and appreciation for rare and endemic species. However, the forest supervisor wanted to consider more than just “all or nothing.” Under direction of the forest supervisor, the planning team adjusted the proposed boundaries based on natural and built environment features to develop an alternative that included only those areas with the highest species density and excluded more area around wildland-urban interface and infrastructure values.

The recommended plan direction was not usable in its original form because it did not comply with Forest Service Handbook direction on plan components (FSH 1909.12, chapter 20, sections 22, 23, and 24.2(2)). Under direction from the forest supervisor, planning staff modified the original language to comply the policy direction, making sure it did not restrict management options while striving to maintain the intent of the original proposal. Boundary adjustments for the purposes of creating alternatives was discussed with Ms. Mutchnick in June of 2018 during a meeting she requested to discuss species of conservation concern. Revisions to recommended plan direction were not discussed at this time because planning staff had not yet completed that work.



Figure K-3. Modified botanical area proposal (Left to right: Mogollon Mountains = 45,029 acres; Piños Altos Mountains and Signal Peak equal 6,198 acres; Emory Pass and Black Range equal 16,944 acres)

The original proposal included the following desired conditions, objective, and guidelines.

“Desired conditions

Sustaining populations of rare and endemic flora of the Gila National Forest including but not limited to FS Species of Conservation Concern. Maintaining habitat conditions including natural unique topographic features of specific rare plant habitat.

Objective

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

Guidelines

Minimize or eliminate grazing impacts. Manage ATV use in habitats of concern. Consider issues particularly in non-wilderness areas such as off-road vehicle use, interface with highways and human environments. Decision making should include minimizing habitat exposure to non-native plant species.

Focus on long-term monitoring of plant populations; understanding of plant distributions.

Manage camping in Special Botanical Area to prevent impact to rare plants.

Maximize opportunities for visitor engagement, education and promote values of unique plant populations of the Gila National Forest.”

Planning staff made the following recommendations and rationale were offered to the forest supervisor about these plan components.

1. The original desired condition should apply forestwide, not just to the proposed botanical areas. Language could be modified to read: “Locations and status (for example, abundance, threats, habitat requirements, and responses to management) of rare and endemic species are known. Habitats and refugia for rare and endemic species are intact, functioning, and sufficient for species persistence.” Not all rare and endemic species qualify for species of conservation concern status, so referencing rare and endemic is more inclusive of the proponent’s concerns. Also, there are forestwide

desired conditions throughout the plan that are inclusive of all species, both rare and common.

For the botanical area desired condition planning staff recommended “Where there are concentrations of rare and endemic plant populations, these species are promoted, and provide opportunities for stakeholder engagement and education. See also the Rare and Endemic Plant and Animal Species and Habitats section.” This would capture the intent of the original guidelines related to visitor experiences, outreach, and education, which is more in-line with policy direction for desired conditions than guidelines.

2. The original objective doesn’t include enough specifics to modify it into an objective that complies with policy direction. There is no specific action to be taken and no timeframe, only a general outcome of all management, which is more in-line with a desired condition. The intent is covered in the desired condition language recommended by planning staff.
3. The suggested guideline about minimizing or eliminating grazing impacts is already covered by forest-wide desired conditions for livestock grazing and is too general for a guideline. There are some specific guidelines in the livestock grazing section that apply to at-risk plant species. It is highly unlikely that all rare and endemic plant species are negatively impacted by grazing, and some may benefit by grazing disturbance. There is no specific evidence correlating livestock grazing and abundance of any of these species. Unless we receive additional, more specific, and actionable information and suggestions on the draft plan, what is contained in the livestock grazing section of the plan is sufficient.
4. The suggested guideline about ATV use was addressed by travel management, which prohibits motor vehicle use off the designated road system. Any potential issues with ATV use and these plant species are an implementation and enforcement issue, not a planning issue. We could include as a standard, rather than a guideline, “New motorized routes will not be constructed, except for temporary routes. These routes will be closed when no longer needed.” We could also include a guideline. “Maintenance of existing motorized routes should avoid ground disturbance outside of the existing road prism and associated drainage features.”
5. The suggested guideline to minimize exposure to non-native species is well covered by forestwide direction for non-native invasive species.
6. One thing that was not covered in the original submission was herbicide use. The planning team recommended a standard. “The use of non-selective herbicides or herbicides that may have activity on rare and endemic plant species will not occur unless it is to control or eradicate noxious weed species, and other integrated pest management efforts have failed or are unlikely to succeed.”
7. Monitoring is not appropriate as a guideline. We can include in the monitoring plan and discuss in a management approach.
8. The suggested guideline about camping could be “Trailheads and other gathering areas (i.e., parking areas, campsites) should include educational and interpretive signage.” This would leverage the original guideline’s intent to provide education and outreach and help reduce any recreational impact in the area.

The forest supervisor approved the modified boundaries for inclusion in alternative 2-proposed action and the original proposal for inclusion in alternative 5, with the plan direction recommended by planning staff to be included in both draft alternatives. This would provide Ms. Mutchnick and other stakeholders another opportunity to see the type of language needed to meet planning requirements make further suggestions that could modify the direction in one or more alternatives.

Comments were indeed submitted on draft plan direction and that input was used to refine plan direction and inform the forest supervisor's decision on botanical area designations as described in the final environmental impact statement's Appendix A: Response to Comments and in the draft Record of Decision.

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Appendix L. Crosswalk between the 1986 Forest Plan and Revised Plan Content

This appendix summarizes many of the changes from 1986 plan direction to the revised plan. It does not provide an exhaustive account of all changes.

The needs for change identified because of the assessment phase of plan revision serve to link the 1986 plan direction to that in the revised plan. Those needs for change are identified by number. Not all the needs for change statements are applicable to the crosswalk as some of them arose from a lack of content in the 1986 plan. The full needs for change document and all 54 needs for change statements can be accessed [here](#). The table format also requires some abbreviations for revised plan content:

DC - desired condition

O - objective

S - standard

G - guideline

These abbreviations are followed by a corresponding number. Management approaches are identified by the full name of the management approach. Monitoring questions are abbreviated as MQ followed by number of the question, for example MQ5.

Air Quality

1986 plan direction - Review and make recommendations for the state air quality re-designations for State Implementation Plans, Prevention of Significant Deterioration Permits, and other air quality issues

Need for change statement number(s) - none

Revised plan section – not applicable

Revised plan content – none

Rationale – Unless specific issues arise, individual national forests and grasslands are generally not responsible for conducting these reviews. Agency involvement and environmental analyses are provided for at the regional level.

1986 plan direction – Riparian, aquatic and terrestrial sensitive receptors, monitoring indicators and acceptable levels of change in class I wilderness areas

Need for change statement number(s) – none

Revised plan section – Air Quality

Revised plan content – Atmospheric Deposition management approach

Rationale – Per the 2012 Planning Rule, monitoring is no longer treated as plan direction; some indicators not supported by current scientific understanding; monitoring for atmospheric deposition impacts is led by the regional office and has included both class I and class II wilderness areas.

1986 plan direction – Prepare air quality and smoke management plans, and review and make recommendations for proposed sources that may impact the forest's class I and class II wilderness areas.

Need for change statement number(s) – none

Revised plan section – Air Quality

Revised plan content – DC3, DC6, Gs2 and 4, Smoke management approach

Rationale – Although this direction is redundant with air quality regulations, this direction was retained to address stakeholder concerns and demonstrate an understanding of our legal obligations under the Clean Air Act.

1986 plan direction – Develop and initiate, within the first decade, a forest air resource monitoring plan to evaluate future impacts.

Need for change statement number(s) – 10

Revised plan section – Monitoring Program

Revised plan content – MQs22 and 23

Rationale – Per the 2012 Planning Rule, monitoring is not appropriate as an objective. Moved to monitoring program.

Cultural Resources

1986 plan direction – Inventory and prevent loss or damage of cultural resources until they can be evaluated for scientific study, interpretive services, or other appropriate uses.

Need for change statement number(s) – none

Revised plan section – Cultural Resources and Archaeology

Revised plan content – DC1–5 and G8

Rationale – Changes reflect updated policy direction and language consistent with standard management practices.

1986 plan direction – Enhance and interpret cultural resources so that the public may gain a better understanding and perspective of our heritage.

Need for change statement number(s) – none

Revised plan section – Cultural Resources and Archaeology

Revised plan content – DC7–11, G4, G6, and Heritage Program Management approach

Rationale – Changes reflect updated policy direction and language consistent with standard management practices.

1986 plan direction – Encourage and conduct scientific studies to gain knowledge about past human behavior.

Need for change statement number(s) – none

Revised plan section – Cultural Resources and Archaeology

Revised plan content – G1–3, G8 and Heritage Program management approach

Rationale – Changes reflect updated policy direction and language consistent with standard management practices.

1986 plan direction - During the conduct of undertakings, the preferred management of sites listed in, nominated to, eligible for, or potentially eligible for the National Register of Historic Places is avoidance and protection to achieve a “No Effect” finding. Exceptions may occur in specific cases where consultation with the State Historic Preservation Officer and the Advisory Council on Historic Preservation indicates that the best use of the resource is data recovery and interpretation.

Need for change statement number(s) – 7 and 9

Revised plan section – not applicable

Revised plan content – none

Rationale – This direction is overly prescriptive and does not adequately provide for adaptive management. This is better determined in consultation with the State Historic Preservation Officer and Advisory Council on a project- and site-specific basis.

1986 plan direction – Cultural resource management, including the formulation and evaluation of alternatives, will be coordinated to the extent feasible with the State Cultural Resource Plan and planning activities of the State Historic Preservation Officer and State Archeologist, and with other state and federal agencies. This will be accomplished as follows: (a) consultation and meetings with such parties; (b) sharing of data, reports, plans, interpretations, and other documents; (c) coordination on National Register nominations; and (d) participation in the state cultural resources planning process.

Need for change statement number(s) – 7 and 9

Revised plan section – not applicable

Revised plan content – none

Rationale – This direction is overly prescriptive and does not adequately provide for adaptive management. This is better determined in consultation with the State Historic Preservation Officer and Advisory Council on a project- and site-specific basis.

1986 plan direction – The forest, through the cultural resources management planning assessment will develop a prioritized list and schedule for nominating eligible properties to the National Register of Historic Places (National Register).

Need for change statement number(s) – 9

Revised plan section – not applicable

Revised plan content – none

Rationale – This direction is overly prescriptive and does not adequately provide for adaptive management. This is better addressed on a site- and circumstance-specific basis.

Ecosystem Management in Northern Goshawk Habitat

1986 plan direction – The northern goshawk standards and guidelines apply to the forest and woodland communities that are outside of Mexican spotted owl protected and restricted areas. Within Mexican spotted owl protected and restricted areas, the Mexican spotted owl standards and guidelines take precedence over the northern goshawk standards and guidelines. (Note: the standards and guidelines for northern goshawk were not just generally referenced as they are here but were also included verbatim in 1986 plan direction.)

Need for change statement number(s) – 24

Revised plan section(s) – Forested Ecological Response Units and Wildlife, Fish, and Plants

Revised plan content – All DCs for forested Ecological Response Units, Wildlife, Fish, and Plants G1a–d and G2

Rationale – The requirements in the revised forest plan meet the intent of the direction in the 1986 plan. Changes were negotiated and agreed upon by the Forest Service Southwestern Region and the U.S. Fish and Wildlife Service and include incorporating the northern goshawk standards, guidelines, monitoring and conservation agreement by reference. Incorporating these items by reference ensures the forest plan remains consistent with them as they are updated based on advances in science.

Federally Endangered Species – Peregrine Falcon

1986 plan direction – Continue to identify existing and potential habitat for peregrine falcons as outlined in the Species Recovery Plan, with the long-term goal of providing habitat for approximately 48 breeding pair. Complete inventories and habitat management plans for breeding habitats as identified in approved recovery plans. Monitor management practices within designated peregrine falcon habitat and evaluate impacts. Avoid disturbance activities in peregrine nesting habitats between March 15 and August 15.

Need for change statement number(s) – 7

Revised plan section(s) – Upland Ecological Response Units, Riparian and Aquatic Ecosystems, Cliffs and Rocky Features

Revised plan content – All DCs for upland and riparian vegetation communities and cliffs and rocky features; Cliffs and Rocky Features Gs3 and 4; Wildlife, Fish, and Plants Raptors management approach

Rationale – Species is no longer federally listed. All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4).

Federally Endangered Species – Bald Eagle

1986 plan direction – Provide habitats to support a long-term goal of 120 and 175 wintering bald eagles. Complete inventories and habitat management plans for wintering bald eagle habitats as specified in approved recovery plans. Maintain eagle roost densities of two to six groves per section in concentration areas. Accomplish wetland and fisheries improvements to maintain and enhance prey base for wintering eagles.

Need for change statement number(s) – 7

Revised plan section(s) – Upland Ecological Response Units, Riparian and Aquatic Ecosystems

Revised plan content – All DCs for upland and riparian vegetation communities; Wildlife, Fish, and Plants Raptors management approach

Rationale – Species is no longer federally listed under the Endangered Species Act. All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4).

Federally Endangered Species – Gila Trout

1986 plan direction – Continue ongoing recovery efforts with the objectives of delisting the species. Develop species into a native game fishery within selected areas identified in conjunction with the New Mexico Department of Game and Fish.

Need for change statement number(s) – 7, 24 and 25

Revised plan section(s) – Riparian and Aquatic Ecosystems; Wildlife, Fish, and Plants

Revised plan content – All plan components for riparian and aquatic ecosystems and Restoration and Relationships and Water Projects management approaches; Wildlife, Fish, and Plants S4, Os2–4, and Adaptation, Restoration and Relationships management approach

Rationale – All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4). The Forest Service is also required to implement recovery plans by law, regulation and policy.

Federally Endangered Species – Mexican Spotted Owl

1986 plan direction – Provide three levels of habitat management-protected, restricted, and other forest and woodland types to achieve a diversity of habitat conditions across the landscape.

Need for change statement number(s) – 7, 24, and 25

Revised plan section(s) – Wildlife, Fish, and Plants

Revised plan content – S4

Rationale – All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4). The Forest Service is also required to implement recovery plans by law, regulation and policy.

1986 plan direction – Protected areas include delineated protected activity centers; mixed conifer and pine-oak forests with slopes greater than 40 percent where timber harvest has not occurred in the

last 20 years; reserved lands which include wilderness, research natural areas, wild and scenic rivers, and congressionally recognized wilderness study areas.

Need for change statement number(s) – 7, 24, and 25

Revised plan section(s) – Wildlife, Fish, and Plants

Revised plan content – S4

Rationale – All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4). The Forest Service is also required to implement recovery plans by law, regulation and policy. Permissible activities in wilderness, research natural areas, wild and scenic river corridors and congressionally recognized wilderness study areas are also dictated by law, regulation, policy or all three. Slope restrictions to prevent irreversible damage to soil, slope, or other watershed condition are included in the revised plan All Upland Ecological Response Unit standards and supported by plan standards for Timber, Forest, and Botanical Products per National Forest Management Act requirements.

1986 plan direction – Restricted areas include all mixed-conifer, pine-oak, and riparian forests outside of protected areas. Other forest and woodland types include all ponderosa pine, spruce-fir, woodland, and aspen forests outside protected and restricted areas.

Need for change statement number(s) – 7, 24, and 25

Revised plan section(s) – Wildlife, Fish, and Plants

Revised plan content – S4

Rationale – All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4). The Forest Service is also required to implement recovery plans by law, regulation, and policy.

1986 plan direction – Survey all potential spotted owl areas including protected, restricted and other forest and woodland types within an analysis area plus the area one-half mile beyond the perimeter of the proposed treatment area.

Need for change statement number(s) – 7, 24, and 25

Revised plan section(s) – Wildlife, Fish, and Plants

Revised plan content – S4

Rationale – All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4). The Forest Service is also required to implement recovery plans by law, regulation, and policy.

1986 plan direction – Establish a protected activity center at all Mexican spotted owl sites located during surveys and all management territories established since 1989. Limit human activity in protected activity centers during the breeding season. Protected activity centers: delineate an area of not less than 600 acres around the activity center using boundaries of known habitat polygons and/or topographic features. Boundaries should enclose the best possible owl habitat configured in as compact a unit as possible, with the nest or activity center located near the center. The activity center

is defined as the nest site. In the absence of a known nest site, the activity center should be defined as a roost grove commonly used during breeding. In the absence of a known nest/roost, the activity center should be defined as the best nest/roost habitat. Boundaries should not overlap. Written justification for boundary delineation should be provided.

Need for change statement number(s) – 7, 24, and 25

Revised plan section(s) – Wildlife, Fish, and Plants

Revised plan content – S4

Rationale – All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4). The Forest Service is also required to implement recovery plans by law, regulation, and policy.

1986 plan direction – Allow no timber harvest except for fuelwood and fire risk abatement in established protected activity centers. For protected activity centers destroyed by fire, windstorm, or other natural disaster, salvage timber harvest or declassification may be allowed after evaluation on a case-by-case basis in consultation with the U.S. Fish and Wildlife Service.

Need for change statement number(s) – 7, 24, and 25

Revised plan section(s) – Wildlife, Fish, and Plants

Revised plan content – S4

Rationale – All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4). The Forest Service is also required to implement recovery plans by law, regulation, and policy.

1986 plan direction – Generally, allow continuation of the level of recreation activities that was occurring prior to listing. Require bird guides to apply for and obtain a special use permit. A condition of the permit shall be that they obtain a sub-permit under the U.S. Fish and Wildlife Service master endangered species permit. The permit should stipulate the sites, dates, number of visits and maximum group size permissible.

Need for change statement number(s) – 7, 24, and 25

Revised plan section(s) – Wildlife, Fish, and Plants

Revised plan content – S4

Rationale – All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4). The Forest Service is also required to implement recovery plans by law, regulation, and policy.

1986 plan direction – Harvest fuelwood when it can be done in such a way that effects on the owl are minimized. Manage within the following limitations to minimize effects to the owl: retain key forest species such as oak; retain key habitat components such as snags and large downed logs; harvest conifers less than 9 inches in diameter only within those protected activity centers treated to abate fire risk.

Need for change statement number(s) – 7, 17, 24, and 25

Revised plan section(s) – Wildlife, Fish, and Plants

Revised plan content – S4

Rationale – All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4). The Forest Service is also required to implement recovery plans by law, regulation, and policy.

1986 plan direction – Treat fuel accumulations to abate fire risks: Select for treatment 10 percent of the protected activity centers where nest sites are known in each recovery unit having high fire risk conditions. Also select another 10 percent of the protected activity centers where nest sites are known as a paired sample to serve as control areas. Designate a 100-acre “no treatment” area around the known nest site of each selected protected activity center. Habitat in the no treatment area should be as similar as possible in structure and composition as that found in the activity center. Use combinations of thinning trees less than 9 inches in diameter, mechanical fuel treatment, and prescribed fire to abate fire risk in the remainder of the selected protected activity center outside the acre “no treatment” area. Retain woody debris larger than 12 inches in diameter, snags, clumps of broad-leafed woody vegetation and hardwood trees larger than 10 inches in diameter at the root collar. Select and treat additional protected activity centers in 10 percent increments if monitoring of the initial sample shows there were no negative impacts or there were negative impacts which can be mitigated by modifying treatment methods. Use light prescribed burns in non-selected protected activity centers on a case-by-case basis. Burning should avoid a 100-acre “no treatment” area around the activity center. Large woody debris, snags, clumps of broad-leafed woody vegetation should be retained and hardwood trees larger than 10-inch diameter at the root collar. Pre- and post-treatment monitoring should be conducted in all protected activity centers treated for fire risk abatement.

Need for change statement number(s) – 7, 24, and 25

Revised plan section(s) – Wildlife, Fish, and Plants

Revised plan content – S4

Rationale – All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4). The Forest Service is also required to implement recovery plans by law, regulation, and policy.

1986 plan direction – Road or trail building in protected activity centers should be avoided but may be permitted on a case-by-case basis for pressing management reasons.

Need for change statement number(s) – 7, 24, and 25

Revised plan section(s) – Wildlife, Fish, and Plants

Revised plan content – S4

Rationale – All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4). The Forest Service is also required to implement recovery plans by law, regulation, and policy.

Habitat Management – Turkey

1986 plan direction – Within turkey habitat, manage for two suitable turkey roost groves per section with the following characteristics: 6 to 15 trees at a density of 90 to 150 square feet of basal area per acre and an individual tree size of 22 inches or greater diameter at breast height.

Need for change statement number(s) – 11 and 24

Revised plan section(s) – Upland Ecological Response Units and Riparian and Aquatic Ecosystems

Revised plan content – All DCs

Rationale – Per the 2012 Planning Rule, the vegetation component of this direction was replaced based on habitat relationships. This direction is overly prescriptive and may not be implementable depending on the lay of the land and the vegetation communities it can support in specific locations. Movement toward the science-based desired conditions for vegetation communities will provide for habitat requirements for all native species, including turkey.

1986 plan direction – Manage open road densities to maintain and restore habitat islands without vehicle intrusion.

Need for change statement number(s) – 24 and 25

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This direction was intended to try to balance the open road density estimated to facilitate projected outputs associated with the 1986 plan. Open road densities and their effects on wildlife species were analyzed and informed the 2014 travel management decision.

Old Growth

1986 plan direction – Until the forest plan is revised, allocated no less than 20 percent of each forest ecosystem management area to old growth as depicted in the table on page 31a. In the long term, manage old growth in patterns that provide for a flow of functions and interactions at multiple scales across the landscape through time. Allocations will consist of landscape percentages meeting old growth conditions and not specific acres. All analyses should be at multiple scales—one scale above and one scale below the ecosystem management areas. The amount of old growth that can be provided and maintained will be evaluated at the ecosystem management area level and be based on forest type, site capability and disturbance regimes. Strive to create or sustain as much old growth compositional, structural, and functional flow as possible over time at multiple area scales. Seek to develop or retain old growth function on at least 20 percent of the naturally forested area by forest type in any landscape. Use information about pre-European settlement conditions at the appropriate scales when considering the importance of various factors. Consider the effects of spatial arrangement on old growth function, from groups to landscapes, including de facto allocations to old growth such as goshawk nest sites, Mexican spotted owl protected activity centers, sites protected for species behavior associated with old growth, wilderness, research natural areas, and other forest structures managed for old growth function. In allocating old growth and making decisions about old growth management, use appropriate information about the relative risks to sustain old growth function at the appropriate scales, due to nature and human-caused events.

Need for change statement number(s) – 17

Revised plan section(s) – Upland Ecological Response Units

Revised plan content – DCs (numbers vary between specific Ecological Response Units)

Rationale – The scientific understanding of old growth dynamics has grown and evolved. The intent of providing for old growth dynamics at multiple scales over time is preserved in the desired conditions for vegetation communities. Acreage allocations to old growth dynamics are replaced by desired conditions for seral state diversity, coarse woody debris and snags.

Habitat Management – General

1986 plan direction – Integrate specific wildlife habitat needs with timber/fuelwood harvest, livestock grazing plans and other management activities with habitat interactions.

Need for change statement number(s) – 11, 24, and 25

Revised plan section(s) – Timber, Forest, and Botanical Products; Livestock Grazing; Wildland Fire and Fuels Management; Nonnative Invasive Species Management; Lands and Realty; Minerals; Roads; Facilities; Sustainable Recreation

Revised plan content – Timber, Forest, and Botanical Products DC1a–c, S1, Ss3–6, S10, and Gs1–6; Livestock Grazing DCs2–4, Ss1–5, Gs1–7, Collaboration, Adaptation, and Monitoring, Adaptation and Forage Reserves, Drought, Forecasting Services and Adaptation, and Livestock and Wildlife management approaches; Wildland Fire and Fuels Management DC5a–c, S5, and Gs1–3; Nonnative Invasive Species Management DC1, Os1–4, Ss1–19, G1–9, Early Detection Rapid Response, Survey and Documentation, Plant Identification, and Information, Education and Research management approaches; Lands and Realty DC10. Gs5 and 8, and Land Adjustments management approach; Minerals DCs1, 2 and 4, Gs5, 11, and 16, and Abandoned Mine Lands management approach; Roads DCs4–5, O1, Ss2 and 3, Gs1–3, 5 and 6. Roads and Relationships and Road Decommissioning management approach; Facilities DC2, Ss1 and 2, Gs1 and 6; Sustainable Recreation DCs12, 16, and 17, Ss3–5, Gs3–5, 7, 9, and 12–16.

Rationale – Wording is different, but intent is preserved. This is multiple-use sustained-yield management.

1986 plan direction – New and reconstructed livestock water developments will include wildlife access and escape considerations.

Need for change statement number(s) – none

Revised plan section(s) – Livestock Grazing

Revised plan content – S3

Rationale – No need to change this management direction was identified.

1986 plan direction – Maintain a rotation of mature and over mature mast producing stands in accessible and potentially accessible pinyon-juniper zones. Maintain escape cover and mast production regimes at no greater than one-half mile intervals.

Need for change statement number(s) – 11, 12, 24, and 25

Revised plan section(s) – Woodland Ecological Response Units

Revised plan content – DCs (numbers vary by ecological response unit)

Rationale – The desired conditions for vegetation in the revised forest plan provide for sustainable mast production on all capable sites.

1986 plan direction – Provide snag recruitment for cavity-nesting species. Maintain three snags per acre adjacent to waters and openings within woodland and coniferous forest habitat areas. Maintain at least 180 snags per 100 acres distributed over the remaining coniferous forest and woodland areas.

Need for change statement number(s) – 11, 17, 19, and 24

Revised plan section(s) – Upland Ecological Response Units and Riparian and Aquatic Ecosystems

Revised plan content – Upland Ecological Response Units DCs for snag density (DC numbers vary by ERU); Riparian and Aquatic Ecosystems 6th-level WS-DCs1 and 4

Rationale – Intent of direction is preserved. Updated to reflect current science.

1986 plan direction – For forest and woodland types not covered by single species management direction. Apply ecosystem approaches to manage for landscape diversity mimicking natural disturbance patterns, incorporating natural variation in stand conditions and retaining special features such as snags and large trees, utilizing appropriate fires, and retention of existing old growth in accordance with forest plan old growth standards and guidelines.

Need for change statement number(s) – 11, 12, 13, 14, 15, and 17

Revised plan section(s) – Upland Ecological Response Units

Revised plan content – All DCs

Rationale – Additional detail based on advances in scientific understanding have been added. Original intent for ecosystem management preserved.

1986 plan direction – Within the level of forage projected for wildlife use, the allocation to different species groups may vary through coordination with the New Mexico Department of Game and Fish and the U.S. Fish and Wildlife Service. If forage allocated to wildlife is not the limiting factor in meeting the level of wildlife emphasis, that temporary forage can be used by livestock. If wildlife numbers increase and forage becomes a limiting factor, temporary forage use for livestock will be cancelled. Any additional forage that becomes available for allocation after projected levels of forest outputs for wildlife and livestock are attained will generally be allocated according to the long-term forage objective unless other resource needs are identified. Additional wildlife habitat capacity that becomes available through this process will be utilized in further meeting objectives for the New Mexico Department of Game and Fish Strategy Plan and Sensitive Species Recovery Plans.

Need for change statement number(s) – 9

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – 1986 plan direction is highly prescriptive, doesn't adequately support adaptive management and is not implementable. Allocating use to specific wildlife species, or wildlife in general is not realistic. Livestock forage use is better addressed at the allotment level.

Riparian Habitat

1986 plan direction – Manage riparian areas in accordance with legal requirements regarding floodplains, wetland, wild and scenic rivers, and cultural and other resources.

Need for change statement number(s) – 7

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – Redundant with law, regulation, and policy direction.

1986 plan direction – Manage riparian areas to protect the productivity and diversity of riparian-dependent resources by requiring actions within or affecting riparian areas to protect, and where applicable, improve dependent resources. Give preferential consideration to resources dependent on riparian areas over other resources. Other resource uses and activities may occur to the extent that they support or do not adversely affect riparian-dependent resources. Improve riparian ecosystems in unsatisfactory condition to satisfactory condition. Maintain riparian ecosystems currently in satisfactory condition.

Need for change statement number(s) – 19, 24, and 25

Revised plan section(s) – Riparian and Aquatic Ecosystems

Revised plan content – All DCs, Ss and Gs

Rationale – Intent of this direction is preserved by managing toward desired conditions.

1986 plan direction – Complete classifications and inventories of riparian ecosystems. Evaluate riparian conditions using appropriate quantitative and/or qualitative methods.

Need for change statement number(s) – 10, 19, 24, and 25

Revised plan section(s) – Riparian and Aquatic Ecosystems and Monitoring Program

Revised plan content – Riparian and Aquatic Ecosystems FS-DC3 and Inventory, Monitoring and Relationships management approach; MQs1, 2, 6, 10, 45, 46, 48, 53, and 63–66

Rationale – Intent of direction preserved. Additional detail added related to how this work is accomplished.

1986 plan direction – Develop action plans that identify strategies for achieving satisfactory riparian conditions.

Need for change statement number(s) – 19

Revised plan section(s) – Riparian and Aquatic Ecosystems

Revised plan content – G4 and Restoration and Relationships management approach

Rationale – Intent of direction preserved. Strategies will be developed on a site-, project-, and activity-specific basis.

Plants

1986 plan direction – Monitor management practices within occupied and potential habitat of plants listed as threatened, endangered, or on the Regional Forester’s Sensitive Plant List. Manage sensitive species to sustain viability and prevent the need for listing as threatened or endangered. On an opportunity basis or if funds become available, inventory plants on the New Mexico endangered species list known to occur on the forest.

Need for change statement number(s) – 7

Revised plan section(s) – Wildlife, Fish, and Plants and Monitoring Program

Revised plan content – Wildlife, Fish, and Plants DCs1–4, 6, 8, and 10, Ss2–4, Gs4, 7, 8, and 10 and MQs65 and 66

Rationale – Per the 2012 Planning Rule, monitoring is no longer direction, it is other plan content. Recovery plans for federally listed species are incorporated by reference into revised plan direction, which includes monitoring requirements. Regional Forester’s Sensitive Species are no longer a classification pending approval of updated Forest Service manual direction.

1986 plan direction – Monitor status of federal listings. If elevated to threatened or endangered status, complete consultations with the U.S. Fish and Wildlife Service as required.

Need for change statement number(s) – 7

Revised plan section(s) – Wildlife, Fish, and Plants

Revised plan content – S4

Rationale – Redundant with law, regulation, and policy. Monitoring is no longer appropriate as plan direction per the 2012 Planning Rule. All current and future approved recovery plans are incorporated by reference (Wildlife, Fish, and Plants S4). The Forest Service is also required to implement recovery plans by law, regulation, and policy.

State Endangered Species

1986 plan direction – Identify forest portions of recovery objectives in conjunction with the New Mexico Department of Game and Fish. Refine habitat requirements and identify specific habitat projects needed to achieve recovery objectives for individual species habitats. Accomplish recovery projects included in approved recovery plans. Projects will be coordinated through integrated forest management practices. Consult with the New Mexico Department of Game and Fish on forest projects that may affect state endangered wildlife species.

Need for change statement number(s) – 3 and 7

Revised plan section(s) – Wildlife, Fish, and Plants

Revised plan content – Adaptation, Restoration and Relationships, and Rare, Endemic and Non-Native Plant Species management approaches

Rationale – Although this is standard operating procedure, this is retained to provide for shared understanding and transparency. Descriptions of how forest staff and leadership work with partners and interested stakeholders is more appropriate as a management approach.

Facilities

1986 plan direction – Maintain transportation system to support resource goals. Provide for forestwide transportation planning, preconstruction engineering, and construction engineering on trails, arterial roads, collector roads, local roads, bridges and major culverts. Construct, reconstruct, or maintain arterial roads, collector roads, local roads, bridges and major culverts to assure user safety and to a level commensurate with the use and the need. Treatments and maintenance prescribed for roads are identified in the current Road Management Implementation Plan. Miles of road by maintenance level are included in Management Area standards.

Need for change statement number(s) – 40, 41, and 42

Revised plan section(s) – Roads

Revised plan content – All plan components and management approaches

Rationale – The travel management analysis and decision were completed in 2014. Implementation is ongoing. Preconstruction and construction engineering and road maintenance are program deliverables and are both unnecessary and inappropriate as plan direction. However, the intent of maintaining a road system that provides safe, reasonable access while limiting resource and user conflicts is preserved in the plan components for roads.

1986 plan direction – Construct, maintain, and regulate use of Forest Service facilities to protect natural resources, correct safety hazards, reduce disinvestment, and support management activities.

Need for change statement number(s) – none

Revised plan section(s) – Facilities

Revised plan content – All plan components and management approaches

Rationale – This direction provides no additional instruction beyond the standard operation procedures of facilities program management. The intent is preserved in plan components and management approaches for facilities with more meaningful direction. Additional detail is provided by the Facilities Master Plan, which is a separate, stand-alone document from the forest plan.

1986 plan direction – Road construction will be avoided in riparian areas.

Need for change statement number(s) – none

Revised plan section(s) – Roads

Revised plan content – S2 and G3

Rationale – This direction was retained with provisions and mitigation measures for unavoidable circumstances.

1986 plan direction – Representatives of the National Radio Astronomy Observatory will be consulted for any project that may cause electronic interference. Project effects of electronic interference to the National Astronomy Observatory will be kept within acceptable limits.

Need for change statement number(s) – none

Revised plan section(s) – Lands and Realty

Revised plan content – G12 and National Radio Astronomy Observatory management approach

Rationale – Revised plan direction preserves intent and provides additional context.

1986 plan direction – Update trail inventory and implementation plans on a five-year interval. Construct or reconstruct trails to develop an adequate system for the protection and management of the Gila National Forest.

Need for change statement number(s) – 3 and 28

Revised plan section(s) – Sustainable Recreation

Revised plan content – DCs1, 12, and 13, Os4 and 5, S4, Gs10–18 and Collaborative Sustainable Recreation Strategy and Relationships management approach

Rationale – Intent of direction is preserved with additional detail and context responsive to needs for change and public input.

1986 plan direction – No potable water systems will be developed in designated wilderness. Maintain potable water systems in a safe condition in accordance with New Mexico state regulations (outside designated wilderness).

Need for change statement number(s) – 7

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This content was removed because the management of designated wilderness, including facilities and installations, is already decided by law, regulation, and policy. Similarly, the management of potable water systems is a matter of legal compliance; this plan direction is repetitive of law and regulation the forest must comply with.

1986 plan direction – In designated wilderness, trail blazing, and re-blazing will be accomplished using blazing irons or other tools, which will provide uniform quality. The standard will be a 4-by-4-inch square over a 4-by-8-inch rectangle separated by 2 to 4 inches of undisturbed material. Trail directional signs will be limited to trail junctions only in designated wilderness. Use of untreated oak trail signs will be required in designated wilderness. Use of untreated oak trail signs will be required in designated wilderness.

Need for change statement number(s) – 7

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This direction is overly prescriptive. Policy direction and technical guidance documents are sufficient to inform a trail sign program.

1986 plan direction – Maintain White Creek and Apache Cabin Administrative Sites at their present state of repair. No major reconstruction will be undertaken.

Need for change statement number(s) – 7

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – These administration sites are in congressionally designated wilderness. Law, regulation, and policy direction provide sufficient guidance for their management and upkeep.

1986 plan direction – Determine forest administrative and operational facilities by evaluating each unit's space needs based upon organization to meet work force planning. Priority projects in the first decade are (see management area tables).

Need for change statement number(s) – none

Revised plan section(s) – Facilities

Revised plan content – All plan components and Facilities Master Plan management approach

Rationale – The revised plan provides guidance for the iterative process described by the plan direction in the 1986 forest plan but does not prescribe priority projects as those are subject to change over time.

1986 plan direction – Provide for the handicapped when constructing or reconstructing facilities.

Need for change statement number(s) – 7

Revised plan section(s) – Facilities

Revised plan content – G2

Rationale – Although this direction is provided by law, it is retained in the revised plan to support continual improvement of provisions for accessibility.

Fire Management

1986 plan direction – Provide for fire management support services necessary to sustain resource yields while protecting improvements, investments, and providing for public safety.

Need for change statement number(s) – 11, 12, 13, 14 and 16

Revised plan section(s) – Wildland Fire and Fuels Management and Wildland-Urban Interface Management Area

Revised plan content – Wildland Fire and Fuels Management DCs1–3, DC5a–c, Ss1–6, Gs1–3 and Wildland-Urban Interface Management Area DCs1–5 and S1

Rationale – Updated to better support integrated resource management and sustainability while maintaining emphasis on firefighter and public safety.

1986 plan direction – Continue fire management planning (budget analysis, pre-attack, prevention, smoke management, mobilization, fire management area plans and other such things).

Need for change statement number(s) – 7

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – Redundant with existing national-level Forest Service and interagency policy and guidance for program management

1986 plan direction – Complete the fire management analysis and planning, designate fire management areas and implement fire management area plans within the first decade.

Need for change statement number(s) – 7

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – Fire management analysis, planning and implementation is an ongoing process guided by national-level Forest Service and interagency policy and guidance.

1986 plan direction – The number of fires exceeding 10 acres will be designated in approved wilderness fire management implementation plans.

Need for change statement number(s) – 12, 14, and 15

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – Number of fires and fire size are not the only factors to consider when determining operational capacity. The process and limitations dictated by the 1986 plan do not reflect current interagency processes or resources available nationally. Capacity varies seasonally and annually and is far greater than at the time the 1986 direction was written. The 1986 direction also does not support adaptive management, restoration of natural fire regimes, or strategic wildfire risk reduction. Decisions are made using a decision support tool as the Wildland Fire Decision Support System.

1986 plan direction – Continue to collect information on and evaluate the effectiveness of fire prescriptions during the first decade.

Need for change statement number(s) – 10

Revised plan section(s) – Monitoring Program

Revised plan content – MQ1 (fire regime or wildfire effects watershed condition indicator), MQ3, MQs 4, 5, 11, 57, 58, and 59

Rationale – Per the 2012 Planning Rule, monitoring is not appropriate as an objective or any other plan component. Moved to monitoring program. Need for fire monitoring information is ongoing and there are new tools and technologies. Evaluation of these monitoring questions, and perhaps additional plan monitoring questions, can inform conclusions about the effectiveness of fire management activities.

1986 plan direction – Prevention and detection will be implemented according to the need (fire danger, risk and hazard) on national forest, state and private lands. Smoking, campfire, and power saw restrictions, hoot owl shifts, and area closures will be implemented according to the Gila Fire

Prevention Plan. Accomplish fire prevention activities by continued participation in public education, personal contacts, and regulated use.

Need for change statement number(s) – 3, 5, and 7

Revised plan section(s) – Wildland Fire and Fuels Management

Revised plan content – Wildland Fire and Fuels Management DC4

Rationale – This direction is largely provided by policy direction for program management and national, interagency guidance.

1986 plan direction – Prescribed natural fire within the Aldo Leopold Wilderness will be guided by the Prescribed Natural Fire Plan.

Need for change statement number(s) – none

Revised plan section(s) – Wildland Fire and Fuels Management

Revised plan content – S2

Rationale – Law, regulation, and policy provide direction for fire management in wilderness. All fire management decisions are now guided by a decision support tool such as the Wildland Fire Decision Support System, rather than the type of planning document specified in the 1986 plan direction.

1986 plan direction – For emergency wildfire suppression in designated wilderness, restrict use of helicopters, power saws, small motorized pumps, motorized vehicles, slurry and other such things to approval by Forest Fire Management Officer. The use of motorized equipment for non-emergency fire suppression activities in designated wilderness must be approved by the Forest Supervisor. Tractors or bulldozers must be approved by the Regional Forester or Director of Aviation and Fire Management under any condition.

Need for change statement number(s) – 7

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This direction reiterates allowable fire management objectives in wilderness and approval processes that are already decided by law, regulation, and policy direction.

1986 plan direction – Unless other resource values dictate, when a fire reaches the established maximum size listed in the management area, an escaped fire situation analysis will be prepared. Based on this analysis, a decision will be made to establish a new perimeter or control the fire. Outside of designated wilderness, the maximum number of fires larger than 10 acres will not exceed the forest's capability to manage up to a limit of 5,000 acres of live fire at any one time.

Need for change statement number(s) – 7

Revised plan section(s) – Wildland Fire and Fuels Management

Revised plan content – S2

Rationale – Number of fires and fire size are not the only factors to consider when determining operational capacity. The process and limitations dictated by the 1986 plan do not reflect current interagency processes or resources available nationally. Capacity varies seasonally and annually and is far greater than at the time the 1986 direction was written. The 1986 direction also does not support

adaptive management, restoration of natural fire regimes or strategic wildfire risk reduction. Decisions are made using a decision support tool such as the Wildland Fire Decision Support System.

1986 plan direction – A decision to use prescribed fire in wilderness shall not be based on benefits to wildlife, maintenance of vegetation types, improvements in forage production, or enhancement of other resource values. These can be additional benefits that may result from a decision to use prescribed fire but are not an objective.

Need for change statement number(s) – 7

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This direction reiterates allowable fire management objectives in wilderness that are already decided by law, regulation, and policy direction.

1986 plan direction – Unless other resource values dictate, suppression actions will be planned to control fires at no larger than the designated sizes. (see management area tables).

Need for change statement number(s) – 7

Revised plan section(s) – Wildland Fire and Fuels Management

Revised plan content – S2

Rationale – Fire size is only one element to consider when determining operational capacity. This direction does not support adaptive management, restoring the natural role of fire, or using fire as a restoration tool. This is also not the current national interagency process. Decisions are made using a decision support tool as previously described.

1986 plan direction – Fuelwood utilization is a major emphasis to reduce forest residues. Yarding techniques are employed to facilitate increased fuelwood utilization in areas easily assessable to the public.

Need for change statement number(s) – 1 and 2

Revised plan section(s) – Wildland Fire and Fuels Management and Timber, Forest, and Botanical Products

Revised plan content – Wildland Fire and Fuels Management Fire, Fuels and Relationships management approach and Timber, Forest, and Botanical Products DC2, G2 and An Integrated Approach to Ecological and Socioeconomic Sustainability and Firewood Program management approaches

Rationale – Additional direction and detail is provided in the revised plan.

1986 plan direction – Activity and natural fuels are treated by lopping and scattering, crushing, smashing, chipping, and prescribed broadcast burning. Natural fuels will be treated in conjunction with activity-created fuels or by fire management area prescription.

Need for change statement number(s) – 7 and 9

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – Does not support adaptive management. This is tactical direction, not strategic direction. These decisions are better made at the project level where site- and circumstance-specific factors can be considered.

