United States Department of Agriculture

Apache-Sitgreaves National Forests Land Management Plan

Programmatic Final Environmental Impact Statement

Apache, Coconino, Greenlee, and Navajo Counties, Arizona

Volume III. Appendices H through J



Forest Service Apache-Sitgreaves National Forests MB-R3-01-11 August 2015

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Printed on recycled paper – August 2015

Programmatic
Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Volume III. Appendices H through J

Apache, Coconino, Greenlee, and Navajo Counties, Arizona

Lead Agency: USDA Forest Service

Responsible Official: Cal Joyner, Regional Forester
U.S. Forest Service
333 Broadway Blvd., SE
Albuquerque, NM 87102
(505) 842-3292

For Information Contact: Thomas D. Osen, Forest Supervisor
P.O. Box 640
30 S. Chiricahua Drive
Springerville, AZ 85938
(928) 333-4301
(928) 333-6292 (TTY)
http://www.fs.fed.us/r3/asnf

Abstract: To comply with the National Forest Management Act and address changes that have occurred over the past 27 years, the Apache-Sitgreaves National Forests propose to revise the current land management plan (1987 plan). This programmatic final environmental impact statement (FEIS) documents analysis of the impacts of four alternatives developed for programmatic management of the 2.1 million acres administered by the Apache-Sitgreaves National Forests.

The FEIS documents the analysis of all alternatives and the associated environmental consequences at a programmatic level. The preferred alternative (alternative B) analyzed in this FEIS and reflected in the accompanying "Apache-Sitgreaves National Forests Land Management Plan," would guide all natural resource management activities on the Apache-Sitgreaves National Forests. This alternative addresses new information and concerns received since the 1987 plan was published, and it meets objectives of Federal laws, regulations, and policies.

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Commonly Used Acronyms

ADA – Arizona Department of Agriculture

ADEQ – Arizona Department of Environmental Quality

ADOT – Arizona Department of Transportation

AMS – Analysis of the Management Situation

AZGFD – Arizona Game and Fish Department

ASQ – Allowable Sale Quantity

BAER – Burned Area Emergency Response

BLM – Bureau of Land Management

BMP – Best Management Practice

CCF – 100 cubic feet

CER – Comprehensive Evaluation Report

CFR – Code of Federal Regulations

CWPP – Community Wildfire Protection Plan

CWRF – Cottonwood-Willow Riparian Forest

DBH – Diameter at Breast Height

DMCF – Dry Mixed Conifer Forest

DRC – Diameter at Root Collar

EI – Ecological Indicator

EIS – Environmental Impact Statement

EPA – Environmental Protection Agency

EO – Executive Order

ESA – Endangered Species Act

FR – Federal Register

FSH – Forest Service Handbook

FSM – Forest Service Manual

GBG – Great Basin Grassland

GIS – Geographical Information System

GTR – General Technical Report

HUC – Hydrologic Unit Code

IC – Interior Chaparral

IRA – Inventoried Roadless Area

MBDRF – Mixed Broadleaf Deciduous Riparian Forest

MIS – Management Indicator Species

MOU – Memorandum of Understanding

MPOW – Madrean Pine-Oak Woodland

MSO – Mexican Spotted Owl

MSG – Montane/Subalpine Grasslands

MVUM – Motor Vehicle Use Map

MWRF – Montane Willow Riparian Forest

NEPA – National Environmental Policy Act

NF – National Forest

NFMA – National Forest Management Act

NFS – National Forest System

NOA – Notice of Availability

NOI – Notice of Intent

NPS – National Park Service

NRCS – Natural Resource Conservation Service

NRHP – National Register of Historic Places

NRT – National Recreation Trail

NVUM – National Visitor Use Monitoring

OHV – Off-highway Vehicle

PAC – Protected Activity Center

PFA – Post-fledging Family Area

PFC – Proper Functioning Condition

PJW – Piñon-Juniper Woodland

PNVT – Potential Natural Vegetation Type

PPF – Ponderosa Pine Forest

RMRS – Rocky Mountain Research Station

RNA – Research Natural Area

ROS – Recreation Opportunity Spectrum

SAD – Sudden Aspen Decline

SDG – Semi-Desert Grassland

SFF – Spruce-Fir Forest

TCP – Traditional Cultural Property

TES – Terrestrial Ecosystem Survey

USC – United States Code

USDA – United States Department of Agriculture

USFS – United States Forest Service

USFWS – United States Fish and Wildlife Service

WCRA – Wetland Cienega Riparian Areas

WMCF – Wet Mixed Conifer Forest

WQA – Wildlife Quiet Area

WUI – Wildland-urban Interface

Appendix H. Comments from Tribes, Elected Officials, and Government Agencies

Table 211 displays a list of tribes, elected officials, and Federal, State, and local government agencies that submitted comments during the 90-day draft environmental impact statement (DEIS) comment period. This appendix provides copies of these comment letters.

Table 211. List of tribes, elected officials, and government agencies that submitted comments during the 90-day DEIS comment period

Organization	
Apache County Board of Supervisors	Barry Weller, District III Supervisor
Arizona Department of Environmental Quality	Diane Arnst, Manager Air Quality Legal Support Section
Arizona Game And Fish Department	Chris Bagnoli, Pinetop Regional Supervisor
Arizona State Land Department	Victoria Carella, Project Manager
Eastern Arizona Counties Organization	Pascal Berlioux, Executive Director
Environmental Protection Agency	Kathleen Martyn Goforth, Manager Environmental Review Office
Gila County Board of Supervisors	Tommie Cline Martin, Supervisor, District 1
Greenlee County Board of Supervisors	David Gomez, Chairman of the Board
Navajo County Board of Supervisors	Jonathan M. Nez, Chairman of the Board
Town of Eagar	Bryce Hamblin, Mayor
United States Fish and Wildlife Service	Patricia Sanderson Port, Regional Environmental Officer
Yavapai Prescott Indian Tribe	Linda Ogo, Culture Research Director

Ltr#0108

From: Doyel
To: FS-ASNF Planning
Subject: A-S LMP Commentary Submission - Apache County
Date: Thursday, May 16, 2013 2:00:25 PM
Attachments: A-S LMP Comment-Apache County.pdf

Michelle Davalos
Forest Planner
Apache-Sitgreaves National Forest
Supervisor Office

Hello Michelle,

Attached is the comment submission for Apache County concerning the Apache-Sitgreaves National Forest Proposed Land Management Plan and Programmatic DEIS.

If the file attachment is too large for your email server, just let me know and I will submit via another route.

Also, here is a link for the document in case you have any issue with this attachment.

http://veritasresearchconsulting.com/wp-content/AS-LMP/A-S_LMP_Comment-Apache_County.pdf

If I may be of any service to yourself or Supervisor Zornes, please don't hesitate to make contact.

Thanks,
Doyel Shamley
Apache County Natural Resource Coordinator

PS - I hope yourself and Jim can make it to our joint Apache County-Alpine Ranger District open house on wildfire fuels reduction. It will be held on 31May13 at 1730 Hrs. in the Alpine Community Center. There will be informational booths, presentations and a question/answer session.