1986 plan direction – When Fire Management Planning is completed, utilize planned and unplanned ignitions when in established prescriptions to accomplish fuel treatment goals outside wilderness and wilderness goals inside wilderness.

Need for change statement number(s) – 7

Revised plan section(s) – Wildland Fire and Fuels Management

Revised plan content – S2

Rationale – Prescribed natural fire plans were the product of a process that has been replaced. Per national interagency direction and guidance, a decision support tool like the Wildland Fire Decision Support System is the current method.

1986 plan direction – Accomplish fuel breaks to Regional standards based on pre-attack planning. Fuel breaks are constructed and maintained in the timber types following each silvicultural treatment by mechanical treatment and/or prescribed fire.

Need for change statement number(s) – 7 and 9

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – There are no longer Regional standards for fuel breaks. Does not support adaptive management. Appropriate specifications for fuel breaks are site- and circumstance-specific. This is tactical direction, not strategic direction. These decisions are better made at the project level where site- and circumstance-specific factors can be considered.

1986 plan direction – Fire suppression strategies appropriate to meet management directions may range from direct control, minimizing acres burned and resource damage to more indirect methods of containment or confinement. Wildfire should be suppressed at a minimum cost consistent with land and resource objectives and values.

Need for change statement number(s) – 7 and 9

Revised plan section(s) – Wildland Fire And Fuels Management

Revised plan content – DC2

Rationale – Updated to be consistent with national interagency guidance and strategies.

1986 plan direction – Assist and coordinate with the state in developing and applying air quality and smoke management standards.

Need for change statement number(s) – none

Revised plan section(s) – Air Quality

Revised plan content – DC2, DC4, S1, G1–2

Rationale – Although this direction is redundant with law, regulation, and policy, it was retained and expanded to respond to stakeholder concerns and demonstrate an understanding of our legal obligations under the Clean Air Act.

1986 plan direction – Maintain agreements with cooperating agencies.

Need for change statement number(s) – 3

Revised plan section(s) – Wildland Fire and Fuels Management and Wildland-Urban Interface Management Area

Revised plan content – Wildland Fire and Fuels Management Annual Pre-Season Landscape Risk Assessment Management Area and Fire, Fuels and Relationships management approaches and Wildland-Urban Interface Management Area Fuel Reduction and Relationships management approach

Rationale – Expanded to include descriptions of how we work with our partners and other stakeholders outside of official agreements such as the Joint Powers Agreement.

Lands Special Uses

1986 plan direction – Conduct landownership adjustment, right-of-way acquisition, land line location, and special-uses programs to promote efficient management after an environmental analysis and/or plan revision on unclassified areas and on avoidance areas.

Need for change statement number(s) – 49 through 53

Revised plan section(s) – Lands and Realty

Revised plan content – All plan components and management approaches

Rationale – Revised plan direction responds to needs for change and provides additional detail.

1986 plan direction – New electric transmission lines should be located in existing transmission line corridors where this is environmentally desirable and visually acceptable. If not, utility corridors may be authorized after an environmental analysis and/or plan revision on unclassified areas and on avoidance areas.

Need for change statement number(s) – 50 and 51

Revised plan section(s) – Lands and Realty, and Utilities Management Area

Revised plan content – Lands and Realty DCs7 and 10, G8, and Utilities Management Area DC3 and G1

Rationale – Intent of 1986 direction retained with modified language for clarity and to reduce redundancy with legal requirements.

1986 plan direction – Require Rural Electrification Administration specifications for raptor protection on permitted power lines during construction and reconstruction.

Need for change statement number(s) – 7 and 9

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – Utility companies are required to include best practices for raptor protection on power lines by the New Mexico Department of Game and Fish and U.S. Fish and Wildlife Service for compliance with existing state and federal laws. These best practices have been updated twice since the 1986 plan was signed by the Avian Power Line Interaction Committee and may be updated in the future as new tools and technologies emerge. Best practices have become standard operating procedures for utility companies as avian encounters with power lines is both a business problem and an ecological problem.

1986 plan direction – Surface-disturbing resource projects will require search for and protection of land monuments.

Need for change statement number(s) – none

Revised plan section(s) – Lands and Realty

Revised plan content – DC3, Gs1 and 2

Rationale – Revised plan direction adds detail and improves clarity for land survey and boundary management.

1986 plan direction – Request Bureau of Land Management re-surveys where section corners haven't been brass capped. Highest priority is in complex land [ownership] patterns where development is taking place. Survey and post national forest landlines in conformance with national standards (15 miles per year during first decade). Priorities are (1) where proposed projects are adjacent to private land; (2) areas known and potential trespass; (3) backlog.

Need for change statement number(s) – 7

Revised plan section(s) – Lands and Realty

Revised plan content – DC3, Gs1 and 2 and Boundaries management approach

Rationale – Policy direction establishes national standards. Land survey staffing has been centralized at the regional level and forest-level survey staff are no longer available. Revised plan content includes additional detail describing why it is important to address boundary posting issues as they are encountered and how forest leadership and staff can work toward resolving those issues.

1986 plan direction – Acquisition of fee lands by purchase will be limited to lands within classified wilderness and lands involved with threatened and endangered wildlife species and high value recreation lands.

Need for change statement number(s) – 53

Revised plan section(s) – Lands and Realty

Revised plan content – DC1 and Land Adjustments management approach

Rationale – Updated plan direction provides additional flexibility for the lands program to respond to access needs and shift priorities as opportunities arise.

1986 plan direction – Priority for rights-of-way acquisition are as follows: (1) resource harvesting programs; (2) administration of national forest lands; (3) public access to national forest lands.

Need for change statement number(s) – 53

Revised plan section(s) – Lands and Realty

Revised plan content – G1 and Access management approach

Rationale – Updated plan direction responds to the need for change.

1986 plan direction – Review forest base map annually and update on an 8-year interval to maintain accuracy.

Need for change statement number(s) – none

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This direction is overly prescriptive. Land surveys and mapping are best reviewed on an as needed basis, which may be more or less often than prescribed by the 1986 plan.

1986 plan direction – In designated wilderness, no new places of permanent human habitation will be permitted unless specifically exempted by the Wilderness Act of 1964. As wilderness boundary is surveyed and posted on the ground, identified land encroachments will be resolved.

Need for change statement number(s) – 7

Revised plan section(s) – Lands and Realty

Revised plan content – DC3, Os and Gs1 and 2

Rationale – The first part of this direction is redundant with law, regulation, and policy governing designated wilderness management. The second part is addressed in revised plan direction providing additional guidance.

Minerals

1986 plan direction – Control surface uses in mineral operations through lease information notices, stipulations, Plans of Operation, and permits which provide for reasonable protection of resource values. Undertake mineral examination and contest actions on claims where development is not in keeping with the mining laws.

Need for change statement number(s) – none

Revised plan section(s) – Minerals

Revised plan content – All plan components and Relationships, Operations and Reclamation management approach

Rationale – The management of locatable and leasable minerals and mining largely determined by federal mining law. Revised plan content provides additional detail, consistent with existing federal laws and provides direction for salable mineral extraction as well.

1986 plan direction – Cooperate with the state to inventory and mitigate hazardous abandoned mine workings.

Need for change statement number(s) – none

Revised plan section(s) – Minerals

Revised plan content – DC2 and Abandoned Mine Lands management approach

Rationale – The abandoned mine lands program is a national program with staffing, funding, and priorities being set at the national level. Revised plan content provides additional context and explanation.

1986 plan direction – For those areas with a visual quality level of modification or maximum modification, concur with mineral leasing requests with only standard lease constraints. For those areas with a visual quality level of partial retention, concur with leasing requests accompanied by an informational notice detailing restrictions, if any. For those areas with visual quality level of retention, concur with leasing requirements but require limited surface occupancy be made of the area leased.

Need for change statement number(s) – 31 and 33

Revised plan section(s) – Scenic Character and Minerals

Revised plan content – Scenic Character All DCs and Gs and Minerals Gs4 and 5

Rationale – The Visual Management System, to which this direction refers, has been replaced by the Scenery Management System in the revised plan in accordance with national policy direction. This includes mapped desired conditions for scenic integrity objectives.

1986 plan direction – Activities associated with the mining and mineral leasing laws are permitted in areas having a recreation opportunity spectrum of semi-primitive non-motorized.

Need for change statement number(s) – 7 and 9

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This is repetitive of federal mining laws and may not be compatible with those laws in all circumstances. The revised plan includes desired recreation opportunity spectrum settings but cannot dictate where mining activities may or may not be authorized.

1986 plan direction – Designate sources for common variety minerals such as sand and gravel for private, city, county, state and other federal use. Sources will be designated through the National Environmental Policy Act process.

Need for change statement number(s) – 7

Revised plan section(s) – Minerals

Revised plan content – DC4, Ss4 and 5, G9 through 16 and Salable Mineral Materials Program management approach

Rationale – The first part of this direction is revised to include additional detail. The second part is removed because it is redundant with the National Environmental Policy Act.

1986 plan direction – All operating plans for valid claims inside wilderness will be reviewed for compatibility with wilderness management objectives and on-the-ground inspections made to ensure compliance.

Need for change statement number(s) – 7 and 9

Revised plan section(s) – Minerals

Revised plan content – Mineral Entry in Wilderness management approach

Rationale – Management related to valid mining claims in wilderness are already decided by law, regulation and policy. The revised plan includes a management approach to promote shared understanding of those legal requirements.

Monitoring

1986 plan direction – All

Need for change statement number(s) – 10

Revised plan section(s) – Monitoring Program

Revised plan content – Monitoring Program

Rationale – Monitoring is no longer plan direction. It is required other plan content. The updated monitoring program is responsive to the need for change and stakeholder comment.

Range

1986 plan direction – Provide forage to the extent benefits are commensurate with costs without impairing land productivity and within the constraints of social needs.

Need for change statement number(s) – none

Revised plan section(s) – Livestock Grazing

Revised plan content – All plan components and management approaches

Rationale – This direction was updated to improve alignment with requirements for integrated resource management in the 2012 Planning Rule.

1986 plan direction – Provide cooperation with other agencies and private range landowners to reduce impacts of livestock grazing.

Need for change statement number(s) – none

Revised plan section(s) – Livestock Grazing

Revised plan content – O2, Gs 6 and 9 and all management approaches

Rationale – Revised plan direction better identifies ways to advance cooperation, coordination and collaboration to support adaptive management and movement toward integrated desired conditions.

1986 plan direction – Identify and manage areas that contain threatened and endangered species of plants.

Need for change statement number(s) – 24

Revised plan section(s) – Livestock Grazing and Wildlife, Fish, and Plants

Revised plan content – Livestock Grazing Gs1 and 4 and Wildlife, Fish, and Plants DCs1 through 4 and 8, S4, and Adaptation, Restoration and Relationships and Rare, Endemic and Non-Native Plant Species management approaches.

Rationale – Revised plan direction preserves the intent of the 1986 direction and provides additional direction to help prevent future listings under the Endangered Species Act.

1986 plan direction – Update range analysis and development of management plans to Region 3 Range Allotment Analysis Handbook Standards on all allotments. Updating intervals are dependent on management intensity identified within each management areas. The following guidelines [for allotment analysis, production-utilization, allotment inspections, management plans and updates, and permit administration activities] will be used after capacity and permitted use are equal (see management area tables).

Need for change statement number(s) – 7, 9 and 38

Revised plan section(s) – Livestock Grazing

Revised plan content – DCs1–5

Rationale – This direction is overly prescriptive and does not adequately support adaptive management. The tools and technologies available to inform rangeland management planning and analysis have and continue to evolve over time and environmental conditions also continue to change. The schedules and guidelines prescribed by the 1986 plan may be more or less than what is needed for any given allotment and operation. Revised plan direction provides more flexible guidance that supports adaptive management and movement toward integrated desired conditions.

1986 plan direction – Forage use by grazing ungulates will be maintained at or above conditions which assure the recovery and continued existence of threatened and endangered species [see table for allowable use by range condition and management strategy]. In consultation with the U.S. Fish and Wildlife Service, develop site-specific forage use levels; in the event site-specific information is not available use the table previously referenced.

Need for change statement number(s) – 7, 9, and 38

Revised plan section(s) – Livestock Grazing and Wildlife, Fish, and Plants

Revised plan content – Livestock Grazing DC2 and Wildlife, Fish, and Plants S4

Rationale – This direction is redundant with the Endangered Species Act requirements for the recovery of listed species. The Forest Service is required to consult and adopt conservation measures developed collaboratively through the consultation process with U.S. Fish and Wildlife Service.

1986 plan direction – Identify key monitoring areas normally ¼ to 1 mile away from water on productive soils on level to intermediate slopes that are readily accessible for grazing. Size of key monitoring areas could be 20 to 500 acres. In some situations, such as high mountain meadows with perennial streams, key areas may be closer than ¼ mile and less than 20 acres.

Need for change statement number(s) – 9 and 38

Revised plan section(s) – Livestock Grazing DC5 and G and Monitoring Program

Revised plan content – Livestock Grazing G9 and MQ1 (rangeland vegetation indicator of watershed condition), MQs2, 9, 29, 30, 31, 43, 44, 46, 53 and 63, and Collaboration, Adaptation and Monitoring and Drought, Forecasting Services and Adaptation management approaches.

Rationale – Monitoring is no longer appropriate as plan direction per the 2012 Planning Rule. There are new technologies and methods to support rangeland monitoring both at the allotment and plan level. The revised plan's monitoring program includes questions that can be informed by allotment-level monitoring and questions that can inform allotment-level management.

1986 plan direction – Manage to bring all grazing allotments to satisfactory management by the mid-point of the third decade. Satisfactory management occurs on allotments where management actions proceed according to a schedule that will not permit regression in range condition or trend.

Need for change statement number(s) – none

Revised plan section(s) – Livestock Grazing

Revised plan content – DCs1–5, O1, S1, Gs1 and 3–5

Rationale – Intent of 1986 direction is preserved by management that moves toward integrated desired conditions in the revised plan. Maintenance or movement toward desired conditions is how compliance with the plan is determined. Management that causes a regression in range condition or trend would not be compliant with the plan.

1986 plan direction – The following criteria will be used to allocate capacity in those management areas where eventual capacity will exceed current permitted numbers: (1) if the capacity created is accomplished through appropriated range funds, with lack of cooperation from the permittees, the additional capacity will be offered to cooperating permittees on allotments where capacity is being reduced; (2) where capacity is created with either un-deposited cooperative funds or a mixture of appropriated range and un-deposited cooperative funds, the additional capacity will be allocated to the cooperating permittee.

Need for change statement number(s) – 9

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – If management results in additional capacity, decisions on how that capacity is allocated are best made at the allotment level. Further, additional capacity on one allotment is unlikely to be transferrable to another allotment; this direction is not truly practicable in many situations.

1986 plan direction – Grazing in riparian zones will be managed to provide for the maintenance and improvement of riparian areas.

Need for change statement number(s) – none

Revised plan section(s) – Livestock Grazing, Watersheds and Riparian and Aquatic Ecosystems

Revised plan content – Livestock Grazing DC3, Ss 1, 3–5, Watersheds 6th Level WS-DCs1a, b, and e, Ss1 and 2, G1 and Riparian and Aquatic Ecosystems All DCs, S1, Gs 4 and 5, and Inventory, Monitoring and Relationships and Restoration and Relationships management approaches.

Rationale – Under the revised plan, the intent of the 1986 plan direction is preserved by management that maintains or moves toward watershed- and ecosystem-scale desired conditions for riparian areas.

1986 plan direction – Outside Designated Wilderness – Pinyon-juniper overstory removal will be accomplished primarily through fuelwood harvest. Other methods will be used where public demand for fuelwood is not sufficient to meet the desired schedule, fuelwood harvest does not achieve the desired management objectives, the stand does not provide suitable fuelwood, or factors which are necessary to accomplish harvest are not available. These methods may involve mechanical, chemical, hand or prescribed fire treatments. Method utilized will be determined through the National Environmental Policy Act process and cost analysis.

Need for change statement number(s) – 1–3 and 11–15

Revised plan section(s) – All Upland Ecological Response Units and all individual woodland and grassland ecological response units, Timber, Forest, and Botanical Products.

Revised plan content – All Upland Ecological Response Units All DCs, individual woodland and grassland DCs, Timber, Forest, and Botanical Products DC2, S6sb, 10 and 11, Gs2 and 3 and An Integrated Approach to Ecological and Socioeconomic Sustainability and Firewood Program management approaches

Rationale – Fuelwood harvest is one of several tools that can be used alone or in combination with other tools to move toward science-based desired conditions for vegetation communities. Updated plan direction provides additional flexibility to use the appropriate tool to move toward and achieve desired conditions for vegetation communities and supply enough fuelwood to meet the public demand.

1986 plan direction – There are approximately 60,000 acres of pinyon-juniper on the Gila National Forest that were treated in the late 1950s through the 1970s to improve forage production. The project areas were mechanically treated by chaining or pushing which was not effective in controlling small trees. These residual, as well as new trees have regrown in size and retreatment is needed to maintain forage production. Retreatment of these existing pinyon-juniper projects and initial treatment through other than fuelwood harvest will be guided by the following criteria: (a) site potential has soil production potential rating of moderate to high; (b) slopes generally less than 15 percent; (c) limit treatment to soil with low or moderate erodibility index; (d) treatment results are cost effective. Methods of treatments will be determined for each individual project by economic environmental analysis.

Need for change statement number(s) – 11–15

Revised plan section(s) – All Upland Ecological Response Units and all individual woodland and grassland ecological response units, Livestock Grazing

Revised plan content – All Upland Ecological Response Units All DCs and Ss1–5 and G1, individual woodland and grassland DCs and objectives, Livestock Grazing DC3

Rationale – Under the 2012 Planning Rule, ecological and socioeconomic desired conditions must be integrated and within the capacity of the land to sustain. This 1986 plan direction does not adequately balance the ecological characteristics and dynamics of pinyon-juniper systems and prioritizes forage production over sustainability. Revised plan direction provides that integration and fulfills the sustainability requirements of the planning rule. Treatments must move toward desired conditions for vegetation communities, which will provide a sustainable forage base as a secondary benefit. Updated direction regarding slope restrictions and treatment methods are provided in the revised plan.

1986 plan direction – There are approximately 50,000 acres of grassland sites that are being encroached by ponderosa pine, pinyon and juniper, rabbit-brush, and snakeweed. Grassland sites will be maintained as grassland using mechanical, chemical and prescribed fire treatment methods. Treatment selection criteria for encroaching ponderosa pine, pinyon and juniper will be the same as described in DO3 above. Snakeweed can be treated using prescribed fire or herbicide methods. Rabbit-brush may be treated using prescribed fire only during the period of rapid growth, mechanical or herbicide methods, whichever is the most cost effective. In rabbit-brush stands with less than 10 percent canopy, use grazing management systems to encourage perennial grass that better compete with rabbit-brush. The grassland sites will be assessed for treatment during the first decade and treated on a priority basis as prescribed in each management area.

Need for change statement number(s) – 11–15

Revised plan section(s) – All Upland Ecological Response Units and grassland ecological response units, Livestock Grazing

Revised plan content – All Upland Ecological Response Units All DCs and Ss1–5 and G1, and grassland DCs and objectives, Livestock Grazing DC3

Rationale – Under the 2012 Planning Rule, ecological and socioeconomic desired conditions must be integrated and within the capacity of the land to sustain. This 1986 plan direction does not adequately balance the ecological characteristics and dynamics of pinyon-juniper systems and prioritizes forage production over sustainability. Revised plan direction provides that integration and fulfills the sustainability requirements of the planning rule. Treatments must move toward desired conditions for vegetation communities, which will provide a sustainable forage base as a secondary benefit. Updated direction regarding slope restrictions and treatment methods are provided in the revised plan.

1986 plan direction – Permittee investment will be encouraged by giving priority to projects that contain at least equal value contributions by the grazing permittee.

Need for change statement number(s) – 38

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This direction was removed because there may be other factors and issues that require projects to be prioritized differently. For example, projects that address issues related to the grazing operation and threatened and endangered species may need to be prioritized over those that only provide benefit to the grazing operation.

1986 plan direction – When replacing allotment boundary fences, forest boundary fences will be given priority.

Need for change statement number(s) – 38

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – Prioritizing boundary fences over pasture fences may not be the best way to support movement toward integrated desired conditions. There are many factors that can influence the relative importance of fences, which can only be evaluated at the allotment level.

1986 plan direction – Grazing allotments will generally be managed to intensity levels described for each management area (see management area tables). Based on existing data, this is projected to result in a long-term capacity as described in each management area. Any additional forage capacity that becomes available after the emphasis levels for livestock and wildlife for each management area has been attained will generally be allocated according to the long-term management emphasis ratio (see management area tables).

Need for change statement number(s) – 38

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This direction does not adequately support adaptive management. Grazing intensity is better addressed at the allotment level, informed by relevant data and site-specific circumstances. It is not practicable to differentially allocate available forage to wildlife or domestic livestock as wildlife cannot be managed in the same way that domestic livestock can be managed.

1986 plan direction – Unsatisfactory condition rangelands will be treated through implementation of approved allotment management plans. Treatment will include: (1) structural or non-structural range improvements necessary to implement or maintain the prescribed intensity level; (2) adjust stocking levels as necessary to maintain the management emphasis.

Need for change statement number(s) – 9 and 38

Revised plan section(s) – All Upland Ecological Response Units and all individual ecological response units, Livestock Grazing

Revised plan content – DCs1–5 and O1

Rationale – This direction is overly prescriptive and doesn't adequately support adaptive management. These are not the only ways in which practices can be altered to improve range condition. For example, adjusting season of use or pasture rotations could be part of a system to improve conditions.

1986 plan direction – Replace range improvements needed to manage at the specified intensity level on a 40-year cycle. Priority for expenditure of funds is as follows (see management area tables).

Need for change statement number(s) – 9 and 38

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This direction is overly prescriptive and doesn't adequately support adaptive management. Range improvements vary in their maintenance needs and lifespan. There are many factors that need to be considered at the allotment level when prioritizing maintenance, reconstruction, or replacement, such as fire damage.

Recreation

1986 plan direction – Maintain and enhance visual resource values through application of landscape management principles.

Need for change statement number(s) – 31 and 33

Revised plan section(s) – Scenic Character

Revised plan content – Scenic Character all plan components and management approaches

Rationale – Updated plan direction is responsive to the need for change.

1986 plan direction – Maintain a full spectrum of trail opportunities.

Need for change statement number(s) – 28

Revised plan section(s) – Sustainable Recreation

Revised plan content – DCs1, 12–14, Os4 and 5, and Collaborative Sustainable Recreation Strategy and Relationships management approach

Rationale – Intent of 1986 plan direction is preserved. Additional specificity added to respond to public comment.

1986 plan direction – Provide a balanced level of developed and dispersed recreation experiences.

Need for change statement number(s) – 28

Revised plan section(s) – Sustainable Recreation

Revised plan content – DCs1, 3, 4, 8–14, 17, and 19

Rationale – Intent of 1986 plan direction preserved with additional detail added.

1986 plan direction – Off-road vehicle implementation plan will be updated whenever changes occur as a result of travel management planning.

Need for change statement number(s) – 7

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This direction is unnecessary. Travel management implementation is ongoing and supporting documents are updated as needed.

1986 plan direction – Recreation use of riparian zones will be managed to avoid damage to riparian resources.

Need for change statement number(s) – 29

Revised plan section(s) – Sustainable Recreation

Revised plan content – DCs1 and 15–17, Ss1–4 and Gs5, 7, 12–16

Rationale – Intent is preserved, and additional detail added to respond to the need for change.

1986 plan direction – The Recreation Opportunity Spectrum as inventoried in 1980 will form the base for the objectives below. Changes in inventory acreage shall conform to the following guidelines: Primitive – no change; Semi-Primitive – no change in wilderness, plus or minus ten percent on all other areas; Motorized Semi-Primitive – change of plus or minus ten percent; Roaded Natural – change of plus or minus 10 percent; Rural – no change.

Need for change statement number(s) – 31 and 33

Revised plan section(s) – Sustainable Recreation

Revised plan content – DCs1, 4, 11, and G1

Rationale – Updated to align with current policy direction and respond to the need for change.

1986 plan direction – Within the Gila National Forest and that portion of the Apache National Forest administered by the Gila National Forest, maintain a recreation stay limit of no longer than 30 days in a consecutive 45-day period for general dispersed recreation, and 14 days for developed sites.

Need for change statement number(s) – 29

Revised plan section(s) – Sustainable Recreation

Revised plan content – DC1, S1, and G5

Rationale – Updated length of stay limits respond to the need for change and are consistent with other national forests in the region.

1986 plan direction – Implement the Recreation Site Construction Schedule and the Rehabilitation Schedule in keeping with assigned priorities.

Need for change statement number(s) – 9

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – Priorities and the need for recreation site construction are subject to change over time based on a myriad of factors. This plan direction is overly prescriptive does not adequately support adaptive management.

1986 plan direction – Provide standard service level interpretive services at the Gila Visitor Center. Provide less than standard service level interpretive services at all other locations.

Need for change statement number(s) – 7 and 9

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This direction is overly prescriptive, does not allow management to be responsive to changing socioeconomic conditions and the management issues it is intended to address are already provided for in policy direction.

1986 plan direction – Hazard inspections will be made on developed sites prior to season of use. Serious hazards which threaten public safety will be corrected immediately. Other hazards will be corrected prior to opening the site to the public. Eliminate maintenance related to health and safety hazards on all facilities in all condition classes.

Need for change statement number(s) – 9

Revised plan section(s) – Sustainable Recreation and Facilities

Revised plan content – Sustainable Recreation DC8, Facilities DC1b, 2, 3 and 5

Rationale –The language directs action versus providing a strategic and practical management framework for facilities.

1986 plan direction – Clean developed sites according to standards in “Cleaning Recreation Sites,” USDA 1980 and in accordance with Region 3 standards.

Need for change statement number(s) – 7

Revised plan section(s) – Sustainable Recreation and Facilities

Revised plan content –Sustainable Recreation DC8, Facilities DC3

Rationale – This direction is repetitive of policy direction and technical guidance.

1986 plan direction – Take water quality samples at all developed site water systems in accordance with New Mexico state regulation.

Need for change statement number(s) – 7

Revised plan section(s) – Facilities

Revised plan content – DC4

Rationale – While the management of potable water systems is already decided by law, it was deemed important enough to retain an emphasis on this through a desired condition.

1986 plan direction – Explore the possibilities of concessionaire operating and maintaining developed recreation sites.

Need for change statement number(s) – 9

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This direction is unnecessary and compels action. Management can explore possibilities of working with concessionaires when and where there are opportunities without plan direction to do so.

1986 plan direction – Grazing of developed recreation sites will be permitted only during periods of low use and where improvements will not be damaged.

Need for change statement number(s) – none

Revised plan section(s) – Livestock Grazing and Sustainable Recreation

Revised plan content – Livestock Grazing DC3 and Sustainable Recreation G3

Rationale – Intent of 1986 plan direction preserved.

1986 plan direction – Timber practices can be permitted within developed sites when prescriptions provide for non-deterioration of recreational opportunities or provide for public safety.

Need for change statement number(s) – none

Revised plan section(s) – Scenic Character, Sustainable Recreation and Timber, Forest, and Botanical Products

Revised plan content – Scenic Character DCs1, 3 and 5, Gs1–6, Sustainable Recreation DCs1 and 10, Gs1, 3 and 6, and Timber, Forest, and Botanical Products S1

Rationale – Intent of 1986 plan direction preserved.

1986 plan direction – The following developed recreation sites will retain the existing mineral withdrawals or adjust to retain that portion needed to protect unique surface values or high value improvements (see management area tables). The following developed recreation sites will be recommended for revocation of mineral withdrawals. (see management area tables).

Need for change statement number(s) – none

Revised plan section(s) – Minerals

Revised plan content – Withdrawals management approach

Rationale – The authority to grant mineral withdrawals is held by the Bureau of Land Management through the Federal Land Policy and Management Act of 1976 (FLPMA). Areas that were withdrawn prior to FLPMA are permanently withdrawn, those that were granted withdrawal after FLPMA generally have an expiration date. Workforce capacity to track and address the status of mineral withdrawals is now at the regional office level, not at the forest level, and coordination is ongoing.

1986 plan direction – Maintain off-road vehicle closure at the Gila River Bird Management Area.

Need for change statement number(s) – 7

Revised plan section(s) – Roads

Revised plan content – S1

Rationale – The 2014 Travel Management decision maintains the off-road closure at the Gila River Bird Management Area and restricts motor vehicle use off the designated system of forest roads. This plan direction is no longer needed.

1986 plan direction – The forest will continue to provide wilderness ethics awareness to the public in the form of written, verbal, and personal contact.

Need for change statement number(s) – none

Revised plan section(s) – Designated Wilderness management area

Revised plan content – Wilderness Character and Relationships, and Outreach and Education management approaches

Rationale – Intent of 1986 plan direction is preserved.

1986 plan direction – New outfitter guide permits will be issued temporarily on a case-by-case basis until wilderness use and capacities are established. Where institutional objectives can be met outside of designated wilderness, permits will not be issued in wilderness. Campsite reservations for outfitter guides will not be made. Outfitter guide caches of unused equipment, materials or camps may be permitted with District Ranger approval.

Need for change statement number(s) – 35 and 37

Revised plan section(s) – Designated Wilderness

Revised plan content – DC8, S2 and Recreation Special Uses management approach

Rationale – Although some of this plan direction is redundant with law, regulation and policy direction, updated direction preserves the intent and adds detail.

Soil and Water

1986 plan direction – Protect and improve the soil resource. Through the use of best management practices, the adverse effect of planned activities will be mitigated, and site productivity maintained. Soil loss due to management will not exceed soil loss tolerance. Provide for the protection of sensitive soils in all surface disturbing activities. Special emphasis should be placed on any management decision to provide protection for fragile soils during the evaluation and implementation processes. Restore lands in unsatisfactory watershed condition.

Need for change statement number(s) – 18, 20, and 21

Revised plan section(s) – Soils, Watersheds, Water Quality, All Upland Ecological Units, Livestock Grazing, Timber, Forest, and Botanical Products, and all other activities and uses sections

Revised plan content – Soils all plan components and management approaches, Watersheds all plan components and management approaches, Water Quality all plan components and management approaches, All Upland Ecological Units Ss1–4, Livestock Grazing O1, Timber, Forest, and Botanical Products and all other activities and uses sections have standards to incorporate best management practices.

Rationale – Intent of the 1986 plan direction is preserved and expanded upon to meet the needs for change.

1986 plan direction – Conduct soil resource inventories to standards of Region 3 Terrestrial Ecosystem Survey procedure by the end of the first decade.

Need for change statement number(s) – none

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This is complete.

1986 plan direction – Analyze all wildfires for soil rehabilitation needs.

Need for change statement number(s) – none

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – Which wildfires qualify for Burned Area Emergency Response assessments is determined by national policy direction.

1986 plan direction – Identify and implement channel restoration and stabilization structures on acres identified for each management area within the first decade.

Need for change statement number(s) – 18, 20, and 21

Revised plan section(s) – Soils, Watersheds, Riparian and Aquatic Ecosystems

Revised plan content – Soils all DCs and Os, Watersheds all DCs, O1, S2 and G1, Riparian and Aquatic Ecosystems all DCs and O1

Rationale – Constructed features are not the only way to restore soil stability, channel shape and function, or watershed condition and may only treat the symptoms, not the root causes of degradation. The revised plan better supports addressing both contributing factors and symptoms as management is directed toward maintaining or moving toward desired conditions for soil and watershed resources.

1986 plan direction – Maintain a number of watershed structures identified for each management area within the first decade.

Need for change statement number(s) – none

Revised plan section(s) – Monitoring Program

Revised plan content – MQ40

Rationale – Maintenance needs vary based on site-specific circumstances and structural design. Best management practices monitoring can help identify maintenance needs. Additional monitoring can be accomplished as part of program delivery.

Timber

1986 plan direction – Provide for a non-declining sustained yield of timber.

Need for change statement number(s) – none

Revised plan section(s) – Timber, Forest, and Botanical Products

Revised plan content – All plan components and management approaches

Rationale – The intent of this plan direction is preserved as required by the Multiple-Use Sustained-Yield Act, National Forest Management Act, and policy direction.

1986 plan direction – Provide green and dead fuelwood and other forest products on a sustained yield basis.

Need for change statement number(s) – 1

Revised plan section(s) – Timber, Forest, and Botanical Products

Revised plan content – All DCs and G2, An Integrated Approach to Ecological and Socioeconomic Sustainability and Firewood Program management approaches

Rationale – The intent of this plan direction is preserved as required by the Multiple-Use Sustained-Yield Act, National Forest Management Act, and policy direction.

1986 plan direction – Provide a volume of timber to maintain jobs in dependent communities.

Need for change statement number(s) – 1

Revised plan section(s) – Timber, Forest, and Botanical Products

Revised plan content – DC2

Rationale – The intent of this plan direction is preserved as required by the Multiple-Use Sustained-Yield Act, National Forest Management Act, and policy direction.

1986 plan direction – Inventory timber lands every ten years. Maintain a continuous 10-year timber harvest schedule. Review the classification of unsuitable timber lands every 10 years.

Need for change statement number(s) – 7

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This direction is already provided by policy.

1986 plan direction – Continue to complete compartment examination to regional standards to provide data for the detailed stand prescriptions to monitor plan results. Compartment examination should be completed by the end of the first decade.

Need for change statement number(s) – 7

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – National policy and regional program oversight provides the necessary direction for stand exam and other data to support silvicultural prescriptions. The plan's monitoring program has been revised to make use of new tools, technologies and methods in an efficient manner. Any project-level monitoring data collected for the purpose of timber stand management could be used to inform plan monitoring.

1986 plan direction – Assure regeneration by natural or artificial means to meet regional standards. Final removal cuts will not be scheduled until adequate regeneration is established.

Need for change statement number(s) – none

Revised plan section(s) – Timber, Forest, and Botanical Products

Revised plan content – S7

Rationale – The intent of this plan direction is preserved as required by the Multiple-Use Sustained-Yield Act, National Forest Management Act, and policy direction.

1986 plan direction – Natural regeneration will be the preferred stand regeneration process.

Need for change statement number(s) – 1

Revised plan section(s) – Timber, Forest, and Botanical Products

Revised plan content – G7 and Reforestation Program management approach

Rationale – Large-scale disturbance, climate change, or both may make it necessary to plant trees (artificial regeneration) if management is to keep forested areas forested.

1986 plan direction – All reforestation projects will include rodent control where needed. Regeneration areas will be adequately protected from domestic livestock grazing to ensure establishment of the trees in accordance with Forest Service Manual direction.

Need for change statement number(s) – 9

Revised plan section(s) – Timber, Forest, and Botanical Products

Revised plan content – Reforestation Program management approach

Rationale – This direction is unnecessary to state. Reforestation projects will include seedling and sapling protection as needed.

1986 plan direction – In mixed conifer stands that contain aspen, encourage aspen regeneration as a minor stand component at the time of regeneration through location of skid trails, landing and temporary roads.

Need for change statement number(s) – 9

Revised plan section(s) – Timber, Forest, and Botanical Products

Revised plan content – G5a

Rationale – Revised plan direction encourages aspen regeneration where it is appropriate but does not specify the way to accomplish that. That is best determined when site- and activity-specific circumstances are known.

1986 plan direction – Use one pre-commercial thinning in sapling stands up to 5.9 inches diameter at breast height. Thin coniferous stands to reduce stocking levels recommended in Forest Service Manual direction. Stands previously thinned and still stagnated may receive one more pre-commercial thinning. Stands with mistletoe or other health problems may be thinned to less than recommended stocking levels, and up to 8.9 inches if until such time as a pulpwood market develops evaluated during the Integrated Resource Management process.

Need for change statement number(s) – 9

Revised plan section(s) – Timber, Forest, and Botanical Products

Revised plan content – none

Rationale – The appropriate silvicultural practices will be selected to move toward desired conditions for ecosystems and watersheds and can be most appropriately selected at the project level when site-specific circumstances can be evaluated.

1986 plan direction – Stands will generally be managed under the uneven-aged silvicultural systems. Cutting methods will be prescribed for specific stands in the silvicultural exams and evaluated during the Integrated Resource Management process.

Need for change statement number(s) – none

Revised plan section(s) – Mixed Conifer with Aspen, Mixed Conifer Frequent Fire, Ponderosa Pine Forest, Ponderosa Pine-Evergreen Oak, Madrean Pinyon-Oak Woodland, Pinyon Juniper Grass and Juniper Grass Woodlands Forest and Timber, Forest, and Botanical Products

Revised plan content – All the ecological response units named above have desired conditions reflecting uneven-aged dynamics at the ecologically appropriate scales, Timber, Forest, and Botanical Products DC1, S6 and G3

Rationale – Intent of 1986 plan direction is preserved. Silvicultural methods will be selected to move toward desired conditions for vegetation communities.

1986 plan direction – Provide an average of 2 down logs per acre (12” diameter or larger) or untreated slash piles 10 feet in diameter or a combination of down logs and slash piles over 55 percent of the forested area. Distribution of downed woody material necessary to meet wildlife habitat requirements will be coordinated through integrated management.

Need for change statement number(s) – 2

Revised plan section(s) – All forest and woodland ecological response units and Timber, Forest, and Botanical Products

Revised plan content – All forest and woodland ecological response units have desired conditions for coarse woody debris, including down logs, Timber, Forest, and Botanical Products DC1, S1 and G3.

Rationale – Intent of 1986 plan direction preserved. Revised direction reflects the current state of the science.

1986 plan direction – Once wildlife habitat and other requirements for down and woody material are met, cull material and slash over three inches in diameter will be made available for fuelwood for two years after timber harvest.

Need for change statement number(s) – 9

Revised plan section(s) – Timber, Forest, and Botanical Products

Revised plan content – DCs1 and 2, S1, Gs2 and 3

Rationale – The intent of this plan direction is retained but the Revised plan includes clearer direction and considers a more interdisciplinary process with considerations for the ecological components

such as wildlife habitat, reducing dead and down, and soils; and continued contribution to the social, economic, and cultural sustainability of local communities, such as fuelwood availability.

1986 plan direction – Forest cutting blocks will be designed where possible with irregular meandering borders to optimize edge benefits for wildlife.

Need for change statement number(s) – none

Revised plan section(s) – Timber, Forest, and Botanical Products

Revised plan content – S6b

Rationale – The intent of this plan direction is preserved as required by the Multiple-Use Sustained-Yield Act, National Forest Management Act and policy direction.

1986 plan direction – Limit tractor/crawler logging equipment in most areas to slopes less than 40 percent.

Need for change statement number(s) – none

Revised plan section(s) – All Upland Ecological Response Units

Revised plan content – Ss2–4

Rationale – While these slope restrictions still represent the upper limit of what this equipment can safely do, there is new equipment and harvesting systems that can safely operate on steeper slopes. Revised plan direction integrates considerations of safety, wildfire threat and soil and watershed conditions to provide more specific constraints and exceptions to maintain or move toward integrated desired conditions for ecosystems, watersheds and fire and fuels management.

1986 plan direction – Openings created through the harvest of timber or fuelwood will not exceed 40 acres.

Need for change statement number(s) – 9

Revised plan section(s) – Timber, Forest, and Botanical Products

Revised plan content – S6a

Rationale – This direction is an overly strict interpretation of the National Forest Management Act and supporting agency policy direction. Revised plan direction preserves the ability to employ adaptive management at the project level as the site and circumstances require.

1986 plan direction – Timber harvest adjacent to riparian areas will be conducted to provide for the protection of these key areas.

Need for change statement number(s) – none

Revised plan section(s) – Watersheds, Riparian and Aquatic Ecosystems and Timber, Forest, and Botanical Products

Revised plan content – Watersheds DCs1d and e and G1, Riparian and Aquatic Ecosystems all DCs, S1, and Gs3 and 4, Timber, Forest, and Botanical Products S4

Rationale – The intent of this plan direction is preserved as required by the Multiple-Use Sustained-Yield Act, National Forest Management Act, Executive orders governing floodplains, and policy direction.

1986 plan direction – The Integrated Resource Management process will be used to integrate multiple resource goals when timber activities are planned.

Need for change statement number(s) – none

Revised plan section(s) – Timber, Forest, and Botanical Products

Revised plan content –S1

Rationale – The intent of this plan direction is preserved as required by the Multiple-Use Sustained-Yield Act, National Forest Management Act, National Environmental Policy Act, and policy direction.

Visual Quality

1986 plan direction – Visual Quality Levels as inventoried and mapped in 1980 will become the Forest base for the Visual Quality Objectives listed below. Preservation: no change. Retention plus or minus 2 percent in foreground, plus or minus 5 percent in middle ground and background. Partial Retention: plus or minus 5 percent in foreground, plus or minus 10 percent in middle ground and background. Modification: plus or minus 10 percent in all areas. One classification movement downward is all that will be tolerated. Manage for visual quality objectives ranging from Preservation to Maximum.

Need for change statement number(s) – 9, 31, and 33

Revised plan section(s) – Scenic Character

Revised plan content – all plan components and management approaches

Rationale – This direction was updated based on the Scenery Management System, which replaces the Visual Management System. Management will be directed toward maintaining and achieving the desired conditions for scenic integrity over the long term.

Wildlife

1986 plan direction – Planning emphasis is placed on big game, small game, game fish, and threatened and endangered species. Threatened and endangered species will receive priority over other species where needs are identified through approved recovery plans.

Need for change statement number(s) – 24 and 25

Revised plan section(s) – All sections under the Ecological Sustainability and Biodiversity heading, Lands and Realty, Minerals, Renewable Energy, Livestock Grazing, Timber, Forest, and Botanical Products, Roads, Facilities, Sustainable Recreation.

Revised plan content – All plan components and most management approaches under the Ecological Sustainability and Biodiversity heading; Lands and Realty DC1, Gs5 and 8 and Land Adjustments management approach; Minerals DCs1 and 4, Ss1–6, Gs1–3, 5–11 and 14–16 and Abandoned Mine Lands management approach; Renewable Energy DC1 and Ss1 and 2; Livestock Grazing DCs2–4, O1, Ss1–4, Gs1 and 3–8, Adaptation and Forage Reserves, Drought, Forecasting Services and Adaptation, Livestock and Wildlife, and Unauthorized and Excess Livestock management approaches; Timber, Forest, and Botanical Products DC1, Ss1 and 3–11, Gs1 and 3–7, An Integrated Approach to Ecological and Socioeconomic Sustainability and Reforestation management approaches; Roads DCs1 and 4–6, O1, Ss1–3, Gs1–3, 5 and 6, Roads and Relationships and Road

Decommissioning management approaches; Facilities DC2, Gs1, 2 and 6; Sustainable Recreation DCs1, 11, 12 and 16; Ss3–5, Gs4, 5, 7, 9, 10, and 12–16.

Rationale – The revised plan complies with 2012 Planning Rule requirements for ecological integrity and the diversity of plant and animal species that occur within the forest. The Endangered Species Act, with which the Forest Service must comply, places emphasis on species recognized under the Act. The revised plan incorporates all approved recovery plans by reference. See also appendix G for more details related to federally listed species and species of conservation concern.

1986 plan direction – Provide wildlife habitat improvements including reconstruction of unmaintained range improvements which are of benefit to wildlife species.

Need for change statement number(s) – 24 and 25

Revised plan section(s) – Wildlife, Fish, and Plants

Revised plan content – Os1 and 5

Rationale – Intent of 1986 direction is preserved.

1986 plan direction – Resource projects will be designed to maintain or improve wildlife habitat to the extent possible provided other resource outputs can be met.

Need for change statement number(s) – 9

Revised plan section(s) – none

Revised plan content – not applicable

Rationale – This direction is overly prescriptive and in conflict with the 2012 Planning Rule requirements. Desired conditions are integrated, desired outputs cannot be prioritized over desired outcomes for wildlife habitat or anything else. It must all work together to achieve integrated resource management.

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Appendix M. Letters from Government Agencies

Federal Aviation Administration, Marty Skinner, January 31, 2020



U.S. Department
of Transportation
**Federal Aviation
Administration**

Air Traffic Organization
Central Service Center

10101 Hillwood Parkway
Fort Worth, TX 76177

January 31, 2020

Adam Mendonca
US Dept of Agriculture, Forest Service
Gila National Forest
3005 E. Camino Del Bosque
Silver City, NM 88061

Dear Mr. Mendonca:

Thank you for your letter dated January 10, 2020, addressed to Regional Director, Southwest Region regarding the Environmental Assessment for Gila National Forest. We normally participate in, and comment on, other federal agency environmental documents only from the perspective of the Federal Aviation Administration's (FAA) areas of responsibility; that is, whether the proposal will have effects on aviation and the National Airspace System. We generally do not provide comments from an environmental standpoint.

From a regularity perspective, you may need to consider if notice to FAA is required for the effect of the proposed actions on airspace. We encourage you to coordinate with the FAA's Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) office so that we can review the alternatives to provide you with the possible impacts. For information on the requirements for notifying the FAA, instructions for completing the forms, or other information regarding the airspace notification process, please visit the OE/AAA web site at:
<https://oeaaa.faa.gov/oeaaa/external/searchAction.jsp?action=generalFAQs>

You will need to determine if formal notice to the FAA is required for the effect of the proposal on airspace. The requirements for this notice may be found in Title 14 of the Code of Federal Regulations, Part 77, Objects Affecting the Navigable Airspace. If any part of the project exceeds notification criteria under FAR Part 77, notice to the FAA is required at least 30 days prior to the proposed construction date. More information may be obtained at the OE/AAA web site.

Sincerely,

Marty Skinner
Manager (A), Operations Support Group
ATO Central Service Center



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Haydn Forward email comments, February 5, 2020

From: Mendonca, Adam -FS
To: Nathanus, Jenny M -FS
Subject: FW: Public Comments on Wilderness
Date: Sunday, February 9, 2020 7:54:10 PM
Attachments: Bullet Point Opposition to Wilderness Additions.docx
image001.png
image002.png
image003.png
image004.png

FYI. Revision comments.



Adam Mendonca
Forest Supervisor
Forest Service
Gila National Forest

p: 575-388-8384
c: 575-519-9465

adam.mendonca@usda.gov

3005 E Camino del Bosque
Silver City, NM 88061

www.fs.fed.us



Caring for the land and serving people

From: Haydn Forward <hforwardjr@gmail.com>
Sent: Wednesday, February 5, 2020 9:18 AM
To: Mendonca, Adam -FS <adam.mendonca@usda.gov>; Mendonca, Adam -FS <adam.mendonca@usda.gov>; Stemmerman, Erick -FS <erick.stemmerman@usda.gov>
Subject: Public Comments on Wilderness

Good Morning Adam and Erick,

In follow-up to your public meeting in Glenwood I have attached your requested comments relating to proposed wilderness areas.

On a related topic, I did appreciate that all your agenda items were those that public opinion would carry weight in final decision making. Opposed to the frustration of simply being informed what the final decisions are.

Thank you
Haydn Forward

Specified Reasoning to Stop ALL Additional Designation of Wilderness Lands in Catron and Grant Counties

Financial Costs

1. The Forest Service is financially handicapped to manage wilderness due to lack of funding. Any additional wilderness lands will not have ear-tagged funding that is required for management of those lands. Additional wilderness will only compound forest service budget issues.
2. Due to financial constraints any implemented, on ground, personnel support for existing wilderness is thin at best. Forest Service feasibility to generate and support management plans for additional wilderness are not funded and do not exist.
3. The current financial issues with management of the Gila Forest and associated wilderness will only be compounded by designating additional wilderness lands. It is important we professionally manage and fund our current wilderness before adding additional burdens.

Proposed Wilderness is eliminating Multiple Use

1. Grazing Allotments

Allotment holders support sophisticated infrastructure requiring year-round vehicle and fuel operated equipment for maintenance. Eliminating these maintenance abilities will negatively affect allotment holders' rights to manage herds and ultimately damage existing wildlife habitat.

The referenced infrastructure list includes:

- a. Fencing and corrals
- b. Cattle guards
- c. Water improvements, dirt tanks, steel drinkers, pumps, water distribution pipe, etc.
- d. Existing Roads supporting (emergency and maintenance vehicles)
- e. Existing erosion control ponds and dams

By eliminating any or all of the above infrastructure, pasture rotation will be affected increasing fire fuel hazards, encouraging woody species growth, reducing water supply and habitat for wildlife.

2. Recreational

All existing roads and 2 track trails are currently used by off road vehicles and passenger automobiles for hunting, limited hiking, handy-caped and aged public access to overnight camping and site-seeing. All of which have a positive financial footprint on the local economy. Eliminating those visiting public opportunities by restricting vehicle access will have an over-all negative impact on local business and tax base.

Note: Above negative recreational impact is currently being experienced by both local business and the general public visitors at the San Francisco River in Mule Creek. The F/S decision to stop vehicle access to historical trails and public camp grounds for wilderness evaluation/study should be reversed.

Note: I understand F/S request for specific area-based comments. However, that allows the potential for areas not generating comments to be considered for wilderness designation. The foundation for my points is to eliminate all new wilderness considerations.

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Department of Agriculture, State of New Mexico, Jeff Witte, April 2, 2020

Data Submitted (UTC 11): 4/2/2020 8:13:32 PM
First name: Ryan
Last name: Blickem
Organization:
System.Data.Entity.DynamicProxies.Organization_816762DAD2F69D2F948FD803742E2AF188F4967BA
FCF869BFB089A883774B244
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Phone: 5756462670
Comments:

Please accept the NMDA's submission of comments on the USFS Draft Revised Forest Plan and Draft Environmental Impact Statement.



MICHELLE LUJAN GRISHAM
Governor

DEPARTMENT OF AGRICULTURE
STATE OF NEW MEXICO

MSC 3189, Box 30005
Las Cruces, New Mexico 88003-8005
Telephone (575) 646-3007

JEFF M. WITTE
Secretary

April 2, 2020

Mr. Adam Mendonca, Forest Supervisor
Gila National Forest
United States Forest Service
3005 East Camino del Bosque
Silver City, NM 88061

Dear Mr. Mendonca:

New Mexico Department of Agriculture (NMDA) submits the following comments to the United States Forest Service's (USFS) request for comments on the Draft Revised Forest Plan (DRFP) and Draft Environmental Impact Statement (DEIS) for the Gila National Forest (GNF).

Part of NMDA's role in New Mexico's agriculture communities is to provide proactive advocacy and promotion. NMDA supports the management of National Forest Service lands under the principles of multiple-use and sustained yield as congressionally mandated by the Multiple-Use and Sustained-Yield Act of 1960 (16 U.S.C. 528-531) and further codified by the National Forest Management Act of 1976 (16 U.S.C. 1601-1614).

An updated forest plan incorporating new scientific and cultural data will benefit livestock grazing as a sustainable and economically important traditional use of the national forest, as recognized by GNF managers.

*All emphasis added to excerpts of the draft plan and DEIS comments below has been added by NMDA.

Alternatives 2 and 3

NMDA does not wholly support one of the alternatives provided by the GNF, but finds that both Alternative 2 and 3 contain components that are beneficial to livestock grazing.

For example, Alternative 3 removes the guideline for stocking vacant allotments and, instead, provides for vacant allotments to be stocked to the maximum extent possible. NMDA prefers this approach because it contributes to the long-term economic benefit of local communities and the ecosystem services provided through appropriate livestock grazing strategies.

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In general, as it relates to livestock grazing, NMDA prefers the flexibility provided by the guidelines under Alternative 3 rather than the standards and guidelines proposed under Alternative 2. As an example: Alternative 2 states, "New or reconstructed range improvements *will* be designed to..." whereas, Alternative 3 states, "New or reconstructed range improvements *should* be designed to..." NMDA prefers the latter approach. Where Alternative 2 states, "New livestock handling facilities designed to hold or concentrate livestock...*will* be located..."; Alternative 3 states, "New livestock handling facilities designed to hold or concentrate livestock...*should* be located...." NMDA prefers the latter approach.

NMDA requests any details on whether there will be a vacant allotment management plan that will provide clarification on the decision-making process on when to use and who can use forage reserves, as proposed in Alternative 2.

Draft Environmental Impact Statement

In this section NMDA identifies portions of the DEIS that, if updated, will create a more robust document on which to build the final plan.

DEIS Volume 1, *Effects Common to All Alternatives*: "The motorized transportation system facilitates mechanical treatments, fire management, and livestock grazing management." NMDA requests that "recreational access" be added to this list of uses facilitated by the motorized transportation system. It is important that recreationists be incorporated into this short list of GNF users who benefit from the motorized transportation system, as each set of users also shares in the impacts arising from motorized transport within the DP.

DEIS Volume 2, *Permitted Grazing*: "Under implementation of all alternatives as part of the agency's multiple-use mandate codified by the Multiple-Use Sustained-Yield Act of 1960 permitted livestock grazing would occur on many areas of the forest and would overlap with many recreation settings and opportunities. Regardless of the setting, whether in designated wilderness (and similarly managed areas), low development general forest areas, or areas with higher levels of development, the presence of cattle or the visible signs of grazing could have potential negative effects to recreation experiences of some forest visitors." NMDA requests removal of the second sentence because it perpetuates the idea that livestock grazing and recreation are incompatible uses of forest lands.

DEIS Volume 2, *Access*: "People want to use their public lands and are becoming sensitive to restrictions on that ability." NMDA suggests removal of the word "their" to clarify the true nature of public-lands ownership: The United States government holds public lands in trust for its citizens and manages these lands under the principle of multiple use.

DEIS Volume 2, *Herbicide Use-Environmental Consequences*: "Weeds also detract from the recreation experiences by reducing the variety and amount of native flora to observe or study and reducing forage availability for wildlife and recreational livestock." NMDA requests this sentence be rewritten as follows: "Weeds also detract from the recreation experiences by

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reducing the variety and amount of native flora to observe or study. Furthermore, weeds reduce forage availability for wildlife, livestock, and recreational livestock."

DEIS Volume 3, Appendix E references the strategic plans of cooperating agencies (i.e., NMDA, as well as San Francisco and Sierra Soil and Water Conservation Districts (SWCDs) as being "complimentary" to the DP. This appears to be a typographical error that would lead readers to incorrectly conclude that the agencies listed are in favor of the proposed revised plan. NMDA requests this typographical error located throughout the document be corrected to "complementary."

Livestock Grazing Standards and Guidelines

NMDA prefers guidelines to standards, as guidelines increase the ability of adaptive management strategies and increase flexibility, which is the stated objective of the DP. Approved guidelines would still require supporting rationale to be specified in the decision document so there are safeguards in place to ensure the intent of the guidelines is followed.

NMDA requests clarification on what *specific* "temporally and spatially appropriate data" the USFS will seek to gather under Livestock Grazing Standard 1 (see below) utilizing the Grazing Permit Administration Handbook, Regional Supplements, and National Best Management Practices for Water Quality on National Forest System Lands, as stated.

"Livestock Grazing Standards

1. Livestock management will be compatible with carrying capacity and address ecological resources (such as forage, invasive plants, at-risk species, soils, riparian health, and water quality) that are departed from desired conditions, as determined by *temporally and spatially appropriate data*."

NMDA requests clarification on what constitutes a "reconstructed" improvement under Livestock Grazing Standard 3 (see below). NMDA foresees a level of confusion that could arise among permittees if the USFS deems a particular range improvement in need of reconstruction rather than repair.

"Livestock Grazing Standards

3. New or *reconstructed* range improvements will be designed to prevent wildlife entrapment (for example, escape ramps in water troughs and cattle guards) and allow for wildlife passage except where specifically intended to exclude wildlife (for example, elk enclosure fence) and/or to protect human health and safety (see also Wildlife, Fish, and Plants)."

In response to Livestock Grazing Guideline 1 (see below), NMDA proposes that any existing livestock handling and watering facilities currently located in riparian management zones (RMZs) should be grandfathered in. Currently, this guideline is missing "consultation, cooperation, and coordination" with the permittee and other cooperating agencies such as local SWCDs. If these approaches are not workable, NMDA proposes that costs of any such

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modifications, relocations, or removals of existing watering facilities be absorbed by USFS since such changes would be made at the behest of USFS.

“Livestock Grazing Guideline

1. Existing livestock handling and watering facilities located in RMZs should be modified, relocated or removed where an interdisciplinary team determines they are incompatible with movement toward desired conditions for other resources. Any modification, relocation or removal of infrastructure may not impede the use of permitted water rights recognized by the State of New Mexico.”

NMDA asserts that “range infrastructure” is too broad of a class to make Livestock Grazing Guideline 7 a viable guideline (see below). For example: Pipeline is almost always buried to avoid freezing during colder months; given its location underground, it’s hard to imagine a scenario in which pipeline would present a safety or aesthetic issue. Furthermore, this guideline treats as equal human/animal safety and aesthetics, even though the latter is far more subjective. Lastly, is it possible that certain range infrastructure – say a set of wooden corrals – aged 50 years or older might qualify as an archaeological resource worth protecting? For these reasons, NMDA requests removal of this guideline.

“Livestock Grazing Guidelines

7. As part of all management activities *range infrastructure* and associated materials (including barbed and smooth wire, storage tanks, pipeline, etc.) that are no longer functioning or in excess of what was needed for maintenance, reconstruction or construction, should be removed to provide for the safety of forest visitors, wildlife, recreational and permitted livestock, and aesthetics. Such requirements should be incorporated into contracts, permits, and agreements. Forest personnel should resolve any such safety hazards identified during project or incident activities.”

NMDA is concerned that Livestock Grazing Guideline 8 (see below) could be misconstrued as an actionable item, where non-Forest Service personnel’s monitoring data would be used as the basis of a forest directive that would force a change in a permittee’s management approach. NMDA requests additional clarification on this guideline to rule out any possible misinterpretation.

“Livestock Grazing Guidelines

8. All monitoring data collected by non-Forest Service personnel that adhere to protocol identified in the plan-level monitoring implementation guide should be accepted for consideration and made available to permit holders for allotment management.”

Special Designations

Proposed Guideline 7 under Eligible Wild and Scenic Rivers states: “Domestic livestock grazing within eligible wild and scenic rivers segments should be managed to protect outstandingly remarkable values.” Currently, there is proposed federal legislation (the M.H. Dutch Salmon Greater Gila Wild and Scenic River Act) that would designate portions of the Gila and other

Mr. Adam Mendonca, Forest Supervisor
Gila National Forest Comments
April 2, 2020
Page 5

rivers as “Wild and Scenic.” The draft legislation provides for continued traditional uses such as grazing and irrigation. This proposed legislation includes language to ensure that such designation would not affect grazing permits or leases. Language in the DEIS appears to conflict with this aspect of the proposed legislation.

NMDA recommends the Turkey Creek location be excluded from potential Research Natural Area designation because of the GNF’s uncertainty about its exact location due to description conflicts between the original proposal and the GNF’s geospatial data.

Herbicide Use

NMDA supports the Proposed Action under Alternative B, which provides managers the greatest level of flexibility and broadest range of tools for noxious weeds management, fuels reduction, and restoration treatment. Alternative B has the greatest potential to improve range conditions and increase forage production.

Feral Cattle

The DP and DEIS utilize “feral cattle” and “wild cows” interchangeably to refer to unclaimed, unauthorized, and unmanaged livestock. NMDA requests uniformity in the language used to refer to such animals, given that they vary in class (age and/or sex). Accordingly, of the language used in the DP and DEIS, “feral cattle” is preferred to “wild cows.”

DEIS Volume 1 further explores the topic of feral cattle under Cumulative Effects. Given that most permittees take range and herd management seriously and keep up with infrastructure maintenance and their cattle as a matter of both short- and long-term economic stability, NMDA requests the word “some” be added where noted in the following sentence: “In the Gila NF, these populations were initially established not because fire destroyed fences, but because *some* former permittees did not keep up with maintenance or their cattle.”

Thank you for the opportunity to comment on the Draft Revised Forest Plan and Draft Environmental Impact Statement. Please feel free to contact Mr. Ryan Blickem at (575) 646-2670 with any questions regarding these comments.

Sincerely,



Jeff M. Witt

JMW/rb/ya

New Mexico Energy, Minerals and Natural Resources Department, Daniela Roth, April 6, 2020

Data Submitted (UTC 11): 4/6/2020 5:30:12 PM
First name: Daniela
Last name: Roth
Organization:
System.Data.Entity.DynamicProxies.Organization_816762DAD2F69D2F948FD803742E2AF188F4967BA
FCF869BFB089A893774B244
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Address1: 1220 S. St. Francis Drive
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Province/Region: NM
Zip/Postal Code: 87505
Country: United States
Email: daniela.roth@state.nm.us
Phone: 5054763347
Comments:

Please find my comments in the attached letter

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Cabinet Secretary

Laura McCarthy, State Forester
Forestry Division



April 6, 2020

Dear Adam Mendonca:

Thank you for providing me the opportunity to review and comment of the draft revised Gila Forest Plan and the associated Environmental Impact Statement. Please consider the following comments:

Draft Revised Forest Plan:

Page 102: The Wildlife, Fish, and Plants. This section is really focused on Wildlife, Fish, and their habitats, with little attention to native plants.

Page 108: Rare and Endemic Plant and Animal Species and Habitats. This section does not address animals and should be renamed: Rare and Endemic Plants and Habitats

Page 238: Rare and Endemic Vegetation Management Areas. These should be priority areas for inventory and population trend and threat monitoring, as well as focus areas for conservation actions, habitat improvements and vegetation treatments. Proposed protections for botanical areas are inadequate. Timber harvesting should be restricted or not be permitted. Impacts of grazing and other ground disturbing activities should be closely monitored.

Page 255: Table 7. Minimum Required Monitoring. This table is confusing, does not seem to correspond with the provided explanation, and it is not clear how questions were identified. Identifiers 2 and 4: Questions would certainly would not provide answers on the status of rare and endemic plants. Documenting the status and trend of rare and endemic plant populations over time is essential for providing management guidance and actions needed for the conservation of these vulnerable resources, especially considering the current known status of many rare plant populations impacted by wildfires. Monitoring rare plant species should be required to prevent future federal listings through proactive conservation measures implemented in response to monitoring results.

Page 281: Appendix B – Proposed and Possible Management Practices: Wildlife, Fish, Plants
This section needs to incorporate following the New Mexico Rare Plant Conservation Strategy as a guidance document and list the NM State Forestry Endangered Plant Program as a partner:

- Coordinate with the NM State Forestry Division and the NM Rare Plant Conservation Strategy regarding information, education, and knowledge gaps as they relate to promoting and improving wildlife, fish, and plant resources and management. Maintain strong partnerships between the Forest Service, State and Federal agencies, county and local governments, and

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nongovernmental organizations to accomplish conservation planning and management toward achieving desired conditions.

- Work with the NM State Forestry Division and other partners to develop conservation measures (for example, public education to reduce human impacts) to prevent listing.

Draft EIS Vol. 1

In general, the Forestry Division supports the development of Alternative 5 as the preferred alternative for the Forest Plan because it provides maximum protection for rare and endangered plants and it is the mission of the Forestry Division's Endangered Plant Program to ensure that no plant species is going extinct in the state of NM (NMAC 19.21.2).

Throughout the document at-risk species, rare and endemic species, Forester's Sensitive Species, and Species of Conservation Concern appear to be used interchangeably, yet they appear to have differing management directives. Very confusing. Please provide an explanation of the differences in definition and how they are being managed differently, if so.

It is unclear why *Erigeron scopulinus* was removed from your list of at-risk species. This species is considered rare by the New Mexico Rare Plant Technical Council, is a NM Rare Plant Conservation Strategy Species, and is listed as vulnerable by NatureServe (G3). It is significantly rarer than *Adenophyllum wrightii* and *Pedicularis angustifolia*, both of which are listed at-risk. In the absence of botanical expertise on the Gila NF, please use the NM Rare Plant Conservation Strategy Scorecard for the most up-to-date information on species considered rare and at-risk in New Mexico.

Page 219: Wright's dogweed (*Adenophyllum wrightii* var. *wrightii*). It's not clear why this is considered an at-risk species given your analysis. NatureServe ranks this variety G4T3 with occurrences in NM and AZ, as well as Chihuahua, Mexico. It is not considered rare by the NM Rare Plant Technical Council and is not a New Mexico Rare Plant Conservation Strategy species. In the absence of botanical expertise on the Gila NF, please use the NM Rare Plant Conservation Strategy Scorecard for the most up-to-date information on species considered rare and at-risk in New Mexico.

Page 223: Gila morning glory (*Ipomoea gilana*). Habitat of this species is not nearly as steep as described, is accessible to livestock (plenty of forage) and contains plenty of fine fuels to carry fire (see photos below). Known sites are located immediately adjacent to a dirt road and are therefore susceptible to impacts from the construction of fire breaks. NatureServe ranks this species critically imperiled (G1/S1).



Ipomoea gilana habitat 2018



Ipomoea gilana habitat 2018

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Page 224. Heartleaf groundsel (*Packera cordamine*)

This species is documented in decline on the Gila NF (see Roth 2018);
<http://www.emnrd.state.nm.us/SFD/ForestMgt/endangeredandrareplantreports.html>

Page 224. Mogollon mountain lousewort (*Pedicularis angustifolia*). This species is considered common and widespread and extends from NM and AZ well into Mexico. It is not considered rare by the NM Rare Plant Technical Council and is not a NM Rare Plant Conservation Strategy species. The G2 NatureServe rank was last reviewed in 1997 and clearly did not take the Mexico distribution in consideration. In the absence of botanical expertise on the Gila NF, please use the NM Rare Plant Conservation Strategy Scorecard for the most up-to-date information on species considered rare and at-risk in New Mexico.

Page 231. "Effects of probable management activities that could potentially affect plant and wildlife communities ...". Please insert.

Page 251 (also page 271). Botanical areas should also be focus areas for inventory surveys and population trend and threat monitoring of at-risk plant species and also include active management in response to findings, including prioritizing thinning and prescribed fire projects. Proposed protections for botanical areas are inadequate. Timber harvesting should be restricted or not permitted. Grazing impacts and other ground disturbing activities should be closely monitored.

Page 255. It is not clear what the difference is between the Regional Forester's Sensitive Species list and Species of Conservation Concern list. Please explain the difference. If the FS bases the inclusion on this list on population trends, it will need to collect population trend data which the FS does currently not collect for at-risk plants. Hence it is unclear how the SS species list is derived.

Page 260. Table 39. The amount of potentially suitable habitat for all sensitive plants is grossly overestimated and not even close to real. This is very misleading and represents a gross misunderstanding of habitat needs for sensitive plants. In addition, sensitive plants are known to only occupy only a fraction of suitable habitat available, anywhere. Maybe this works for animals, but definitely not for plants.

Page 270. Impacts of mechanical vegetation treatments and wildfire on sensitive plant species have not been studied and can potentially be detrimental to small endemic populations and even result in local extinctions, ultimately leading to federal listing. Hence impacts of treatments need to be closely monitored before inference is made on positive impacts. Positive impact to the ecosystem as a whole is not equivalent to positive impacts on dwindling populations of at-risk plant species. Again, perhaps a reasonable conclusion for animals, but not for plants.

Page 286. Impacts of herbicide use should be evaluated and minimized for all at-risk plant species, regardless of where they occur, not just in botanical management areas.

Page 289. Timber, forests, and botanical products. This section is almost exclusively about timber and forest products and does not address management of botanical products. How are these resources tracked and managed? How does the Forest ensure that overharvesting does not occur? How are harvest limits determined? In addition, it appears that timber harvesting is considered suitable in

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botanical management areas, which is not feasible, and will result in significant impacts to sensitive plant species without careful planning. Please clarify.

EIS Vol 2.

Page 487. Proposed Botanical Areas and Rare and Endemic Management Areas

Important Plant Areas contain a significant number of documented rare and endangered plant species, some of which only occur in the Gila NF and nowhere else in the world. Hence these areas should afford special protections, including restrictions of timber harvests and other ground disturbing activities. Impacts of grazing, thinning and prescribed burning treatments, herbicide treatments, recreation, and wildfire should be carefully monitored within Rare and Endemic Plant Management Areas. These areas should also be priority areas for increased inventory surveys, population trend monitoring and habitat restoration projects.

Please let me know if I can be of further assistance.

Sincerely,



Daniela Roth
Endangered Plant Program Coordinator

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New Mexico Environment Department, Dennis McQuillan, April 7, 2020

From: [McQuillan, Dennis, NMED](#)
To: [FS-ajalapl](#)
Subject: Gila National Forest draft EIS
Date: Tuesday, April 7, 2020 12:18:06 PM
Attachments: image001.png
2010-04-07 - OOTS NEPA review Gila National Forest draft EIS.pdf

Dear Mr. Mendonca,
Please see the attached letter.
Best wishes,
Dennis McQuillan
Chief Scientist
New Mexico Environment Department
1190 St. Francis Dr.
PO Box 5469
Santa Fe, NM 87502
505-827-2140 desk
505-660-1592 cell
dennis.mcquillan@state.nm.us
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Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

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James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

April 7, 2020

Adam Mendonca
Forest Supervisor
Gila National Forest
3005 E. Camino del Bosque
Silver City, NM 88061

Submitted by email to: SM.FS.ajalapl@usda.gov

Dear Mr. Mendonca,

The New Mexico Environment Department (NMED) has reviewed information submitted for the December 2019 **Gila National Forest draft Environmental Impact Statement** and offers the following comments. We have included regulations and requirements that apply to the project as described; however, other environmental regulations administered by NMED may apply depending on the circumstances of your project, in addition to regulations and requirements of other federal, state, tribal, county and municipal agencies.

NMED Air Quality Bureau Comments

The Air Quality Bureau (AQB) has evaluated the information submitted with respect to the above NEPA request for consultation.

The draft plan area includes the New Mexico counties of Catron, Grant, Hidalgo, and Sierra. We concur with you that those counties are in attainment with the National and New Mexico Ambient Air Quality Standards (NAAQS).

The proposed action includes the use of prescribed fires; the AQB administers the Smoke Management Program (SMP), partnering with federal and private land managers statewide to assure that fire remains a viable tool to achieve land management objectives while protecting New Mexico's air quality. The purpose of the SMP is to provide a clear and equitable regulatory basis for smoke management in New Mexico, while reducing impacts to local populations affected by smoke. Any government or nongovernment entity proposing to conduct prescribed fire activities within the jurisdiction of the AQB are subject to 20.2.65 NMAC SMOKE MANAGEMENT.

The AQB requests close coordination for any planned burns in advance of those burns and as required by regulation. Coordination with the SMP with respect to any planned or unplanned burning activities within the management area will ensure the desired conditions and objectives for air quality will be met, along with any issues associated with air quality monitoring. This coordination also assists in the issuing of timely smoke alerts and responding to citizen complaints. Potential impacts of air emissions on

Mr. Mendonca, April 7, 2020

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nearby Class I areas should be evaluated. As a result, the effects on air quality from prescribed fire would be short term and localized near the prescribed fire area.

Potential exists for temporary increases in dust and emissions from any activities that involve road construction, mechanical harvesting, earthmoving, construction equipment and other vehicles; however, the increases should not result in non-attainment of air quality standards. Dust control measures should be taken to minimize the release of particulates due to vehicular traffic and any construction or harvesting type of activities. Areas disturbed by these activities, within and adjacent to the project area should be reclaimed to avoid long-term problems with erosion and fugitive dust.

To further ensure air quality standards are met, applicable local or county regulations requiring smoke, noise and/or dust control must be followed.

With the appropriate smoke and dust control measures in place, the project is not anticipated to result in nonattainment of the New Mexico or National Ambient Air Quality Standards or contribute negatively to air quality on a long-term basis.

NMED Drinking Water Bureau Comments

Several public regulated water systems are located within the project boundary along with several others to the south that are within a Watershed that is partly within the Gila National Forest (see figure below). The proposed action would lessen the risk of uncharacteristic high-intensity wildfires. Reduction in the risk of uncharacteristic wildfires is a benefit to public drinking water quality as it reduces the risk of debris flows that can cause major damage to systems and their sources. Of direct benefit to water systems is the plan to correct and maintain water systems that t not currently have a condition rating of "good". The New Mexico Drinking Water Bureau has a positive opinion on the proposed action.

NMED Ground Water Quality Bureau Comments

Ground Water Quality Bureau (GWQB) staff reviewed the information submitted, focusing specifically on the potential effect to ground water resources in the area of the proposed project.

Implementation of the project may involve the use of heavy equipment leading to a possibility of contaminant releases associated with equipment malfunctions (e.g., fuel, hydraulic fluid, etc.). The GWQB advises all parties involved in the project to be aware of notification requirements for accidental discharges as specified at 20.5.2.1203 NMAC.

Ground and Surface Water Protection Regulations, 20.6.2 NMAC, are available at <http://www.sca.nm.gov/parts/title20/20.006.0002.html>.

NMED Petroleum Storage Tank Bureau Comments

There are active Petroleum Storage Tank Bureau (PSTB) facilities and release sites near the project area. PSTB Facilities:

Facility	Facility	Nearest	City	County	Zip	Lat	Long	Release Name
2004	ALMA CROWN OILFIELD LLC	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	ALMA CROWN OILFIELD LLC
2005	BLACK HILLS STATION 8	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 8
2006	BLACK HILLS STATION 9	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 9
2007	BLACK HILLS STATION 10	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 10
2008	BLACK HILLS STATION 11	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 11
2009	BLACK HILLS STATION 12	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 12
2010	BLACK HILLS STATION 13	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 13
2011	BLACK HILLS STATION 14	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 14
2012	BLACK HILLS STATION 15	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 15
2013	BLACK HILLS STATION 16	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 16
2014	BLACK HILLS STATION 17	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 17
2015	BLACK HILLS STATION 18	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 18
2016	BLACK HILLS STATION 19	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 19
2017	BLACK HILLS STATION 20	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 20
2018	BLACK HILLS STATION 21	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 21
2019	BLACK HILLS STATION 22	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 22
2020	BLACK HILLS STATION 23	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 23
2021	BLACK HILLS STATION 24	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 24
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2025	BLACK HILLS STATION 28	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 28
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2067	BLACK HILLS STATION 70	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 70
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2070	BLACK HILLS STATION 73	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 73
2071	BLACK HILLS STATION 74	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 74
2072	BLACK HILLS STATION 75	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 75
2073	BLACK HILLS STATION 76	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 76
2074	BLACK HILLS STATION 77	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 77
2075	BLACK HILLS STATION 78	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 78
2076	BLACK HILLS STATION 79	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 79
2077	BLACK HILLS STATION 80	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 80
2078	BLACK HILLS STATION 81	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 81
2079	BLACK HILLS STATION 82	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 82
2080	BLACK HILLS STATION 83	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 83
2081	BLACK HILLS STATION 84	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 84
2082	BLACK HILLS STATION 85	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 85
2083	BLACK HILLS STATION 86	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 86
2084	BLACK HILLS STATION 87	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 87
2085	BLACK HILLS STATION 88	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 88
2086	BLACK HILLS STATION 89	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 89
2087	BLACK HILLS STATION 90	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 90
2088	BLACK HILLS STATION 91	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 91
2089	BLACK HILLS STATION 92	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 92
2090	BLACK HILLS STATION 93	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 93
2091	BLACK HILLS STATION 94	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 94
2092	BLACK HILLS STATION 95	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 95
2093	BLACK HILLS STATION 96	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 96
2094	BLACK HILLS STATION 97	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 97
2095	BLACK HILLS STATION 98	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 98
2096	BLACK HILLS STATION 99	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 99
2097	BLACK HILLS STATION 100	1000 HWY 100	BLUENWOOD	DEUEL	89000	3	112.22	BLACK HILLS STATION 100

Mr. Mendonca, April 7, 2020

Mr. Mendonca, April 7, 2020

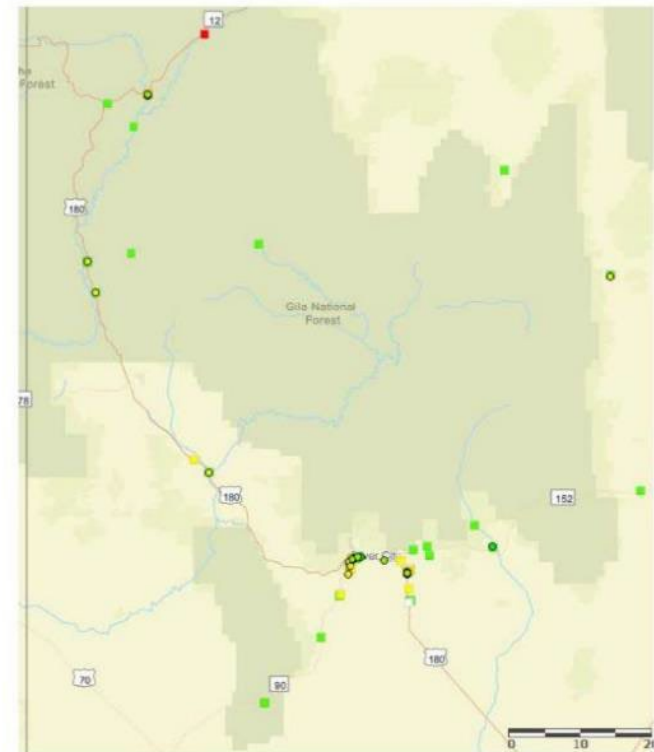
*Final Environmental Impact Statement for the Revised Forest Plan, Volume 3
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PSTB Release Sites:

GoNM – OpenEnviroMap <https://gis.web.env.nm.gov/oem/?map=gonm>

Legend:

- Leaking Underground Storage Tanks By Priority
- ☒ Leaking Underground Storage Tank Sites
- Priority
- 1 - Imminent Risk To Receptors
 - 2 - Product At Site
 - 3 - Contaminants In Groundwater
 - Not Prioritized
 - No Further Action



For information on specific release sites, refer to GoNM – OpenEnviroMap
<https://gis.web.env.nm.gov/oem/?map=gonm>

Facilities for which PSTB records show there are no longer petroleum storage tanks that PSTB regulates and where there has not been a release, are not included in these comments. There also may be tanks present or a release that PSTB does not have a record of in the database.

For further information, please consult the online resources. Many of the records requested from PSTB are

Mr. Mendonca, April 7, 2020

Mr. Mendonca, April 7, 2020

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available online and may be quickly accessed at the links provided below.

Instructions for using PSTB online resources

<https://cloud.env.nm.gov/waste/pages/view.php?ref=11708&k=58a5678159>

Storage Tank Lists of all storage tanks in the State of New Mexico that fall or fell under PSTB regulations and have been registered, whether they are still present or not.

https://www.env.nm.gov/petroleum_storage_tank/reports-and-lists/

GoNM Mapper is a Geographic Information System that shows the location of facilities and release sites in New Mexico and has extensive site information including some administrative records.

<https://gis.web.env.nm.gov/oem/?map=gonm>

If you have questions or need further information, please call PSTB at 505-476-4397.

NMED Surface Water Quality Bureau Comments

The Surface Water Quality Bureau (SWQB) Watershed Protection Section (WPS) staff has reviewed the Draft Environmental Impact Statement prepared by the Gila National Forest. There is a shared interest in improving the watershed conditions in the Gila National Forest and a strong collaborative partnership locally has developed and continues to grow between our agencies.

Non-degradation of impaired waters and Outstanding National Resource Waters (ONRWs) is of principal concern to the WPS. All projects implemented under the Forest Plan should have appropriate analysis of water quality impacts while in the planning stage of the future projects. In the Forest Plan there should be a requirement to verify compliance of projects with antidegradation provisions in the State Water Quality Standards at NMAC 20.6.4.8 (available at <https://www.env.nm.gov/surface-water-quality/wqs>). These provisions state that "existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained," no further degradation is allowed in waters that don't support their aquatic life or contact recreation designated uses, and no degradation is allowed in ONRWs. The SWQB Mapper is an interactive mapping tool which should be utilized to identify up-to-date information on impaired waters and locate ONRWs that may occur in the project area. This mapping tool is available at <https://gis.web.env.nm.gov/oem/?map=swqb>. The National Inventory of Wetlands should also be referenced in researching project areas and if necessary local staff with SWQB can provide additional mapping data of known wetland locations in most of the Forest Plan area. This data is being developed by the SWQB Wetlands Program and has not been formally released to date.

The development of new BMP's is ever changing and should be researched continually for awareness. For example, in the Forest Plan (page 158) there was reference to *heavy mechanical equipment being used to accomplish the removal of upland species which were encroaching into a riparian area, but by using this heavy equipment the removal of vegetative groundcover, compaction and rutting can occur*. BMP's have been developed to lessen those stated impacts. In this example construction mats can be used. They protect the environment you are working in from harm, alleviate project delays, protect construction equipment from damage, and are reusable. More information about construction mats or other BMPs can be found on the U.S. Army Corps of Engineers website; <https://www.nae.usace.army.mil/Portals/74/docs/regulatory/StateGeneralPermits/MA/ConstructionMatBMPs.pdf>.

The proposed Alternatives 2,3,4 &5 in the Forest Plan in the Riparian and Aquatic Ecosystem Section take into consideration the negative impacts "travel" had to riparian areas and aquatic species by limiting

Mr. Mendonca, April 7, 2020

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Sierra Soil and Water Conservation District, Travis Day, April 4, 2020

From: travis@sierraswcd.org
To: [CSalcedo](#)
Cc: [Henderson, Adam JS](#)
Subject: Sierra SWCD Gila Forest Plan Comments
Date: Wednesday, April 8, 2020 11:36:07 AM
Attachments: [Sierra SWCD Gila Comments.pdf](#)

Good Afternoon,
Please see the attached comments submitted by Sierra Soil & Water Conservation District.
Thank you,

Travis Day
Natural Resource Director
W: (575) 894-2212 x107
C: (575) 740-2290
Sierra Soil and Water Conservation District
2101 S. Broadway Street
Truth or Consequences, New Mexico 87901



Sierra Soil and Water Conservation District
2101 South Broadway - Truth or Consequences, NM 87901 - Phone (575) 894-2232 - Fax (575) 894-2165

Gila National Forest
Attn.: Plan Revision
3005 E. Camino del Bosque,
Silver City, NM 88061

April 4, 2020

To Whom it May Concern,

The Sierra Soil and Water Conservation District (Sierra SWCD), following the purpose and policy set forth by the Soil and Water Conservation Act in Section 73-20-26 to "...conserve and develop the natural resources of the state, provide for flood control, preserve wildlife, protect the tax base and promote the health, safety and general welfare of the people of New Mexico.", supports the wise use and conservation of forested lands within the district's jurisdictional boundaries.

The SSWCD submits the following comments in response to the draft Gila National Forest Revision Plan.

General Plan Comments

- Sierra SWCD recommends that within all Desired Conditions, Standards and Objectives the terms "should not" be amended to read "can be" or "may be". The amended language would give USFS personnel the opportunity to allow actions in certain cases while maintaining a positive verbiage throughout the plan versus language expressing USFS personnel the opportunity to not allow actions.
- Sierra SWCD recommends that any and all projects or decisions be in full consultation with the permittee of the allotment(s) in which the project/decision is impacting.
- Page 108
 - It is recommended that additional information be added to ensure grazing will not be impacted by the established botanical areas. The US Forest Service has the responsibility to maintain a multiple use approach and consider the local customs and cultures when making decisions. Grazing plays a key role in the local economy and culture therefore should continue to be a top priority and shall not be impacted by the establishment of botanical areas.
- Page 142 Desired Condition #5
 - Sierra SWCD appreciates the Gila NF in prioritizing efficiently conducted environmental analyses.