Doyel

Ltr#0108

JOE SHIRLEY, JR.
MEMBER OF THE BOARD
DISTRICT I
P.O. Box 1952, Chinle, AZ 86503

TOM M. WHITE, JR.
CHAIRMAN OF THE BOARD
DISTRICT II
P.O. Box 994, Ganado, AZ 86505

BARRY WELLER
VICE-CHAIR OF THE BOARD
DISTRICT III
P.O. Box 428, St. Johns, AZ 85936

BOARD OF SUPERVISORS
OF APACHE COUNTY

P.O. BOX 428
ST. JOHNS, ARIZONA 85936

TELEPHONE: (928) 337-7503
FACSIMILE: (928) 337-2003

DELWIN P. WENGERT, MANAGER-CLERK
ST. JOHNS, AZ 85936

RECEIVED
MAY 17 2013
MAILROOM

May 15, 2013

Apache-Sitgreaves National Forests – Plan Revision Team
PO Box 640
30 S. Chiricahua Drive
Springerville, AZ 85938

Dear Sir/Mme:

Apache County, Arizona appreciates the opportunity to comment on the Apache-Sitgreaves Plan and DEIS revisions. County governments and elected officials have the responsibility for protecting the health and welfare of their citizens, including but not limited to protecting the societal and economic impacts of Forest Service planning. We take this responsibility with the utmost seriousness.

Apache County's comments are meant to describe omissions, provide new information, identifying areas needing clarification and/or offer alternatives that have not been considered in the proposed plan and DEIS.

We appreciate your attention to our comments and look forward to reviewing a revised and improved DEIS that will most effectively disclose the environmental and human consequences that result from the proposed action and alternatives.

Sincerely,

Barry Weller
District III Supervisor

Delwin Wengert
County Manager

Doyel Shamley
Natural Resource Coordinator

Apache County, AZ Comment on the Apache-Sitgreaves Plan and DEIS revisions.

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Introduction.

The following comments are hereby submitted to the United States Forest Service, Apache-Sitgreaves National Forest ("Agency"), to aid in the preparation of a Final Environmental Impact Statement (EIS) for Land Management Planning that meets the purpose of an EIS as described in 40 CFR 1502.1. It is the intent of these comments to provide information to the Agency that highlights where the Agency has not followed its own rules, regulations and authorizing laws that direct how the management of National Forest land is to take place. These comments also point out where the National Environment Policy Act and the Council on Environmental Quality regulations (40 CFR, Parts 1500-1508) have not been followed.

The comments presented here do not completely cover all of the information generated and used by the Agency in their preparation of the DEIS, nor are they intended to be an exhaustive legal review of the Draft Environment Impact Statement (DEIS), but are rather a layman's review that captures the easily identified and obvious places where the Agency has failed to comply with the law and regulations. These comments point out where the Agency has not been concise, clear or to the point, as well as where the Agency has not clearly provided evidence that is meaningful to the average person that supports the analysis or conclusion that is presented. (40 CFR 1502.1)

These comment are being offered to ensure that the Agency provides a full and fair discussion of significant environmental impacts and informs decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts and/or enhance the quality of the human environment. They have been generated by local people who live and work in the communities that surround the Apache Sitgreaves National Forest (A-S) and who are concerned with the future management of the Forest.

DEIS

1. General DEIS comments

Issue: Not all versions of the DEIS are identical

Discussion: Not all physical copies of the DEIS match the PDF versions of the DEIS, which makes discussion of the issues of the DEIS difficult. It is not known where the differences might be in each version, nor whether the differences are sufficiently substantive as to render the whole public review process meaningless. Note that this means that some of the page references in these comments may not agree with page numbers of the versions used by the Revision Team.

Remedy: Identify and publicize all differences to the various versions of the DEIS.

Issue: The DEIS is overly complex and confusing.

Reference: 40CFR 1502.1: "*...Statements shall be concise, clear, and to the point...*"

Discussion: The combined total of the *Proposed Land Management Plan for the Apache-Sitgreaves National Forests* and the *Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan* (DEIS) is well over 900 pages, not including reference documents. The reference materials are not readily available to the public. The layout is not logical and is unnecessarily complex. Specific examples of this problem are to be found in subsequent comments. Additionally, headings throughout so equally weighted in font (without use of numbers or other identifiers) that it is impossible to determine when the text is a section or a subsection.

The unnecessary complexity, poor layout and confusing formatting combine to obscure the core data, thereby hindering the potential to understand the issues and pinpoint problematic areas.

Remedy: Reformat the Proposed Plan and DEIS to streamline presentation of information in a more logical flow, omitting duplication and conflicting information, and correcting format, grammar and punctuation for purposes of clarity. Provide links to downloadable reference materials available on the internet (and if documents are not yet on the internet, put them there).

Issue: The DEIS and Plan glossaries do not contain the same definitions or fail to define terms used throughout the documents.

Discussion: The Agency cannot assume that a reader understands Agency jargon. Certain terminology that is used in the documents causes confusion and thereby influences how information in the DEIS may be understood by the public. While instances of confusing and undefined terminology occur so frequently that identifying all examples here would be unproductive, an example from Chapter 1.Purpose and Need for Change is provided as representative. Page 3, first paragraph, uses the phrase "evaluate different programmatic strategies (or alternatives)". It is unclear whether "programmatic strategies" and "alternatives"

are to be considered interchangeable for or exclusive of each other. These terms do not appear in the glossary.

Furthermore, the Fire Specialist Report apparently uses Arizona's ADEQ glossary. While this may be accidental, it is unclear if the public should use Arizona's definitions in interpreting the Report. It is additionally unknown if the Report author is using Arizona's or the Agency's definitions. The public needs to be comfortable with definitions, and confident that terms will be used and defined the same throughout all documents.

Remedy: Define terminology at first use within the text, that is internally consistent, and also in the glossary. Specialist Reports should have glossaries and they should match. Correct glossaries so that identical terms are defined the same between all documents, including Specialist Reports. Also, each glossary should include important terminology for that document.

Issue: The DEIS is fails to provide an unbiased presentation of Alternatives

Reference: NEPA Sec. 1502.2 Implementation. *To achieve the purposes set forth in Sec. 1502.1 agencies shall prepare environmental impact statements in the following manner:*

(f) Agencies shall not commit resources prejudicing selection of alternatives before making a final decision

Discussion: Throughout the DEIS a bias exists towards Alternative B (the Preferred Alternative). In order for the public to fairly assess the Alternatives, they must be presented in an even and unbiased manner, yet when Alternative B is presented (e.g. DEIS Chapter 2, page 21), that Alternative is referred to as "proposed action" and "preferred alternative". If it were true that because the Agency prefers an Alternative it is the best Alternative, then there would be no point in involving the public at all.

Not only is the language of the DEIS biased towards Alternative B, but the public meetings were also biased towards the Agency's preferred alternative. For instance, *Apache-Sitgreaves National Forests Announces the Release of the Proposed Plan and DEIS*, a flyer dated February 2013 that was handed out in public meetings lists the properties of Alternative B ("sets the framework", "recommends") but includes no information about other Alternatives. Furthermore, various stations set up at public meetings used to explain different areas of interest were also slanted in favor of Alternative B; visitors to the stations were told why they needed Alternative B but not necessarily other Alternatives. Maps for all Alternatives were not displayed on the walls.

In several instances, members of the public who requested hard copies of the DEIS were offered DEIS Plan B section rather than the full DEIS.

Remedy: Biased wording within the DEIS should be changed to present an unprejudiced selection of Alternatives. The public should be made aware that just because the Agency prefers an Alternative, that Alternative may not be the best one.

Issue: The DEIS inconsistently and erroneously includes non- A-S NF lands.