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Sierra Soil and Water Conservation District
2101 South Broadway - Truth or Consequences, NM 87901 - Phone (575) 894-2232 - Fax (575) 894-2165

- Page 143 Standard #4
 - Sierra SWCD recommends that the standard include consultation between the Gila National Forest and the permittee to allow the possibility of infrastructure being built within an RMZ, if no other options are available.
- Page 143 Guideline #1
 - Sierra SWCD has strong concerns with the decision to modify, relocate or remove range infrastructure solely being made by an ID team. Sierra SWCD recommends that all decision-making processes shall include the permittee. Furthermore, Sierra SWCD recommends that that "may not" be amended to "shall not". Finally, Sierra SWCD recommends that the guideline read: *Existing livestock handling and watering facilities located in RMZs may be modified, relocated or removed where and interdisciplinary team and the permittee determines they are incompatible with movement toward desired conditions for other resources. Any modification, relocation or removal of infrastructure shall not impede the use of permitted water rights recognized by the State of New Mexico.*
- Page 144 Guideline #7
 - Sierra SWCD has concerns with the removal of range infrastructure. The removal of range infrastructure eliminates the possibility of future utilization of the pasture in which the range infrastructure is located. Furthermore, Sierra SWCD recommends stricter oversight of range infrastructure maintenance on allotments that have non-use permits.
- Page 144 Guideline #8
 - Sierra SWCD appreciates the sharing of monitoring data with permittees.
- Page 172 Desired Condition #5
 - Sierra SWCD recommends that included within the desired conditions it shall state that public comment will be taken prior to the closure of roads to determine whether it is unneeded.
- Page 191. Trails. Objectives. Restoring only one mile of trail per year due to fire damage is unacceptable. For example, the Continental Divide National Scenic Trail in the Aldo Leopold Wilderness alone was extensively damaged in the 2013 Silver Fire and is presently difficult to locate and in many places impassable due to erosion and downfall. Approximately 20 + miles of the CDNST are affected and it is the primary trail for wilderness use. Peripheral trails in the Aldo Leopold Wilderness on both sides of the Continental Divide have likewise deteriorated due to fire and neglect and are in serious need of maintenance and reconstruction. We have a serious concern that not enough budget nor manpower is being dedicated to trails maintenance and/or reconstruction.
- Page 246. Table 4 exhibits only 10% (352,922 acres) of Gila Forest designated as suitable timber area but another 683,090 acres in "May Be Suitable". That appears to be dogmatic and "wishy-washy". If the area grows an appropriate volume (90 cubic feet/year or more) of timber and is accessible (less than 40% slope), why is it not in the suitable area?
- Page 364. Trails. States that differences in trails between proposed wilderness areas and non-wilderness would be "un-affected." The difference in maintenance with motorized




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- equipment and manual tools is huge in the terms of output and labor necessary to accomplish maintenance or reconstruction. Anyone who thinks otherwise most likely has never been on the working side of either a chainsaw or a two man crosscut saw (known as a "misery whip" for good reason).
- Sierra SWCD recommends the USFS look into the opportunity to allow permittees to maintain roads within their allotment.

B10- Aldo Leopold Addition Northeast

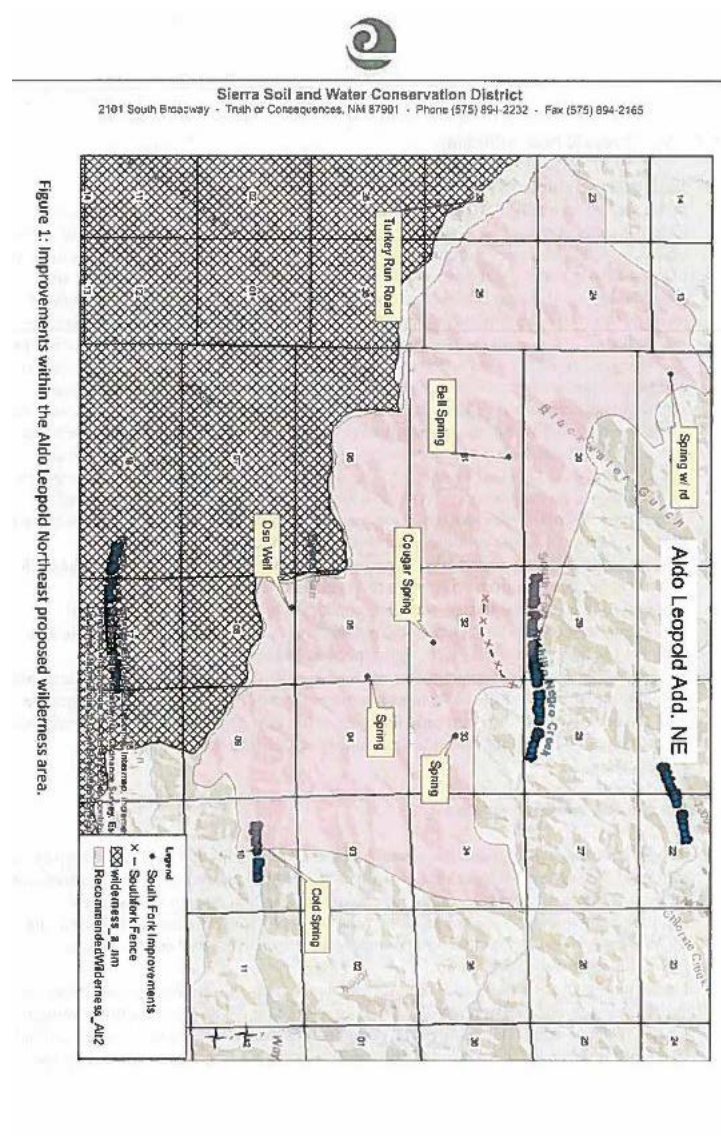
- The proposed Aldo Leopold Addition NE wilderness area (Alt. 2) currently includes numerous man-made, significantly noticeable improvements as well as currently planned significantly noticeable improvements that have **APPROVED** funding from the Natural Resource Conservation Service (NRCS) through the Environmental Quality Incentives Program (EQIP). The addition of these areas for wilderness recommendation puts a strain on the permittee's ability to install the improvements forcing modifications and possible return of funds to NRCS (See Figure 1). These improvements include the following:
 - **Cold Spring**
 - Located in T12S R9W Section 10
 - It is planned to install a 5000-gallon black poly storage tank and a 6' tire trough
 - **Cougar Spring**
 - Located in T11S R9W Section 32
 - This location currently includes an above ground HDPE pipeline and a steel rim drinker
 - It is planned to install 851' HDPE pipeline, 2500-gallon black poly storage tank and a 6' tire trough
 - Funding is approved to construct a fence using white top tee posts that are highly reflective and not of natural coloration is planned to run through T11S R9W section 32 to a natural boundary that runs through the entirety of the proposed area.
 - The lodge tank trick tank located in the Northwest corner of section 24 will be replaced with a new turkey drinker and a 5000-gallon black poly tank.
- Oso well is included in the proposed wilderness area. Despite not having currently planned improvements, the inclusion of this area for wilderness recommendation puts a great hindrance on permittee's ability to utilize the well for future conservation projects.
- The Wilderness Act of 1964 states the following "A wilderness, ...are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions..." The above current improvements and planned improvements exhibit how the landscape has or will have been trammelled by man resulting in the lack of primeval character and mitigate the natural conditions of the landscape.



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- There are numerous springs throughout the proposed areas that are necessary for the permittees to access including a spring in section 19 that has a road that runs to it. Furthermore, chainsaws are required to be used to access the springs and inclusion of wilderness recommendation will not allow permittees to utilize chainsaws essentially preventing spring access. (See Figure 1)
- The road running through turkey run draw sees high usage and splits existing wilderness from the proposed recommended area. Under section 2(C) of the Wilderness act, it states "... has outstanding opportunities for solitude or a primitive and unconfined type of recreation." The close proximity and noise disturbance from the mentioned road which sees high traffic use, reduces user's opportunity for solitude. Additional roads are included within the proposed area including roads that run from Cold Springs to Oso Well and from the northern adjacent private property to Cougar Spring.
- Despite Mexican Spotted Owl PACS, the proposed area does not contain any significant scientific, educational, scenic, or historical value. The PACs can be managed without wilderness recommendation.
- Due to the high amount of significantly noticeable improvements that remove the primeval conditions of the landscape, minimal amount of opportunity for solitude, and lack of area significance, Sierra SWCD requests that B10- Aldo Leopold Addition Northeast be removed from consideration for wilderness recommendation.

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B1A-C- Aldo Leopold Seco Additions

- Within the December 2019: *Draft Evaluation of Lands Inventoried for Potential Wilderness Characteristics*, under criterion 3 section (c), it states that prevalence of improvements may impose limitations on the apparent naturalness of the area and further on explains the presence of mining activity and range improvements. The Wilderness Act of 1964 clearly states the following *"A wilderness, ...are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions..."* The presence of mining activity and range improvements clearly show significantly noticeable man-made permanent improvements are located within the proposed areas. Lastly, the document also states that roads can be found within the proposed area. Under section 4(C) of the Wilderness Act, it states *"...there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act... no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area."* Motorized vehicles have the capability to utilize this road violating conditions set forth by the Wilderness Act of 1964 for wilderness designation. Sierra SWCD recommends that the areas listed within the draft document be removed from wilderness recommendation inclusion.
- The proposed eastern boundary of the recommended area does not follow natural topography and creates an unnatural transition from the adjacent managed private and state land to the unmanaged newly recommended wilderness.
- Sierra SWCD has strong concerns that the inclusion of the proposed wilderness area will virtually incorporate the entire Animas allotment for wilderness. The current permittee will not be affected as they currently have a non-use agreement however recommendation for wilderness will greatly hinder the possibility of utilizing the allotment for management.

B11- Aldo Leopold Addition Southeast

- The B11 proposed wilderness has a road that travels north through the B11 polygon to a trail head. See figure 2. Under section 4(C) of the Wilderness Act, it states *"...there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act... no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area."*
- Under section 2(c) of the Wilderness Act it states *"... has outstanding opportunities for solitude or a primitive and unconfined type of recreation."* The road that runs through Cave Creek and adjacent to entire B11 polygon decreases the opportunity to feel solitude in the proposed area. This road sees high traffic during hunting season and use by the



Sierra Soil and Water Conservation District
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- permittee. The established buffer distance between the road and the proposed area will not mitigate or eliminate the noise disturbance.
- The Wilderness Act of 1964 states the following *"A wilderness, ...are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions..."* The AL Addition SE proposed area does include a couple man-made, significantly noticeable improvements. These improvements include a steel drinker located at slim spring, a steel drinker at pigeon spring and CK stump hole tank. Each water source will require future maintenance. Furthermore, the inclusion of this wilderness area will put a strain on the permittee (requires use of chainsaw to access infrastructure) who is required to maintain all range infrastructure. See figure 2.
 - The proposed eastern boundary of the recommended area does not follow natural topography and creates an unnatural transition from the adjacent managed private and state land to the unmanaged newly recommended wilderness. Following the current boundary may adversely affect the adjacent private property in a wildfire event due to the lack of management opportunities resulting from the wilderness recommendation.
 - The permittees of the Kingston Allotment are currently planning projects to be funded by the Natural Resource Conservation Service (NRCS) Environmental Quality Incentives Program (EQIP) (in discussion with the Black Range District staff) throughout the allotment. The inclusion of wilderness areas within their allotment may pose a hindrance in the installment of planned improvements.
 - Due to the existing road within the proposed area, low opportunity for solitude, high number of man-made improvements that require maintenance from the permittee, the unnatural boundaries and the impact that the inclusion will put on the permittee, Sierra SWCD recommends that the B11 Aldo Leopold Addition SE not be further considered for wilderness recommendation.

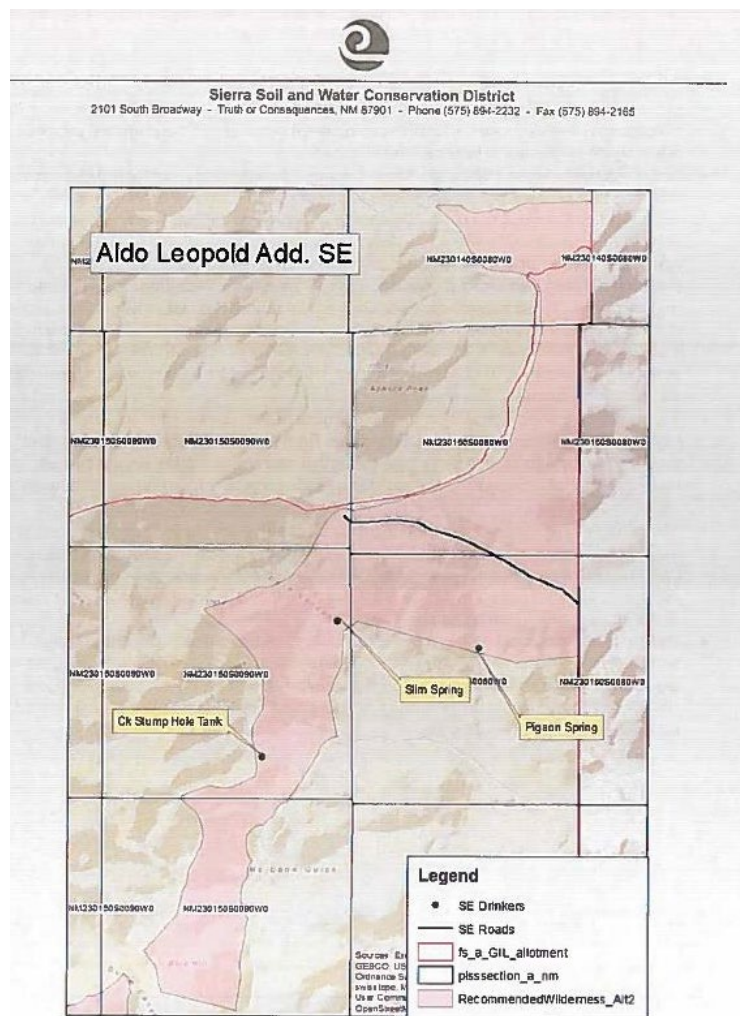


Figure 2: Improvements within the Aldo Leopold Southwest proposed wilderness area.

Sierra Soil and Water Conservation District
2101 South Broadway - Truth or Consequences, NM 87901 - Phone (575) 894-2232 - Fax (575) 894-2165

WSB1- Rabb Park

- The southern boundary of the Rabb Park proposed wilderness area is approximately 350 ft from NM Highway 152. Under section 2(C) of the Wilderness act, it states "... has outstanding opportunities for solitude or a primitive and unconfined type of recreation." The close proximity and noise disturbance from NM Highway 152 which sees high traffic use, reduces user's opportunity for solitude.
- The Wilderness Act of 1964 states the following "A wilderness, ...are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions..." The Rabb Park proposed area does include man-made, significantly noticeable improvements. These improvements that reduce the apparent naturalness of the area include, a cement and metal drinker located south of Hillsboro Peak and a metal drinker and corral located at East Railroad Spring. Hillsboro Peak is also included within the proposed area and includes a cabin and tower. See figure 3.
- Allotment boundary fences are located throughout the entirety of the WSB1 proposed area. These fences are constructed using either white-top or orange T-posts that do not follow coloration of the natural landscape and are significantly noticeable when hiking through the area. These fences are not only permeant but also exhibit that man has trameled in this area violating the definition of wilderness according the Wilderness Act of 1964. Furthermore, permittees require the use of chainsaws to maintain the fences as required by their grazing permit. The inclusion of the area for wilderness will put a strain on the permittee's ability to meet the requirements for infrastructure maintenance set forth in their grazing permit. See figure 3.
- The permittees of the Kingston Allotment are currently planning projects to be funded by the Natural Resource Conservation Service (NRCS) Environmental Quality Incentives Program (EQIP) (in discussion with the Black Range District staff) throughout the allotment. The inclusion of wilderness areas within their allotment may pose a hindrance in the installment of planned improvements.
- Rabb Park proposed area includes permanent, significantly noticeable improvements and the low opportunity for solitude due to high traffic use on roads surrounding the eastern portion of the proposed area. It is for these reasons and the impact of the inclusion on permittees that Sierra SWCD requests that the eastern portion within the Kingston Allotment be removed from further consideration during the wilderness recommendation process.



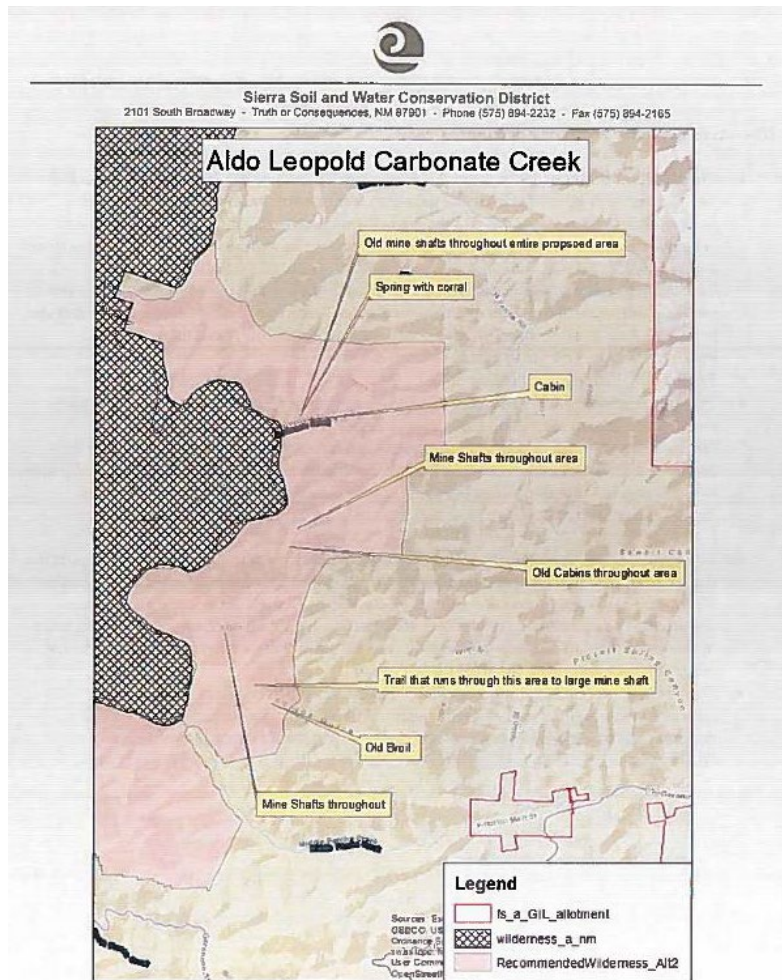



Figure 4: Improvements within the Aldo Leopold Carbonate Creek proposed wilderness area.

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Sierra Soil and Water Conservation District
2101 South Broadway - Truth or Consequences, NM 87901 - Phone (575) 894-2232 - Fax (575) 894-2165

We thank you for the opportunity to provide comments on the Gila National Forest Revision Plan.

Sincerely,

Travis Day

Travis Day
Natural Resource Director
Sierra Soil and Water Conservation District

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Environmental Protection Agency, Arturo J. Blanco, April 9, 2020



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270-2102

April 9, 2020

From: [Price, Kimoka](#)
To: [PS albuquerque, Shaw, Adam - PS; Northrup, Jerry M. PS; Williams, Shelia - PS](#)
Cc: [Price, Kimoka; Houston, Robert](#)
Subject: Gila National Forest Draft Revised Forest Plan - EPA's Detailed Comment Letter
Date: Monday, April 13, 2020 6:30:57 AM
Attachments: GFO Fin 20200008.pdf

As with the rest of the federal government, EPA is under maximum telework status across the nation in an effort to support COVID-19 prevention actions. Accordingly, the NEPA 309 program will be sending correspondence electronically to agencies under electronic signature. Please find attached the electronic version of the Comment Letter for the Gila National Forest Draft Revised Forest Plan.

If there are questions or if the electronic signature/document does not meet your federal agency requirements, please let me know.

Kimoka Price, Environmental Engineer/NEPA Project Manager
Office of Regional Administrator - Communities, Tribes and Env. Assessment (6RA-C)
National Environmental Policy Act (NEPA) Program
U.S. Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500
Dallas, Texas
75270
(214)665-7438
price.kimoka@epa.gov

Mr. Adam Mendonca, Forest Supervisor
U.S. Forest Service
3005 E. Camino del Bosque
Silver City, NM 88061

Dear Mr. Mendonca:

Pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500 – 1508), and our NEPA review authority under Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (EIS) for the revision of the Gila National Forest Draft Revised Forest Plan (CEQ No. 20200008).

The U.S. Forest Service proposes to revise the 1986 Gila National Forest Plan, as amended, which covers approximately 3.3 million acres located in Catron, Grant, Hidalgo and Sierra Counties, New Mexico. The Draft EIS documents analysis of impacts for five alternatives for the programmatic management of the Gila National Forest.

The Draft EIS states the "Federal Clean Water Act is administered by the EPA, although the EPA delegates many functions to the Army Corps of Engineers and state governments." For clarification purposes, the Army Corps of Engineers administers the Dredge or Fill Discharge Permit Program. In the case of National Pollutant Discharge Effluent System Program under Section 402 of the Clean Water Act, the state may be delegated permitting authority. Corresponding regulatory websites can be located at: <https://www.epa.gov/laws-regulations/summary-clean-water-act>.

The Draft EIS discusses Tribal consultation and coordination pursuant to Executive Order 13175. Further, it states that there will also be multiple community meetings following the release of the Draft EIS. As such, Tribal consultation and coordination should continue as appropriate.

Also, the Draft EIS identifies the Forest Service will comply with State's Smoke Management Program. The discussion should also include related criteria and hazardous air pollutants emissions and any impacts to air quality and visibility for any Class I Federal Areas identified in 40 CFR Part 81, Subpart D.

With the programmatic management of the Gila National Forest, the Draft EIS discusses that mitigation plan(s) will be developed and implemented to minimize impacts. We look forward to

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reviewing any NEPA documents tiering from the Draft EIS and Final EIS, including commitments to mitigation of adverse impacts.

EPA appreciates the opportunity to review the Draft EIS and is available to discuss our recommendations. If you have any questions, please contact Kimeka Price of my staff at (214) 665-7438 or by e-mail at price.kimeka@epa.gov.

Sincerely,

Arturo J. Blanco
Director
Office of Communities, Tribes and
Environmental Assessment

Final Environmental Impact Statement for the Revised Forest Plan, Volume 3
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Grant Soil Water Conservation District, John Merino, March 16, 2020

Data Submitted (UTC 11): 3/17/2020 9:27:07 PM
First name: John
Last name: Merino
Organization:
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FCF869BFB089A893774B244
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Comments:

GRANT SOIL WATER CONSERVATION DISTRICT

March 16, 2020

Adam Mendonca
Forest Supervisor
ATTN: Plan Revision Team
Gila National Forest
3005 E. Camino del Bosque
Silver City, NM 88061

Subject:

Comments for the Draft Revised Gila National Forest Plan.

Dear Forest Supervisor, Mendonca

Introduction:

The Grant Soil and Water Conservation District (GSWCD) Board of Supervisors respectfully request your review and consideration of our comments pertaining to the Draft Revised Forest Plan EIS and Revised Gila National Forest Plan (Draft Plan). The GSWCD, while having reviewed the Draft EIS, is focusing most of their comments on the Draft Plan. The GSWCD is not interested in spending much time or effort in debating the Gila National Forest (GNF) on how they went about analyzing the effects of their proposed action and alternatives to the proposed action. Rather we feel it much more beneficial to focus on what potentially will constitute the future management of the GNF.

We do want to support the GNF in their efforts to propose, analyze and hopefully implement an herbicide use program on the GNF. It has been our experience that herbicides can be a very effective, efficient and safe tool for managing unwanted vegetation if their use is closely and properly managed.

Background Information:

There has recently been a misunderstanding and debate as to the role the GSWCD plays in the management of natural resources in Grant County. First, we want to make it clear that the GSWCD is not a political advocacy group nor a non-governmental organization that is in the business of swaying public opinion concerning land use philosophies. The GSWCD does not consider itself as a player in the ongoing politically driven environmental and land management philosophical debates. The mission of the GSWCD is as follows:

Grant Soil & Water Conservation District is committed to sustainable conservation through leadership, education, planning and implementation of environmentally sound projects to ensure the long-term productivity and responsible management of Grant County's natural resources.

The GSWCD is an independent subdivision of New Mexico State Government which is under the direction of the New Mexico Soil and Water Conservation Commission. The GSWCD Board of Supervisors are duly elected representatives of the local citizens in Grant County.

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As with all of the Soil and Water Conservation Districts in the United States, and as is reflected in the above GSWCD mission statement, the GSWCD is focused on the **sustainable conservation of natural resources**. Also, as is common to all of the Soil and Water Conservation Districts in the United States, the GSWCD has close ties with the USDA Natural Resource Conservation Service as well as the nation's Land Grant Universities, who for years have been the leaders in natural resource conservation and agriculture/rural land management research. The GSWCD works closely with the NM Department of Agriculture, NM State Forester's Office, Grant County Board of Supervisors, NMSU Extension Service, NMSU Range Improvement Task Force, Southwest New Mexico Cooperative Weed Management Board, the various local schools and a host of other entities that have concerns for the conservation of natural resources.

The GSWCD feels it has a lot it can bring to the table when addressing the future management of the Gila National Forest.

General Comments:

Even though it appears that the planning team attempted to make the information presented in the Draft EIS and Draft Plan understandable to the general public, it is obvious when reviewing these documents that most users of the GNF will have a hard time understanding much of what is presented in these documents. The entire record for this planning process is so filled with agency jargon and the latest politically correct terminology that only a few experienced ecologists and highly specialized resource managers could ever decipher what is meant by much of the information presented. It is doubtful that even the majority of Forest Service employees that work on the GNF could explain the meaning of much of the terminology that is used.

It is clear when looking at Figure 1, the Forest Service once knew that the agency was created to provide for the public and could communicate the Forest Service's mission to the public very well. When reviewing the Draft EIS and revised Draft Plan it is not clear what the agency is looking to communicate and accomplish other than making their planning documents idealistic and politically correct.

The Draft EIS and Draft Plan are loaded with idealistic, politically correct and often judgmental language such as shown in the following examples:

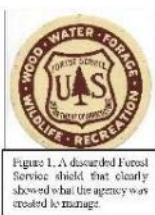


Figure 1. A discarded Forest Service shield that clearly showed what the agency was created to manage.

"Historic range of variability"
"Natural ecological processes"
"Biotic connectivity"
"Fire regime condition class"

"Ecological Response Unit"
"Fire adapted ecosystems"
"Departure from reference conditions"
"Ecosystem sustainability"

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While the use of these and hundreds of other intellectually impressive statements in the Draft EIS and Draft Plan may indicate the high level of education of the authors of these documents, this kind of impressive sounding language does not translate easily into defining clear and concise management direction for the GNF.

It was not that long ago that forest and rangeland conditions (now called health) were measured in the terms of current and sustainable production of wood and forage. Watershed condition was measured in the terms of ground cover, erosion (soil loss) and the flow of usable clean water in the streams. Wildlife populations and their habitat conditions were measured by recording the species present and their population trends. Recreation values were measured by the number of people who actually came to and used the National Forest lands along with a measure of what they preferred to do when visiting their National Forest.

The measurable things that once were important for determining how National Forest lands were to be cared for and managed have become secondary to an effort to change the vegetation and other characteristic of the National Forest lands back to what is imagined they looked like and supported prior to settlement by European man. This imagined "*Potential*", which is based upon having no interference by man and his activities, has led to a strong protectionism philosophy.

While it is not directly said in the Draft EIS and Draft Plan, when looking at the overall management direction found in these documents, it is easy to get the feeling that if the public would not harvest and consume forest products and would engage in only "*Light on the Land/Leave No Trace*" recreation activities, the "*desired and potential*" conditions ("*ecosystem health*") of the GNF could be achieved. Overstocked forest stands would be naturally thinned by wildfire, only low levels of natural erosion would occur, nature would create and properly distribute all necessary wildlife habitat so no species would decline below viable population levels, and ample quantities of clean unpolluted water would flow year around in the Forest streams.

Providing for human needs (versus fulfilling emotional feelings and desires) has in the past been proven to be successful and was what made the Forest Service one of the most prestigious and respected land management agencies to have ever existed. It was not until National Forest management started to be driven by emotions, litigation and politics that forest health started to decline and the public lost faith in the Forest Service's ability to manage the National Forest System Lands.

Revised Draft GNF Forest Plan Issues:

The following issues, along with the GSWCD's concerns, all pertain to the Revised Draft Plan. The GSWCD is not interested in commenting on, nor trying to influence the process used by the GNF to develop the Draft Plan. How well the Planning Team followed the NEPA process is not the primary concern of the GSWCD. The future **sustainable conservation of natural resources** on the GNF is the focus of the following comments.

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Issues Statement 1: *In the description of "Traditional Uses" as found on pages 4 and 5 of the Draft Plan, the very important downstream use of water coming from the lands that make up the GNF is not recognized.*

Concern: While not a major issue, the downstream supply of water coming from the mountainous terrain that now makes up the GNF played a critical role in the early settlement of Southwest New Mexico and Southern Arizona. The waters that historically flowed in the Gila River greatly influenced the settlement of the area that makes up Southwest New Mexico and Southern Arizona, and today Gila River water supports many of the people that currently inhabit the arid Southwest.

Requested Action: It is suggested that the historical importance of the Gila River and the supply of water it has provided for hundreds of miles downstream be recognized. Much of this water originates on the GNF.

Issue Statement 2: *Although other restoration methods support the traditional uses of the national forest and are an important part of the vision for the future, fire has been and will remain the primary restoration tool. (Second to last sentence, first paragraph, page 7)*

Concerns: Fire has only recently become the primary restoration tool on the GNF. Using fire as a restoration tool only came to be the primary treatment for restoration when the watershed and timber management programs on the GNF were devastated by litigation. In the past, outside funding sources and the use of timber sale receipts funded a large portion of the GNF fuels management, timber stand management and other vegetation/watershed restoration projects.

In the past, the primary use of fires on the GNF has been to treat the slash generated by fuelwood harvesting, timber harvesting and thinning practices. It has not been that long that the use of fire has been considered to be a significant watershed/vegetation treatment technique on the GNF. A lot of watershed/vegetation treatment burns have been tried on the GNF in the last 30 years. There have been many failures, along with a few successful burns, that actually accomplished the prescribed management object of the burn treatment over the years. Making the area black and void of organic materials may be a fuels management object but seldom does it meet watershed/vegetation management objects.

In the past, much of the fine fuels and smaller organic materials located on the soil surface were left to be incorporated into the soil. These "fuels" were left to be decomposed by micro-organisms, where the resulting broken-down lignin and cellulose carbon-based molecules became incorporated into the soil as valuable plant nutrients. The microbe decomposed "fuels" provided critical carbon-based soil organic material that is an important link in the "Carbon Cycle" which is key to all plant growth.

In the past, the surface layers of organic material were not indiscriminately consumed using fire unless the surface layers of organic materials were considered to be excessive. They were left and treated as a key component of natural processes.

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Requested Action: It is requested that a variety of management techniques for restoration of vegetation be kept on equal footing with the use of fire and not branded as too expensive or too hard to accomplish; thus, not considered or used.

Issue Statement 3: *The Gila does not compete well for funding for more expensive mechanical treatments, because of its remoteness and the area's low population density. The funding necessary to mechanically treat large acreages tends to go to national forests close to urban areas and the designated municipal watersheds those large population centers depend on. (first and second sentences, second paragraph, page 7)*

Concerns: In the past a major portion of mechanical treatments were funded from outside funding sources such as the sale of timber, forage and other forest products or the treatments were actually accomplished by the work that provided these products to the public. Even many recreation activities and special uses of National Forest Systems lands once returned funds that could be used to enhance conditions on National Forest Systems lands. The LWCF fund, that is now almost entirely used for the purchase of more land to be incorporated into the federal system, was once a valuable source for "Land and Water Conservation Funds".

In the past, depending entirely on "Congressional" appropriated funding derived from taxes was never a major funding source for mechanical treatment or for fuel reduction on the GNF. "KV" and "Brush Disposal" funds were collected from the revenues derived from the sale of the timber and/or forest products. These funds were the primary source of funding for both "fuels management" and "watershed/vegetation treatments" on hundreds of acres on the GNF each year. These laws allowed the collection and use of funds for land treatments and are still in effect. The problem is the harvesting and use of forest products from the GNF isn't. There should be an effort put forth in the Revised GNF Plan to, once again, harvest forest products on the GNF instead of planning to make fire the primary treatment tool where these forest products are converted into carbon dioxide and spewed into the atmosphere.

It is true that competing for funding for land treatment projects on National Forest System lands has become a political exercise. The Bush administration tried to deal with this situation when it developed and implemented the "Healthy Forest" initiative where "fuels" treatment in the wildland urban interface (WUI) became the priority for funding.

While the GNF has focused some of its "fuels" treatment work towards the WUI areas, it does not appear that the GNF has done a very good job tying fuels treatment with watershed/vegetation treatment and then finding opportunities to accomplish these multiple benefit projects in the high priority WUI areas. Multi-function treatment projects in high priority WUI areas need to be identified through a multi-agency coordination effort to be competitive in today's political environment. The GNF needs to become better at working with cooperating agencies and all types of forest users' groups if it wants to become competitive for funding.

The GSWCD has for years worked with the NM State Forester's Office, the NM State Land Office and the BLM to implement their WUI treatment programs on lands of mixed ownership in Grant County. The GSWCD has also been significantly involved with two very successful non-Forest Service funded watershed projects that involved National Forest System lands. (Mangas and Burro Cienega Watershed projects). Both of these projects resulted in a significant amount of expensive mechanical treatments being successfully completed.

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The Mangas Watershed project also involved a considerable amount of burning in the piñon/juniper woodland vegetative community in the Burro Mountains. While not all of the attempted burns were successful, several were very successful, and much was learned about the techniques needed to successfully burn in this vegetative community on the GNF.

It is somewhat discerning to hear that because of current limited funding opportunities, the GNF is looking to focus the use of fire for most future fuels and watershed/vegetation treatments on the GNF. It is hoped that the current situation on the GNF does not continue into the future. The current situation where the GNF tends to burn the same areas every few years while avoiding areas that have a much higher need for treatment needs to end. There are many areas on the GNF such as the Bear Creek/Pinos Altos area north of Silver City that could be very competitive for funding through Forest Service grant opportunities and multiple outside funding sources.

Requested Action: The GNF needs to look into improving their efforts for multi-agency/multi-landownership planning and implementation of land treatment projects, especially in the WUI areas. The GNF needs to look into taking advantage of the multiple land treatment funding sources that are available through cooperative planning and implementation efforts. (i.e. Community Wildfire Protection Plans, Multi-agency/Multi-land ownership Watershed Plans). The GNF also needs to become more competitive in capturing targeted project dollars by building a record of successfully completing a variety of projects using a variety of treatment techniques in a variety of situations.

Promoting and depending on the use of fire as the primary land treatment technique on the GNF will only make it harder to get funding for mechanical treatment projects in the future. As explained above mechanical treatment projects are often the most appropriate method to restore and/or enhance National Forest System lands.

Issue Statement 4: *From an ecological standpoint, fire is the primary restoration tool because the Gila landscape evolved with frequent fire. It is a natural ecological process that helped shape the national forest's plant and animal communities, watersheds, and hydrology before the fire suppression era began. But now, because the lack of fire on the landscape has contributed to higher tree densities, restoration with fire is like surgery with a chainsaw, trade-offs abound, and it is all about water. (The last three sentences, second paragraph, page 7)*

Concerns: The landscapes that makeup the GNF may have evolved with fire, and in the past these landscapes may have been dominated with plant communities, soil conditions, watershed conditions and ecosystems that were indicative of periodic fires burning through the area. The one thing that is not clearly stated in the above issue statement is that all of this "natural ecological process" took place prior to man greatly influencing the landscapes that make up the GNF. Much more than just an era of fire suppression has occurred on the GNF since the "frequent fire" days.

During the late 1800's and early 1900's thousands of sheep, goats and domestic pigs, along with thousands of cattle and hundreds of horses and mules grazed the landscapes that make up the GNF. Thousands, if not millions, of cords of wood were cut to provide fuel for the local people who were moving into the area. Fuel for wood stoves, steam engines and heating fires as well as timbers for the mines and the railroad all came from the landscapes that make up today's GNF. This exploitation of the "natural" landscapes soon made these landscapes **not so natural** and greatly changed their ability to ever return to the condition that once existed.

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It is going to take a substantial effort by man and not just the return to the desired previous "natural ecological process" and "frequent fire" to return these landscapes into what they were prior to the late 1800's. Man's routinely burning the current landscapes of the GNF will most likely send the "natural ecological process" in an entirely new and unknown direction, just as occurred in the late 1800's and early 1900's exploitation of the resources caused the GNF landscapes to be in the condition we are dealing with today.

Nature is not always a friend of man. It may be noble to want to go back to the "natural" landscapes that are thought to have once occurred; and allow "nature" to manage the GNF the way it is believed to have occurred years ago, but the reality is the landscapes that make up GNF need to be managed as they occur today with man's past influences being the reality.

It is true that many acres on the GNF are dominated by dense stands of trees and shrubs. It is also true many of these stands, due to their age, are becoming decadent and much more prone to burn especially during drier years. It is also true, as stated above, "restoration with fire is like surgery with a chainsaw..." With all of this said, using fire as the primary tool for treating the current fuel load and the degraded soil and watershed conditions on the GNF makes about as much sense as burning your house down so you won't have to worry about your house burning down.

Requested Action: Do not depend on the use of fire as the primary tool for landscape restoration on the GNF. The recent large and very destructive fires on the GNF show that fire is not a controlled method for treating landscapes and fire often results in negatively and severely altering the landscapes that were to be treated.

While fire can be used to reduce fuels at the landscape scale at a much lower cost, fire needs to be considered as the hammer in the restoration toolbox. Fire can be a restoration tool, but like using a hammer, things can go wrong quickly, and unintended irreversible damage is often the result.

Issue Statement 5: *Past and current management actions, inactions, and a changing climate have contributed to ecosystem and watershed departure from what is known about the historic range of variability. For example, past fire suppression and historic overgrazing contributed to altered fire regimes and other ecological processes. Legacy issues associated with past management remain evident in many places. These issues include woody vegetation encroachment into grasslands, infill of forest and woodland openings, increased tree densities within forest and woodland patches, altered distributions of vegetation structural states and species composition, and impaired soil conditions. (Last paragraph on page 7)*

Concern: As stated in the above issue statement, on many acres of the GNF the current soil, watershed and vegetative conditions are very different than the desired conditions described in the plan and are totally outside of what is described as the historic range of variability. Many areas no longer have the soil structure, depth, nutrients and water holding capability to ever return to be within the defined range of variability or what is believed to be the desired natural state. Deep gullies exist that lower the water table in the once highly productive valley bottoms. Many hillsides that once supported stands of perennial grasses are now rocky, shrub and tree covered slopes. While the GNF draft revised plan recognizes this situation, it is unclear how this situation will be addressed in the future.

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Requested Action: It is suggested the GNF revised plan recognizes that many highly degraded acres on the GNF will never return to a condition that is within their once historic range of variability and that these areas can at least be managed to provide resources that are beneficial to man. It is hoped the rocky tree covered slopes can continue to provide a source of fuelwood for the public and the valley bottoms that are dissected by deep eroding gullies can be treated; and while they will never return to be a wetland, they can be managed to produce forage for livestock and wildlife.

Issue Statement 6: *Past fire suppression, historic overgrazing, and other activities have disrupted many natural processes, such as wildfire and natural vegetation succession. (First sentence in the Ecological Changes section found on page 9)*

Concern: Just about everyone will concede that historic overgrazing and other activities that occurred during the settlement/homestead era (late 1880's early 1900's) disrupted many natural processes such as natural vegetation succession on the GNF. The lumping of fire suppression into the same category of a disruptor of natural processes as what occurred in the late 1880's on the landscapes that make up the GNF is very misleading and more of a politically correct theory than fact based.

It is also difficult to understand how "wildfire" is a **desired** natural process for the GNF when it impedes and often destroys "natural vegetation succession". Natural vegetation succession results in dynamic and diverse plant communities, healthy and functioning ecosystems, functioning watersheds and highly productive soils that are the desired natural functions valued by man and called for in the Draft Plan.

Just because fire is causing the disturbance, it does not mean the resulting impacts are beneficial or natural. Not all fires burn with the same intensity and both managed-fires and wildfires can have a wide range of impacts on natural vegetation succession, especially when the landscapes that are burned are not in a natural state when a fire occurs.

Under the current man-induced unnatural setting of overstocked forest, and the heavy accumulations of fuels; recent extremely intense, super-hot, wildfires have had an unnatural and severe impact on large blocks of the GNF. Along with these recent man-induced extremely intense, super-hot wildfires, which have impacted large blocks of the GNF, many previous man-induced ecosystems that are not within their natural range of variability currently exist and are the reality that the future management of the GNF needs to address.

In time it will be recognized that these unnatural and severe impacts have not only altered the natural vegetative communities, but also have altered the desired soil and watershed functions on thousands of acres of the GNF. The use of fire as the primary treatment tool on the GNF under most circumstances will only further interfere with the natural carbon and water cycles that healthy ecosystems depend upon to exist.

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The adverse impacts of fire are nothing new and have been documented for many years. Unlike the impacts of improper logging, grazing and other man-induced disturbances, fire can and has historically altered entire landscapes in just a few hours or days.

Requested Action: Rewrite the statement identified in issue 6 to make it clear that wildfires burning under unnatural conditions can and have resulted in unnatural impacts that are way beyond the historic range of natural variability.

Issue Statement 7: *To effectively manage to achieve desired conditions of a forest resource, project planners and decision-makers must ensure that they use the entire plan and not just the forest plan components listed for that resource. Effective integrated resource management recognizes the interdependence of ecological, social, cultural, and economic resources. (Second paragraph on page 16)*

Concern: The GSWCD strongly agrees with this statement and hopes it will be a driving force in the future management of the GNF.

Requested Action: No change to the draft plan is required.

Issue Statement 8: *The previous discussion about landscape scale heterogeneity and plan content for vegetation and fire management can support resilient watersheds, although careful consideration of disturbance type, frequency, magnitude and intensity or severity will be required to maintain a balanced approach. (Third sentence of the third paragraph page 20)*

Concern: The GSWCD agrees that careful consideration of disturbance type, frequency, magnitude and intensity or severity will be required to maintain a balanced approach to management of the GNF, especially when dealing with the use of fire as a treatment or restoration tool.

Requested Action: No change to the draft plan is required.

Issue Statement 9: *Although this topic is little studied, those studies that have been conducted demonstrate that areas that have filled this role previously are actually more likely to experience stand-replacement fire in subsequent wildfires. This implies mechanical treatments may be necessary to maintain some refugial areas. (Last two sentences of the second full paragraph on page 21)*

Concern: As is prescribed in the last sentence of this statement the GSWCD does agree that mechanical treatments may be the best and safest way to treat critical refugial areas on the GNF in the future.

Requested Action: No change to the draft plan is required.

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Issue Statement 10: *Herbicide is often the only effective tool to control, contain, or eradicate noxious weed species due the characteristics of the species themselves and logistical and economic considerations. When treating native re-sprouting alligator juniper or evergreen oak species, the purpose is to add herbicide to "the toolbox" with its use being determined through an interdisciplinary process considering lessons learned and economics. (First and second sentences, paragraph 4 page 23)*

Concern: The GSWCD supports the use of herbicides as a tool to treat noxious weeds and alligator juniper or oak species on the GNF.

Requested Action: No change to the draft plan is required.

Issue Statement 11: *The plan components developed for upland vegetation are based on Ecological Response Units (ERUs). ERUs represent a classification system based on vegetation characteristics that would occur when natural disturbance regimes and ecological processes prevail. (First sentence, second paragraph, page 25)*

Concern: The GSWCD has a concern that the ecological classification system for the updated GNF Plan is based upon, as stated above, "vegetation characteristics that would occur when natural disturbance regimes and ecological processes prevail." This approach to ecological classification is not founded upon the reality of past human disturbances, the current man-induced ecological processes, nor the vegetative communities that exist today.

The desire to manage the GNF upland vegetation as Ecological Responses Units (ERUs), which are based upon natural disturbance regimes and ecological processes, is a substantial change from how the GNF has been managed in the past. As is noted throughout the draft plan, the desired natural processes have not been occurring for well over 100 years on most of the GNF. This concept, while noble, is not in line with reality.

Man, and his need for food, fiber, water, space, and a purpose for being, will continue to interfere with natural disturbance regimes and ecological processes as long as the public is dependent upon the landscapes that make up the GNF for the multiple use and sustained yield of resources. If natural disturbance regimes and ecological processes are to prevail, the most logical management for the landscapes that make up the GNF would be to designate the entire GNF as "Wilderness"

Requested Action: With a predetermined desired natural ecosystem concept (presented as ERUs) being introduced and implemented in the draft GNF plan, it would be reasonable to also present the expected future ecosystem characteristics (ERUs) under continued multiple use, sustained yield management. 36 CFR 219.10 requires that: "While meeting the requirements of §§219.8 and 219.9, a plan developed or revised under this part must provide for ecosystem services and multiple uses, including outdoor recreation, range, timber, watershed, wildlife, and fish, within Forest Service authority and the inherent capacity of the plan area..."

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Issue Statement 12: *However, it is expected that more acres will be treated with prescribed and naturally ignited wildfire for two reasons. First, the cost per acre is lower which will facilitate more acres of treatment being realized. Secondly, mechanical treatments may mimic some of the ecological outcomes of fire and may facilitate the restoration of fire to the landscape but they cannot replace an ecological process. (Last three sentences, third paragraph, page 28)*

Concern: As has been presented previously, the GSWCD is concerned that fire will be the primary tool for the future treatment of the landscapes on the GNF. When, as stated above, "it is expected that more acres will be treated with prescribed and naturally ignited wildfire" the opportunity for anyone except the Forest Service to be involved in treatment projects will be greatly limited.

The idea that, as stated above, "the cost per acre is lower, which will facilitate more acres of treatment being realized" does not take into account the use of any funding sources except appropriate tax dollars. The use of fire to treat landscapes does not yield any forest products that could generate funds that could be available for the treatment of fuels, restoration of functioning watersheds and restoration of diverse vegetation communities. As explained in above comments, the generation and sale of forest products in the past fund much of the land treatments done on National Forest System lands across the West.

As has been presented throughout the draft plan, appropriated funding for treatment projects is currently very limited, and the GNF does not compete well for appropriated funds. Expecting, as stated above, "more acres will be treated with prescribed and naturally ignited wildfire" is counterproductive to finding multiple funding sources and providing for the social, economic needs of the local community.

The idea that, as stated above, "mechanical treatments may mimic some of the ecological outcomes of fire and may facilitate the restoration of fire to the landscape, but they cannot replace an ecological process." appears to be an attempt to justify the use of fire based upon a personal value judgement. ("but they cannot replace an ecological process") What is so terribly wrong with that?

This statement indicates that emotional feelings and political correctness are more important than the condition of the GNF. What difference does it make how properly functioning and healthy ecosystems become established and make up the landscapes found on the GNF. While man's influences are blamed for much of the degraded conditions on the GNF, what says man's influences can't provide the desired future conditions that are called for in the revised GNF plan. It appears degraded watershed, soil and vegetative conditions due to "natural processes" are acceptable, but functioning watersheds, stable and productive soils, and healthy self-sustaining productive vegetative communities that are the result of mechanical treatments and man's efforts are not acceptable.

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Requested Action: Reconsider making everything pertaining to the future management of the GNF politically correct. Allow the use of long established and proven treatment techniques on the GNF even if they are not considered to be an ecological process and politically correct.

Issue Statement 13: Issue statement 13 is made up of multiple statements under the Forest-wide Plan Direction section. These statements deal with soils, water quality, watersheds and riparian/aquatic ecosystems management. The GSWCD was established and has dealt with the proper management and conservation of these resources located within the GSWCD's boundaries for many years.

***Soils:** When management results in accelerated soil loss, these soil functions are altered or impaired, and ecosystem services are reduced. While some soil functions or a degree of soil function may be recovered within a human lifetime, soil itself is essentially a non-renewable resource due to the time it takes for soil to form. It has been estimated that in the water-limited Southwest, it can take 300 to 1,000 years to form an inch of soil. (Third paragraph page 76)*

***Water Quality:** Nonpoint source pollutants are the primary source of water pollution in the State of New Mexico and in the Gila NF. Point source pollutants can be traced back to a single point, such as a pipes or ditches from industrial or sewage treatment facilities. Nonpoint source pollution is caused by water moving over and through the ground and carrying natural and human-made pollutants into streams and waterbodies and remains the nation's largest source of water quality problems. (First three sentences, paragraph three page 81)*

***Watershed:** Watershed condition is integral to all aspects of resource management and use. Good watershed management maintains the productive capacity of soils, protects water quality and quantity, sustains native species, provides for state-designated beneficial water uses, and reduces the threat of fire and flood damage to Forest Service infrastructure and downstream values. (Last paragraph page 83)*

***Riparian and Aquatic Ecosystems:** More than half of the Gila NF's riparian and aquatic ecosystems are not properly functioning because of one or more of the following reasons:*

- 1. non-native invasive aquatic species,*
- 2. alterations in the amount, timing, and duration of water flows due to drought, diversions and withdrawals, or post-fire effects,*
- 3. poor water quality related to excessive sediment or temperature,*
- 4. riparian and wetland vegetation conditions resulting from drought, fire or post-fire effects, excessive herbivory by elk, livestock, or both; and*
- 5. degraded channel shape and function resulting from the same factors impacting riparian and wetland vegetation conditions and alterations of water flow.*

Concern: The GSWCD is concerned that the management of these very basic resources and the vital functions they provide for maintaining the productivity of the GNF are not given the proper emphasis in the draft plan. The emphasis on "natural processes" such as fire, insect damage, erosion, floods etc. to create a desired level of disturbance for achieving the desired future condition of the ERU's on the GNF is difficult to understand.

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Natural disturbance events such as wildfires, hurricanes, tornadoes, floods, and droughts; along with the explosions in the population of insect and other vegetation destroying organisms, have altered and most often degraded the condition and function of watersheds, soils, and vegetative communities for millions of years. These "natural processes", which now appear to be a desirable method of resource management to some, will not support the desired future conditions found in the draft plan nor the desires of the overall local human community. The idea that human activities and human management of the GNF landscapes will cause devastating "unnatural" disturbances, which is detrimental to healthy ecosystems only leads to the feeling that people are no longer welcome on the GNF.

Requested Action: The GNF needs to reconsider their dependence on "natural processes" as the avenue to achieving their desired future conditions. More emphasis needs to be placed on the use of well planned, science-based, and proven management and treatment techniques when addressing the basic resource needs and the vital functions of the watersheds, soils, water quality, and key vegetative communities (such as the riparian/aquatic ecosystems) on the GNF.

Issue Statement 14: Relationships are a key factor that can influence the success of how the forest plan is implemented. With the challenges the forest faces today, strong working relationships with all stakeholders, partners, and volunteer groups are vital to increase capacity and help meet desired conditions to care for the land and serve the people. (Fourth paragraph page 122)

Concern: The GSWCD strongly agrees with this statement and hopes it will be a driving force in the future management of the GNF. Positive relationships are key to implementing and accomplishing the future management of the GNF.

Requested Action: No change to the draft plan is required.

Issue Statement 15: Whether wildfire or prescribed fire, the direct and indirect effects of any one fire are rarely all positive or all negative. Fire can restore or maintain landscape heterogeneity and vegetation structure, or it can reduce landscape heterogeneity or fragment habitat. It can increase nutrient availability, or it can result in a loss of nutrients and soil productivity. It can accelerate erosion and sediment delivery to streams, or reduce the risk of future undesirable fire effects, or both. It can result in the loss of carbon, but also increase the ability of the system to sequester carbon. The potential for any of these effects depends on many variables, including but not limited to fuel and weather conditions, topography, and management decisions. Fire effects are also cumulative and interact with previous or subsequent effects of other activities and disturbances in beneficial or detrimental ways. For example, watershed impacts and recovery time increase when two high-severity fires occur on the same piece of ground with insufficient recovery time between. On the other hand, multiple fires within an area over time can limit fire size, intensity, and undesirable fire effects. (Fourth paragraph page 131)

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Concern: It is clear when reading the above issue statement that fire can have both positive and negative effects. When using fire to reduce fuels, it is almost always the most cost-effective and efficient tool that can be used, but as described in the above statement, fire is also known to have significant adverse impacts to watershed/vegetation conditions.

Fire is not a tool that can be used to selectively target any particular individual or group of plant species. Fire is not a tool that can be used for treating the many resprouting plant species that are found on the GNF.

Fire always results in the loss of carbon from the burned area and any increase in the ability to sequester carbon seldomly replaces the carbon that was lost in the original fire treatment. Fire almost always results in the long-term loss of nutrients and soil productivity even though there is usually a short-term spike of plant growth following a burn. There are many more adverse effects to native ecosystems that result from fire.

The concern the GSWCD has with the GNF's desire to use fire as a primary tool to restore or maintain "natural" watershed, soil and vegetation functions on the landscape is that fire has not been proven to be a consistent and reliable treatment tool. There are multiple recent fire scares on the GNF where naturally ignited wildfires were put into an appropriate suppression category where they would be monitored. These monitored/managed wildfires eventually result in an intense, and very destructive, catastrophic wildfire. When and to what degree these current fire scares will again provide the ecosystem functions they once did is unknown. There now is a high risk that these fire scared landscapes will become invaded with non-native plant species and possibly invasive noxious weed species.

The best available science clearly presents the known and proven risk of burning even the most "fire adapted" ecosystems. While the GNF treatment toolbox still contains many long known and proven tools to restore and maintain "natural" landscapes, it appears the cost and ease of doing landscape treatments, not the effects of the treatment, will determine the treatment tool used.

Requested Action: Reconsider making ecosystem restoration and treatment decisions based upon the cost and ease of doing the treatments. Allow the use of long proven and tested restoration and treatment techniques on the GNF even if they are not considered to be a natural ecological process and are no longer considered to be politically correct.

Issue Statement 15: *Alternately, livestock grazing can compete with fire restoration objectives because the fine fuels necessary to support fire occurrence, spread, and flame lengths sufficient to thin stands, is also the forage crop grazing permittees depend on. There are times and locations where a lack of adequate fuel loading is the challenge to restoring the natural role of fire. (Second paragraph page 142)*

Livestock use provides for conditions that support movement toward natural fire regimes. (Second item in Desired Conditions list)

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Concern: These two statements raise many concerns due to the fact the future management on the GNF appears to be heading towards a higher priority on burning the native grassland vegetative communities than providing forage for livestock and wildlife. These statements set the stage for a future increase in grassland wildfires which easily spreads and burns with enough intensity to destroy not only the shrub and tree vegetative component but also many of the grassland plant species found in the grassland ecosystems on the GNF. A fire that burns with flame lengths sufficient to thin shrubs and trees stands will be hot enough to remove many of the climax grass species that are not well adapted to fire.

It has been shown multiple times in various studies and through rangeland management practices that healthy grassland communities out-compete and prevent the invasion of woody species over time. It is only after events like years of severe overgrazing or intensely hot or repeated wildfires that woody species become established where natural climax grassland plant communities once existed. The idea that fire inhibits shrub and tree establishment over the long term in grassland ecosystems is not supported by research or current proper grazing management practices.

Through "tree-ring" research it is now a common belief that fire thins stands of shrubs and trees in forested ecosystems. This usually occurs where the fuels that support wildfires are duff layers and/or dead woody material. This fire related thinning of shrubs and trees is not a long-term change in these forested ecosystems and periodic fire has to occur for any long-term result to exist.

Through "tree-ring" research it has been shown that the fire adapted ecosystem natural processes that occur mostly in the ponderosa pine forest ecosystems never lets these ecosystems advance into their true climatic stage due to the reoccurring disturbance. Reoccurring disturbance and the fire adapted ecosystem natural process that is documented in the ponderosa pine forest does not necessarily lead to the desired condition, the desired natural functions and/or the desired ecosystem health for most woodland and grassland ecosystems on the GNF.

A healthy grassland community that is made up of a wide variety of native grass species takes many years to develop. These unique ecosystems develop through years of competition between plant species and do not develop, nor are they maintained, in a disturbance dominated situation. Low succession stage grass communities in the southwest that are dominated by species such as blue grama and Arizona fescue are fire adapted ecosystems, but a highly productive native multi-species grassland ecosystem is not a fire adapted ecosystem and can be easily destroyed by fire.

Requested Action: The GSWCD would like to see the future management of the GNF more in line with the desires and needs of the people who live and depend upon the GNF and not so driven by the desire to restore the natural role of fire. There are many examples on the GNF where fire has not resulted in a historic healthy and functioning ecosystem especially in the long-term. Most of the recent wildfires on the GNF have destroyed healthy and functioning ecosystems and it will take hundreds, if not thousands of years for these climax ecosystems to ever return to the GNF landscapes. If the GNF turns everything into a fire adapted ecosystem where periodic fire occurs, climax ecosystems will be a rare feature on the landscape.

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Issue Statement 16: *Livestock management will be compatible with carrying capacity and address ecological resources (such as forage, invasive plants, at-risk species, soils, riparian health, and water quality) that are departed from desired conditions, as determined by temporally and spatially appropriate data. (First item in the Standard list on page 143)*

Concern: The above statement does not need to be presented as a Forest Plan Standard. The stocking of GNF allotments within the carrying capacity and the other requirements presented above are what make up proper management of livestock grazing, which is required in Forest Service Manuals and Handbooks, Term Grazing Permits, Allotment Management Plans and multiple other documents. The above statement could easily lead a reader to believe that livestock management on the GNF has been and is still unregulated and without the proper oversight of professional rangeland managers.

Requested Action: Reword the above grazing management Forest Plan Standard so it does not indicate "ecological resources (such as forage, invasive plants, at-risk species, soils, riparian health, and water quality) that **are departed from desired conditions...**" are a common occurrence on the GNF. There are many well managed allotments that are made up of healthy and productive ecosystems on the GNF and the future management of allotments where ecological resources are departed from desired conditions have been or will be addressed through site specific NEPA analysis.

Issue Statement 17: *Existing livestock handling, and watering facilities located in RMZs should be modified, relocated or removed where an interdisciplinary team determines they are incompatible with movement toward desired conditions for other resources. Any modification, relocation or removal of infrastructure may not impede the use of permitted water rights recognized by the State of New Mexico. (First item in the list of guidelines on page 143 & 144)*

Concern: The modification, relocation or removal of existing livestock handling, and watering facilities located in RMZs due to them being incompatible with movement toward desired conditions for other resources as determined by an interdisciplinary team will lead to much controversy and mistrust.

Most livestock handling, and watering facilities located in RMZs have been in place for many years and have not adversely impacted other resources. With this new guideline being brought forward in the revised Forest Plan an interdisciplinary team will soon be able to interfere with the current livestock management activities on most allotments. Livestock handling, and watering facilities, whether located in RMZs or not, play a key role in the management of an allotment and their location is often key to making livestock management successful, especially in rough or isolated locations.

While the guideline does not address who will bear the cost of modifying, relocating or removing existing livestock handling, and watering facilities located in RMZs, the cost should not be the responsibility of the livestock operation. The allotment permittee nor the Forest Service rangeland

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management program should be held responsible for satisfying what will most likely be a very minor but politically correct desired condition that benefits another function.

Requested Action: Remove this bias, unnecessary and potentially highly controversial guideline from the revised Forest Plan. If found to be necessary address the construction and maintenance of livestock handling and watering facilities on a case by case basis when developing or updating the allotment specific livestock grazing management plan.

Issue Statement 18: *Vacant allotments should be considered for temporary use by holders of a current permit during times or events when their allotment(s) require growing season recovery time because of wildfire or other disturbance, or to minimize livestock and wildlife conflicts. (Sixth guideline found on page 144)*

Concern: No one will disagree that vacant allotments, when possible, should as stated above, "be considered for temporary use by holders of a current permit during times or events when their allotment(s) require growing season recovery time because of wildfire or other disturbance." What is more important than worrying about "require growing season recovery time" which often is not necessary, the GNF needs to consider the need for providing forage for the permittee whose operation is dependent upon the use of their GNF Allotment(s).

Often time following a wildfire or other disturbance such as a prescribed burn, planned and appropriately timed grazing immediately following the disturbance is very beneficial for treating the resprouting shrub species so they do not dominate the site in the future. Also planned and appropriately timed grazing immediately following a fire can be a tool to suppress the invasion of the site by non-native grass species such as Lehman's lovegrass and other undesirable species of grass, forbs and shrubs.

Another thing the GNF has been very reluctant to address or consider is using "Vacant" allotments to resolve long-term problems. These problems could include situations where very low forage production lands make up most of an allotment. Also, allotments that are uneconomical to graze in today's economy could be retired from grazing without putting current GNF permittees out of business. Combining or reconfiguring existing allotments or moving term permit obligations to a "Vacant" allotment in order to graze the most productive rangelands instead of relying on unsuitable or very poor condition rangelands could resolve many current and future resource problems.

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There are multiple critical public safety and TES species management situations on the GNF that could be easily resolved on the GNF if the GNF Forest Plan would consider using "Vacant" allotments to resolve these long standing and highly controversial problems. It seems that waiting for a lawsuit to be filed and then spending the time and money to deal with an unwinnable situation is the direction the GNF is taking instead.

Requested Action: Establish in the revised Forest Plan the option to address long standing rangeland conflicts and resources issues by combining or reconfiguring existing vacant allotments with current active allotments; or by moving term permit obligations to the productive and accessible portion of a vacant allotments.

Issue Statement 19: *All monitoring data collected by non-Forest Service personnel that adhere to protocol identified in the plan-level monitoring implementation guide should be accepted for consideration and made available to permit holders for allotment management. (Eighth guideline found on page 144)*

Concern: The use of non-Forest Service personnel to collect livestock grazing and rangeland health related monitoring data should be closely scrutinized and should involve the holders of Term Grazing Permits on the GNF before any decision is made. This guideline would set a very dangerous precedent concerning the use of the "best available science" especially if grazing related monitoring data is collected by someone that is not a journeyman level professional rangeland manager.

Accepting monitoring data from anyone just because its collection adhered to the protocols identified in the plan-level monitoring implementation guide does not mean it is accurate and dependable. It is very easy to let one's personal bias corrupt almost any type of monitoring data especially when someone is not properly trained and does not have experience collecting plant community related data. Collecting accurate data related to the production and health of vegetation is especially difficult due to the tremendous number of variables that are involved.

Requested Action: Only accept rangeland monitoring data collected by a journeyman level professional rangeland manager or someone who is trained and closely supervised by a journeyman level professional rangeland manager.

Issue Statement 20: *Annual allotment inspections could be conducted in the field with the permit holder to facilitate discussion of any issues that may be a factor. (Last partial sentence page 145 and first partial sentence page 146)*

Concern: Allotment inspections, if they are going to have any meaning, **MUST** be conducted in the field with the permit holder. You cannot inspect something without actually observing it.

Requested Action: Change **could be** to **must be** in the sentence and then support the GNF rangeland management employees in accomplishing this task.

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Issue Statement 21: *The Roadless Area Conservation Final Rule (Roadless Rule) prohibits road construction, reconstruction, and timber harvest, except under certain circumstances, in inventoried roadless areas because they have the greatest likelihood of altering and fragmenting landscapes, resulting in immediate long-term loss of roadless area values. Some existing roads may be present within inventoried roadless areas. The Roadless Rule does not prohibit motorized travel on existing roads or motorized trails. (Last partial sentence on page 209 and first partial paragraph on page 210)*

Concern: The current 36 CFR, Part 294 Subpart B does not contain the provisions of the 2001 Roadless Rule as described above and as contained in the Draft Plan. In the July 1, 2019 revised 36 CFR, Part 294, Subpart B, it is clearly stated in §294.10: "The purpose of these administrative procedures is to set forth a process for state-specific rulemaking to address the management of inventoried roadless areas in areas where the Secretary determines that regulatory direction is appropriate based on petition from affected Governor." There is no text in the current 36 CFR, Part 294, in any Subpart concerning prohibitions pertaining to road construction, reconstruction, and timber harvest within identified Roadless Areas on National Forest System lands in New Mexico.

Also, the 1980 New Mexico Wilderness Act clearly states in; "Sec. 101, The purposes of this Act" at § "(2)insure that certain other National Forest System lands in New Mexico be promptly available for nonwilderness uses including, but not limited to, campgrounds and other recreation site development, timber harvesting, intensive range management, mineral development, and watershed and vegetation manipulation". It is further stated in "Sec 104 (b)(3) areas in the State of New Mexico reviewed in such Final Environmental Statement (RARE II Final Environmental Statement dated January 1979) and not designated as wilderness, or for wilderness study by this Act need not be managed for the purpose of protecting their suitability for wilderness designation pending revision of the initial plans."

The 1980 New Mexico Wilderness Act further states in; "Sec 104 (c) Unless expressly authorized by Congress, the Secretary shall not conduct any further statewide roadless area review and evaluation of National Forest System lands in the State of New Mexico for the purpose of determining their suitability for inclusion in the National Wilderness Preservation System."

The original 2001 Roadless Rule itself states at 294.14(a) that "This subpart does not revoke, suspend, or modify any permit, contract, or other legal instrument authorizing the occupancy and use of National Forest System lands issued prior to January 12, 2001. The 1980 New Mexico Wilderness Act is definitely a legal instrument that authorizes the occupancy and use of National Forest System Lands prior to January 12, 2001.

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Requested Action: The GSWCD would like for the GNF to reconsider their use of the original (and now deleted) 2001 Planning Rule to designate 733,836 acres of the GNF as special "Inventoried Roadless Areas" that would have special management prohibitions on road construction, reconstruction, and timber harvest.

While the implementation of the 2001 Roadless Area Rule has been litigated with multiple opposing legal opinions and injunctions being rendered, the 1980 New Mexico Wilderness Act makes it clear that all but the areas designated as Wilderness or Wilderness Study Areas by the Act were to be dropped from any further management that would protect them for future designation as Wilderness areas.

The GSWCD would also like the GNF to provide the GSWCD with references to any Acts passed by Congress since 1980, that expressly authorized the Secretary to conduct any further statewide roadless area reviews and evaluations of National Forest System lands in the State of New Mexico for the purpose of determining their suitability for inclusion in the National Wilderness Preservation System. The 2012 Planning Rule is not management direction authorized by Congress and can't be the instrument that allows for the inventory, analysis and recommendation of Roadless Areas on the GNF for Wilderness designation.

Conclusion:

The GSWCD Board of Supervisors finds it necessary to provide the above Draft GNF Revised Plan comments in order to define where the mission of the GSWCD is in line with the revised draft plan and where the GSWCD's mission is contrary to what is being proposed as the future management of the GNF.

Over the years the GNF and the GSWCD have worked together to accomplish some very needed watershed restoration and enhancement work. Also, there have been times when the GNF and the GSWCD could not agree on certain land management policies and procedures. There always will be controversy and different opinions concerning resource management issues, but the GNF and the GSWCD have always been able to respect each other and move forward to continue working together to fulfill the mission of the both entities.

The GSWCD Board of Supervisors realizes that the GNF has to follow the Forest Service's 2012 Planning Rule direction, which dictates that very specific items have to be addressed in the revised plan. This top-down management direction also calls for a much different approach to the management of National Forest lands than was practiced in the past.

The new role fire plays on National Forest System lands is a major change in how disturbance is to be considered and dealt with on the GNF. Fire is now considered a "natural process" and is managed much differently than it was in the past. Fire prevention and suppression (now called Fire Management) were considered a resource protection function for many years by the Forest Service. Now "Fire Management" is a major vegetation management function and the firefighters of the past have become the new Forest Service pseudo professional vegetation managers.

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The mission of the GSWCD has not changed for many years and does not conform well with the Forest Service's new approach to land and resource management. This radical land and resource management change by the Forest Service, which is very evident throughout the Draft Revised Forest Plan, is going to make it much more difficult for the GNF and the GSWCD to work together without one entity or the other having to ignore their responsibilities and commitments to the local public.

The above comments capture many issues that are the result of the 2012 Planning Rule direction and the drastic changes in the Forest Service's approach to fire management. These comments also capture many of the individual GNF user's issues concerning restrictions on their specific use of the GNF. Many of these issues might well be the subject of objections filed by local citizens in the future.

It is hoped that the GSWCD comments can be used to resolve many of the concerns being voiced by the users of the GNF and will result in a well-thought-out and meaningful GNF Revised Forest Plan that can be supported by the citizens of Grant County.

New Mexico Department of Game & Fish, Matt Wunder, April 16, 2020

Data Submitted (UTC -11): 4/15/2020 8:28:32 PM
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System.Data.Entity.DynamicProxies.Organization_816762DAD2F89D2F945FD503742E2AF135F4967BA
FCF866BFB088A893774B244
Title:
Official Representative/Member Indicator :
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Comments:



16 April 2020

Plan Revision Team
Gila National Forest
3005 E. Camino del Bosque
Silver City, NM 88061

RE: Gila National Forest Draft Land Management Plan and EIS; NMDGF No. 19852

The Department of Game and Fish (Department) has reviewed the Draft Land Management Plan (Plan) for the Gila National Forest, and the Draft Environmental Impact Statement (EIS) for the Draft Land Management Plan. The Department appreciates the opportunity to participate in the Plan revisions as a formal cooperators under the National Environmental Policy Act process, and finds that the Plan has been improved through the planning team's interactions with the cooperating agencies. The Department also recommends addressing the following comments within the final Plan and EIS to strengthen measures benefiting wildlife and wildlife habitats on the Gila National Forest (Forest).

The following comments are organized sequentially by page number within the Plan and EIS (including appendices). Comments include both specific recommendations regarding statements within the draft Plan and EIS documents, and broader issues that the Department recommends addressing within the final Plan, including the following:

- The Department holds several special use permits issued by the Forest including Snow Lake, Quemado Lake, and Lake Roberts. These lakes are popular recreational fishing areas in southwestern New Mexico where angling opportunities are limited. The Plan should include assurance that activities approved in special use permits, including dam maintenance and monitoring, can continue long term.
- The Plan references Best Management Practices (BMPs) throughout the document, yet rarely indicates the source or provides citations for specific BMPs. The Department recommends including a reference for each BMP, or adding a section that describes what the BMPs are, their role in Forest management, and sources for each BMP.

Plan Comments, Sequentially by Page Number

Page iii, Table of Contents. The page numbers in the Table of Contents are incorrect.

Page 23, Management Approach to Restoration. The last sentence of the fourth paragraph is incomplete.

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Page 33. All Vegetation Communities Guidelines. Guideline 8 should be amended to state: "Habitat availability, configuration, and connectivity allows wildlife populations to adjust their movements (seasonal migration, foraging, etc.) in response to long-term trends in climate or anthropogenic landscape use."

Page 33. All Vegetation Communities Standards. This section should include a Standard stating that timber harvest will occur only where it can include necessary protections for streams, streambanks, shorelines, lakes, other bodies of water, and wetlands.

Page 34. All Vegetation Management Approaches. The section on Restoration and Relationships states: "The forest strives to align restoration objectives with supporting local economics, cultures and long-standing traditions, providing products to people whenever possible and encouraging industry innovations." This statement should clarify the need for "sustainable" harvest of products that balances providing products while maintaining and restoring ecological function and wildlife habitat.

Page 38. Spruce-Fir Desired Conditions. Condition 3 at the landscape scale should include an intent that each forest patch of 1000 acres or larger contains old growth attributes.

Page 39. Spruce-fir Mid-Scale Desired Conditions. The plan should clarify the desired range for understory basal values. As currently stated, "from less than one percent to 20 percent or more" could include values from 0 to 100 percent. This statement also occurs on page 43, in mid-scale desired conditions for mixed conifer with aspen.

Page 47. Mixed Conifer with Aspen Mid-scale Desired Conditions. The Department recommends adding desired conditions that include old growth attributes.

Page 51. Ponderosa Pine Desired Conditions. The Department recommends that the Plan provide a more specific and prescriptive direction for Gambel oak in the Guidelines for all vegetative communities where they occur. In the southwestern U.S., Gambel oak is an important component of productive wildlife habitat. It provides browse and acorn mast crops for deer, turkey, and many other game and non-game mammals and birds as well as cover and nesting structure for wildlife (Reynolds et al. 1970). In New Mexico and Arizona, ponderosa pine forests with Gambel oak have been documented to support higher bird diversity and abundance than ponderosa pine forests without Gambel oak (Jentsch et al. 2008). Therefore, the Department offers the following recommendations for creating and maintaining Gambel oak patches within the treatment area.

- Retain a mosaic of all sizes and age classes of Gambel oak across treated areas.
- Retain tree-form Gambel oak in the 12-14" diameter range to maximize acorn production for game and non-game species (Clary and Tiedemann 1992), and larger diameter Gambel oak to provide nesting and roosting habitat for turkey and other bird species.
- Retain patches of pole-sized Gambel oak in the 3-6" diameter range to increase migratory bird diversity (Jentsch et al. 2008).

Page 64. PJ Woodland (Persistent Woodland). The Department generally does not support treatments within persistent piñon-juniper woodlands, except in wildland urban interface (WUI) situations. Piñon-juniper woodlands supply abundant mast crops for food, nesting habitat and cover for numerous wildlife species, including deer, black bears and migratory birds. The

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Department strongly recommends that Standards and/or Guidelines be included stating that treatments will generally be avoided within persistent piñon-juniper woodlands, except in WUI situations.

Page 65. PJ Woodland (Persistent Woodland). The Department recommends adding pinyon jay to the list of at-risk species for PJ Woodland and PJ Grass. Pinyon jays depend on piñon-juniper woodlands, a large portion of their population occurs within New Mexico, and they have experienced rapid population declines (Rosenberg et al. 2016, Sauer et al. 2017). This species is a Species of Greatest Conservation Need (SGCN) identified in the State Wildlife Action Plan (SWAP), and is a species of concern on national and international scales (Rosenberg et al. 2016, BirdLife International 2017).

Page 90 - 91. Riparian and Aquatic Ecosystems Watershed-Scale Desired Conditions. Desired Condition 3a states "Riparian and aquatic habitat provides for self-sustaining populations of native fish, amphibians, aquatic and semi-aquatic species within their historic distributions." There is ample evidence that species have already shifted their distributions in response to long-term climatic variability. This wording should account for both *historic* and *potential future* ranges.

Desired Condition 3b lacks connectivity for riparian habitat, although connectivity language is included for streams. Healthy riparian systems provide important movement corridors for aquatic and terrestrial wildlife. The Department recommends amending the wording to include riparian habitat connectivity as a Desired Condition.

The Department recommends including additional connectivity language to Desired Condition 3d. We recommend: Channels, floodplains, and water tables are connected and facilitate regeneration of native riparian, wetland, and aquatic plants that attenuate flood flows and provide diverse habitats for fish and wildlife.

Desired Condition 3e states "Native mid to late seral states occurs on more than 80 percent of the riparian/wetland areas in the 6th level watershed." This section should also specify desired conditions for saplings and seedlings that are indicative of natural flow regimes and floodplain characteristics that support the continued recruitment and regeneration of native vegetation.

Page 92. Riparian and Aquatic Ecosystems Objectives

The EIS states that the forest does not have a detailed inventory or assessment of springs and seeps (volume 1, page 133). The EIS and Plan lack information regarding the status of these springs and seeps (developed or undeveloped). The Plan contains Desired Conditions for proper functioning of springs and seeps. The Department requests adding an Objective of assessing and, if needed, improving the condition of 10-20 individual springs and seeps over each 10 year period following Plan approval. These measures will create improved conditions for important wildlife habitats. The Department encourages submitting results of spring condition assessments to the [Springs Online](https://springsdata.org/) database maintained by the Springs Stewardship Institute (<https://springsdata.org/>). The Department can provide technical assistance in using this online catalog of southwestern springs and their associated ecological attributes as necessary.

Page 92. Riparian and Aquatic Ecosystems Standards. The Department recommends that Standard 2 provide more specific language requiring decontamination of equipment used in aquatic environments to control aquatic diseases and pathogens, such as whirling disease and chytrid fungus. The Department also recommends referencing the Declining Amphibian Task

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Force Fieldwork Code of Practice. These practices minimize the threat of transmitting aquatic pathogens and parasites to both amphibians and fish.

Page 93. Riparian and Aquatic Ecosystems Guidelines. Guideline 2 states "New or redesigned stream crossings, such as bridges and culverts should be wide enough to at least pass the bankfull width unimpeded and incorporate aquatic organism passage design." This guideline should provide more details and Best Management Practices consistent with the Department's [Bridge and Culvert Construction Guidelines](#).

Guideline 6 states "New or redeveloped spring developments should provide protection for the ecosystems supported by the spring without precluding property rights". The Department recommends amending this to "protection or restoration of proper ecosystem function that maintains water quality and quantity."

The Department recommends adding a guideline that livestock grazing be seasonally managed to allow for plant development or recovery sufficient to sustain properly functioning wetland and riparian areas, including survival of young woody seedlings and saplings.

Page 93. Riparian and Aquatic Ecosystems Management Approaches. The Department recommends adding an Objective or Management Approach for restoring beaver populations. The Plan should indicate that such actions will require coordination with the Department to ensure proper authorizations. The Plan should also include constructed beaver dam analogs to create similar beneficial conditions for aquatic and riparian habitats where beaver cannot be reintroduced due to potential conflicts with adjacent land management or other factors.

Page 94. Riparian and Aquatic Ecosystems. The list of at-risk species includes both Gila chub and headwater chub; however, both have been reclassified as roundtail chub. The Plan should clarify this.

Page 98. Cliffs and Rocky Features. Guideline 5 states "Where rock climbing or other recreational activities have the potential to trample known populations of at-risk plant or animal species, or cultural sites, signs should be posted educating groups to stay in permitted areas to avoid impacts." The Department recommends amending this to "potential to disturb known populations". The Department also recommends Guidelines for seasonal use restrictions or closures in areas where recreational activities have the potential to disturb known Peregrine Falcon or other raptor nesting sites. Such guidelines should include specific dates for seasonal use restrictions or closures.

Page 100. Caves and Abandoned Mine Lands. Desired Condition 2 states "Cave resources and abandoned mine lands provide habitat for species, particularly bats, that require specialized niches for raising young, roosting, and overwintering. Caves maintain humidity, temperature, and disturbance levels consistent with historic conditions. Caves known to be important for endemic, rare, federally listed, species of conservation concern, or cave-roosting bats are intact or provide habitat for these species. Disease is not spread by land management activities." Management approaches should include limiting public access to caves that provide habitat for bats to preclude introduction of white nose syndrome.

Page 100. Caves and Abandoned Mine Lands, Guidelines. We request converting Guidelines 1 (avoiding direct impact to bats), 2 (protecting bat roosts), and 3 (decontamination procedures to protect bats) to Standards. White-nose syndrome (*Pseudogymnoascus destructans*) threatens the persistence of affected bat populations and is likely to occur

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sometime in New Mexico (J.N. Stuart, pers. comm.). The standards should reference the National White-nose Syndrome Decontamination Protocol Version 09.13.2018 which are available at <https://www.whitenosesyndrome.org/mmedia-education/united-states-national-white-nose-syndrome-decontamination-protocol-april-2016-2>.

Page 102. Wildlife, Fish and Plants. Paragraph 2 should reference the Department's 2016 Statewide Fisheries Management Plan.

The fourth paragraph, first sentence should state: "The needs of individual or groups of wildlife species include food, water, and shelter, space, and connected habitats".

The citation "MEA 2005" in the sixth paragraph, second sentence is not included in this section's references.

Page 103. Wildlife Fish and Plants. The Department notes that the draft plans for both the Cibola National Forest and Santa Fe National Forest split this section into subsections for Aquatic Species and Habitats, Terrestrial Species and Habitats, and At-risk Species, which provides for more specific, in depth development of desired conditions, objectives, standards, guidelines and management approaches. The Department believes that the treatment of these resources within the plans from the other forests is more effective, and requests that for consistency with other New Mexico forest plans, the Gila National Forest should similarly subdivide its Wildlife, Fish, and Plants section.

The background description should provide a reference for the list of SCC and the criteria used to develop this list. The Department also recommends referencing state listed species and SGCN identified in the State Wildlife Action Plan (SWAP).

The statement in the third paragraph "...while the New Mexico Department of Game and Fish is responsible for managing all other wildlife species" is incorrect. This sentence should state that the Department is responsible for managing all of the state's protected vertebrates, mollusks, and crustaceans, as defined in Chapter 17, New Mexico Statutes Annotated.

Page 103. Wildlife Fish and Plants Desired Conditions. Desired Condition 1 states "Native populations are abundant and adequate to ensure that they are well distributed throughout a majority of their historic range and supported by healthy ecosystems and watersheds." Many species may or have already shifted their distribution in response to long-term climate change. The wording should account for both historic and potential future ranges.

Desired Conditions 2 and 3 should provide an explanation of what constitutes reference conditions.

Desired Condition 4 states "Interconnected terrestrial, riparian, and aquatic habitats promote species' movements and genetic exchange, allow for movement of wide-ranging species, contribute to self-sustaining populations (including at-risk species), and enable species to adapt to changing environmental and climatic conditions." Wording should be modified to "enable species to adapt and move in response to environmental and climatic conditions."

Desired Condition 7 states "Habitat features such as cliffs, caves, cavities, snags, large down woody material, herbaceous cover and shrub cover provide forage, cover, fawning and nesting sites for species requiring them." This statement should also include old growth attributes.

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Page 104. Wildlife Fish and Plants Objectives. The Department supports Objective 4 to restore or enhance at least 100 miles of stream habitat over each 10-year period. This objective would have significant benefits to aquatic and riparian fish and wildlife resources.

Page 105. Wildlife Fish and Plants Guidelines. The Department supports the language in Guideline 5 recognizing the importance of barriers to fish movement. These structures are necessary to restore and protect native fish populations.

Page 110. Non-native Invasive Species Background information. The Department agrees that triploid rainbow trout should not be considered invasive species since they are managed to provide recreational opportunities. Other non-native species such as brown trout, rainbow trout, and catfish also provide recreational opportunities and should not be considered invasive species in those contexts. However, in some streams, particularly those identified for Gila or Rio Grande cutthroat trout restoration, these species could be considered invasive. The Department recommends that the Forest consult and reference the Department's 2016 Statewide Fisheries Management Plan for additional details on management focus for individual stream reaches.

Page 111. Non-native Invasive Species Objectives. All efforts to reduce or eliminate non-native fish populations should align with the objectives set forth in the Department's 2016 Statewide Fisheries Management Plan and be implemented in collaboration with the Department. The objective could state reduction of non-natives in at least four streams rather than stating a range.

Page 112. Non-native Invasive Species Standards. Standard 2 states that integrated pest management (IPM) will be used for noxious species; however, IPM can be used for species that are not defined as noxious but are still considered invasive. This Standard should be reworded to be broader.

The Department supports objectives to eliminate non-native fish species and recommends adding a standard in support of methods for non-native fish removal.

Page 112. Non-native Invasive Species Guidelines. Guidelines should specifically mention The Department's Aquatic and Invasive Species Program's "Clean, Drain, and Dry" Guidelines which are critical to keeping New Mexico free of invasive quagga and zebra mussels. The Department also recommends adding management approaches to follow protocols such as the Declining Amphibian Task Force Fieldwork Code of Practice. These practices minimize the threat of transmitting aquatic pathogens and parasites to both amphibians and fish.

Page 142. Livestock Grazing Background and Description. This section should provide a brief narrative describing how livestock grazing is authorized and permitted on Forest lands. It should also include a description of the Forest's abilities and mechanisms for modifying stocking numbers, timing, and duration to ensure improvement, restoration, and sustainability of rangelands and grazing suitability if changes in range condition occur within the term of the grazing permit authorization.

Page 143. Livestock Grazing Objectives. The Department recommends adding objectives to establish additional and alternate water sources for livestock to reduce activity within Riparian Management Zones for maintaining stream morphology and vegetative conditions conducive to aquatic and riparian species management and adhering to New Mexico water quality standards.

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Page 143. Livestock Grazing Standards. Standard 3 states "New or reconstructed range improvements will be designed to prevent wildlife entrapment (for example, escape ramps in water troughs and cattleguards) and allow for wildlife passage...". This should include a statement that any new or reconstructed fencing should be consistent with the Department's [wildlife-friendly fencing guidelines](http://www.wildlife.state.nm.us/conservation/habitat-handbook/) (available at <http://www.wildlife.state.nm.us/conservation/habitat-handbook/>) to ensure wildlife passage.

Standard 5 should add a stipulation that grazing of domestic sheep or goats should not be authorized in areas occupied by bighorn sheep, or in areas where the risk of contact between domestic sheep or goats and bighorn sheep is moderate or high.

Page 149-152. Timber Forest and Botanical Products. The background information references the Collaborative Forest Restoration Program Act (as authorized by the 2000 Community Forest Restoration Act), of which Section 605(b)(1)(c) states "preserve old and large trees". The plan indicates that all projects must address specific restoration objectives, including retention of desirable quantities of old and large trees.

The 2012 planning regulations focus on forest restoration, not timber removal. Schultz et al. (2013) state that "The 2012 Forest Planning regulations identify forest and watershed restoration as priorities for the revised Forest plans. Plan components must function to maintain or restore ecosystem structure, function, composition, connectivity, key ecosystem characteristics, rare species communities and native tree diversity".

The New Mexico Forest Restoration Principles, which the Department supports and to which the U.S Forest Service is signatory, also call for the protection of large and old trees. The Principles (https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5207898.pdf) state the following.

Preserve old or large trees while maintaining structural diversity and resilience. Large and old trees, especially those established before ecosystem disruption by Euro-American settlement, are important forest components and critical to functionality of ecosystem processes. Their size and structural complexity provide critical wildlife habitat by broadly contributing crown cover, influencing understory vegetation patterns, and providing future snags. Ecological restoration should manage to ensure the continuing presence of large and old trees, both at the stand and landscape levels. This includes preserving the largest and oldest trees from cutting and crown fires, focusing treatments on excess numbers of small young trees.