References:

DEIS p 16. "*Apache-Sitgreaves NFs that border the Gila NF; they are to be considered for wilderness recommendation during the Gila NF plan revision process.*"

DEIS p 38, Footnote 6 "*Alternative D also recommends 2,981 acres on the Coconino NF and 3,607 acres on the Gila NF.*"

DEIS p 101. "*... the upper portion of the Harden Cienega watershed is located in New Mexico on the Gila NF.*"

DEIS p 101. "*...data and information that has been collected has primarily occurred on the Gila NF in New Mexico.*"

DEIS p 240, Footnote 25. "*...four PACs fall partially outside the Apache-Sitgreaves NFs onto other forests (three on the Coconino NF and one on the Gila NF), encompassing about an additional 568 acres.*"

DEIS p 345. "*The area for this analysis includes the watersheds of eligible and suitable rivers on adjacent national forests (Gila and Coconino NFs).*"

DEIS p 358-359 Potential Wilderness "*includes 3,577 acres on the Gila NF*", "*includes 30 acres on the Gila NF*"

Discussion: The area for analysis as presented to the public is the Apache-Sitgreaves National Forest, yet recommendations are made in Alternatives for not only NF lands outside the A-S, but for lands managed by other public agencies as well as tribal and private lands. While it is understood that ecosystems may span across management borders, any such inclusion is outside the scope of the DEIS. Furthermore, the lands included are not consistently addressed throughout the DEIS.

Remedy: Remove reference to or inclusion of lands outside the A-S from the scope, analysis, justification and recommendations. Or, alternatively, change the DEIS name to demonstrate the inclusion of lands above and beyond the Apache-Sitgreaves NF, including all maps (e.g. Figure 1, page 2) that indicate that only the lands of the A-S NF are at issue.

Issue: The DEIS and Plan fail to sufficiently consider the impacts of two catastrophic wildfires

Discussion: The Rodeo-Chediski and the Wallow Fires together burned over a million acres of land, most of which was on the A-S NF. The A-S NF, At 2.75 million acres, these wildfires have impacted a major percentage of A-S NF lands, and necessarily a significant amount of private lands in and next to the Forest. The effects of the two fires have a huge impact on the current conditions of all management areas of the Forest, and cannot be minimized.

Remedy: All data should be reviewed to be sure it is recent enough to be placed within the framework of wildfire impact. New data should be used to re-analyze all Agency management planning, to determine cumulative impact on the human environment and should be included in determining the natural and human environmental consequences of each of the action

alternatives. Once this information is available the Forest should re-release a new watershed section of the DEIS for public consideration and comment

2. DEIS Chapter 1: Purpose and Need for Change

Issue: The DEIS fails to establish a need for change based on existing conditions.

Reference:

40CFR 1502.1:The primary purpose of an environmental impact statement is to serve as an action-forcing device to insure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government.

It shall provide full and fair discussion of significant environmental impacts and shall inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.

Statements shall be concise, clear, and to the point, and shall be supported by evidence that the agency has made the necessary environmental analyses.

Discussion: "Revision Topic", a term that appears first on page 3 and that is not included in the glossary, indicates that changes will be needed in the areas discussed even before a need to do so has been established. The purpose of a DEIS is to provide a fair discussion of significant impacts and provide alternatives, not to dictate outcomes.

It is unclear what exactly "Revision Topics" may actually be. If they are statements of need, then they should be derived from existing conditions, however not only are existing conditions not well or fully represented, the specialists' reports upon which existing conditions are based are not even referenced. Terminology used in the Revision Topics is biased (e.g. p. 4: "too many young and small trees"; p. 5: "unsatisfactory soil conditions") and thus influences how the public would understand such purpose and need as actually is provided.

Remedy: The Purpose and Need chapter should be revised to represent the purpose of this DEIS in accordance to NEPA. Existing conditions should be fully provided without prejudicial wording, and clear statements of the need for change should be provided based on existing conditions.

Issue: The DEIS fails to fairly address impacts on human environment.

Discussion: There is no purpose whatsoever for natural resource management planning if the impact on human environment is not included. Humans cannot exist without interacting with the natural environment and are fully interconnected with it. Humans evolved with the environment in which the species exists, and are dependent upon natural resources just as other species are. Thus, to only focus on human impact on natural resources and ignore the impact of natural resource management on humans is to omit a key factor in resource management and environmental health.

Remedy: The DEIS should discuss need for change within the context of the human environment, not outside of it.

3. DEIS Chapter 2: Alternatives, Including the Proposed Action

Issue: The DEIS fails to present the Alternatives in a format that allows them to be adequately compared.

Discussion: The Alternatives, which are the heart of the DEIS, are not even discussed for six pages into the chapter. Even at that point it is difficult to actually locate each of the Alternatives, and the Alternatives are never clearly laid out in a manner that enables fair comparison of them.

Remedy: The Alternatives should be included in the DEIS Table of Contents so they can be easily located. A table should be in Chapter 2 that allows for ready comparison of all components of the Alternatives.

Issue: The tables that are provided for comparison of Management Areas do not provide the same descriptions of management areas.

Reference: DEIS Chapter 2, pages 30-31, Tables 1 – 2

Discussion: No fair comparison of the differences or similarities between Alternative A (no action) and the other Alternatives can be made if the same information is not presented for comparison. For instance, are "Forest Land" and "General Forest" the same in Tables 1 and 2? Why is "Blue Range Primitive Area and Additions" (199,505 acres) in Table 1 labeled as "Primitive Area" (199,505 acres) in Table 2? No explanation is provided for the difference in terminology.

Remedy: Revise Tables 1 and 2 to show the same data categories.

Issue: The DEIS fails to adequately provide definition for and justification of "indicators" of the need for change.

Discussion: Table 3 (p 32) is based on indicators of the need for change and issues for the four alternatives, however these indicators are not discussed in Chapter 1, Purpose and Need for Change. There is no way for the public to know where these indicators came from.

Furthermore, the term "indicator" generally means "a trend or fact of information on the state, level or condition of something", in other words, something that can be compared and monitored. This term is not defined in the text or the glossary of the DEIS. A number of items presented as indicators in Table 3 cannot be quantified in order to differentiate between Alternatives; for instance, some Alternatives simply offer "Opportunity". This leaves the public with no way to determine the differences between those indicators.

Remedy: Discuss how and why indicators are developed in Chapter 1 in order to justify their application to the Alternatives. Review all indicators to be sure they can yield quantifiable results that can be compared.

Issue: The DEIS has failed to develop and present alternatives that are significantly different from each other.

Discussion: The proposed alternatives have very similar objectives; there is insufficient specific information included to indicate how they may differ in practice. The Agency presents elements *common* to all Alternatives (page 17) in a clear and easy to understand format, while obscuring differences between Alternatives that might exist by burying any such differences in text, rather than an equally clear and understandable format. The Alternatives are not developed and presented in a way to facilitate comparison, but even so, the only Alternative that stands out as significantly different is Alternative D due to major increase in wilderness. All of the proposed alternatives except Alternative A (the present plan) are based on an underlying assumption that "restoration" of historic conditions or something similar is the objective and all management will aim at this objective no matter which alternative is chosen (we presume that present management will not be the chosen alternative, although the reasons for this are not adequately explained).

The rigorous exploration and objective analysis in the evaluation of all reasonable alternatives is called for in CEQ regulation 40 CR 1502.14 (a).

The DEIS does not bring forward the issues of current and future impacts on the human environment of any of the Alternatives, much less Alternative D, which necessarily would have significant impact on the socio-economics of the communities dependent on the A-S NF. The narrow range of difference between the alternatives found in the DEIS means that the effects and outcomes of implementing any of the alternative not much different other than Alternative D, and the true effects and outcomes of implementing Alternative D are not rigorously explored and analyzed.