The Collaborative Forest Landscape Restoration Program (as authorized through the Omnibus Public Land Management Act of 2009) also protects large and old trees, where Section 4003(c)(1)(D) requires "retaining the large trees contributing to old growth structure".

Remaining old growth stands provide a unique multi-canopy habitat for many wildlife species that are dependent on climax old growth forests, including at-risk species such as the Mexican Spotted Owl and northern goshawk. The Department strongly recommends that this section include a Guideline recognizing the importance of protecting large and old legacy trees to benefit wildlife.

Page 166. Locatable Minerals Standards. Standard 2 states "Adequate reclamation bonds will be required from operators for all proposed mineral activities". This Standard should state how the Forest determines bond amounts to ensure that adequate monies are available for

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reclamation and remediation if an operator abandons a mining site, and what criteria the Forest would use to determine when the reclamation bonds would be released.

This section should include a standard that all reclamation activities must use certified weed-free, native plant seed mixes and mulches. Seed test results should be requested from the seed vendor to avoid inadvertently introducing non-native species to the revegetation site(s). Additionally, any alternate seeds used to substitute for primary plant species that are unavailable at the time of reclamation should also be native. Locally adapted ecotypes should be used when available.

Page 167. Locatable Minerals Guidelines. This section should include a new Guideline clearly stating what vegetation standards must be met before a reclamation site will be released. Vegetation standards could be comparisons to undisturbed reference areas, or technical standards for vegetation diversity and cover.

Guideline 5 states "Reclamation plans should be appropriate for the setting (for example, soils, vegetation, climate, or slope). Seed mixes, vegetation, and soil used for reclamation should be representative of the local ecosystem." It should also stipulate that the seed mixes and mulches are certified weed-free, and that seed test results are requested from the seed vendor in order to avoid inadvertently introducing nonnative and/or invasive species to the revegetation site. Additionally, any alternate seeds used to substitute for primary plant species that are unavailable at the time of reclamation should also be native.

Page 168. Locatable Minerals Management Approaches. The Reclamation section states "The bond can be returned once satisfactory reclamation is completed by the operator." The word satisfactory is vague and should be more clearly defined.

Page 169. Salable Minerals Standards. An additional standard should restrict removal of materials within water resource features, Riparian Management Zones or within minimum buffer distance to water features, to protect water resource features from mining and gravel operations.

Page 172. Roads Guidelines. Guideline 3 states "Construction of new roads should be avoided in riparian areas. Where unavoidable due to terrain or topography, new road construction should incorporate best management practices to minimize impacts." This guideline should provide more details on best management practices for construction and maintenance of roads that are consistent with the Department's [bridge and culvert guidelines](http://www.wildlife.state.nm.us/conservation/habitat-handbook/) available at <http://www.wildlife.state.nm.us/conservation/habitat-handbook/>

The Department recommends adding a guideline stating that road construction or maintenance activities should avoid or minimize noise and habitat disturbance, and where at-risk species are present, should occur outside of critical life-cycle periods (e.g., breeding or nesting for birds), or when animals may be present (e.g., during migration).

Page 173. Roads Management Approaches. The Department requests that the narrative on Relationships include a statement that the Forest will look for opportunities to work with the Department and the New Mexico Department of Transportation to implement large game animal-vehicle collision mitigation projects and enhance wildlife habitat connectivity.

The section on prioritizing decommissioning of roads should also include factors that limit habitat connectivity or impede movement of wildlife species.

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Page 174-175. Facilities The Department recommends incorporating guidelines for reducing avian collisions consistent with U.S. Fish and Wildlife Service's [Reducing Bird Collisions with Buildings and Building Glass Best Practices](#) and the American Bird Conservancy's [Bird-Friendly Building Design](#)

Page 200. Wilderness. Desired Condition 4 states that wilderness areas will have no occurrence of non-native invasive species. The Department fully supports native species conservation. However, we believe this Desired Condition is neither reasonable nor attainable within the time frame of this forest plan in reference to non-native fishes. A significant portion of aquatic habitats within wilderness areas support non-native sportfish species, such as wild brown and rainbow trout, channel and flathead catfish, and smallmouth bass. These sportfish populations provide opportunities that are culturally and economically important and contribute to the identified needs for recreation, traditional and cultural ways of life, and connecting people to the land and heritage.

Page 223. Management Areas, Wildland-urban interface. The plan should quantify the geographic extent of the described wildland urban interface (WUI). Maximizing the amount of WUI area treated within an individual project would likely minimally impact overall Desired Conditions for other Forest resources at the Plan level. However, the cumulative effects of WUI projects have great potential for creating conflicts with other desired resource conditions. The distribution of WUI areas among vegetation types is also lacking, precluding assessment of potential conflicts among Plan components. In the absence of WUI area quantification, the EIS fails to effectively analyze resource impacts from the different alternatives. The Forest should provide more tangible operational guidance for WUI area delineation, and should quantify the proportion of area within each ERU where ecological resource conditions could be superseded by fuel reductions or other resource concerns that are more important to a specific WUI area. Desired Conditions for multiple forest types (Mixed Conifer with Aspen, Mixed Conifer with Frequent Fire, Ponderosa Pine, Piñon-Juniper Woodland) include reduced structural components such as snag density and downed woody debris in WUI areas. While this is understandable, quantification is still needed to determine what proportion of the Forest may be expected to represent these sub-optimal conditions for wildlife habitat, and to provide baseline data to measure future change and effective habitat loss on the Forest.

Page 233-236. Eligible Wild and Scenic Rivers. The Department believes that fish should be included as an Outstanding Remarkable Value for Middle Fork Gila River and Mule, Whitewater, and Willow creeks due to the important native fish populations that inhabit these streams.

The Department supports designation of appropriate waters as Wild and Scenic. However, we are concerned that standard 7 of no temporary or permanent facilities may conflict with the need to construct fish migration barriers necessary to protect or restore native fish populations. Barriers may also be necessary to protect Outstandingly Remarkable Values of rivers and streams by maintaining and/or restoring natural river processes and habitat, which are important components of Wild and Scenic designations. The Department requests adding additional guidance and specific language to affirm that fish barriers adequately designed to maintain and/or enhance natural stream function (including free-flowing character) could be constructed under interim management protections for eligible rivers.

Page 243. Utilities Management Areas. This section should include an additional Guideline to incorporate transmission line and substation construction practices in conformance with the

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Avian Power Line Interaction Committee's "Suggested Practices for Avian Protection on Power Lines", and "Reducing Avian Collisions with Power Lines" (<https://www.aplic.org/mission>)

Page 255. Minimum Required Monitoring. Question identifier 4 uses native fish density and ratio of native to non-native fish density as an indicator of rare and endemic plant and animal species and habitats, DC2 which states: "Habitats and refugia for rare and endemic species are intact, functioning, and sufficient for species persistence." The wording should clarify if this is a single metric, or species-specific. A single density metric fails to account for species-specific status or population declines, which are particularly important for habitat specialists, or species whose life history traits make them more vulnerable and slower to recover following disturbance.

Long-term monitoring should include vegetation monitoring in key areas of grazing allotments to inform adaptive management and assess continued movement toward desired conditions; i.e., maintaining stable vegetation cover and diversity trends for allotments with good to excellent range conditions, or reversing trends for allotment with poor and/or declining conditions. Vegetation monitoring can include long-term photo points and/or vegetation sampling transects.

Page 281. Appendix B Proposed and Possible Management Practices, Wildlife, Fish, and Plants. This section should state "Work with New Mexico Department of Game and Fish to identify and designate management areas to address wildlife values including wildlife habitat connectivity, and to ensure that wildlife are free from harassment and human disturbance at a scale that does not impact vital functions of populations (e.g., breeding, feeding, rearing young and migration and dispersal) resulting in a negative impact to the persistence of the species in the forest".

Page 281, Appendix B, Proposed and Possible Management Practices, Wildlife, Fish, and Plants. The second bullet point states: "Coordinate with the NMDGF and USFWS regarding listed and native species, reintroductions, introductions, or transplants of listed or native species, control or eradication of non-native species, and the management of sport and native fishes, including the identification of refugia for native fish (that is, native only stream reaches)". The Department recommends moving this to Standards in the Wildlife, Fish and Plants section, rather than a possible management practice with no commitment for implementation.

Page 282. Appendix B Proposed and Possible Management Practices, Livestock Grazing. This section should state "The forest will work with grazing permittees and provide guidelines for wildlife friendly fences to facilitate wildlife movement and habitat connectivity".

Page 282. Appendix B Proposed and Possible Management Practices, Livestock Grazing. This section should state "The forest will work with grazing permittees to reduce impacts and protect Riparian Management Zones".

Page 303. Appendix D Focal Species Rationale. The Plan's list of Focal Species includes only two species, and is insufficient to meet the 2012 Planning Rule's direction for providing "...inference to the integrity of the larger system to which it belongs, and...meaningful information regarding the effectiveness of the plan in maintaining or restoring ecological conditions to maintain the diversity of plant and animal communities". Considerations for focal species given in the Plan include species ability to be effectively monitored within the financial capability of the Forest, being sufficiently abundant to detect change in status, having standardized monitoring approaches, and exhibiting population responses to habitat stressors. If limited resources dictate a cap on focal species monitoring activities, the Department recommends community-level monitoring (e.g., for birds or small mammals) that includes

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individual species responsive to Forest management conditions. This approach evaluates biological community or guild-level data to provide greater statistical power, and reveals composition and structure patterns informative of habitat conditions. Community-level data could indicate whether overall composition is changing, and individual focal species such as the species listed below could be used to assess directionality of those changes relative to Desired Conditions. Department biologists would be available to provide technical assistance in designing such a monitoring system for focal species. The Forest may also be in possession of previous species monitoring data that would inform selection of Focal Species.

Ponderosa pine: Grace's Warbler, Virginia's Warbler, Pygmy Nuthatch, Northern Goshawk

Mixed conifer: Grace's Warbler, Northern Goshawk

Riparian: Lewis's Woodpecker, Gila Woodpecker, Olive-sided Flycatcher, Southwest Willow Flycatcher, Bell's Vireo, Common Black Hawk

Piñon-juniper: Pinyon Jay, Juniper Titmouse, Black-throated Gray Warbler

Environmental Impact Statement:

The Department supports the Proposed Action, Alternative 2 because it allows more flexibility with use of prescribed and mixed-severity wildland fire, and is the action alternative most likely to reduce potential for catastrophic, stand replacing wildfire, which is most damaging to wildlife and important wildlife habitats, including riparian and aquatic habitats. The Department also supports alternatives that keep grazing allotments vacant for flexibility of use in adaptive management, and to allow for vegetation recovery following drought or disturbance.

The Department appreciates inclusion of the Arizona toad (*Anaxyrus microscaphus*) and lesser longnose bat (*Leptonycteris yerbabuena*) as Species of Conservation Concern (SCC) as recommended in our 15 November 2016 comments on the draft Gila National Forest Assessment.

Volume 1, Page 26. Alternative comparison tables should include rows that indicate relative differences among the alternatives in the expected quantity (density) of snags and coarse woody debris, and components for landscape connectivity. The Department supports management direction within the various alternatives that maximizes the occurrence of these valuable wildlife habitat features.

Volume 1, Page 179. Threats identified for Southwest Willow Flycatcher and Yellow-billed Cuckoo should also include traffic noise, and loss of habitat due to drought, water diversion or groundwater pumping, invasive non-native plants, and grazing.

Volume 1, Page 179. The section on Chihuahua chub needs to be updated with current information. Nonnative predators were eliminated from the basin after the Silver Fire and Chihuahua chub are currently found throughout the majority of the Mimbres River basin. The statement that Chihuahua chub are only found regularly at Moreno Springs is no longer accurate.

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Volume 1, Page 179. It should be stated that Gila chub have been reclassified as roundtail chub. Critical habitat for Gila chub should be given in streams miles, not acres (as it is for other fish species with critical habitat).

Volume 1, Page 180. Distribution of spikedace should be updated with current information. Spikedace were captured in the lower Middle Fork Gila River in 2017 (Ferguson and Ruhl 2018).

Volume 1, Page 181. The second paragraph, line 4 should state "...most genetically distinct *subspecies* of gray wolf..."

Volume 1, Page 181. The Mexican gray wolf narrative should include the most recent survey numbers.

Volume 1, Page 184. While a past attempt at establishing Chihuahua chub in McKnight Creek was not successful, they have recently been introduced into McKnight Creek again and their status there is currently unknown.

Volume 1, Page 186. This section should include conservation measures for the New Mexico Meadow Jumping Mouse.

Volume 1, Page 192 and 199. Key Ecological Conditions for Chihuahua chub, Gila chub, Gila trout, loach minnow, and spikedace do not include any specific conditions for loach minnow or spikedace. Loach minnow and spikedace live in habitats that are very different than the other listed species. Unembedded riffle habitat is important for loach minnow and run and shoal habitat is important for spikedace. Key Ecological Conditions for Gila Trout should also include cold water temperatures.

Volume 1, Page 213. The Forest should update the section on Rio Grande sucker distribution with current information. Rio Grande suckers are native to the San Francisco River drainage (Turner et al. 2019). In addition, nonnative predators were eliminated from the Mimbres River following the 2013 Silver Fire, thus are no longer contributing to population declines. The Department recommends clarifying what type of trends (i.e., distribution, abundance, etc.) the Plan refers to in this section as well as the timeframe for long-term trends.

Volume 1, Page 213. The first sentence in the Roundtail chub section is very confusing and doesn't make sense.

Volume 1, Page 257. There is a spelling error in the scientific name for desert sucker. The correct name is *Catostomus clarkii*.

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Thank you for the opportunity to review and comment on this draft Plan and EIS. If you have any questions, please contact Meaghan Conway, Aquatic and Riparian Habitat Specialist, at 505-476-8160 or Meaghan.Conway@state.nm.us.

Sincerely,



Matt Wunder, Ph.D.
Chief, Ecological and Environmental Planning Division

MW/mc

cc: USFWS NMES Field Office
Kirk Patten, NMDGF Chief, Fisheries Management Division
Elise Goldstein, NMDGF Assistant Chief, Wildlife Management Division
Jennifer D'Annibile, NMDGF Southwest Regional Habitat Biologist

Literature Cited

BirdLife International 2017. *Gymnorhinus cyanocephalus* (amended version of 2016 assessment). The IUCN Red List of Threatened Species 2017: e.T22705608A110431877. <https://dx.doi.org/10.2305/IUCN.UK.2017-1.RLTS.T22705608A110431877.en>.

Clary, W.P., and A.R. Tiedemann. 1992. Ecology and values of Gambel oak woodlands. Pp. 87-95 in P.F. Ffolliott et al., Technical Coordinators. 1992. Ecology and management of oak and associated woodlands: Perspectives in the Southwestern United States and Northern Mexico. 1992 April 27-30, Sierra Vista, Arizona. General Technical Report RM-218. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado, USA.

Ferguson, B. and Ruhl, M. 2018. Gila River Basin Native Fishes Conservation Program: New Mexico Department of Game and Fish Native Fish Conservation Efforts 2017 Annual Report. 18 pp.

Jentsch, S., R.W. Mannan, B.G. Dickson, and W.M. Block. 2008. Associations among breeding birds and Gambel oak in Southwestern ponderosa pine forests. *Journal of Wildlife Management* 72:994-1000.

Reynolds, H.G., W. Clary, and P. Ffolliott. 1970. Gambel oak for Southwestern wildlife. *Journal of Forestry* 68:545-547.

Rosenberg, K.V., J.A. Kennedy, R. Dettmers, R.P. Ford, D. Reynolds, J.D. Alexander, C.J. Beardmore, P.J. Blancher, R.E. Bogart, G.S. Butcher, A.F. Canfield, A. Couturier, D.W.

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- Demarest, W.E. Easton, J.J. Giocomo, R.H. Keller, A.E. Mini, A.O. Panjabi, D.N. Pashley, T.D. Rich, J.M. Ruth, H. Stabins, J. Stanton, T. Will. 2016. Partners in Flight landbird conservation plan: 2016 revision for Canada and continental United States. Partners in Flight Science Committee, USA.
- Sauer, J.R., D.K. Niven, J.E. Hines, D.J. Ziolkowski, Jr, K.L. Pardieck, J.E. Fallon, and W.A. Link. 2017. The North American Breeding Bird Survey, results and analysis 1966-2014, version 2.07.2017. USGS Patuxent Wildlife Research Center, Laurel, Maryland, USA.
- Schultz, C.A., T. D. Sisk, B. R. Noon, and M. A. Nie. 2013. Wildlife conservation planning under the United States Forest Service's 2012 planning rule. *The Journal of Wildlife Management* 77:428-444.
- Turner, T.F., T.J. Pilger, M.J. Osborne, and D.L. Propst. 2019. Rio Grande Sucker is *Pantosteus plebeius* Is Native to the Gila River Basin. *Copeia* 107: 393-403.

San Francisco Soil and Water Conservation District, Howard Hutchinson, April 10, 2020



San Francisco Soil and Water Conservation District
P.O. Box 119 – Glenwood, New Mexico 88039
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April 10, 2020

Submitted via: <https://cara.ecosystem-management.org/Public/CommentInput?Project=51887>

Mr. Adam Mendonca, Forest Supervisor
Gila National Forest
United States Forest Service
3005 East Camino del Bosque
Silver City, NM 88061

RE: Comments for the Draft Revised Gila National Forest Plan.

Dear Supervisor Mendonca,

Thank you for this opportunity to comment on the Forest Plan Revisions. The San Francisco Soil & Water Conservation District (District) participated in all of the Technical meetings concerning the plan revisions. We consistently questioned the baseline for determining the desired future condition in those meetings and as presented in the Forest Plan Assessment. The baseline concern is having the forest lands returned to pre-European settlement conditions. We have concerns that this direction is not achievable and will have detrimental unintended consequences.

COMMENTS ON THE GILA FOREST PLAN REVISIONS

1. *In the description of "Traditional Uses" as found on pages 4 and 5 of the Draft Plan, the very important downstream use of water coming from the lands that make up the GNF is not recognized.*

Concern: The District views this as a major issue. The downstream supply of water coming from the mountainous terrain that now makes up the Gila National Forest (GNF) played a critical role in the early settlement of Southwest New Mexico and Southern Arizona. The waters that historically flowed in the San Francisco and Gila Rivers greatly influenced the settlement of the area that makes up Southwest New Mexico and Southern Arizona, and today Gila River water supports many of the people that currently inhabit the arid Southwest.

Requested Action: It is suggested that the historical importance of the Rivers originating in the GNF and the supply of water they provided for hundreds of miles downstream be recognized.

2. *Although other restoration methods support the traditional uses of the national forest and are an important part of the vision for the future, fire has been and will remain the primary restoration tool. (Second to last sentence, first paragraph, page 7)*

Concerns: Fire has only recently become the primary restoration tool on the GNF. Using fire as a restoration tool only came to be the primary treatment for restoration when the watershed and timber management programs on the GNF were devastated by litigation. In the past, outside funding sources and the use of timber sale receipts funded a large portion of the GNF fuels management, timber stand management and other vegetation/watershed restoration projects.

CONSERVATION - DEVELOPMENT - SELF-GOVERNMENT

Data Submitted (UTC 11): 4/15/2020 9:02:06 PM
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Previously the primary use of fires on the GNF has been to treat the slash generated by fuel wood harvesting, timber harvesting and thinning practices. It has not been that long that the use of fire has been considered to be a significant watershed/vegetation treatment technique on the GNF. A lot of watershed/vegetation treatment burns have been tried on the GNF in the last 30 years. Few burns actually accomplished the prescribed management objective of the burn treatment over the years. Making areas black and void of organic materials may be a fuels management object but seldom does it meet watershed/vegetation management objects.

Historically much of the fine fuels and smaller organic materials located on the soil surface were left to be incorporated into the soil. These "fuels" were left to be decomposed by microorganisms, where the resulting broken-down lignin and cellulous carbon-based molecules became incorporated into the soil as valuable plant nutrients. The microbes decomposed "fuels" provided critical carbon-based soil organic material that is an important link in the "Carbon Cycle" which is key to all plant growth.

Requested Action: It is requested that a variety of management techniques for restoration of vegetation be kept on equal footing with the use of fire and not branded as too expensive or too hard to accomplish; thus, not considered or used.

3. *The Gila does not compete well for funding for more expensive mechanical treatments, because of its remoteness and the area's low population density. The funding necessary to mechanically treat large acreages tends to go to national forests close to urban areas and the designated municipal watersheds those large population centers depend on. (First and second sentences, second paragraph, page 7)*

Concerns: In the past a major portion of mechanical treatments were funded from outside funding sources such as the sale of timber, forage and other forest products or the treatments were actually accomplished by the work that provided these products to the public. Even many recreation activities and special uses of National Forest Systems lands once returned funds that could be used to enhance conditions on National Forest Systems lands. "KV" and "Brush Disposal" funds were collected from the revenues derived from the sale of the timber and/or forest products. These funds were the primary source of funding for both "fuels management" and "watershed/vegetation treatments" on hundreds of acres on the GNF each year. These laws allowed the collection and use of funds for land treatments and are still in effect. The problem is the harvesting and use of forest products from the GNF has been reduced to near zero. There should be an effort put forth in the Revised GNF Plan to, once again, harvest forest products on the GNF instead of planning to make fire the primary treatment tool where these forest products are converted into carbon dioxide and spewed into the atmosphere. It is true that competing for funding for land treatment projects on National Forest System lands has become a political exercise. The Bush administration tried to deal with this situation when it developed and implemented the "Healthy Forest" initiative where "fuels" treatment in the wildland urban interface (WUI) became the priority for funding.

While the GNF has focused some of its "fuels" treatment work towards the WUI areas, it does not appear that the GNF has done a very good job tying fuels treatment with watershed/vegetation treatment and then finding opportunities to accomplish these multiple benefit projects in the high priority WUI areas. Multi-function treatment projects in high priority WUI areas need to be identified through a multi-agency coordination effort to be competitive in today's political environment. The GNF needs to become better at working with cooperating agencies and all types of forest users' groups if it wants to become competitive for funding.

Requested Action: The GNF needs to look into improving their efforts for multi-agency/multi-landownership planning and implementation of land treatment projects, especially in the WUI areas. The GNF needs to look into taking advantage of the multiple land treatment funding sources that are available through cooperative planning and implementation efforts. (i.e. Community Wildfire Protection Plans, Multi-agency/Multi-land ownership Watershed Plans).

Promoting and depending on the use of fire as the primary land treatment technique on the GNF will only make it harder to get funding for mechanical treatment projects in the future. As explained above mechanical treatment projects are often the most appropriate method to restore and/or enhance National Forest System lands.

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4. *From an ecological standpoint, fire is the primary restoration tool because the Gila landscape evolved with frequent fire. It is a natural ecological process that helped shape the national forest's plant and animal communities, watersheds, and hydrology before the fire suppression era began. But now, because the lack of fire on the landscape has contributed to higher tree densities, restoration with fire is like surgery with a chainsaw, trade-offs abound, and it is all about water. (The last three sentences, second paragraph, page 7)*

Concerns: The landscapes that makeup the GNF may have evolved with fire, and in the past these landscapes may have been dominated with plant communities, soil conditions, watershed conditions and ecosystems that were indicative of periodic fires burning through the area. The one thing that is not clearly stated in the above issue statement is that all of this "natural ecological process" took place prior to man greatly influencing the landscapes that make up the GNF. Much more than just an era of fire suppression has occurred on the GNF since the "frequent fire" days.

The Forest Assessment leading up to the forest plan created a focus on pre-European settlement conditions that have not existed since that period in time. This is due to a recorded change in the climate that at the time of European settlement was coming out of an extended dry period. It is also recorded that Indians deliberately lit low intensity fires as well as a regular cycle of naturally occurring lightning ignited fires. These created burn cycles between two and seven years in the ponderosa, dry mixed conifer and woodland communities.

These fires maintained the ponderosa and dry mixed conifer and woodland density in the park like condition described and photographed by the early European settlers. In the spruce/fir/aspen uplands limited area blowout fires occurred on a one hundred and fifty to 200 years creating a mosaic of differing successions.

Nature is not always a friend of man. It may be noble to want to go back to the "natural" landscapes that are thought to have once occurred; and allow "nature" to manage the GNF the way it is believed to have occurred years ago, but the reality is the landscapes that make up GNF need to be managed as they occur today with man's past influences being the reality.

It is true that many acres on the GNF are dominated by dense stands of trees and shrubs. It is also true many of these stands, due to their age, are becoming decadent and much more prone to burn especially during drier years. It is also true, as stated above, "restoration with fire is like surgery with a chainsaw..." With all of this said, using fire as the primary tool for treating the current fuel load and the degraded soil and watershed conditions on the GNF makes about as much sense as burning your house down so you won't have to worry about your house burning down.

Requested Action: Do not depend on the use of fire as the primary tool for landscape restoration on the GNF. The recent large and very destructive fires on the GNF show that fire is not a controlled method for treating landscapes and fire often results in negatively and severely altering the landscapes that were to be treated.

While fire can be used to reduce fuels at the landscape scale at a much lower cost, fire needs to be considered as the hammer in the restoration toolbox. Fire can be a restoration tool, but like using a hammer, things can go wrong quickly, and unintended irreversible damage is often the result.

5. *Past and current management actions, inactions, and a changing climate have contributed to ecosystem and watershed departure from what is known about the historic range of variability. For example, past fire suppression and historic overgrazing contributed to altered fire regimes and other ecological processes. Legacy issues associated with past management remain evident in many places. These issues include woody vegetation encroachment into grasslands, infill of forest and woodland openings, increased tree densities within forest and woodland patches, altered distributions of vegetation structural states and species composition, and impaired soil conditions. (Last paragraph on page 7)*

Concern: As stated in the above issue statement, on many acres of the GNF the current soil, watershed and vegetative conditions are very different than the desired conditions described in the plan and are totally outside of what is described as the historic range of variability. (See figure 1) Many areas no longer have the soil structure, depth, nutrients and water holding capability to ever return to be within the defined range of variability or what is believed to be the desired natural state. Deep gullies exist that lower the water table in the

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once highly productive valley bottoms. Many hillsides that once supported stands of perennial grasses are now rocky, shrub and tree-covered slopes. While the GNF draft revised plan recognizes this situation, it is unclear how this situation will be addressed in the future.



Figure 1: Alma, New Mexico looking west circa 1920. Note an almost total absence of trees and other riparian vegetation along the river as well as very limited piñon/juniper woodlands on the hills.

Requested Action: It is suggested the GNF revised plan recognizes that many highly degraded acres on the GNF will never return to a condition that is within their once historic range of variability and that these areas can at least be managed to provide resources that are beneficial to man. It is hoped the rocky tree covered slopes can continue to provide a source of fuelwood for the public and the valley bottoms that are dissected by deep eroding gullies can be treated; and while they may never return to be a wetland, they can be managed to produce forage for livestock and wildlife.

6. *Past fire suppression, historic overgrazing, and other activities have disrupted many natural processes, such as wildfire and natural vegetation succession. (First sentence in the Ecological Changes section found on page 9)*

Concern: Just about everyone will concede that historic overgrazing and other activities that occurred during the settlement/homestead era (late 1880's early 1900's) disrupted many natural processes such as natural vegetation succession on the GNF. The lumping of fire suppression into the same category of a disruptor of natural processes as what occurred in the late 1880's on the landscapes that make up the GNF is very misleading and more of a politically correct theory than fact based.

It is also difficult to understand how "wildfire" is a desired natural process for the GNF when it impedes and often destroys "natural vegetation succession". Natural vegetation succession results in dynamic and diverse plant communities, healthy and functioning ecosystems, functioning watersheds and highly productive soils that are the desired natural functions valued by man and called for in the Draft Plan.

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Just because fire is causing the disturbance, it does not mean the resulting impacts are beneficial or natural. Not all fires burn with the same intensity and both managed-fires and wildfires can have a wide range of impacts on natural vegetation succession, especially when the landscapes that are burned are not in a natural state when a fire occurs.

Under the current man-induced unnatural setting of overstocked forest, and the heavy accumulations of fuels, recent extremely intense, super-hot, wildfires have had an unnatural and severe impact on large blocks of the GNF. Along with these recent man-induced extremely intense, super-hot wildfires, which have impacted large blocks of the GNF, many previous man-induced ecosystems that are not within their natural range of variability currently exist and are the reality that the future management of the GNF needs to address.

In time it will be recognized that these unnatural and severe impacts have not only altered the natural vegetative communities, but also have altered the desired soil and watershed functions on thousands of acres of the GNF. The use of fire as the primary treatment tool on the GNF under most circumstances will only further interfere with the natural carbon and water cycles that healthy ecosystems depend upon to exist.

The adverse impacts of fire are nothing new and have been documented for many years. Unlike the impacts of improper logging, grazing and other man-induced disturbances, fire can and has historically altered entire landscapes in just a few hours or days.

Requested Action: Rewrite the statement identified in issue 6 to make it clear that wildfires burning under unnatural conditions can and have resulted in unnatural impacts that are way beyond the historic range of natural variability.

7. *To effectively manage to achieve desired conditions of a forest resource, project planners and decision-makers must ensure that they use the entire plan and not just the forest plan components listed for that resource. Effective integrated resource management recognizes the interdependence of ecological, social, cultural, and economic resources. (Second paragraph on page 16)*

Concern: The District strongly agrees with this statement and hopes it will be a driving force in the future management of the GNF.

Requested Action: No change to the draft plan is required.

8. *The previous discussion about landscape scale heterogeneity and plan content for vegetation and fire management can support resilient watersheds, although careful consideration of disturbance type, frequency, magnitude and intensity or severity will be required to maintain a balanced approach. (Third sentence of the third paragraph page 20)*

Concern: The District agrees that careful consideration of disturbance type, frequency, magnitude and intensity or severity will be required to maintain a balanced approach to management of the GNF, especially when dealing with the use of fire as a treatment or restoration tool.

Requested Action: No change to the draft plan is required.

9. *Although this topic is little studied, those studies that have been conducted demonstrate that areas that have filled this role previously are actually more likely to experience stand-replacement fire in subsequent wildfires. This implies mechanical treatments may be necessary to maintain some refugial areas. (Last two sentences of the second full paragraph on page 21)*

Concern: As is prescribed in the last sentence of this statement the District agrees that mechanical treatments may be the best and safest way to treat critical refugial areas on the GNF in the future. The District also believes that mechanical treatments should be the preferred treatment option for all areas of the GNF.

Requested Action: No change to the draft plan is required.

10. *Herbicide is often the only effective tool to control, contain, or eradicate noxious weed species due the characteristics of the species themselves and logistical and economic considerations. When treating native re-sprouting alligator juniper or evergreen oak species, the purpose is to add herbicide to "the toolbox" with its use being determined through an interdisciplinary process considering lessons learned and economics. (First and second sentences, paragraph 4 page 23)*

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Concern: The District supports the use of herbicides as a tool to treat noxious weeds and alligator juniper or oak species on the GNF.

Requested Action: No change to the draft plan is required.

11. *The plan components developed for upland vegetation are based on Ecological Response Units (ERUs). ERUs represent a classification system based on vegetation characteristics that would occur when natural disturbance regimes and ecological processes prevail. (First sentence, second paragraph, page 25)*

Concern: The District has a concern that the ecological classification system for the updated GNF Plan is based upon, as stated above, "vegetation characteristics that would occur when natural disturbance regimes and ecological processes prevail." This approach to ecological classification is not founded upon the reality of past human disturbances, the current man-induced ecological processes, nor the vegetative communities that exist today.

The desire to manage the GNF upland vegetation as Ecological Responses Units (ERUs), which are based upon natural disturbance regimes and ecological processes, is a substantial change from how the GNF has been managed in the past. As is noted throughout the draft plan, the desired natural processes have not been occurring for well over 100 years on most of the GNF. This concept, while noble, is not in line with reality.

Man, and his need for food, fiber, water, space, and a purpose for being, will continue to interfere with natural disturbance regimes and ecological processes as long as the public is dependent upon the landscapes that make up the GNF for the multiple use and sustained yield of resources. If natural disturbance regimes and ecological processes were to prevail, the most logical management for the landscapes that make up the GNF would be to designate the entire GNF as "Wilderness."

Requested Action: With a predetermined desired natural ecosystem concept (presented as ERUs) being introduced and implemented in the draft GNF plan, it would be reasonable to also present the expected future ecosystem characteristics (ERUs) under continued multiple use, sustained yield management. 36 CFR 219.10 requires that: "While meeting the requirements of §§219.8 and 219.9, a plan developed or revised under this part must provide for ecosystem services and multiple uses, including outdoor recreation, range, timber, watershed, wildlife, and fish, within Forest Service authority and the inherent capacity of the plan area..."

12. *However, it is expected that more acres will be treated with prescribed and naturally ignited wildfire for two reasons. First, the cost per acre is lower which will facilitate more acres of treatment being realized. Secondly, mechanical treatments may mimic some of the ecological outcomes of fire and may facilitate the restoration of fire to the landscape but they cannot replace an ecological process. (Last three sentences, third paragraph, page 28)*

Concern: As has been presented previously, the District is concerned that fire will be the primary tool for the future treatment of the landscapes on the GNF. When, as stated above, "it is expected that more acres will be treated with prescribed and naturally ignited wildfire" the opportunity for anyone except the Forest Service to be involved in treatment projects will be greatly limited.

The idea that, as stated above, "the cost per acre is lower, which will facilitate more acres of treatment being realized" does not take into account the use of any funding sources except appropriate tax dollars. The use of fire to treat landscapes does not yield any forest products that could generate funds that could be available for the treatment of fuels, restoration of functioning watersheds and restoration of diverse vegetation communities. As explained in above comments, the generation and sale of forest products in the past fund much of the land treatments done on National Forest System lands across the West.

As stated throughout the draft plan, appropriated funding for treatment projects is currently very limited, and the GNF does not compete well for appropriated funds. Expecting, as stated above, "more acres will be treated with prescribed and naturally ignited wildfire" is counterproductive to finding multiple funding sources and providing for the social, economic needs of the local community.

The idea that, as stated above, "mechanical treatments may mimic some of the ecological outcomes of fire and may facilitate the restoration of fire to the landscape, but they cannot replace an ecological process," appears

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to be an attempt to justify the use of fire based upon a personal value judgment. ("but they cannot replace an ecological process") What is so terribly wrong with that?

This statement indicates that emotional feelings and political correctness are more important than the condition of the GNF. What difference does it make how properly functioning and healthy ecosystems become established and make up the landscapes found on the GNF. While man's influences are blamed for much of the degraded conditions on the GNF, what says man's influences can't provide the desired future conditions that are called for in the revised GNF plan. It appears degraded watershed, soil and vegetative conditions due to "natural processes" are acceptable, but functioning watersheds, stable and productive soils, and healthy self-sustaining productive vegetative communities that are the result of mechanical treatments and man's efforts are not acceptable.

Requested Action: Reconsider making everything pertaining to the future management of the GNF politically correct. Allow the use of long established and proven treatment techniques on the GNF even if they are not considered to be an ecological process and politically correct.

13. Multiple statements under the Forest-wide Plan Direction section.

- a. *Soils- When management results in accelerated soil loss, these soil functions are altered or impaired, and ecosystem services are reduced. While some soil functions or a degree of soil function may be recovered within a human lifetime, soil itself is essentially a non-renewable resource due to the time it takes for soil to form. It has been estimated that in the water-limited Southwest, it can take 300 to 1,000 years to form an inch of soil. (Third paragraph page 76)*
- b. *Water Quality- Nonpoint source pollutants are the primary source of water pollution in the State of New Mexico and in the Gila NF. Point source pollutants can be traced back to a single point, such as a pipe or ditches from industrial or sewage treatment facilities. Nonpoint source pollution is caused by water moving over and through the ground and carrying natural and human-made pollutants into streams and water bodies and remains the nation's largest source of water quality problems. (First three sentences, paragraph three page 81)*
- c. *Watershed- Watershed condition is integral to all aspects of resource management and use. Good watershed management maintains the productive capacity of soils, protects water quality and quantity, sustains native species, provides for state-designated beneficial water uses, and reduces the threat of fire and flood damage to Forest Service infrastructure and downstream values. (Last paragraph page 83)*
- d. *Riparian and Aquatic Ecosystems- More than half of the Gila NF's riparian and aquatic ecosystems are not properly functioning because of one or more of the following reasons:*
 - i. *non-native invasive aquatic species.*
 - ii. *alterations in the amount, timing, and duration of water flows due to drought, diversions and withdrawals, or post-fire effects.*
 - iii. *poor water quality related to excessive sediment or temperature.*
 - iv. *riparian and wetland vegetation conditions resulting from drought, fire or post-fire effects, excessive herbivory by elk, livestock, or both; and*
 - v. *degraded channel shape and function resulting from the same factors impacting riparian and wetland vegetation conditions and alterations of water flow.*

Concern: The District is concerned that the management of these very basic resources and the vital functions they provide for maintaining the productivity of the GNF are not given the proper emphasis in the draft plan. The emphasis on "natural processes" such as fire, insect damage, erosion, floods etc. to create a desired level of disturbance for achieving the desired future condition of the ERUs on the GNF is difficult to understand.

Natural disturbance events such as wildfires, hurricanes, tornadoes, floods, and droughts; along with the explosions in the population of insect and other vegetation destroying organisms, have altered and most often degraded the condition and function of watersheds, soils, and vegetative communities for millions of years. These "natural processes", which now appear to be a desirable method of resource management to some, will not support the desired future conditions found in the draft plan nor the desires of the overall local human community. The idea that human activities and human management of the GNF landscapes will cause

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devastating “unnatural” disturbances, which is detrimental to healthy ecosystems only leads to the feeling that people are no longer welcome on the GNF.

Requested Action: The GNF needs to reconsider their dependence on “natural processes” as the avenue to achieving their desired future conditions. More emphasis needs to be placed on the use of well planned, science-based, and proven management and treatment techniques when addressing the basic resource needs and the vital functions of the watersheds, soils, water quality, and key vegetative communities (such as the riparian/aquatic ecosystems) on the GNF.

14. Relationships are a key factor that can influence the success of how the forest plan is implemented. With the challenges the forest faces today, strong working relationships with all stakeholders, partners, and volunteer groups are vital to increase capacity and help meet desired conditions to care for the land and serve the people. (Fourth paragraph page 122)

Concern: The District strongly agrees with this statement and hopes it will be a driving force in the future management of the GNF. Positive relationships are key to implementing and accomplishing the future management of the GNF.

Requested Action: No change to the draft plan is required.

15. Whether wildfire or prescribed fire, the direct and indirect effects of any one fire are rarely all positive or all negative. Fire can restore or maintain landscape heterogeneity and vegetation structure, or it can reduce landscape heterogeneity or fragment habitat. It can increase nutrient availability, or it can result in a loss of nutrients and soil productivity. It can accelerate erosion and sediment delivery to streams, or reduce the risk of future undesirable fire effects, or both. It can result in the loss of carbon, but also increase the ability of the system to sequester carbon. The potential for any of these effects depends on many variables, including but not limited to fuel and weather conditions, topography, and management decisions. Fire effects are also cumulative and interact with previous or subsequent effects of other activities and disturbances in beneficial or detrimental ways. For example, watershed impacts and recovery time increase when two high-severity fires occur on the same piece of ground with insufficient recovery time between. On the other hand, multiple fires within an area over time can limit fire size, intensity, and undesirable fire effects. (Fourth paragraph page 131)

Concern: It is clear when reading the above issue statement that fire can have both positive and negative effects. When using fire to reduce fuels, it is almost always the most cost-effective and efficient tool that can be used, but as described in the above statement, fire is also known to have significant adverse impacts to watershed/vegetation conditions.

Fire is not a tool that can be used to selectively target any particular individual or group of plant species. Fire is not a tool that can be used for treating the many re-sprouting plant species that are found on the GNF.

Fire always results in the loss of carbon from the burned area and any increase in the ability to sequester carbon seldom replaces the carbon that was lost in the original fire treatment not to mention the amount of carbon released into the atmosphere. Fire almost always results in the long-term loss of nutrients and soil productivity even though there is usually a short-term spike of plant growth following a burn. There are many more adverse effects to native ecosystems that result from fire.

The concern the District has with the GNF desire to use fire as a primary tool to restore or maintain “natural” watershed, soil and vegetation functions on the landscape is that fire has not been proven to be a consistent and reliable treatment tool. There are multiple recent fire scares on the GNF where naturally ignited wildfires were put into an appropriate suppression category where they would be monitored. These monitored/managed wildfires resulted in an intense, and very destructive, catastrophic wildfire. When and to what degree these current fire scares will again provide the ecosystem functions they once did are unknown. Now there is a high risk that these fire scared landscapes will become invaded with non-native plant species and possibly invasive noxious weed species.

The best available science clearly presents the known and proven risk of burning even the most “fire adapted” ecosystems. While the GNF treatment toolbox still contains many long known and proven tools to restore and

maintain “natural” landscapes, it appears the cost and ease of doing landscape treatments, not the effects of the treatment, will determine the treatment tool used.

Requested Action: Reconsider making ecosystem restoration and treatment decisions based upon the cost and ease of doing the treatments. Allow the use of long proven and tested restoration and treatment techniques on the GNF even if they are not considered to be a natural ecological process and are no longer considered to be politically correct.

16. Alternately, livestock grazing can compete with fire restoration objectives because the fire fuels necessary to support fire occurrence, spread, and flame lengths sufficient to thin stands, is also the forage crop grazing permittees depend on. There are times and locations where a lack of adequate fuel loading is the challenge to restoring the natural role of fire. (Second paragraph page 142)

Livestock use provides for conditions that support movement toward natural fire regimes. (Second item in Desired Conditions list)

Concern: These two statements raise many concerns due to the fact the future management on the GNF appears to be heading towards a higher priority on burning the native grassland vegetative communities than providing forage for livestock and wildlife. These statements set the stage for a future increase in grassland wildfires which easily spreads and burns with enough intensity to destroy not only the shrub and tree vegetative component but also many of the grassland plant species found in the grassland ecosystems on the GNF. A fire that burns with flame lengths sufficient to thin shrubs and trees stands will be hot enough to remove many of the climax grass species that are not well adapted to fire.

It has been shown multiple times in various studies and through rangeland management practices that healthy grassland communities out-compete and prevent the invasion of woody species over time. It is only after events like years of severe overgrazing or intensely hot or repeated wildfires that woody species become established where natural climax grassland plant communities once existed. The idea that fire inhibits shrub and tree establishment over the long term in grassland ecosystems is not supported by research or current proper grazing management practices.