Alternatives

According to the Forest Supervisor's letter, Alternative A, the present plan, focuses on "ecological maintenance" and Alternative B, C, and D focus on "ecological restoration – or restoring the land to conditions which are resilient to disturbances such as wildfire, management activities, and climate variability." However, we did not find any reference to "ecological maintenance" in the current forest plan, so it is not clear what that means. Although there are objectives to provide for multiple use and an array of sustainable economic and ecological benefits to the public in the current forest plan, and similar statements were made in the Working Draft Management Plan, they are lacking, or at least marginalized in this statement of alternatives. The current forest plan provides a rational basis for managing the Forest, i.e. to provide **sustained** economic and ecological benefits to forest users and the general public. Sustained means that the long-term productivity of the land will not be diminished by management and use. If actual management under the current plan has not done that, then it is appropriate to change it. That does not imply that it is necessary to "restore" historic conditions as proposed in all three of the alternatives to current management.

There are concerns about the term "restoration" because it is unclear what that term means. "Restore" means to return something to its previous condition, and that is implied in these alternatives. One can only interpret this to mean that **all three alternatives have the same goal**, and that they only differ in the type and intensity of management that will be used to achieve it. The common goal is to re-establish to the extent possible the presumed "historic condition" that existed before Anglo-American settlement. Apparently, the assumptions are: that those conditions are known, that they can be achieved, and they are desirable given the present needs of the people of Arizona. We think all 3 assumptions are highly questionable.

Another assumption stated in the supervisor's letter is that such "restored" ecosystems will be "resilient" to wildlife, management activities and climate variability. The term "resilient" is a controversial one in ecological theory. Resilience means that vegetation (or soils, or wildlife populations, etc) will be modified by such things as wildfire, management activities (such as grazing, logging, thinning, hunting, etc) or "climatic variability," but that it will return to its historic state when the "disturbance" is removed or diminished. However, it can be argued that this concept is not realistic for several reasons. The vegetation, soils, wildlife and other factors that existed at the time of Anglo American settlement were the result of history (climate, fire frequency, etc), including the influences of native Americans, up to that time. This has all been altered and the vegetation, soils and wildlife have responded to the changes that have occurred, not only in the management applied to it by Anglo Americans but by changes in climate, soil erosion, introductions of new species, and extinction of some original species. In some cases the changes have been marked (e.g. in conversion of some grasslands to shrub lands) and in some cases they have been fairly minor (e.g. mountain grasslands or chaparral). But all have changed to some degree and none will ever return to the historic condition.

Furthermore, there is no reason to suppose that the "historic" condition was the "ideal" condition from either an ecological or economic point of view. It didn't produce any saw timber harvest, it didn't produce any livestock, it did not produce as much of certain types of wildlife (e.g. elk), and other than the fact there were no buildings, roads or power lines, it may not have been more esthetically pleasing. It probably did produce more and better quality water than presently at the higher elevations, and probably less sediment and flood flow at the lower elevations.

It seems curious that the Agency refers to resilience as "climatic variability." Apparently, the Agency is hedging its bets about global climate change and calling it variability. Climate is a term that **includes** variability in weather patterns over time. Variability implies change up and down from a mean situation. So climate characterizes the mean weather and its variability. Climate change however implies a directional trend in the weather over and above its characteristic variability. Geologic history has shown us that climate is always changing due to both changes in weather variability and directional changes in overall climate, and it is difficult to identify or separate them, and even more difficult to predict their future changes. The only thing we can be sure of is that climate and weather patterns will change to some degree and that the ecosystem will respond to those changes no matter whether it is similar to the historic condition or not. It seems a contradiction to base planning on the concept of return to a condition that no longer exists while admitting that future conditions will not be the same as either the present or the past.

Issue: The DEIS contains errors in Ecological Restoration conditions and other areas.

Discussion: Due to the number of issues and comments, these comments are bundled together.

Overall Conditions

The statement that "12 out of 14 vegetation types are moderately to severely departed from historic conditions" is a good example of the criticism in the section above. It is not clear what difference it makes if the departure is moderate or severe (however those terms are defined)? (The use of "departed" is rather odd – the dictionary defines this word to mean "dead". Something cannot be moderately or severely dead. The word "different" might be a better one). What should be described here is not how "departed" the vegetation types are, but what are the current levels of sediment yield, water quality, water quantity, forage output, timber output, habitat quality for specific wildlife species, amount and condition of recreational facilities, etc in relation to what is ecologically or economically desirable and feasible to attain, and what types of vegetation will provide those desired or feasible results. There is no reason to suppose that the historic condition is the only one that could provide the desired ecological conditions and benefits, or even that it will provide them.

Forest Conditions

It is unclear what it means to say that forest vegetation types "may not be sustainable". Aspen stands have been reduced due to lack of fire. It certainly appears that alligator juniper is going to take over some areas that were formerly ponderosa pine after fire removed the pine.

Grassland Conditions

It is unclear what it means to say that grassland types "may not be sustainable". "Some grassland conditions are so departed that they may not be restorable. This includes semi-desert, Great Basin, and montane subalpine grasslands." Presumably this means that grasslands have been invaded by trees (subalpine) and shrubs (semi desert and Great Basin). They are "restorable" to the extent that the trees and shrubs can be removed and a good mixture of perennial grass maintained. Whether such treatment is economically feasible depends on how the costs and benefits are calculated.

Woodland Conditions

It is not clear if pinon-juniper (P-J) woodland refers only to those areas where pinyon juniper occurred historically. If so, this would mean that the problem with P-J is in now what was the historic grassland.

Riparian and Aquatic Habitat

It is unclear why the term "habitat" is used here. Riparian and aquatic systems or vegetation would be more appropriate. "Habitat" is a term usually referring to wildlife food or cover – and although riparian and aquatic areas provide habitat, so do the uplands. It is unclear what the term degraded means; it would be better to be more specific.

Wildlife Habitat

It is unclear why fragmentation of habitat would be the major issue for wildlife as opposed to cover and food (forage), or if fragmentation of habitat is actually an issue of "ecological restoration?" It is possible that this should go in the next group of issues that relate to public

demand and economics. Also, an objective to restore elk populations to their "historic" levels would be effectively impossible since the "historic" elk species no longer exists and elk hunters would probably not be very happy with the "historic" population levels.

Other Issues

Recreation Demand

No data is provided for the kinds of recreation for which demand is stated to be increasing; such data would necessarily be a factor in deciding what kind of facilities to plan for.

Wilderness/Primitive Areas

The DEIS states that "opportunity" for additional wilderness/primitive areas exists; however no justification is provided as to the purpose of designating more. Since increase in wilderness will restrict the types of management that can be applied, this would potentially hamper the effort to "restore" the historic conditions or to achieve other resource goals.

Research Natural Areas(RNAs)

The "need" for additional RNAs apparently is based on the flawed assumption that these will help define historic conditions. If research is to be conducted it would be better to use it to quantify and improve understanding of basic ecosystem processes and how they relate to management practices.

Contributions to Local Communities

The provision of wood products should not be a "by product of forest restoration" but should be planned to meet local needs to the extent that it is consistent with sustainable yields and other resource benefits (e.g. wildlife, grazing, recreation, water quality, etc). The same is true of livestock grazing and game management.

Livestock Grazing/Rangeland Resources

It is not clear why this is a separate issue; either it should be included in the "ecological restoration" issues or the community benefits section, or both. The statement that "available" rangeland may vary by alternative must be clarified as to its meaning and how it varies from one alternative to another. Without that information it is impossible to select among the alternatives.

Invasive Species

It is important to have a program to control and eradicate "invasive" species, however this statement should be qualified to restrict it to those species which are capable of being controlled or eradicated and that will cause significant damage to forest benefits if they are not. There is a danger that any "exotic" species will be classified as invasive and result in needless expenditure of time and effort, as well as unreasonable limitations on forest users. Some species are not necessarily undesirable or controllable, e.g. Kentucky bluegrass, Bermuda grass, filaree, tumble weeds, and Rocky Mountain elk.

Management Indicator Species(MIS)

We do not believe the MIS concept is a valid scientific concept. The use of MIS rests on the premise that the abundance of a particular animal species is somehow related to the overall "health" of the ecosystem. We believe the abundance of animal species is related to the quality of the habitat **for that species** and to other natural or management factors that may affect the

population (such as hunting, predation, disease, human interference, etc). This concept should be abandoned entirely because it is not based on good ecological science.

Remedy: Redevelop Alternatives based upon public input, actual use and current conditions that are significantly different from each other. Present the Alternatives in a manner such that "reviewers may evaluate their comparative merits", as called for in 40 CFR 1502.14 (b). Correct errors in conditions and other areas of the Alternatives.

4. DEIS Chapter 3: Affected Environment and Environmental Consequences

Issue: The DEIS fails to include the required analysis of the current and future impact or benefit on the human environment.

Discussion: The agency has throughout the discussions of effects in Chapter 3 made generalized statements about possible effects and risk rather than providing the required analysis. The requirement to take a hard look at the environmental consequences rather than making conclusive assertions has been included in the findings of numerous court decision that deal with environmental analysis and decisions. Also, 40 CFR 1502.24 states: "Agencies shall insure the professional integrity, including scientific integrity, of the discussion and analysis in environmental impact statements."

Throughout the effects analysis in the DEIS resource specialists have only discussed the impacts on the natural environment. There is not full disclosure of the amount or types of human use in order to better address actual disturbance. The DEIS makes the base assumption that human presence equates to disturbance, and that disturbance is bad. The DEIS conversely makes the base assumption that no human use equates to no disturbance, and that no disturbance is good. However there is no data and analysis to support or disprove these assumptions.

The analysis makes no differentiation between intermittent use vs. heavy use, between the impacts of the different types of use. There is no data disclosed for measurement of actual area of vegetative or wildlife disturbance.

Remedy: Disclose site specific data about the types and frequency of use on the different areas of the Forest, along with acreage of actual (if any) disturbed land and impacts on wildlife. Estimates of acres of actual impacted land area should be displayed as a percent of any given land area such as acres of disturbance per section etc. This data should then be used to present the current and future effect on the environment (Direct and Indirect effects) and also be used to show a clear difference between the alternatives. (See 40 CFR 1502.16)

Issue: The DEIS fails to use current conditions data for soils condition.

Reference: (Chapter 3, Affected Environment, Soil Condition, p. 52) *The forests soils are described in the "Terrestrial Ecosystem Survey of the Apache-Sitgreaves NFs" (TES) (Laing et al., 1987).*

Discussion: the Terrestrial Ecosystem Survey (TES) reporting is skewed because it is based on data collected during one of the wettest decades on record; the A-S has experienced drying and drought ever since.

Remedy: Use current condition data to rebuild TES reporting and for analysis.

Issue: The DEIS fails to adequately address retention of desired vegetative community characteristics through assumption that burning is a best primary vegetative treatment.

Discussion: The last paragraph, page 205, & first paragraph page 206 of the DEIS state: *"In the analysis for this resource, assumptions include:*

"To meet the plan's treatment objective for acres of burning, a combination of planned (prescribed burning) and unplanned (wildfire) ignitions would occur. Burning could occur across all NFS lands.

"A set acreage would be burned each year. This number varies by alternative. The actual acres burned, when the plan is implemented, may fluctuate yearly due to natural ignitions, weather, and burning conditions".

While burning can be used as a tool to treat some vegetative communities, burning cannot be relied on as a primary means of achieving desired vegetative densities and dominance of fire tolerant species. Many desired vegetative community characteristics (i.e. old growth stands of selected tree species) can only be achieved by excluding certain ecosystems from fire especially during periods of drought.

Remedy: Increase the use of mechanical vegetation treatments to provide for the development and continuation of desired vegetative communities.

Issue: The DEIS states in error that previously burned areas stop fires.

Discussion: Paragraph 6, page 208, of the DEIS states: **"***Fire frequency and severity has been altered from historic condition in most vegetation types. Historically, fires could burn until they were extinguished by precipitation, ran out of fuel, or reached a previously burned area."*

The above statement could only be true if a previously burned area has no regeneration of vegetation and production of fuels. Recent catastrophic wildfires have shown that previously burned areas with regrowth do, in fact burn. While it is true that *freshly* burned areas will not support fire due to the lack of fuel, it is hoped that this condition is not the "natural fire regime" condition the Agency wants to manage for. If fires are burning at such frequent intervals that sufficient fuels are not present to support fire, it would also be true that a functioning watershed, favorable soil conditions and a healthy ecosystem does not exist.

Remedy: Correct statement on p 208 that previously burned areas stop fires. Review all use of the phrases "retuning natural fire regimes" and "natural fire regimes" in light of current extreme departure from historic conditions.

Issue: The DEIS fails to include all values and resources of the A-S.

Reference: (paragraph 5, page 210, DEIS): *A natural fire regime is a general classification of the role fire would play across a landscape in the absence of modern human mechanical intervention, but it includes the influence of aboriginal burning (Agee, 1993; Brown, 1995). Coarse-scale definitions for natural fire regimes have been developed by Hardy et al. (2001) and Schmidt et al. (2002) and interpreted for fire and fuels management by Hann and Bunnell (2001). The five natural fire regimes are classified based on average number of years between fires (fire frequency) combined with the severity of the fire on the dominant overstory vegetation.*

Discussion: The role fire has historically played across the landscape in the absence of modern human mechanical intervention, while interesting to think about and discuss, is much too complex to define with just 5 simple "Fire Regimes". *Maintenance of ecological integrity and biodiversity must be based on well-grounded principles of disturbance ecology. However, non-equilibrium aspects of ecosystems, such as unpredictability, instability and stochasticity due to various natural disturbances, have not been satisfactorily integrated into practical application. Failure to acknowledge the dynamic nature of systems will inevitably lead to unexpected changes and unachieved conservation goals. (Mori, Akira S. Ecosystem management based on natural disturbances: hierchical context and non-equilibrium paradigm, Journal of Applied Ecology 2011, 48, 280-292)*

The current desire to make all of the vegetative communities (PNVT) on the Agency resistant to and capable of coping with fire does not take into account the many other values and resources produced on the Forest. The values and resources produced on the Agency such as non-nutrient and mineral laden water, abundance of non-fire tolerant species of plants and animals along with ecosystems that have reached a non-disturbance climax state should not be compromised merely because it requires the Forest to maintain an active fire prevention and suppression program. The idea "nature conditions" and "natural fire regimes" are superior to what has occurred over the past century on the National Forest is unproven and based upon emotions verses science. The pursuit of "nature conditions" and "natural fire regimes" will most likely lead to the continuing occurrence of large catastrophic fires such as the recent Wallow and Whitewater/Baldy Fires. The current casual approach and lack of concern over the acres burned is already apparent in the currently employed fire fighting techniques.

Apache County's priorities are the health, safety and welfare of the people who live, work and play in the county. A-S NF management based on the human environment, that is, the values and resources that are important to current and future generations, is not only crucial for Apache County, but beneficial to the Forest. With proper management, production and sale of many high value forest products can provide much of the needed vegetative treatment and pay much of the cost of preventing and suppressing fires long before they spread and become catastrophic events. As Forest-related jobs increase, sales tax returns improve, which allows Apache County to improve emergency and social services. Not only is this good partnership and stewardship of public lands, it is required by the Multiple *Use - Sustained Yield Act of 1960* (MUSY) (Public Law 86-517).

Remedy: Analyze management and develop Alternatives based on values and resources that are important to current and future generations, and that benefit the human as well as the ecological environment.