Through “tree-ring” research it is now a common belief that fire thins stands of shrubs and trees in forested ecosystems. This usually occurs where the fuels that support wildfires are dull layers and/or dead woody material. This fire related thinning of shrubs and trees is not a long-term change in these forested ecosystems and periodic fire has to occur for any long-term result to exist.

Through “tree-ring” research it has been shown that the fire adapted ecosystem natural processes that occur mostly in the ponderosa pine forest ecosystems never lets these ecosystems advance into their true climatic stage due to the reoccurring disturbance. Reoccurring disturbance and the fire adapted ecosystem natural process that is documented in the ponderosa pine forest does not necessarily lead to the desired condition, the desired natural functions and/or the desired ecosystem health for most woodland and grassland ecosystems on the GNF.

A healthy grassland community that is made up of a wide variety of native grass species takes many years to develop. These unique ecosystems develop through years of competition between plant species and do not develop, nor are they maintained, in a disturbance-dominated situation. Low succession stage grass communities in the southwest that are dominated by species such as blue grama and Arizona fescue are fire adapted ecosystems, but a highly productive native multi-species grassland ecosystem is not a fire adapted ecosystem and can be easily destroyed by fire.

Requested Action: The District would like to see the future management of the GNF more in line with the desires and needs of the people who live and depend upon the GNF and not so driven by the desire to restore the natural role of fire. There are many examples on the GNF where fire has not resulted in a historic healthy and functioning ecosystem especially in the long-term. Most of the recent wildfires on the GNF have destroyed healthy and functioning ecosystems and it will take hundreds, if not thousands of years for these climax ecosystems to ever return to the GNF landscapes. If the GNF turns everything into a fire adapted ecosystem where periodic fire occurs, climax ecosystems will be a rare feature on the landscape.

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17. *Livestock management will be compatible with carrying capacity and address ecological resources (such as forage, invasive plants, at-risk species, soils, riparian health, and water quality) that are departed from desired conditions, as determined by temporally and spatially appropriate data. (First item in the Standard list on page 143)*

Concern: The above statement does not need to be presented as a Forest Plan Standard. The stocking of GNF allotments within the carrying capacity and the other requirements presented above are what make up proper management of livestock grazing, which is required in Forest Service Manuals and Handbooks, Term Grazing Permits, Allotment Management Plans and multiple other documents. The above statement could easily lead a reader to believe that livestock management on the GNF has been and is still unregulated and without the proper oversight of professional rangeland managers.

Requested Action: Reword the above grazing management Forest Plan Standard so it does not indicate "ecological resources (such as forage, invasive plants, at-risk species, soils, riparian health, and water quality) that are departed from desired conditions..." are a common occurrence on the GNF. There are many well managed allotments that are made up of healthy and productive ecosystems on the GNF and the future management of allotments where ecological resources are departed from desired conditions have been or will be addressed through site specific NEPA analysis.

18. *Existing livestock handling, and watering facilities located in RMZs should be modified, relocated or removed where an interdisciplinary team determines they are incompatible with movement toward desired conditions for other resources. Any modification, relocation or removal of infrastructure may not impede the use of permitted water rights recognized by the State of New Mexico. (First item in the list of guidelines on page 143 & 144)*

Concern: The modification, relocation or removal of existing livestock handling, and watering facilities located in RMZs due to them being incompatible with movement toward desired conditions for other resources as determined by an interdisciplinary team will lead to much controversy and mistrust.

Most livestock handling, and watering facilities located in RMZs have been in place for many years and have not adversely impacted other resources. With this new guideline being brought forward in the revised Forest Plan an interdisciplinary team will soon be able to interfere with the current livestock management activities on most allotments. Livestock handling, and watering facilities, whether located in RMZs or not, play a key role in the management of an allotment and their location is often key to making livestock management successful, especially in rough or isolated locations.

While the guideline does not address who will bear the cost of modifying, relocating or removing existing livestock handling, and watering facilities located in RMZs, the cost should not be the responsibility of the livestock operation. Neither the allotment permittee nor the Forest Service rangeland management program should be held responsible for satisfying what will most likely be a very minor but politically correct desired condition that benefits another function.

Requested Action: Remove this bias, unnecessary and potentially highly controversial guideline from the revised Forest Plan. If found to be necessary address the construction and maintenance of livestock handling and watering facilities on a case by case basis when developing or updating the allotment specific livestock grazing management plan.

19. *Vacant allotments should be considered for temporary use by holders of a current permit during times or events when their allotment(s) require growing season recovery time because of wildfire or other disturbance, or to minimize livestock and wildlife conflicts. (Sixth guideline found on page 144)*

Concern: No one will disagree that vacant allotments, when possible, should as stated above, "be considered for temporary use by holders of a current permit during times or events when their allotment(s) require growing season recovery time because of wildfire or other disturbance." What is more important than worrying about "require growing season recovery time" which often is not necessary, the GNF needs to consider the need for providing forage for the permittee whose operation is dependent upon the use of their GNF Allotment(s).

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Often time following a wildfire or other disturbance such as a prescribed burn, planned and appropriately timed grazing immediately following the disturbance is very beneficial for treating the re-sprouting shrub species so they do not dominate the site in the future. Also planned and appropriately timed grazing immediately following a fire can be a tool to suppress the invasion of the site by non-native grass species such as Lehman's lovegrass and other undesirable species of grass, forbs and shrubs.

Another thing the GNF has been very reluctant to address or consider is using "Vacant" allotments to resolve long-term problems. These problems could include situations where very low forage production lands make up most of an allotment. Also, allotments that are uneconomical to graze in today's economy could be retired from grazing without putting current GNF permittees out of business. Combining or reconfiguring existing allotments or moving term permit obligations to a "Vacant" allotment in order to graze the most productive rangelands instead of relying on unsuitable or very poor condition rangelands could resolve many current and future resource problems.

There are multiple critical public safety and TFS species management situations on the GNF that could be easily resolved on the GNF if the GNF Forest Plan would consider using "Vacant" allotments to resolve these long standing and highly controversial problems. It seems that waiting for a lawsuit to be filed and then spending the time and money to deal with an unwinnable situation is the direction the GNF is taking instead.

Cattle moved to unfamiliar pastures historically loose weight and are severely handicapped in supporting offspring, resulting in calf crop reduction and loss of mother cows. As such the forest plan should not take the position that generating open allotments for times of fire threat as a satisfactory insurance stance.

Requested Action: Establish in the revised Forest Plan the option to address long-standing rangeland conflicts and resources issues by combining or reconfiguring existing vacant allotments with current active allotments; or by moving term permit obligations to the productive and accessible portion of vacant allotments. Caution should be exercised in encouraging temporary movement of livestock to vacant allotments per our above concern.

20. *All monitoring data collected by non-Forest Service personnel that adhere to protocol identified in the plan-level monitoring implementation guide should be accepted for consideration and made available to permit holders for allotment management. (Eighth guideline found on page 144)*

Concern: The use of non-Forest Service personnel to collect livestock grazing and rangeland health related monitoring data should be closely scrutinized and should involve the holders of Term Grazing Permits on the GNF before any decision is made. This guideline would set a very dangerous precedent concerning the use of the "best available science" especially if grazing related monitoring data is collected by someone that is not a journeyman level professional rangeland manager.

Accepting monitoring data from anyone just because its collection adhered to the protocols identified in the plan-level monitoring implementation guide does not mean it is accurate and dependable. It is very easy to let one's personal bias corrupt almost any type of monitoring data especially when someone is not properly trained and does not have experience collecting plant community related data. Collecting accurate data related to the production and health of vegetation is especially difficult due to the tremendous number of variables that are involved.

Requested Action: Only accept rangeland monitoring data collected by a journeyman level professional rangeland manager or someone who is trained and closely supervised by a journeyman level professional rangeland manager.

21. *Annual allotment inspections could be conducted in the field with the permit holder to facilitate discussion of any issues that may be a factor. (Last partial sentence page 145 and first partial sentence page 146)*

Concern: Allotment inspections, if they are going to have any meaning, must be conducted in the field with the permit holder. You cannot inspect something without actually observing it.

Requested Action: Change "could be" to "must be" in the sentence and then support the GNF rangeland management employees in accomplishing this task.

CONSERVATION -DEVELOPMENT -SELF-GOVERNMENT

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22. The Roadless Area Conservation Final Rule (Roadless Rule) prohibits road construction, reconstruction, and timber harvest, except under certain circumstances, in inventoried roadless areas because they have the greatest likelihood of altering and fragmenting landscapes, resulting in immediate long-term loss of roadless area values. Some existing roads may be present within inventoried roadless areas. The Roadless Rule does not prohibit motorized travel on existing roads or motorized trails. (Last partial sentence on page 209 and first partial paragraph on page 210)

Concern: The current 36 CFR, Part 294 Subpart B does not contain the provisions of the 2001 Roadless Rule as described above and as contained in the Draft Plan. In the July 1, 2019 revised 36 CFR, Part 294, Subpart B, it is clearly stated in §294.10: "The purpose of these administrative procedures is to set forth a process for state-specific rulemaking to address the management of inventoried roadless areas in areas where the Secretary determines that regulatory direction is appropriate based on petition from affected Governor." There is no text in the current 36 CFR, Part 294, in any Subpart concerning prohibitions pertaining to road construction, reconstruction, and timber harvest within identified Roadless Areas on National Forest System lands in New Mexico.

Also, the 1980 New Mexico Wilderness Act clearly states in: "Sec. 101, The purposes of this Act" at § "(2) insure that certain other National Forest System lands in New Mexico be promptly available for nonwilderness uses including, but not limited to, campgrounds and other recreation site development, timber harvesting, intensive range management, mineral development, and watershed and vegetation manipulation". It is further stated in "Sec 104 (b)(5) areas in the State of New Mexico reviewed in such Final Environmental Statement (RARE II Final Environmental Statement dated January 1979) and not designated as wilderness, or for wilderness study by this Act need not be managed for the purpose of protecting their suitability for wilderness designation pending revision of the initial plans."

The 1980 New Mexico Wilderness Act further states in: "Sec 104 (c) Unless expressly authorized by Congress, the Secretary shall not conduct any further statewide roadless area review and evaluation of National Forest System lands in the State of New Mexico for the purpose of determining their suitability for inclusion in the National Wilderness Preservation System."

The original 2001 Roadless Rule itself states at 294.14(a) that, "This subpart does not revoke, suspend, or modify any permit, contract, or other legal instrument authorizing the occupancy and use of National Forest System lands issued prior to January 12, 2001. The 1980 New Mexico Wilderness Act is definitely a legal instrument that authorizes the occupancy and use of National Forest System Lands prior to January 12, 2001."

Requested Action: The District would like for the GNF to reconsider their use of the original (and now deleted) 2001 Planning Rule to designate 733,836 acres of the GNF as special "Inventoried Roadless Areas" that would have special management prohibitions on road construction, reconstruction, and timber harvest.

While the implementation of the 2001 Roadless Area Rule has been litigated with multiple opposing legal opinions and injunctions being rendered, the 1980 New Mexico Wilderness Act makes it clear that all but the areas designated as Wilderness or Wilderness Study Areas by the Act were to be dropped from any further management that would protect them for future designation as Wilderness areas.

The District would also like the GNF to provide the District with references to any Acts passed by Congress since 1980, that expressly authorized the Secretary to conduct any further statewide roadless area reviews and evaluations of National Forest System lands in the State of New Mexico for the purpose of determining their suitability for inclusion in the National Wilderness Preservation System. The 2012 Planning Rule is not management direction authorized by Congress and can't be the instrument that allows for the inventory, analysis and recommendation of Roadless Areas on the GNF for Wilderness designation.

COMMENTS SPECIFIC TO CONSIDERATIONS OF NEW WILDERNESS AREAS WITHIN THE SAN FRANCISCO SOIL & WATER CONSERVATION DISTRICT:

In addition to the comments above on roadless management standards the District is requesting that there be no additional designations of wilderness lands in Catron County. We understand the Forest Service requested

specific area-based comments. However, that allows the potential for areas not generating comments to be considered for wilderness designation. The following are our concerns:

Financial Costs

1. The Forest Service is financially handicapped to manage wilderness due to lack of funding. Any additional wilderness lands will not have ear-tagged funding that is required for management of those lands. Additional wilderness will only compound forest service budget issues.
2. Due to financial constraints any implemented, on ground, personnel support for existing wilderness is thin at best. Forest Service feasibility to generate and support management plans for additional wilderness are not funded and do not exist.
3. Designating additional wilderness lands will only compound the current financial issues with management of the Gila Forest and associated wilderness. It is important we professionally manage and fund our current wilderness before adding additional burdens.

Ecological Costs

1. The GNF Plan Assessment pointed out that a significant percentage of the lands are not in proper functioning condition. These conditions will require significant management actions to bring these areas into properly functioning condition. Wilderness designation restricts the management tools required to accomplish restoration. This will mean these areas will be condemned to remain in degraded condition or more likely decline in ecosystem health.

Proposed Wilderness is eliminating Multiple Use

1. Grazing Allotments

Allotment holders support sophisticated infrastructure requiring year-round vehicle and fuel operated equipment for maintenance. Eliminating these maintenance abilities will negatively affect allotment holders' rights to manage herds and ultimately damage existing wildlife habitat. The referenced infrastructure list includes:

- a. Fencing and corrals
- b. Cattle guards
- c. Water improvements, dirt tanks, steel drinkers, pumps, water distribution pipe, etc.
- d. Existing Roads supporting (emergency and maintenance vehicles)
- e. Existing erosion control ponds and dams

Eliminating any or the entire above infrastructure will affect pasture rotation affected increasing fire fuel hazards, encouraging woody species growth, reducing water supply and habitat for wildlife.

2. Recreational

All existing roads and 2 track trails are currently used by off road vehicles and passenger automobiles for hunting, limited hiking, handicapped and aged public access to overnight camping and site seeing. All of which have a positive financial footprint on the local economy. Eliminating those visiting public opportunities by restricting vehicle access will have an over-all negative impact on local business and tax base.

Both local business and the general public visitors to the San Francisco River below the confluence of Big Dry Creek South of Pleasanton, New Mexico to the Arizona border are currently experiencing the above negative recreational impact. The F/S decision to stop vehicle access to historical trails and public campgrounds for wilderness evaluation/study should be reversed.

The District looks forward to working with the Gila National Forest towards the goals of improving the natural resources of our home and production of the multiple uses from the National Forest lands.

Sincerely,

CONSERVATION -DEVELOPMENT -SELF-GOVERNMENT

CONSERVATION -DEVELOPMENT -SELF-GOVERNMENT

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Howard Hutchinson, Chairman

CONSERVATION - DEVELOPMENT - SELF-GOVERNMENT

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Grant County, Harry Browne, April 16, 2020

From: FSgilaplan
To: Harry Browne
Subject: RE: Comments on Draft Gila Forest Plan
Date: Thursday, April 16, 2020 5:32:33 PM
Attachments: image001.png
image002.png
image003.png
image004.png

Hi Harry, Just wanted to let you know I received your comments. I'm sorry for the issues with CARA. We are actively working with support services to resolve the issue. Hope you are safe and healthy.



Jenny (Nessa) Natharius, CPSS
Acting Forest Planner, Interdisciplinary Ecologist/Soil Scientist

Forest Service
Gila National Forest

pc 575-388-8483
jenny.natharius@usda.gov

3005 E. Camino del Bosque
Silver City, NM 88061

www.fs.fed.us



Caring for the land and serving people

From: Harry Browne [mailto:hbrowne@grantcountynm.gov]
Sent: Thursday, April 16, 2020 5:02 PM
To: FS-gilaplan <SM.FS.gilaplan@usda.gov>
Subject: Comments on Draft Gila Forest Plan

Greetings,

I attempted several times to use the CARA page to submit these comments, receiving repeated error messages that did not contain information about what changes were required. I am therefore e-mailing these comments to you. Thank you.

Harry Browne
210 N Cooper St
Silver City, NM 88061
hbrowne@grantcountynm.gov
(575) 654-4396

I would like to start by noting that I have read and fully support the comments that have been submitted by Mr. Mike Fugagli. Mr. Fugagli observes that the draft Forest Plan fails to address--except in passing--the number one ecological issue of our time: climate change. In part, this failure is due to the constraints of law, such as the criteria to be used in recommending areas to be designated as wilderness. I believe there is considerable leeway for judgment in applying those criteria, however, which leads me to conclude that a failure of vision is also to blame for the plan's short-

sightedness in the face of even conservative estimates of the effects of climate change on the Gila National Forest and our world.

In particular, I believe the description of Alternative 2 as one that balances the various stakeholder interests in forest management is inaccurate and represents an abdication of responsibility by an agency that has access to the best available science. An approach that is "balanced" by historical standards is not adequate today, when ameliorating the effects of climate change is in fact the only approach that stands a chance of meeting any stakeholder's long-term interests. It is akin to hewing to the middle of the river, even as our canoe approaches a waterfall.

I will briefly address several of the interests the draft Plan attempts to balance.

Grazing. The plan correctly acknowledges that overgrazing and fire suppression have created unhealthy forest conditions in which fire becomes catastrophic rather than helpful. It needs to back this observation with strictly enforced rules about how many cattle can graze in sensitive areas, and for how long. Preventing damage to the Gila's riparian corridors and ensuring that grazing on the Gila is not contributing to global warming must be the highest priorities. There is some scientific debate about whether grazing can be done in a way that removes carbon dioxide from the atmosphere; there is no debate that grazing done without great attention to soil compaction patterns, forage type and density, and regular herd movement leads to poor soil health, poor water retention, and net increases in atmospheric carbon dioxide.

Timber. Cutting overly thick stands of Ponderosa and Pinyon pines would help restore the forest to health, but unfortunately for the economics of those operations, the large-diameter trees that mills traditionally make their profit from need to be preserved, not cut. The Plan should contemplate subsidies for small-tree removal so forest-product businesses can help the forest and sustain local jobs.

Recreation. Grant County's plan to diversify our economy depends on access to public lands for users of all sorts. Completing the Gila's portion of the Continental Divide Trail and effectively connecting it to nearby communities is essential to this effort, and does not interfere with the primary goal of protecting as much land as possible as wilderness. Related goals such as expanding opportunities for mountain biking and clarifying the rules and approved routes for motorized users are valid but secondary, since if we do not survive as a species no one will care whether they have more or fewer miles of accessible trail. To the extent possible, the draft Plan should seek to favor motorized access in areas closer to population centers.

Biodiversity and Sustainability. Slowing and eventually halting the ongoing mass extinction of flora and fauna is of paramount importance to the globe. We have an opportunity to do our part here by protecting more land as wilderness and hundreds of miles of waterways as wild and scenic. The draft plan recommends Congress take action in both of these ways, but it needs to be much bolder in its recommendations; timidity is no way to confront the climate emergency. All of the potential wilderness areas described in Alternative 5 should be recommended to Congress for designation.

Private Property within the Forest. Protecting private property owners from wildfire by heavily subsidizing the thinning of surrounding woodlands is in effect a subsidy of those property owners, and should not be considered a high priority for funding. As an innholder myself, I feel I and my family should be entirely responsible for maintaining a fire-wise environment. Many other needs identified in this draft Plan and in my comments should be considered higher priority uses of limited funding.

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Caballo Soil and Water Conservation District, Susan Downs, April 13, 2020

Data Submitted (UTC-11): 4/13/2020 3:28:24 PM
First name: Susan
Last name: Downs
Organization:
System Data Entity: DynamicProxies Organization_816762DAD2F89D2F948FD803742E2AF185F4967BA
FCF8699FB089A863774E244
Title: Admin Assistant
Official Representative/Member Indicator:
Address1: PO Box 145
Address2:
City: Garfield
State:
Province/Region: New Mexico
Zip/Postal Code: 87836
Country: United States
Email: caballowcd@gmail.com
Phone: 5752675016
Comments:

 **Caballo Soil and Water Conservation District**
April 13, 2020 PO Box 145 • Garfield, NM 87936 • Phone and Fax 575-267-0516

Adam Mendonca, Forest Supervisor
Gila National Forest
3005 E Camino del Bosque
Silver City NM 88061

Attn: Plan Revision Team

Dear Mr. Mendonca:

The Caballo Soil and Water Conservation District Board of Supervisors appreciates the opportunity to submit comments pertaining to the Gila National Forest Plan Revision Draft Land Management Plan and Draft Environmental Impact Statement. The Caballo Soil and Water Conservation District (SWCD) is a political subdivision of the State of New Mexico. Portions of the Caballo SWCD lie within the Gila National Forest, along the southern portion of the Gila south of Jarlosa Canyon.

The Caballo District appreciates all the work and research that you and your staff completed in preparing the draft Forest Plan. The Plan and the EIS both show substantial details on the all aspects of historic uses of the forest land along with the cultural uses.

In looking at all the natural resources concerns the Caballo District agrees and supports the items outlined in Alternative 2 in the EIS. In particular the District fully agrees with the proper use of herbicides as a tool to address non-native weeds and invasive species, as well as addressing the use of herbicides on re-growth of alligator juniper.

As part of the draft Forest Plan the Caballo District reviewed all the areas proposed for additions to Wilderness acres. The District understands the review process of evaluating additional lands and considerations for additional lands into the current wilderness acres within the CNF. After close review of the maps, it would appear that Alternative #2 would have the least impact on forest activities overall. One item of concern to the Caballo District is the affect that additional lands into wilderness could potentially adversely impact current users of those proposed lands, especially grazing permittees. From what we understand wilderness designation could impact the permittee's ability to carry out routine grazing operations, such as putting out minerals for cattle, maintaining or improving existing livestock water systems and maintenance on stock tanks. If land under consideration are routinely accessed by producers via horseback, then the District does not have any issues with said designation.

Thank you for this opportunity.

Harvey Morrow, Chairman
Susan Downs

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Comments from Alicia Edwards, April 18, 2020

Data Submitted (UTC-11): 4/18/2020 4:45:48 PM
 First name: Alicia
 Last name: Edwards
 Organization:
 Title:
 Official Representative/Member Indicator:
 Address1:
 Address2: 1808 N Yuuca
 City: Silver City
 State: New Mexico
 Province/Region:
 Zip/Postal Code: 88061
 Country: United States
 Email: alicia@grantcountynm.gov
 Phone: 575-313-3371
 Comments:

I attended the final meeting in Silver City, which was essentially a training meeting where a great deal of emphasis was placed on the manner of input—specifically the document we were given and spent 2+ hours discussing. I recognize that the Covid-19 epidemic and subsequent measures taken have affected how many things operate. However, given the critical importance of this plan and the significant amount of emphasis that was placed on how the comment document was going to be used, the fact that this online comment platform does not reflect that document is unconscionable. That said, I have submitted my comments via the aforementioned document attached as a pdf file. If the past is any indicator, it could be 25 or more years before a plan of this magnitude happens again for the Gila Forest. I believe the most important thing to take into consideration in this process is that the plan has to be comprehensive enough to provide guidance far into the future, flexible enough to allow for consequences we haven't even thought of yet and specific enough to keep a forest supervisor's personal and/or political preferences from having undue influence on the future of a public asset that doesn't just belong to the residents in and around the forest but to every single person who resides in the US. I would like to thank Adam Mendonca, Matt Schultz and the rest of the Forest Service staff that contributed to this plan for their diligence and hard work. I felt like there really was a commitment to public involvement in the process and that the process reflected that commitment.

YOUR NAME: Alicia Edwards
DATE: 4/27/2020
MEETING LOCATION: Silver City

REVISED FOREST PLAN ISSUES AND OPTIONS						
For each row below, please circle which option you think fits best into a package of ideas for the Gila National Forest Revised Land Management Plan, or circle "Other Ideas" and write in your own suggestions—you can do this in addition to circling an existing option or instead of circling an existing option.						
Range of options in the DRAFT Plan Environmental Impact Statement				Other Ideas	Why?	
Restoration Priority Vegetation Types	OPTION A No priority vegetation types; work wherever there is an opportunity	OPTION B Prioritize grasslands and historically open-canopy woodlands	OPTION C Prioritize forest/ timberland vegetation types	OPTION D Prioritize all vegetation types that were historically maintained by frequent, low severity fire	OPTION E Balance priorities across all vegetation types; retain flexibility to shift priorities to respond to changing conditions	natural climate change I want future Forest Supervisors to have the flexibility to take into account the currently unknown consequences of climate change & how it will affect our watersheds
Restoration Methods/ Tools	OPTION A Combine naturally ignited wildfire, prescribed fire and mechanical thinning <i>mechanical includes timber sales</i>	OPTION B Emphasize mechanical thinning and restrict the use of prescribed fire	OPTION C Emphasize naturally ignited wildfire and prescribed fire and restrict mechanical thinning			we have to find a balance between what would naturally happen & the fact that human impact makes what would happen naturally very difficult
Restoration Methods/ Tools and the Wildland Urban Interface	OPTION A Mechanical thinning treatments are restricted to the Wildland Urban Interface	OPTION B Mechanical thinning treatments are not restricted to the Wildland Urban Interface.				flexibility & common sense!

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REVISED FOREST PLAN ISSUES AND OPTIONS					
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Range of options in the DRAFT Plan Environmental Impact Statement				Other Ideas	Why?
	OPTION A	OPTION B	OPTION C		
New or Realigned Roads, Motorized Trails and Recreation Sites <i>Riparian Areas</i>	No direction is provided; decisions are made on a case by case basis at the discretion of the Forest Supervisor or District Ranger	New roads and motorized routes, or realignments, recreation sites or other infrastructure should not be located within the 100-year floodplain, or within 300 feet of a riparian area	<u>OPTION C</u> New roads and motorized routes, or realignments, recreation sites or other infrastructure should not be located within the 100-year floodplain, or within 500 feet of riparian areas with streams year round water or native trout populations <i>+ non-year round</i>		please ADD non-year round water. We must do everything we can to protect riparian areas seasonal water areas
New or Realigned Roads, Motorized Trails and Recreation Sites	Road building in known Mexican Spotted Owl Protected Activity Centers (PACs) should be avoided but may be permitted on a case by case basis for pressing management reasons	No direction is provided; decisions are made on a case by case basis at the discretion of the Forest Supervisor or District Ranger	<u>OPTION C</u> New roads and motorized routes, recreation sites or other infrastructure should not be located within a half-mile of known Mexican Spotted Owl Protected Activity Centers (PACs) <i>1/2 mile from edge of PAC</i>	<i>if any need to build, ESA requirements</i> <i>600 Acre circle</i>	Follows ESA requirements

Below Riparian Area - veg reflects presence of water - not sub-surface doesn't have to be year round

2

REVISED FOREST PLAN ISSUES AND OPTIONS					
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Range of options in the DRAFT Plan Environmental Impact Statement				Other Ideas	Why?
	OPTION A	OPTION B	OPTION C		
New or Reconstructed Range Infrastructure <i>plants</i>	Range improvements should be designed to allow wildlife passage except where intended to exclude wildlife (such as an elk enclosure fence) and protect human health and safety. New livestock handling facilities should be located outside of occupied sites of at-risk species <i>plant</i>	<u>OPTION B</u> Range improvements are required to be designed to allow wildlife passage except where intended to exclude wildlife (such as an elk enclosure fence) and protect human health and safety. New livestock handling facilities are required to be located outside of occupied sites of at-risk species	No direction is provided; decisions are made on a case by case basis at the discretion of the Forest Supervisor or District Ranger in consultation with the grazing permittee		At risk species should include at risk plants + vegetation
New or Reconstructed Range Infrastructure	New livestock handling facilities should be located outside of archeological sites	No direction is provided; decisions are made on a case by case basis at the discretion of the Forest Supervisor or District Ranger in consultation with the grazing permittee	New livestock handling facilities are required to be located outside of archeological sites	<u>option D</u> Some direction provided: 16, taking into consideration whether or not the site is lithic scatter, cultural scatter or a homestead. What kind of infrastructure is being considered + location	Also, these infrastructure should not be located where damage to springs can occur

Spring damage

Lithic scatter vs. home sites

*Fences
corridors
stock tanks
cattle guards*

"hot action" does not disturb archeological sites

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REVISED FOREST PLAN ISSUES AND OPTIONS					
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Range of options in the DRAFT Plan Environmental Impact Statement				Other Ideas	Why?
New or Reconstructed Range Infrastructure	OPTION A No direction is provided; decisions are made on a case by case basis at the discretion of the Forest Supervisor or District Ranger in consultation with the grazing permittee	OPTION B New livestock handling facilities should be located outside of riparian areas	OPTION C New livestock handling facilities are required to be located outside of riparian areas		in the base of allotments changes + design, we more protect riparian areas - the natural plant + animal species that occur there - prevent desertification of riparian areas
	OPTION A Mineral supplements are required to not be located within sites occupied by at-risk plant species	OPTION B No direction is provided; decisions are made on a case by case basis at the discretion of the Forest Supervisor or District Ranger in consultation with the grazing permittee	OPTION C Mineral supplements should not be located within sites occupied by at-risk plant species		
Livestock Mineral Supplements	OPTION A Mineral supplements are required to not be located within archaeological sites	OPTION B Mineral supplements should not be within archaeological sites	OPTION C No direction is provided; decisions are made on a case by case basis at the discretion of the Forest Supervisor or District Ranger in consultation with the grazing permittee	option D Same as range infrastructure - (fence, cultural sensitive etc)	
	OPTION A Mineral supplements are required to not be located within archaeological sites	OPTION B Mineral supplements should not be within archaeological sites	OPTION C No direction is provided; decisions are made on a case by case basis at the discretion of the Forest Supervisor or District Ranger in consultation with the grazing permittee		

At risk plant species =

4

REVISED FOREST PLAN ISSUES AND OPTIONS					
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Range of options in the DRAFT Plan Environmental Impact Statement				Other Ideas	Why?
Livestock Mineral Supplements	OPTION A No direction is provided; decisions are made on a case by case basis at the discretion of the Forest Supervisor or District Ranger in consultation with the grazing permittee	OPTION B Mineral supplements are required to not be located on soils that are saturated, in an unsatisfactory condition or at risk for erosion	OPTION C Mineral supplements should not be located on that are saturated, in an unsatisfactory condition or at risk for erosion		
	OPTION A Restocking and management of grazing allotments following wildfire, mechanical vegetation treatment or other disturbance should be evaluated by an interdisciplinary team and the permit holder for readiness. Livestock use of recovering riparian vegetation should be managed to maintain or improve canopy cover of native riparian and wetland species	OPTION B Restocking and management of grazing allotments following wildfire, mechanical vegetation treatment or other disturbance are required to be evaluated by an interdisciplinary team and the permit holder for readiness. Livestock use of recovering riparian vegetation is required to be managed to maintain or improve canopy cover of native riparian and wetland species	OPTION C No direction is provided; decisions are made on a case by case basis at the discretion of the Forest Supervisor or District Ranger in consultation with the grazing permittee		
Adaptive Livestock Management	OPTION A Restocking and management of grazing allotments following wildfire, mechanical vegetation treatment or other disturbance should be evaluated by an interdisciplinary team and the permit holder for readiness. Livestock use of recovering riparian vegetation should be managed to maintain or improve canopy cover of native riparian and wetland species	OPTION B Restocking and management of grazing allotments following wildfire, mechanical vegetation treatment or other disturbance are required to be evaluated by an interdisciplinary team and the permit holder for readiness. Livestock use of recovering riparian vegetation is required to be managed to maintain or improve canopy cover of native riparian and wetland species	OPTION C No direction is provided; decisions are made on a case by case basis at the discretion of the Forest Supervisor or District Ranger in consultation with the grazing permittee		

Dan Dietzel 575 956-8272

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REVISED FOREST PLAN ISSUES AND OPTIONS					
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Range of options in the DRAFT Plan Environmental Impact Statement				Other Ideas	Why?
Vacant Livestock Grazing Allotments	OPTION A Some vacant grazing allotments are reserved for temporary use by current permit holders when allotments require growing season recovery as a result of wildfire, drought or other disturbance, or to minimize wildlife conflicts. (Swing allotments or forage reserves)	OPTION B All vacant grazing allotments are stocked to the maximum extent possible. <i>"grass bank"</i>	OPTION C Vacant allotments remain unstocked until a NEPA review is completed. If new NEPA is necessary, vacant allotments remain unstocked until new NEPA decision determines appropriate future management.	<i>1 allotment per district centrally located?</i> <i>originally: cooperative agreement</i>	option D <i>close all vacant allotments - why reintroduce cattle to areas that have had a chance to recover?</i>
Land Adjustments	OPTION A Lands program includes landownership adjustment, right-of-way-acquisition, and land line identification to promote a contiguous land base within the Forest boundary	OPTION B Land adjustments (including acquisitions) are made for the purposes of enhancement of public access and use, and to support resource management objectives	OPTION C Conducting land exchanges are the preferred method over acquisitions for making land adjustments		<i>No land adjustments should be made that benefit private corporations - emphasis should be placed on adjustments that benefit public use & access</i>

investigate grazing program not 100%
10 lots avail
if 100k spent on grazing programs \$100k in revenue
if 12 million must be left for 20 yrs
subsidizing
if 100k for private
make a line - permit reducing vacant allotments

6

REVISED FOREST PLAN ISSUES AND OPTIONS					
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Range of options in the DRAFT Plan Environmental Impact Statement				Other Ideas	Why?
Proposed Botanical Areas	OPTION A 3 Designated Botanical Areas totaling 150,590 acres	OPTION B 3 Botanical Management Areas totaling 68,171 acres	OPTION C No Botanical designated or management areas	<i>Highest & best use of these lands</i>	<i>taking into consideration the highest & best use of the designated areas</i>
Proposed Research Natural Areas	OPTION A 4 Proposed Research Natural Areas recommended for designation, totaling 1,878 acres	OPTION B 2 Proposed Research Natural Areas recommended for designation, totaling 1,500 acres	OPTION C No new Proposed Research Natural Areas recommended for designation		

REVISED FOREST PLAN ISSUES AND OPTIONS					
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Range of options in the DRAFT Plan Environmental Impact Statement				Other Ideas	Why?
Group Size Limit for Designated Wilderness Areas	OPTION A Maximum group size for designated wilderness is limited to 25 persons and/or 35 head of pack and saddle stock	OPTION B There are no limits to group sizes permitted within designated wilderness. Outfitter-guide operating plans include direction to follow Leave No Trace principles and incorporate wilderness values into operations, guide training, and client interactions	OPTION C Maximum group size for designated wilderness is 15 persons and 25 head of pack and saddle stock. Numbers may be adjusted for future changed conditions. Exceptions may be granted by the Forest Supervisor or designated agent, including terms and conditions of special use permits, or groups that agree to mitigation terms and Leave No Trace Ethics, and for fire management, and emergencies involving health and safety		

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REVISED FOREST PLAN ISSUES AND OPTIONS						
For each row below, please circle which option you think fits best into a package of ideas for the Gila National Forest Revised Land Management Plan, or circle "Other ideas" and write in your own suggestions—you can do this in addition to circling an existing option or instead of circling an existing option.						
Range of options in the DRAFT Plan Environmental Impact Statement					Other Ideas	Why?
	OPTION A	OPTION B	OPTION C	OPTION D		
Group Size Limit for Recommended Wilderness Areas	There are no recommended wilderness areas therefore there is no need to consider group size limits	There are no limits to group sizes permitted within recommended wilderness. Outfitter-guide operating plans include direction to follow Leave No Trace principles and incorporate wilderness values into operations, guide training, and client interactions	Maximum group size for designated wilderness is limited to 25 persons and/or 35 head of pack and saddle stock	Maximum group size for recommended wilderness is 15 persons and 25 head of pack and saddle stock. Numbers may be adjusted for future changed conditions. Exceptions may be granted by the Forest Supervisor or designated agent, including terms and conditions of special use permits, or groups that agree to mitigation terms and Leave No Trace Ethics, and for fire management, and emergencies involving health and safety		

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Catron County Commission, Van J. Bucky Allred, April 14, 2020

From: Bill Green
To: Natharius, Jenny M -FS
Subject: RE: Comments
Date: Thursday, April 16, 2020 3:25:31 PM
Attachments: imao6091.png
imao6092.png
imao6093.png
imao6094.png

In the future, you may feel free to remind me that I am in your debt!

Bill Green
Catron County Manager
Office – 575 – 533 – 6423
Cell – 575 – 519 - 2064

From: Natharius, Jenny M -FS <jenny.natharius@usda.gov>
Sent: Thursday, April 16, 2020 3:24 PM
To: Bill Green <b.green@catroncountynm.gov>
Subject: RE: Comments

Got 'em Bill. Thanks a bunch.



Jenny (Nessa) Natharius, CPSS
Acting Forest Planner, Interdisciplinary Ecologist/Soil Scientist
Forest Service
Gila National Forest
p: 575-388-8483
jenny.natharius@usda.gov
3005 E. Camino del Bosque
Silver City, NM 88061
www.fs.fed.us
[USDA](#) [Twitter](#) [Facebook](#)
Caring for the land and serving people

From: Bill Green [<mailto:b.green@catroncountynm.gov>]
Sent: Thursday, April 16, 2020 3:21 PM
To: Natharius, Jenny M -FS <jenny.natharius@usda.gov>
Subject: Comments

Thanks!

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Clerk – PO Box 197
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Connie Sue Shipley
Treasurer – PO Box 407
(575) 533-6384
Lillie Laney
Assessor – PO Box 416
(575) 533-6577
Ian Fletcher
Sheriff – PO Box 467
(575) 533-6222
Beverly Laude
Probate Judge



Anita A. Hand
Commissioner
District No. 1
John Cliff Snyder
Commissioner
District No. 2
Van J. (Bucky) Allred
Commissioner
District No. 3
Commission Office
PO Box 507 – (575) 533-6423
FAX (575) 533-6483
Bill Green
County Manager

Submitted via: <https://cara.ecosystem-management.org/Public/CommentInput?Project=51887>

April 14, 2020

Mr. Adam Mendonca, Forest Supervisor
Gila National Forest
United States Forest Service
3005 East Camino del Bosque
Silver City, NM 88061

RE: Comments for the Draft Revised Gila National Forest Plan.

Dear Supervisor Mendonca,

Catron County covers the majority of the Gila Forest and a great part of the individuals who live in the county, in part or whole, depend on the forest to provide for their livelihood in one form or another. As history has born out, changes in federal laws, environmental and endangered species acts have killed the lumber industry and greatly affected livestock management, hunting and guiding, recreation and public access. Any more restrictive guidelines or rules would only further the damage already done toward citizens of this county. Without just compensation for forest acreage (PILT is an unjust process as its formula does not address low population counties properly), Catron County will always be forced in a position of being unable to provide basic services for its constituents. We urge you to refrain from adding wilderness areas and encourage you to be as supportive as possible for ranchers, hunters and the lumber industry. Please accept the following comments:

COMMENTS ON THE GILA FOREST PLAN REVISIONS

1. In the description of "Traditional Uses" as found on pages 4 and 5 of the Draft Plan, the very important downstream use of water coming from the lands that make up the GNF is not recognized.

Concern: Catron County views this as a major issue. The downstream supply of water coming from the mountainous terrain that now makes up the Gila National Forest (GNF) played a critical role in the early settlement of Southwest New Mexico and Southern Arizona. The waters that historically flowed in the San Francisco and Gila Rivers greatly influenced the settlement of the area that makes up Southwest New Mexico and Southern Arizona, and today Gila River water supports many of the people that currently inhabit the arid Southwest.

Requested Action: It is suggested that the historical importance of the Rivers originating in the GNF and the supply of water they provided for hundreds of miles downstream be recognized.

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2. *Although other restoration methods support the traditional uses of the national forest and are an important part of the vision for the future, fire has been and will remain the primary restoration tool. (Second to last sentence, first paragraph, page 7)*

Concerns: Fire has only recently become the primary restoration tool on the GNF. Using fire as a restoration tool only came to be the primary treatment for restoration when the watershed and timber management programs on the GNF were devastated by litigation. In the past, outside funding sources and the use of timber sale receipts funded a large portion of the GNF fuels management, timber stand management and other vegetation/watershed restoration projects.

Previously the primary use of fires on the GNF has been to treat the slash generated by fuel wood harvesting, timber harvesting and thinning practices. It has not been that long that the use of fire has been considered to be a significant watershed/vegetation treatment technique on the GNF. A lot of watershed/vegetation treatment burns have been tried on the GNF in the last 30 years. Few burns actually accomplished the prescribed management objective of the burn treatment over the years. Making areas black and void of organic materials may be a fuels management objective, but seldom does it meet watershed/vegetation management objects.

Historically much of the fine fuels and smaller organic materials located on the soil surface were left to be incorporated into the soil. These "fuels" were left to be decomposed by microorganisms, where the resulting broken-down lignin and cellulose carbon-based molecules became incorporated into the soil as valuable plant nutrients. The microbe decomposed "fuels" provided critical carbon-based soil organic material that is an important link in the "Carbon Cycle" which is key to all plant growth.

Requested Action: It is requested that a variety of management techniques for restoration of vegetation be kept on equal footing with the use of fire and not branded as too expensive or too hard to accomplish; thus, not considered or used.

3. *The Gila does not compete well for funding for more expensive mechanical treatments, because of its remoteness and the area's low population density. The funding necessary to mechanically treat large acreages tends to go to national forests close to urban areas and the designated municipal watersheds those large population centers depend on. (First and second sentences, second paragraph, page 7)*

Concerns: In the past a major portion of mechanical treatments were funded from outside funding sources such as the sale of timber, forage and other forest products or the treatments were actually accomplished by the work that provided these products to the public. Even many recreation activities and special uses of National Forest Systems lands once returned funds that could be used to enhance conditions on National Forest Systems lands.

"KV" and "Brush Disposal" funds were collected from the revenues derived from the sale of the timber and/or forest products. Those funds were the primary source of funding for both "fuels management" and "watershed/vegetation treatments" on hundreds of acres on the GNF each year. These laws allowed the collection and use of funds for land treatments and are still in effect. The problem is the harvesting and use of forest products from the GNF has been reduced to near zero. There should be an effort put forth in the Revised GNF Plan to, once again, harvest forest products on the GNF instead of planning to make fire the primary treatment tool where these forest products are converted into carbon dioxide and spewed into the atmosphere.

It is true that competing for funding for land treatment projects on National Forest System lands has become a political exercise. The Bush administration tried to deal with this situation when it developed and implemented the "Healthy Forest" initiative where "fuels" treatment in the wildland urban interface (WUI) became the priority for funding.

While the GNF has focused some of its "fuels" treatment work towards the WUI areas, it does not appear that the GNF has done a very good job tying fuels treatment with watershed/vegetation treatment and then finding opportunities to accomplish these multiple benefit projects in the high priority WUI areas. Multi-function treatment projects in high priority WUI areas need to be identified through a multi-agency coordination effort to be competitive in today's political environment. The GNF needs to become better at working with cooperating agencies and all types of forest users' groups if it wants to become competitive for funding.