Issue: The DEIS places too much weight on scientifically unverifiable "historic" conditions rather than existing science and human values.

Reference: (last paragraph, page 211, DEIS): *Vegetation in FRCC 1 is more resilient and resistant and less likely to lose key ecosystem components (e.g., native species, large trees, soil) after a disturbance.*

Discussion: This statement is pure conjecture and cannot be supported with science. This is only limited, antidotal information concerning the structure of forest ecosystems and the population levels of native species prior to the time the western United States was settled. While there is no doubt the era of settlement in the western United States was very destructive and altered the characteristics of many forest ecosystems, there is no definitive way to accurately document the structure of forest ecosystems and the population levels of native species prior to this era. No accurate science based pre-settlement data, which is necessary to reasonably compare current and past ecosystem characteristics is available.

Health, condition, and trend are widely used terms in ecosystem management, but their use is highly variable. Their application has been incompatible with the kinds of ecosystem changes that have occurred during the Quaternary and with our evolving understanding of ecosystem dynamics and present and future impacts from human activities. To manage for sustainability into the future, our concepts, definitions, and selection of standards should be appropriate for what we know about the influence of past, present, and future impacts. To avoid circularity in concepts and assessments of health, they should be based on values that are distinct from the sampled indicators and attributes applied in making the assessments. Definitions and concepts are needed that allow for the selection of standards of health and condition that are more appropriate for the nonlinear trajectories of ecosystem change and human alterations of those trajectories into the future.[1]

A few historic photographs and written descriptions of open savanna type forest stands does not mean a long term equilibrium between fire disturbance and plant community succession had been reached and these ecosystems were producing an abundance of native species, high quality clean water supplies and a constant or desired level of old growth trees. The Agency can and should be managed to provide what is important to the current population and the Agency should not base future management on some hypothetical superior management scenario where human activities are considered detrimental.

Remedy: Remove emphasis on "retuning natural fire regimes" and reanalyze for values and resources that are important to current and future generations in order to comply with Multiple *Use - Sustained Yield Act of 1960* (MUSY) (Public Law 86-517)

[1] http://www.fs.fed.us/rm/pubs_int/int_gtr338/int_gtr338_097_101.pdf

Issue: The DEIS fails to include human environment in Alternative A analysis

Reference: (4th paragraph, page 214, DEIS): *Due to the threat of fire moving into or from developed areas, higher levels of management may be needed to restore fire-adapted ecosystems, including regular maintenance treatments.*

Discussion: There is no question that higher levels of management (fire suppression/prevention and fuels reduction) are required when developed areas are present within a forest ecosystem. The need to provide for the safety of people and their property has very little to do with an ecosystem being "restored and fire-adapted". There is no panacea that allows fire to play its natural role in today's society, especially when prolong drought conditions exist.

Whether an ecosystem is considered fire-adapted or not, when hot, dry and windy conditions develop, as occur every spring and summer in the Southwest, the threat of fire (whether human or natural caused, or classified as prescribed or a wildfire) should be a concern and steps to prevent and suppress fires should be a priority for the Agency.

Remedy: De-emphasize "restoring fire-adapt ecosystems" and develop management alternatives that prioritize the safety of people and property. Focus on fire prevention and suppression activities and reducing fuels in key locations as opposed to "restoring fire adapted ecosystems" and "returning natural fire regimes".

Issue: The DEIS fails to include human environment in Alternative B analysis

Reference: DEIS, page 214, last paragraph: *"As treatments occur within the wildland-urban interface, the risk of uncharacteristic wildfire and the resulting threat to communities and ecosystems would be reduced and potential losses from such fires would be mitigated. Treatments within the wildland-urban interface would not only help protect communities, but would also help protect the forests from fire that starts on private lands. These treatments would also benefit firefighter and public safety."*

Discussion: While fuel treatments within the wildland-urban interface will reduce the potential of losses and lower the threats to firefighter and the public, it needs to be made clear that "uncharacteristic wildfire" is not the only type of fire that can consume homes and harm people. If "natural fire regimes" are in place and fires burn through the forest at increased intervals there will be even more opportunities for fires to burn into the wildland-urban areas and destroy structures and harm people even though they will be burning fine fuels.

Remedy: Remove emphasis on "uncharacteristic fires" and develop management alternatives that prioritize the safety of people and property. This would require an emphasis on fire prevention and suppression activities even if treatments are completed in the wildland-urban interface.

Issue: Use of FRCC to discuss consequences is confusing

Reference: DEIS page 218, paragraphs 1-4: *"As the FRCC is improved over the planning period, there should be movement toward a natural fire regime and a reduced risk of*

uncharacteristic wildfire. Vegetation would become more resistant and resilient and less likely to lose key ecosystem components after a disturbance. This would benefit firefighter and public safety. Additionally, treatments aimed to protect natural resources from uncharacteristic wildfire would outweigh the short-term impacts upon the landscapes during treatment.

"As FRCC is improved over the planning period, fire would behave more similar to reference conditions. For example, ponderosa pine in FRCC 1 would have a fire regime and vegetative structure similar to reference conditions where fires were low intensity and high frequency. Vegetation consisting of open stands and clumps of trees would promote surface versus crown fire behavior.

"Although this analysis examined overall FRCC by total PNVT, it is anticipated that as site-specific projects are conducted, there would be an improvement in FRCC for those treated acres. For example, the overall FRCC for ponderosa pine is 3, but would include areas which have had treatment and are now rated at FRCC 1 and 2.

"Fire disturbances may have adverse environmental consequences on some resources (e.g., smoke affecting communities, vegetation structure) in the short term. Over the long term, however, these resources would benefit from fire disturbances that result in more sustainable and productive ecosystems and reduced risk of uncharacteristic wildfire."

Discussion: All of the above statements are intended to describe the effects of implementing the proposed fire management for the Agency. These descriptions are all based upon current and desired fire regime classifications and moving FRCC ratings towards a FRCC rating of 1 for each PNVT. If the readers of the above statements do not have a background in the latest fire jargon and philosophy associated with federal agency fire management these statement are totally meaningless.

Also there is not much research and science based data to support the theories that "natural fire regimes" "fire adapted ecosystems" and a "FRCC rating of 1" provides healthier ecosystems, less erosion, more clean water supplies for downstream users and many other conditions that make up a healthy forest. While it is well documented that burning forest ecosystems periodically will reduce the intensity of fires as they repeatedly burn through an ecosystem, all of the claims pertaining to ecosystem health are based upon speculation. Also, it is well-documented the species and age class of plants remaining in a repeatedly burned ecosystem will be more fire tolerant, but this can't be equated to an increase in desired species of plants and animals. In addition to the above, there is no evidence that repeatedly burned ecosystems are more capable of providing the resources and values the public desires from the National Forest.

The description of proposed fire management contained in the Proposed A-S Land Management Plan DEIS needs to be something that can be easily understood by the public and something based on proven techniques and the best available science. The current federal fire management policy, used as the basis for the future fire management of the Agency, is based upon tree ring research, which shows historic fire intervals coupled with much speculation about what vegetative community characteristics that information may be equated to. The use of PNVT adds an additional layer of confusion and again is something based upon speculation and opinion, inasmuch as PVNT is "potential" based on estimate, not on scientific study.

Remedy: Replace confusing language and concept with language that can be easily understood by the non-expert reader regarding the role fires play in providing a healthy forest.

Issue: The DEIS fails to adequately address potential effects of fire.

Reference: DEIS Chapter 3, page 64, second paragraph and Specialist Report page 10, second paragraph: "*The environmental consequences section provides a qualitative assessment of forecasted trends in watershed conditions by alternative based on the concept of concentrating restoration treatments within priority watersheds and, in a more general sense, describing potential effects from forest restoration activities, recreation activities and roads, grazing, special uses, and climate change on watershed condition.*"

Discussion: It is unclear why the potential effects of fire (whether natural or human caused, unplanned or managed as a treatment tool) are not mentioned in this paragraph, and are not thoroughly addressed in the Watershed Specialist Report or watershed management section of the DEIS as an activity or event that affects watershed health. Fire, whether low intensity or high intensity, removes ground cover and to varying degrees increases the erosion of soil[2]. In fact, history and common sense demonstrate that there is no activity that can occur on forested lands that has such a proven and documented potential to increase erosion over vast acres as the burning of vegetation in either a wildfire or planned/managed fire.

The Agency should be particularly aware of the effect of fire following the Rodeo-Chediski and Wallow Fires that together have consumed over a million acres of the Forest since 2002. Flooding and erosion due to these fires are an obvious threat to the safety of the local citizens, yet are only briefly addressed in the Watershed Specialist Report or DEIS for the updated Forest Plan. These obvious wildfire effects are identified by the Forest Service in its *Wallow Fire 2011, Large Scale Event Recovery, Watershed Report.*[3] The priority for treatment of degraded watersheds should be coordinated with the production and sale of forest products as much as possible in order to expedite the completion of treatments and to offset a portion of treatment cost through the collection of receipts from the sale of forest products.

Fire, whether considered an uncharacteristic wildfire or a fire that was planned and burning within set parameters, has the potential to adversely affect watershed conditions. The effects that burning forest vegetation has on watershed functionality and conditions cannot be overlooked even if it is now the politically correct method of treating forest fuels.

Remedy: Reanalyze the current watershed status and potential watershed effects for the Forest and address fire as an activity that has and can in the future cause degradation of watershed conditions. Watershed management emphasis for the next ten to fifteen years should be directed mainly toward degraded watershed conditions due to catastrophic wildfires.

[2] http://www.fs.fed.us/rm/science-application-integration/docs/national-fire-plan/wildfire-effects.pdf

[3] http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5333362.pdf

Issue: The DEIS attempts to use the Land Management Plan to implement the failed Travel Management Plan

Reference: (DEIS Chapter 3, Affected Environment, Motorized Routes, p. 332, last paragraph). *Additional travel ways exist that are not part of the NFS road network and are considered unauthorized routes. An inventory has not been completed, but it is estimated that there are hundreds of miles of unauthorized routes. These unauthorized routes include unplanned, abandoned travel ways; user created routes; and roads that were once under permit or other authorization and were not decommissioned upon termination of the authorization. Travel ways in this category are awaiting management evaluation as to whether or not to include them as part of the transportation system or to decommission.*

Discussion: The DEIS is not a replacement for a Travel Management Plan (TMP). Including this section in the Land Management Plan appears to be an attempt to bypass the NEPA process.

Apache County is very clear about insisting that all Travel Management Plan references should be removed for the Plan, the DEIS and all supporting documents. There is absolutely no way that the public can pick from the Alternatives with no analysis completed and no impact comparison provided.

Remedy: Delete this section of the DEIS and remove all TMP references.

5. DEIS Chapter 4: Consultation and Coordination

The DEIS has failed to in general to comply with federal regulations addressing consistency requirements and has failed to comply with federal regulations addressing coordination with the County including cooperating Agency status for local government.

Issue: The DEIS omits key information regarding compliance with required intergovernmental coordination with local governments or state governments.

Discussion: The DEIS discusses public participation and tribal consultation (not coordination) on p. 10, however coordination with local governments or state governments is missing from the DEIS. Fulfilling coordination requirements is also absent from the *Decision Framework* section, p. 8. In addition, Chapter 4: *List of Preparers; Consultation and Coordination* p. 493 lists Apache County Supervisors as having been consulted, in fact Apache County was not invited to the table to be significantly involved or coordinated with.

In not addressing coordination in the DEIS, specifically, the A-S is out of compliance with the coordination requirements spelled out in federal, state and local statutes and regulations. (*See Attachments 1 and 2*)

Remedy: Include these laws, regulation and agency directives into the DEIS in the sections and appendix that addresses related laws and regulations. Additionally, comply with coordination requirements for the DEIS; specify how the Agency coordinated.

Issue: The DEIS fails to disclose coordination, fails to demonstrate compliance with the laws and regulations related to coordination.

Reference: 36 CFR 219.7, 40 CFR 1502.16(c), 1506.2.

(a) The responsible line officer shall coordinate regional and forest planning with the equivalent and related planning efforts of other Federal agencies, State and local governments, and Indian tribes.

(c) The responsible line officer shall review the planning and land use policies of other Federal agencies, State and local governments, and Indian tribes. The results of this review shall be displayed in the environmental impact statement for the plan (40 CFR 1502.16(c), 1506.2). The review shall include--

(1) Consideration of the objectives of other Federal, State and local governments, and Indians tribes, as expressed in their plans and policies;

(2) An assessment of the interrelated impacts of these plans and policies;

(3) A determination of how each Forest Service plan should deal with the impacts identified; and,

(4) Where conflicts with Forest Service planning are identified, consideration of alternatives for their resolution.

(d) In developing land and resource management plans, the responsible line officer shall meet with the designated State official (or designee) and representatives of other Federal agencies, local governments, and Indian tribal governments at the beginning of the planning process to develop procedures for coordination. As a minimum, such conferences shall also be held after public issues and management concerns have been identified and prior to recommending the preferred alternative.

(e) In developing the forest plan, the responsible line officer shall seek input from other Federal, State and local governments, and universities to help resolve management concerns in the planning process and to identify areas where additional research is needed. This input should be included in the discussion of the research needs of the designated forest planning area.

(f) A program of monitoring and evaluation shall be conducted that includes consideration of the effects of National Forest management on land, resources, and communities adjacent to or near the National Forest being planned and the effects upon National Forest management of activities on nearby lands managed by other Federal or other government agencies or under the jurisdiction of local governments.

Remedy: Agency should comply with 36 CFR 219.7 and disclose the results of their consistency review, per 219.7(c) and (40 CFR 1502.16(c), 1506.2). Review the planning and land use policies of local governments; display the results of said review in the DEIS and show how the line officer fulfilled this requirement. This should include reviewing prior Memoranda of

Understanding and previous communications from local governments regarding planning, coordination and cooperation. Additionally, coordinate with local government in the implementation of monitoring; include results of said planning in the monitoring section of the DEIS.

Issue: The DEIS fails to demonstrate intergovernmental coordination.

Discussion: The state of Arizona has mandated intergovernmental coordination with the passage of AZ Senate Bill 1398, amending section 2. Title 11, Chapter 2, Article 4, ARS - to be read 11-269.09: Federal and state regulations: local coordination: standing and definition:

D. (2) Coordination means the process by which the federal and state governments seeks in good faith to reach consistency between federal or state regulation, rule, plan or policy and the county law, regulation, plan or policy that is less restrictive than the federal or state regulation, rule, plan or policy.

B. If the federal or state government fails to coordinate in good faith with the county, the county shall hold public hearings, consider the evidence and vote on whether to authorize litigation to enforce the county's coordination rights.

Remedy: Discuss how Agency has fulfilled this requirement in order for the County to comply with Subsection B. of this State law's above requirements.

Issue: The DEIS fails to address coordination with private property owners

Discussion: The DEIS briefly addresses communities (p 587) but does not disclose potentially affected private property owners outside of towns and communities, per 36 CFR 219.6(k) Requirement:

Forest planning activities should be coordinated to the extent practicable with owners of lands that are intermingled with, or dependent for access upon, National Forest System lands. The results of this coordination shall be included in the environmental impact statement for the plan as part of the review required in Sec. 219.7(c).