Requested Action: The GNF needs to look into improving their efforts for multi-agency/multi-landownership planning and implementation of land treatment projects, especially in the WUI areas. The GNF needs to look into taking advantage

of the multiple land treatment funding sources that are available through cooperative planning and implementation efforts. (i.e. Community Wildfire Protection Plans, Multi-agency/Multi-land ownership Watershed Plans).

Promoting and depending on the use of fire as the primary land treatment technique on the GNF will only make it harder to get funding for mechanical treatment projects in the future. As explained above mechanical treatment projects are often the most appropriate method to restore and/or enhance National Forest System lands.

4. *From an ecological standpoint, fire is the primary restoration tool because the Gila landscape evolved with frequent fire. It is a natural ecological process that helped shape the national forest's plant and animal communities, watersheds, and hydrology before the fire suppression era began. But now, because the lack of fire on the landscape has contributed to higher tree densities, restoration with fire is like surgery with a chainsaw; trade-offs abound, and it is all about water. (The last three sentences, second paragraph, page 7)*

Concerns: The landscapes that make up the GNF may have evolved with fire, and in the past these landscapes may have been dominated with plant communities, soil conditions, watershed conditions and ecosystems that were indicative of periodic fires burning through the area. The one thing that is not clearly stated in the above issue statement is that all of this "natural ecological process" took place prior to man greatly influencing the landscapes that make up the GNF. Much more than just an era of fire suppression has occurred on the GNF since the "frequent fire" days.

The Forest Assessment leading up to the forest plan created a focus on pre-European settlement conditions that have not existed since that period in time. This is due to a recorded change in the climate that at the time of European settlement was coming out of an extended dry period. It is also recorded that Indians deliberately lit low intensity fires as well as a regular cycle of naturally occurring lightning ignited fires. These created burn cycles between two and seven years in the ponderosa, dry mixed conifer and woodland communities.

These fires maintained the ponderosa and dry mixed conifer and woodland density in the park like condition described and photographed by the early European settlers. In the spruce/fir/aspen uplands limited area blowout fires occurred on a one hundred and fifty to 200 years creating a mosaic of differing successions.

Nature is not always a friend of man. It may be noble to want to go back to the "natural" landscapes that are thought to have once occurred; and allow "nature" to manage the GNF the way it is believed to have occurred years ago, but the reality is the landscapes that make up GNF need to be managed as they occur today with man's past influences being the reality.

It is true that many acres on the GNF are dominated by dense stands of trees and shrubs. It is also true many of these stands, due to their age, are becoming decadent and much more prone to burn especially during drier years. It is also true, as stated above, "restoration with fire is like surgery with a chainsaw..." With all of this said, using fire as the primary tool for treating the current fuel load and the degraded soil and watershed conditions on the GNF makes about as much sense as burning your house down so you won't have to worry about your house burning down.

Requested Action: Do not depend on the use of fire as the primary tool for landscape restoration on the GNF. The recent large and very destructive fires on the GNF show that fire is not a controlled method for treating landscapes and fire often results in negatively and severely altering the landscapes that were to be treated.

While fire can be used to reduce fuels at the landscape scale at a much lower cost, fire needs to be considered as the hammer in the restoration toolbox. Fire can be a restoration tool, but like using a hammer, things can go wrong quickly, and unintended irreversible damage is often the result.

5. *Past and current management actions, inactions, and a changing climate have contributed to ecosystem and watershed departure from what is known about the historic range of variability. For example, past fire suppression and historic overgrazing contributed to altered fire regimes and other ecological processes. Legacy issues associated with past management remain evident in many places. These issues include woody vegetation encroachment into grasslands, infill of forest and woodland openings, increased tree densities within forest and woodland patches, altered distributions of vegetation structural states and species composition, and impaired soil conditions. (Last paragraph on page 7)*

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Concern: As stated in the above issue statement, on many acres of the GNF the current soil, watershed and vegetative conditions are very different than the desired conditions described in the plan and are totally outside of what is described as the historic range of variability. (See figure 1) Many areas no longer have the soil structure, depth, nutrients and water holding capability to ever return to be within the defined range of variability or what is believed to be the desired natural state. Deep gullies exist that lower the water table in the once highly productive valley bottoms. Many hillsides that once supported stands of perennial grasses are now rocky, shrub and tree-covered slopes. While the GNF draft revised plan recognizes this situation, it is unclear how this situation will be addressed in the future.

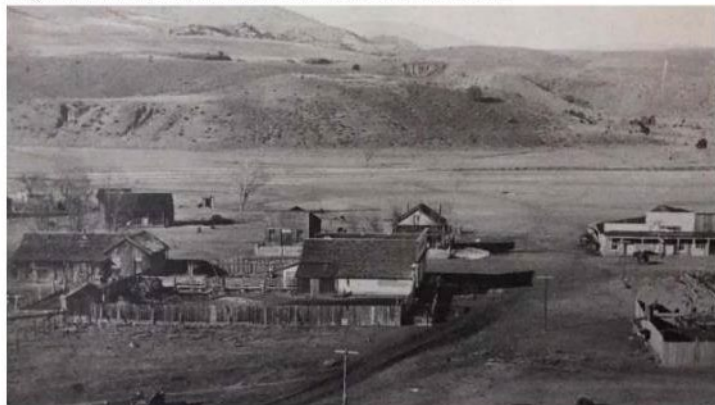


Figure 1: Alma, New Mexico looking west circa 1920. Note an almost total absence of trees and other riparian vegetation along the river as well as very limited piñon/juniper woodlands on the hills.

Requested Action: It is suggested the GNF revised plan recognizes that many highly degraded acres on the GNF will never return to a condition that is within their once historic range of variability and that these areas can at least be managed to provide resources that are beneficial to man. It is hoped the rocky tree covered slopes can continue to provide a source of fuelwood for the public and the valley bottoms that are dissected by deep eroding gullies can be treated and while they may never return to be a wetland, they can be managed to produce forage for livestock and wildlife.

6. *Past fire suppression, historic overgrazing, and other activities have disrupted many natural processes, such as wildfire and natural vegetation succession. (First sentence in the Ecological Changes section found on page 9)*

Concern: Just about everyone will concede that historic overgrazing and other activities that occurred during the settlement/homestead era (late 1880's/early 1900's) disrupted many natural processes such as natural vegetation succession on the GNF. The lumping of fire suppression into the same category of a disruptor of natural processes as what occurred in the late 1880's on the landscapes that make up the GNF is very misleading and more of a politically correct theory than fact based.

It is also difficult to understand how "wildfire" is a desired natural process for the GNF when it impedes and often destroys "natural vegetation succession". Natural vegetation succession results in dynamic and diverse plant communities, healthy and functioning ecosystems, functioning watersheds and highly productive soils that are the desired natural functions valued by man and called for in the Draft Plan.

Just because fire is causing the disturbance, it does not mean the resulting impacts are beneficial or natural. Not all fires burn with the same intensity and both managed-fires and wildfires can have a wide range of impacts on natural vegetation succession, especially when the landscapes that are burned are not in a natural state when a fire occurs.

Under the current man-induced unnatural setting of overstocked forest, and the heavy accumulations of fuels recent extremely intense, super-hot, wildfires have had an unnatural and severe impact on large blocks of the GNF. Along with these recent man-induced extremely intense, super-hot wildfires, which have impacted large blocks of the GNF, many previous man-induced ecosystems that are not within their natural range of variability currently exist and are the reality that the future management of the GNF needs to address.

In time it will be recognized that these unnatural and severe impacts have not only altered the natural vegetative communities, but also have altered the desired soil and watershed functions on thousands of acres of the GNF. The use of fire as the primary treatment tool on the GNF under most circumstances will only further interfere with the natural carbon and water cycles that healthy ecosystems depend upon to exist.

The adverse impacts of fire are nothing new and have been documented for many years. Unlike the impacts of improper logging, grazing and other man-induced disturbances, fire can and has historically altered entire landscapes in just a few hours or days.

Requested Action: Rewrite the statement identified in issue 6 to make it clear that wildfires burning under unnatural conditions can and have resulted in unnatural impacts that are way beyond the historic range of natural variability.

7. *To effectively manage to achieve desired conditions of a forest resource, project planners and decision-makers must ensure that they use the entire plan and not just the forest plan components listed for that resource. Effective integrated resource management recognizes the interdependence of ecological, social, cultural, and economic resources. (Second paragraph on page 16)*

Concern: Catron County strongly agrees with this statement and hopes it will be a driving force in the future management of the GNF.

Requested Action: No change to the draft plan is required.

8. *The previous discussion about landscape scale heterogeneity and plan content for vegetation and fire management can support resilient watersheds, although careful consideration of disturbance type, frequency, magnitude and intensity or severity will be required to maintain a balanced approach. (Third sentence of the third paragraph page 20)*

Concern: Catron County agrees that careful consideration of disturbance type, frequency, magnitude and intensity or severity will be required to maintain a balanced approach to management of the GNF, especially when dealing with the use of fire as a treatment or restoration tool.

Requested Action: No change to the draft plan is required.

9. *Although this topic is little studied, those studies that have been conducted demonstrate that areas that have filled this role previously are actually more likely to experience stand-replacement fire in subsequent wildfires. This implies mechanical treatments may be necessary to maintain some refugial areas. (Last two sentences of the second full paragraph on page 21)*

Concern: As is prescribed in the last sentence of this statement Catron County agrees that mechanical treatments may be the best and safest way to treat critical refugial areas on the GNF in the future. The county also believes that mechanical treatments should be the preferred treatment option for all areas of the GNF.

Requested Action: No change to the draft plan is required.

10. *Herbicide is often the only effective tool to control, contain, or eradicate noxious weed species due the characteristics of the species themselves and logistical and economic considerations. When treating*

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native re-sprouting alligator juniper or evergreen oak species, the purpose is to add herbicide to "the toolbox" with its use being determined through an interdisciplinary process considering lessons learned and economics. (First and second sentences, paragraph 4 page 23)

Concern: Catron County supports the use of herbicides as a tool to treat noxious weeds and alligator juniper or oak species on the GNF.

Requested Action: No change to the draft plan is required.

11. *The plan components developed for upland vegetation are based on Ecological Response Units (ERUs). ERUs represent a classification system based on vegetation characteristics that would occur when natural disturbance regimes and ecological processes prevail. (First sentence, second paragraph, page 25)*

Concern: Catron County has a concern that the ecological classification system for the updated GNF Plan is based upon, as stated above, "vegetation characteristics that would occur when natural disturbance regimes and ecological processes prevail." This approach to ecological classification is not founded upon the reality of past human disturbances, the current man-induced ecological processes, nor the vegetative communities that exist today.

The desire to manage the GNF upland vegetation as Ecological Responses Units (ERUs), which are based upon natural disturbance regimes and ecological processes, is a substantial change from how the GNF has been managed in the past. As is noted throughout the draft plan, the desired natural processes have not been occurring for well over 100 years on most of the GNF. This concept, while noble, is not in line with reality.

Man, and his need for food, fiber, water, space, and a purpose for being, will continue to interfere with natural disturbance regimes and ecological processes as long as the public is dependent upon the landscapes that make up the GNF for the multiple use and sustained yield of resources. If natural disturbance regimes and ecological processes were to prevail, the most logical management for the landscapes that make up the GNF would be to designate the entire GNF as "Wilderness"

Requested Action: With a predetermined desired natural ecosystem concept (presented as ERUs) being introduced and implemented in the draft GNF plan, it would be reasonable to also present the expected future ecosystem characteristics (ERUs) under continued multiple use, sustained yield management. 36 CFR 219.10 requires that: "While meeting the requirements of §§219.8 and 219.9, a plan developed or revised under this part must provide for ecosystem services and multiple uses, including outdoor recreation, range, timber, watershed, wildlife, and fish, within Forest Service authority and the inherent capacity of the plan area..."

12. *However, it is expected that more acres will be treated with prescribed and naturally ignited wildfire for two reasons. First, the cost per acre is lower which will facilitate more acres of treatment being realized. Secondly, mechanical treatments may mimic some of the ecological outcomes of fire and may facilitate the restoration of fire to the landscape but they cannot replace an ecological process. (Last three sentences, third paragraph, page 28)*

Concern: As has been presented previously, the Catron County is concerned that fire will be the primary tool for the future treatment of the landscapes on the GNF. When, as stated above, "it is expected that more acres will be treated with prescribed and naturally ignited wildfire" the opportunity for anyone except the Forest Service to be involved in treatment projects will be greatly limited.

The idea that, as stated above, "the cost per acre is lower, which will facilitate more acres of treatment being realized" does not take into account the use of any funding sources except appropriate tax dollars. The use of fire to treat landscapes does not yield any forest products that could generate funds that could be available for the treatment of fuels, restoration of functioning watersheds and restoration of diverse vegetation communities. As explained in above comments, the generation and sale of forest products in the past fund much of the land treatments done on National Forest System lands across the West.

As has been presented throughout the draft plan, appropriated funding for treatment projects is currently very limited, and the GNF does not compete well for appropriated funds. Expecting, as stated above, "more acres will be treated with prescribed and naturally ignited wildfire" is counterproductive to finding multiple funding sources and providing for the social, economic needs of the local community.

The idea that, as stated above, "mechanical treatments may mimic some of the ecological outcomes of fire and may facilitate the restoration of fire to the landscape, but they cannot replace an ecological process." appears to be an attempt to justify the use of fire based upon a personal value judgment. ("but they cannot replace an ecological process.") What is so terribly wrong with that?

This statement indicates that emotional feelings and political correctness are more important than the condition of the GNF. What difference does it make how properly functioning and healthy ecosystems become established and make up the landscapes found on the GNF. While man's influences are blamed for much of the degraded conditions on the GNF, what says man's influences can't provide the desired future conditions that are called for in the revised GNF plan. It appears degraded watershed, soil and vegetative conditions due to "natural processes" are acceptable, but functioning watersheds, stable and productive soils, and healthy self-sustaining productive vegetative communities that are the result of mechanical treatments and man's efforts are not acceptable.

Requested Action: Reconsider making everything pertaining to the future management of the GNF politically correct. Allow the use of long established and proven treatment techniques on the GNF even if they are not considered to be an ecological process and politically correct.

13. Multiple statements under the Forest-wide Plan Direction section.

- a. *Soils: When management results in accelerated soil loss, these soil functions are altered or impaired, and ecosystem services are reduced. While some soil functions or a degree of soil function may be recovered within a human lifetime, soil itself is essentially a non-renewable resource due to the time it takes for soil to form. It has been estimated that in the water-limited Southwest, it can take 300 to 1,000 years to form an inch of soil. (Third paragraph page 76)*
- b. *Water Quality: Nonpoint source pollutants are the primary source of water pollution in the State of New Mexico and in the Gila NF. Point source pollutants can be traced back to a single point, such as a pipes or ditches from industrial or sewage treatment facilities. Nonpoint source pollution is caused by water moving over and through the ground and carrying natural and human-made pollutants into streams and water bodies and remains the nation's largest source of water quality problems. (First three sentences, paragraph three page 81)*
- c. *Watershed: Watershed condition is integral to all aspects of resource management and use. Good watershed management maintains the productive capacity of soils, protects water quality and quantity, sustains native species, provides for state-designated beneficial water uses, and reduces the threat of fire and flood damage to Forest Service infrastructure and downstream values. (Last paragraph page 83)*
- d. *Riparian and Aquatic Ecosystems: More than half of the Gila NF's riparian and aquatic ecosystems are not properly functioning because of one or more of the following reasons:*
 - i. *non-native invasive aquatic species.*
 - ii. *alterations in the amount, timing, and duration of water flows due to drought, diversions and withdrawals, or post-fire effects.*
 - iii. *poor water quality related to excessive sediment or temperature.*
 - iv. *riparian and wetland vegetation conditions resulting from drought, fire or post-fire effects, excessive herbivory by elk, livestock, or both; and*
 - v. *degraded channel shape and function resulting from the same factors impacting riparian and wetland vegetation conditions and alterations of water flow.*

Concern: Catron County is concerned that the management of these very basic resources and the vital functions they provide for maintaining the productivity of the GNF are not given the proper emphasis in the draft plan. The emphasis on "natural processes" such as fire, insect damage, erosion, floods etc. to create a desired level of disturbance for achieving the desired future condition of the ERUs on the GNF is difficult to understand.

Natural disturbance events such as wildfires, hurricanes, tornadoes, floods, and droughts; along with the explosions in the population of insect and other vegetation destroying organisms, have altered and most often degraded the condition and function of watersheds, soils, and vegetative communities for millions of years. These "natural processes", which now appear to be a desirable method of resource management to some, will not support the desired future conditions found in

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the draft plan nor the desires of the overall local human community. The idea that human activities and human management of the GNF landscapes will cause devastating "unnatural" disturbances, which is detrimental to healthy ecosystems only leads to the feeling that people are no longer welcome on the GNF.

Requested Action: The GNF needs to reconsider their dependence on "natural processes" as the avenue to achieving their desired future conditions. More emphasis needs to be placed on the use of well planned, science-based, and proven management and treatment techniques when addressing the basic resource needs and the vital functions of the watersheds, soils, water quality, and key vegetative communities (such as the riparian/aquatic ecosystems) on the GNF.

14. *Relationships are a key factor that can influence the success of how the forest plan is implemented. With the challenges the forest faces today, strong working relationships with all stakeholders, partners, and volunteer groups are vital to increase capacity and help meet desired conditions to care for the land and serve the people. (Fourth paragraph page 122)*

Concern: Catron County strongly agrees with this statement and hopes it will be a driving force in the future management of the GNF. Positive relationships are key to implementing and accomplishing the future management of the GNF.

Requested Action: No change to the draft plan is required.

15. *Whether wildfire or prescribed fire, the direct and indirect effects of any one fire are rarely all positive or all negative. Fire can restore or maintain landscape heterogeneity and vegetation structure, or it can reduce landscape heterogeneity or fragment habitat. It can increase nutrient availability, or it can result in a loss of nutrients and soil productivity. It can accelerate erosion and sediment delivery to streams, or reduce the risk of future undesirable fire effects, or both. It can result in the loss of carbon, but also increase the ability of the system to sequester carbon. The potential for any of these effects depends on many variables, including but not limited to fuel and weather conditions, topography, and management decisions. Fire effects are also cumulative and interact with previous or subsequent effects of other activities and disturbances in beneficial or detrimental ways. For example, watershed impacts and recovery time increase when two high-severity fires occur on the same piece of ground with insufficient recovery time between. On the other hand, multiple fires within an area over time can limit fire size, intensity, and undesirable fire effects. (Fourth paragraph page 131)*

Concern: It is clear when reading the above issue statement that fire can have both positive and negative effects. When using fire to reduce fuels, it is almost always the most cost-effective and efficient tool that can be used, but as described in the above statement, fire is also known to have significant adverse impacts to watershed/vegetation conditions.

Fire is not a tool that can be used to selectively target any particular individual or group of plant species. Fire is not a tool that can be used for treating the many re-sprouting plant species that are found on the GNF.

Fire always results in the loss of carbon from the burned area and any increase in the ability to sequester carbon seldom replaces the carbon that was lost in the original fire treatment not to mention the amount of carbon released into the atmosphere. Fire almost always results in the long-term loss of nutrients and soil productivity even though there is usually a short-term spike of plant growth following a burn. There are many more adverse effects to native ecosystems that result from fire.

The concern Catron County has with the GNF desire to use fire as a primary tool to restore or maintain "natural" watershed, soil and vegetation functions on the landscape is that fire has not been proven to be a consistent and reliable treatment tool. There are multiple recent fire scares on the GNF where naturally ignited wildfires were put into an appropriate suppression category where they would be monitored. These monitored/managed wildfires resulted in an intense, and very destructive, catastrophic wildfire. When and to what degree these current fire scares will again provide the ecosystem functions they once did are unknown. Now there is a high risk that these fire scared landscapes will become invaded with non-native plant species and possibly invasive noxious weed species.

The best available science clearly presents the known and proven risk of burning even the most "fire adapted" ecosystems. While the GNF treatment toolbox still contains many long known and proven tools to restore and maintain "natural" landscapes, it appears the cost and ease of doing landscape treatments, not the effects of the treatment, will determine the treatment tool used.

Requested Action: Reconsider making ecosystem restoration and treatment decisions based upon the cost and ease of doing the treatments. Allow the use of long proven and tested restoration and treatment techniques on the GNF even if they are not considered to be a natural ecological process and are no longer considered to be politically correct.

16. *Alternately, livestock grazing can compete with fire restoration objectives because the fine fuels necessary to support fire occurrence, spread, and flame lengths sufficient to thin stands, is also the forage crop grazing permittees depend on. There are times and locations where a lack of adequate fuel loading is the challenge to restoring the natural role of fire. (Second paragraph page 142)*
Livestock use provides for conditions that support movement toward natural fire regimes. (Second item in Desired Conditions list)

Concern: These two statements raise many concerns due to the fact the future management on the GNF appears to be heading towards a higher priority on burning the native grassland vegetative communities than providing forage for livestock and wildlife. These statements set the stage for a future increase in grassland wildfires which easily spreads and burns with enough intensity to destroy not only the shrub and tree vegetative component but also many of the grassland plant species found in the grassland ecosystems on the GNF. A fire that burns with flame lengths sufficient to thin shrubs and trees stands will be hot enough to remove many of the climax grass species that are not well adapted to fire.

It has been shown multiple times in various studies and through rangeland management practices that healthy grassland communities out-compete and prevent the invasion of woody species over time. It is only after events like years of severe overgrazing or intensely hot or repeated wildfires that woody species become established where natural climax grassland plant communities once existed. The idea that fire inhibits shrub and tree establishment over the long term in grassland ecosystems is not supported by research or current proper grazing management practices.

Through "tree-ring" research it is now a common belief that fire thins stands of shrubs and trees in forested ecosystems. This usually occurs where the fuels that support wildfires are duff layers and/or dead woody material. This fire related thinning of shrubs and trees is not a long-term change in those forested ecosystems and periodic fire has to occur for any long-term result to exist.

Through "tree-ring" research it has been shown that the fire adapted ecosystem natural processes that occur mostly in the ponderosa pine forest ecosystems never lets these ecosystems advance into their true climatic stage due to the reoccurring disturbance. Reoccurring disturbance and the fire adapted ecosystem natural process that is documented in the ponderosa pine forest does not necessarily lead to the desired condition, the desired natural functions and/or the desired ecosystem health for most woodland and grassland ecosystems on the GNF.

A healthy grassland community that is made up of a wide variety of native grass species takes many years to develop. These unique ecosystems develop through years of competition between plant species and do not develop, nor are they maintained, in a disturbance-dominated situation. Low succession stage grass communities in the southwest that are dominated by species such as blue grama and Arizona fescue are fire adapted ecosystems, but a highly productive native multi-species grassland ecosystem is not a fire adapted ecosystem and can be easily destroyed by fire.

Requested Action: Catron County would like to see the future management of the GNF more in line with the desires and needs of the people who live and depend upon the GNF and not so driven by the desire to restore the natural role of fire. There are many examples on the GNF where fire has not resulted in a historic healthy and functioning ecosystem especially in the long-term. Most of the recent wildfires on the GNF have destroyed healthy and functioning ecosystems and it will take hundreds, if not thousands of years for these climax ecosystems to ever return to the GNF landscapes. If the GNF turns everything into a fire adapted ecosystem where periodic fire occurs, climax ecosystems will be a rare feature on the landscape.

17. *Livestock management will be compatible with carrying capacity and address ecological resources (such as forage, invasive plants, at-risk species, soils, riparian health, and water quality) that are departed from desired conditions, as determined by temporally and spatially appropriate data. (First item in the Standard list on page 143)*

Concern: The above statement does not need to be presented as a Forest Plan Standard. The stocking of GNF allotments within the carrying capacity and the other requirements presented above are what make up proper management of

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livestock grazing, which is required in Forest Service Manuals and Handbooks, Term Grazing Permits, Allotment Management Plans and multiple other documents. The above statement could easily lead a reader to believe that livestock management on the GNF has been and is still unregulated and without the proper oversight of professional rangeland managers.

Requested Action: Reword the above grazing management Forest Plan Standard so it does not indicate “ecological resources (such as forage, invasive plants, at-risk species, soils, riparian health, and water quality) that are departed from desired conditions.” are a common occurrence on the GNF. There are many well managed allotments that are made up of healthy and productive ecosystems on the GNF and the future management of allotments where ecological resources are departed from desired conditions have been or will be addressed through site specific NEPA analysis.

18. Existing livestock handling, and watering facilities located in RMZs should be modified, relocated or removed where an interdisciplinary team determines they are incompatible with movement toward desired conditions for other resources. Any modification, relocation or removal of infrastructure may not impede the use of permitted water rights recognized by the State of New Mexico. (First item in the list of guidelines on page 143 & 144)

Concern: The modification, relocation or removal of existing livestock handling, and watering facilities located in RMZs due to them being incompatible with movement toward desired conditions for other resources as determined by an interdisciplinary team will lead to much controversy and mistrust.

Most livestock handling, and watering facilities located in RMZs have been in place for many years and have not adversely impacted other resources. With this new guideline being brought forward in the revised Forest Plan an interdisciplinary team will soon be able to interfere with the current livestock management activities on most allotments. Livestock handling, and watering facilities, whether located in RMZs or not, play a key role in the management of an allotment and their location is often key to making livestock management successful, especially in rough or isolated locations.

While the guideline does not address who will bear the cost of modifying, relocating or removing existing livestock handling, and watering facilities located in RMZs, the cost should not be the responsibility of the livestock operation. Neither the allotment permittee nor the Forest Service rangeland management program should be held responsible for satisfying what will most likely be a very minor but politically correct desired condition that benefits another function.

Requested Action: Remove this bias, unnecessary and potentially highly controversial guideline from the revised Forest Plan. If found to be necessary address the construction and maintenance of livestock handling and watering facilities on a case by case basis when developing or updating the allotment specific livestock grazing management plan.

19. Vacant allotments should be considered for temporary use by holders of a current permit during times or events when their allotment(s) require growing season recovery time because of wildfire or other disturbance, or to minimize livestock and wildlife conflicts. (Sixth guideline found on page 144)

Concern: No one will disagree that vacant allotments, when possible, should as stated above, “be considered for temporary use by holders of a current permit during times or events when their allotment(s) require growing season recovery time because of wildfire or other disturbance.” What is more important than worrying about “require growing season recovery time” which often is not necessary, the GNF needs to consider the need for providing forage for the permittee whose operation is dependent upon the use of their GNF Allotment(s).

Often time following a wildfire or other disturbance such as a prescribed burn, planned and appropriately timed grazing immediately following the disturbance is very beneficial for treating the re-sprouting shrub species so they do not dominate the site in the future. Also planned and appropriately timed grazing immediately following a fire can be a tool to suppress the invasion of the site by non-native grass species such as Lehman’s lovegrass and other undesirable species of grass, forbs and shrubs.

Another thing the GNF has been very reluctant to address or consider is using “Vacant” allotments to resolve long-term problems. These problems could include situations where very low forage production lands make up most of an allotment. Also, allotments that are uneconomical to graze in today’s economy could be retired from grazing without putting current GNF permittees out of business. Combining or reconfiguring existing allotments or moving term permit obligations to a

“Vacant” allotment in order to graze the most productive rangelands instead of relying on unsuitable or very poor condition rangelands could resolve many current and future resource problems.

There are multiple critical public safety and TIS species management situations on the GNF that could be easily resolved on the GNF if the GNF Forest Plan would consider using “Vacant” allotments to resolve these long standing and highly controversial problems. It seems that waiting for a lawsuit to be filed and then spending the time and money to deal with an unwinnable situation is the direction the GNF is taking instead.

Requested Action: Establish in the revised Forest Plan the option to address long-standing rangeland conflicts and resources issues by combining or reconfiguring existing vacant allotments with current active allotments; or by moving term permit obligations to the productive and accessible portion of vacant allotments.

20. All monitoring data collected by non-Forest Service personnel that adhere to protocol identified in the plan-level monitoring implementation guide should be accepted for consideration and made available to permit holders for allotment management. (Eighth guideline found on page 144)

Concern: The use of non-Forest Service personnel to collect livestock grazing and rangeland health related monitoring data should be closely scrutinized and should involve the holders of Term Grazing Permits on the GNF before any decision is made. This guideline would set a very dangerous precedent concerning the use of the “best available science” especially if grazing related monitoring data is collected by someone that is not a journeyman level professional rangeland manager.

Accepting monitoring data from anyone just because its collection adhered to the protocols identified in the plan-level monitoring implementation guide does not mean it is accurate and dependable. It is very easy to let one’s personal bias corrupt almost any type of monitoring data especially when someone is not properly trained and does not have experience collecting plant community related data. Collecting accurate data related to the production and health of vegetation is especially difficult due to the tremendous number of variables that are involved.

Requested Action: Only accept rangeland monitoring data collected by a journeyman level professional rangeland manager or someone who is trained and closely supervised by a journeyman level professional rangeland manager.

21. Annual allotment inspections could be conducted in the field with the permit holder to facilitate discussion of any issues that may be a factor. (Last partial sentence page 145 and first partial sentence page 146)

Concern: Allotment inspections, if they are going to have any meaning, must be conducted in the field with the permit holder. You cannot inspect something without actually observing it.

Requested Action: Change “could be” to “must be” in the sentence and then support the GNF rangeland management employees in accomplishing this task.

22. The Roadless Area Conservation Final Rule (Roadless Rule) prohibits road construction, reconstruction, and timber harvest, except under certain circumstances, in inventoried roadless areas because they have the greatest likelihood of altering and fragmenting landscapes, resulting in immediate long-term loss of roadless area values. Some existing roads may be present within inventoried roadless areas. The Roadless Rule does not prohibit motorized travel on existing roads or motorized trails. (Last partial sentence on page 209 and first partial paragraph on page 210)

Concern: The current 36 CFR, Part 294 Subpart B does not contain the provisions of the 2001 Roadless Rule as described above and as contained in the Draft Plan. In the July 1, 2019 revised 36 CFR, Part 294, Subpart B, it is clearly stated in §294.10: “The purpose of these administrative procedures is to set forth a process for state-specific rulemaking to address the management of inventoried roadless areas in areas where the Secretary determines that regulatory direction is appropriate based on petition from affected Governor.” There is no text in the current 36 CFR, Part 294, in any Subpart concerning prohibitions pertaining to road construction, reconstruction, and timber harvest within identified Roadless Areas on National Forest System lands in New Mexico.

Also, the 1980 New Mexico Wilderness Act clearly states in; “Sec. 101, The purposes of this Act” at § “(2) insure that certain other National Forest System lands in New Mexico be promptly available for nonwilderness uses including, but

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not limited to, campgrounds and other recreation site development, timber harvesting, intensive range management, mineral development, and watershed and vegetation manipulation". It is further stated in "Sec 104 (b)(2) areas in the State of New Mexico reviewed in such Final Environmental Statement (RARE II Final Environmental Statement dated January 1979) and not designated as wilderness, or for wilderness study by this Act need not be managed for the purpose of protecting their suitability for wilderness designation pending revision of the initial plans."

The 1980 New Mexico Wilderness Act further states in: "Sec 104 (c) Unless expressly authorized by Congress, the Secretary shall not conduct any further statewide roadless area review and evaluation of National Forest System lands in the State of New Mexico for the purpose of determining their suitability for inclusion in the National Wilderness Preservation System."

The original 2001 Roadless Rule itself states at 294.14(a) that, "This subpart does not revoke, suspend, or modify any permit, contract, or other legal instrument authorizing the occupancy and use of National Forest System lands issued prior to January 12, 2001. The 1980 New Mexico Wilderness Act is definitely a legal instrument that authorizes the occupancy and use of National Forest System Lands prior to January 12, 2001."

Requested Action: Catron County would like for the GNF to reconsider their use of the original (and now deleted) 2001 Planning Rule to designate 733,836 acres of the GNF as special "Inventoried Roadless Areas" that would have special management prohibitions on road construction, reconstruction, and timber harvest.

While the implementation of the 2001 Roadless Area Rule has been litigated with multiple opposing legal opinions and injunctions being rendered, the 1980 New Mexico Wilderness Act makes it clear that all but the areas designated as Wilderness or Wilderness Study Areas by the Act were to be dropped from any further management that would protect them for future designation as Wilderness areas.

Catron County would also like the GNF to provide the county with references to any Acts passed by Congress since 1980, that expressly authorized the Secretary to conduct any further statewide roadless area reviews and evaluations of National Forest System lands in the State of New Mexico for the purpose of determining their suitability for inclusion in the National Wilderness Preservation System. The 2012 Planning Rule is not management direction authorized by Congress and can't be the instrument that allows for the inventory, analysis and recommendation of Roadless Areas on the GNF for Wilderness designation.

COMMENTS SPECIFIC TO CONSIDERATIONS OF NEW WILDERNESS AREAS WITHIN CATRON COUNTY:

In addition to the comments above on roadless management standards Catron County is requesting that there be no additional designations of wilderness lands in the county. We understand the Forest Service requested specific area-based comments. However, that allows the potential for areas not generating comments to be considered for wilderness designation. The following are our concerns:

Financial Costs

1. The Forest Service is financially handicapped to manage wilderness due to lack of funding. Any additional wilderness lands will not have ear-tagged funding that is required for management of those lands. Additional wilderness will only compound forest service budget issues.
2. Due to financial constraints any implemented, on ground, personnel support for existing wilderness is thin at best. Forest Service feasibility to generate and support management plans for additional wilderness are not funded and do not exist.
3. Designating additional wilderness lands will only compound the current financial issues with management of the Gila Forest and associated wilderness. It is important we professionally manage and fund our current wilderness before adding additional burdens.

Ecological Costs

1. The GNF Plan Assessment pointed out that a significant percentage of the lands are not in proper functioning condition. These conditions will require significant management actions to bring these areas into properly functioning condition. Wilderness designation restricts the management tools required to accomplish restoration.

This will mean these areas will be condemned to remain in degraded condition or more likely decline in ecosystem health.

Proposed Wilderness is eliminating Multiple Use

1. Grazing Allotments

Allotment holders support sophisticated infrastructure requiring year-round vehicle and fuel operated equipment for maintenance. Eliminating these maintenance abilities will negatively affect allotment holders' rights to manage herds and ultimately damage existing wildlife habitat. The referenced infrastructure list includes:

- a. Fencing and corrals
- b. Cattle guards
- c. Water improvements, dirt tanks, steel drinkers, pumps, water distribution pipe, etc.
- d. Existing Roads supporting (emergency and maintenance vehicles)
- e. Existing erosion control ponds and dams

Eliminating any or the entire above infrastructure will affect pasture rotation affected increasing fire fuel hazards, encouraging woody species growth, reducing water supply and habitat for wildlife.

2. Recreational

All existing roads and 2 track trails are currently used by off road vehicles and passenger automobiles for hunting, limited hiking, handicapped and aged public access to overnight camping and site seeing. All of which have a positive financial footprint on the local economy. Eliminating those visiting public opportunities by restricting vehicle access will have an over-all negative impact on local business and tax base.

Both local business and the general public visitors to the San Francisco River below the confluence of Big Dry Creek. South of Pleasanton, New Mexico to the Arizona border are currently experiencing the above negative recreational impact. The B/S decision to stop vehicle access to historical trails and public campgrounds for wilderness evaluation/study should be reversed.

We appreciate the opportunity to provide comment on the proposed new forest plan. We hope that our concerns will not be brushed aside or taken lightly. To often, it seems that the federal system forgets the actual people that live in the area and the officials that have been elected to represent them.

Sincerely,

Van J "Bucky" Allred, Chair

Catron County Commission

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Santa Fe County, Anna Hansen

Adam Mendonca
Forest Supervisor
Gila National Forest
3005 E. Camino del Bosque
Silver City, NM 88061

Re: Comment on the draft Gila Forest Plan and DEIS

I am writing to express my disappointment with the Forest Service's draft land management plan for the Gila National Forest. I appreciate your work to address the environmental, economic, and social challenges and issues facing the Gila Forest, but the final forest management plan needs to include additional protections for wilderness, wildlife, water, and the climate.

The following issues need to be adequately addressed in the final Gila Forest Management plan:

Climate: The draft plan states clearly that climate change is happening here and now, but fails to incorporate this acknowledgement in its proposed actions. Although addressing climate is outside the purview of the Gila National Forest, there are measures within your agency's authority that could lessen the impacts of our climate emergency. One measure is an honest assessment of the destructive impacts of livestock grazing. As the forest gets hotter and drier, livestock numbers should be reduced to improve forest conditions and allow for the regeneration of carbon-sequestering grass that provides fine fuels to carry low severity wildfires. Riparian areas, the most productive habitat in the forest, must be off-limits to livestock. The Gila River in the Gila Wilderness Area, a vital climate refuge, has been heavily damaged by dozens of feral cattle, which need to be removed immediately. The draft plan fails to take this seriously.

Wilderness: In today's climate emergency, the designation of new wilderness areas that function as climate refugia is crucial. Although only Congress has the authority to designate wilderness areas, the Forest Service's wilderness recommendations are influential. The five alternatives in the draft Environmental Impact Statement (DEIS) have a range of recommended new wilderness areas ranging from zero to almost 750,000 acres; the preferred alternative recommends just 110,000 acres. The preferred alternative recommends wilderness for 46,685 acres out of almost 150,000 total acres rated as Outstanding by the Forest Service itself, or just 31%. I urge the Forest Service to adopt the wilderness recommendations in Alternative 5.

Wild and Scenic Rivers: As with wilderness areas, Wild and Scenic Rivers can only be designated by Congress--the Forest Service's mandate is to determine eligibility. While a coalition of conservation groups has proposed almost 450 miles of rivers and streams, largely in the Gila National Forest, for Wild and Scenic River status, the Forest Service has found eligible just half that number and should expand the list of values that contribute to eligibility.

Species of Conservation Concern: We are experiencing a mass extinction event. While the draft plan acknowledges the vulnerability of high elevation spruce-fir forests, its list of Species of Conservation Concern fails to include plants and animals that live only in this ecosystem. The plan exhibits a disconnect between ecosystem vulnerability and the actions required to mitigate the resultant loss of biodiversity.

Herbicides: The Forest Service has embedded a complete herbicide plan in its forest plan DEIS. This proposed plan approves the use of 21 different herbicides across the Forest for use on non-native species and a few native trees such as oak and alligator juniper. A programmatic herbicide plan should not be nested into the draft forest plan. The Forest Service needs to focus on the revised forest plan, and proceed with the herbicide EIS in a separate process after the forest plan comment period has ended.

In the face of ever-increasing threats of climate change, resource extraction, and over-development, please safeguard Gila National Forest lands now to protect our economy, natural heritage, opportunities for outdoor recreation, and traditions and livelihood for future generations.

Supporting comment: The protection of the Gila Forest and River is paramount and it is a national treasure to New Mexicans. Please keep it wild and beautiful. We need to protect our Wildlife, water, land, and air. Santa Fe County Commissioner Anna Hansen

Full Name: Anna Hansen
Address: 2008 Kiva Rd. Santa Fe, NM 87505
Email: dakinidesign@newmexico.com

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U.S. Department of the Interior, Office of the Secretary, Susan King, April 16, 2020

From: [Natharius, Jenny M -FS](#)
To: [King, Susan E](#)
Subject: RE: Gila Revised Forest Plan comments, DOI
Date: Friday, April 17, 2020 3:59:45 PM
Attachments: image001.png
image002.png
image003.png
image004.png

Thank you Susan. We will. Hope everything is well with you and yours. Enjoy your weekend!



Jenny (Nessa) Natharius, CPSS
Acting Forest Planner, Interdisciplinary Ecologist/Soil Scientist

Forest Service
Gila National Forest

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Caring for the land and serving people



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
1001 Indian School Road NW, Suite 348
Albuquerque, New Mexico 87104

File 9043.1
ER 20:0024

April 16, 2020

Jenny Natharius, Forest Plan Revision Team Lead
Gila National Forest
U.S. Forest Service
3005 E. Camino del Bosque
Silver City, NM 88061

SUBJECT: Comments Regarding the Draft EIS for the USFS Gila National Forest Draft Revised Forest Plan, New Mexico

Dear Ms. Natharius:

The U.S. Department of the Interior (Department) appreciates the opportunity to review and comment regarding the Draft EIS for the Gila National Forest Draft Revised Forest Plan. Bureau of Land Management specialists have reviewed the Federal Register Notice of Availability, the project website, and the DEIS document and have the following comments on lands, realty, and access.

The BLM Las Cruces District Office (LCDO) is concerned with Forest actions that may affect adjacent BLM managed lands in Sierra and Grant Counties. The LCDO requests notification and consultation on actions that may impact access to those adjacent lands, specifically road closures that may limit or eliminate access to BLM managed lands. (The BLM LCDO understands that travel management is not part of this revision and would be handled in a separate decision.) The LCDO will continue to partner with the Gila National Forest on various actions such as fire suppression, fuels treatment, the Continental Divide National Scenic Trail, and wildlife habitat management. The BLM welcomes and appreciates any opportunity to participate in project level planning and implementation for this effort.

The BLM Socorro Field Office (SFO) is concerned with Forest actions that may impact adjacent BLM managed lands, specifically in Catron County, and requests that the same coordination and involvement brought forward by the BLM LCDO in this letter occur during the planning process.

From: King, Susan E [mailto:susan_king@ios.doi.gov]
Sent: Friday, April 17, 2020 3:43 PM
To: Natharius, Jenny M -FS <jenny.natharius@usda.gov>
Subject: Gila Revised Forest Plan comments, DOI

Nessa,

The Silver City office recommended that I send the attached comments directly to you. I respectfully request that USFS consider them in its final EIS and revision to the Forest Plan.

Please give me a call if you have any questions. Thank you.

Susan

Susan King
Regional Environmental Officer
Office of Environmental Policy and Compliance
U.S. Department of the Interior
Albuquerque, NM 87114
Cell: 505.331.4653
Desk: 505.563.3571
susan_king@ios.doi.gov

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We appreciate your consideration of the comments raised in this letter in the upcoming stages of your project. If you have any questions, please contact Catherine Brewster, Planner at the New Mexico State Office, by phone at (505)-954-2044 or via email at cbrewster@blm.gov.

Sincerely,

A handwritten signature in dark ink, appearing to be 'SK' or 'Susan King'.

Susan King, Regional Environmental Officer
Albuquerque, New Mexico