Without this information and the apparent lack of compliance, stated above, and no meaningful County coordination, the Agency cannot produce an accurate Effects Analysis in the FEIS. Furthermore, the Deciding officer cannot find appropriate balance between the effects of the proposed action and/or activities vs. the benefits to society and the health, safety and welfare of the County and its environs.

Remedy: The FEIS should describe in the DEIS how the line officer fulfilled this requirement to coordinate with potentially effected private property owners, such as inholders and adjacent property owners, per 36 CFR 219.6(k).

Issue: The DEIS fails to mention the Agency's rejection of Apache County Cooperating Agency (CA) request.

Discussion: Cooperating Agency (CA) status is an effective way to improve coordination with local governments for shared or overlapping jurisdictions and cooperation with on-the-ground information, especially the human environment factors. Apache County has specialists and experts who can provide valuable input into the Interdisciplinary Team process. This is best achieved through CA status that allows the flexibility and timely sharing of important information by way of the County's legal responsibilities and its expertise in important aspects of the proposed Forest management plan impacts disclosed in the DEIS. As a CA, the County is also more effectively tied into the implementation of the plan that is intertwined with County roads and transportation plans, programs and activities as well as socio-economic activities.

The County has requested CA status for these very reasons, yet, the Agency denied the County's request for Cooperating Agency status. The County asserts that the Agency and its NEPA analysis misinterpreted the regulations related to CA. Specifically the Agency incorporated into their denial their own unsupported opinions and position for turning down the County's request for CA.

The County also instructs the A-S to include in the FEIS as to why Apache County does meet one or more of the CEQ' Cooperating Agency. Apache County maintains that they do meet one or more of the factors for obtaining CA. Refer to Attachment 2 for the County's Factors for Cooperating.

It is not clear to Apache County Supervisors why the County's Cooperating Agency request was rejected, particularly given that Navajo County was granted cooperating agency in the TMP EIS. The County also is aware that Gila National Forest granted cooperating agency to three adjacent New Mexico counties in their travel management EIS NEPA process. Apache County is no different in jurisdiction or expertise. The County has the same intermixed transportation systems, cost-share programs, and road contracts as well as other cooperative ventures that can be impacted by travel management rules.

The Agency is arbitrary and capricious in its rejection of the County's CA request.

Without this information and apparent lack of compliance, stated above, and no meaningful input from the County via coordination, cooperating agency and/or joint planning, the A-S cannot produce an accurate Effects Analysis in the FEIS. Furthermore, the Deciding officer cannot find appropriate balance between the effects of the proposed action and/or activities vs. the benefits to society and the health, safety and welfare of the County and its environs.

Remedy: The Agency's rejection of the Cooperating Agency (CA) request should be included in the FEIS Chapter 4 and/or in the DEIS Appendix. The correspondence for both the County's request and the Agency denial should be in the project record, and are available at the County's office upon request. Agency should disclose its legal reasoning for the CA denial, including documentation of why the County's factors for CA are not sufficient for CA status to assist the A-S in the TMP NEPA analyses. In the event that the Agency should decide to provide Apache County with the same CA status that have been granted to other forest dependent counties, per 1502.9 (b), then the Agency should document this in the DEIS.

Issue: The DEIS is missing important information regarding Joint Planning Requests.

Discussion: In addition to the cooperating agency rejection, the Apache Sitgreaves National Forest has ignored Catron County and Apache County requests for joint environmental impact statements assessments and joint hearings in the NEPA process, per 40 CFR§1506.2. Both counties have environmental laws and policies for protecting the environment. The County desires an explanation as to why the A-S is not complying with §1506.2 that requires cooperating with the County Board of Supervisors "…to the maximum extent possible". This failure to comply with this regulation can be corrected by complying with 40 CFR. 1506.2. and 1502.9 (b).

Without this compliance by A-S, stated above, and no meaningful the County coordination, cooperating agency and/or joint planning, the A-S cannot produce an accurate Effects Analysis in the FEIS. Furthermore, the Deciding officer cannot find appropriate balance between the effects of the proposed action and/or activities vs. the benefits to society and the health, safety and welfare of the County and its environs.

Remedy: Include an explanation as to why the Agency has not complied with 40 CFR§1506.2 in Chapter 4 and/or in the DEIS Appendix. In the event that the Agency should decide to comply with this regulation, then the Agency should document this in the DEIS.

Issue: The DEIS is missing important information in regards to consistency requirements analysis as it pertains to local and state policies, plans, programs and activities.

Discussion: The DEIS is missing very important information in regards to consistency requirements analysis as it pertains to local and state policies, plans, programs and activities, per 36 CFR 219.7. The only references to consistency in the DEIS refer to federal planning. The section goes on to state:

For effective NEPA analysis the DEIS must meet the CEQ requirement for consistency with state and local plans for NEPA at 40 CFR 1502.25(a):

...directs to the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with other environmental review laws and executive orders.

Furthermore, CEQ states:

(d) To better integrate environmental impact statements into State or local planning processes, statements shall discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law. (40 CFR 1506.2)

Both CEQ regulations and the USFS 36 CFR 29.7 are similar in purpose and need:

(c) The responsible line officer shall review the planning and land use policies of other Federal agencies, State and local governments, and Indian tribes. The results of this review shall be displayed in the environmental impact statement for the plan (40 CFR 1502.16(c), 1506.2), as discussed in the County's previous section on coordination in section f (discussions/remedies 3g1 through 3g6), above.

The above consistency discussion illustrates why it is so important for the A-S NEPA process to comply with the federal agency coordination requirements, discussed in the previous section, above. Consistency review ties into the requirement to coordinate to identify these intergovernmental consistent and inconsistent policies to improve the environmental conditions.

Remedy: The Agency should document coordination with the County, per 36 CFR 219.7 (1982) in order to complete the consistency requirements, per 36 CFR per 219.7 or provide discussion as to reasons for non-compliance with CFR requirements.

Issue: DEIS fails to disclose the possible consistencies and inconsistencies between the proposed A-S TMP alternatives in the DEIS and State, Tribal and/or local government policies.

Discussion: The FEIS consistency section must address related local policies, programs and activities, such as county roads and transportation plans, related County environmental planning and review process; the County Community Wildfire Prevention Plan, related law enforcement to just name some of the related county policies. CEQ recommends that consistency analysis be located in the Affects Analysis.

Furthermore, the DEIS is missing related discussion regarding consistencies with state policies, such as the Arizona Coordination Act and the Arizona Dept. of Transportation (Chapter 28 section on coordination) the Arizona Dept. of Environmental Quality (Chapter 49), Arizona Dept. of Water Resources to name a few.

Remedy: The Agency should address specific individual local government policy and planning, including discussion of consistency with local and state policy and planning in the Affects Analysis section.

DEIS SPECIALIST REPORTS

The following are comments directed to statements made in the Specialist Reports and the DEIS. Since the same language is found in the Reports and the analysis sections of the DEIS the statements referenced below should be considered to be found in both documents unless it is stated otherwise. Since comments have been solicited for the DEIS, the referenced statements may also be identified by where they are found in the DEIS.

1. Fire

The following information is offered to clarify Apache County's position on future fire management on the A-S National Forest and is adapted from information contained in the 2010 Strategic Fire Plan for California[4]. This information offers a different perspective to fire management from that presented by the Agency.

California wildfires have threatened people's lives/safety and destroyed property at a magnitude much greater than what has occurred on the Agency for many years. Wildland-urban interface and forest/rangeland fuel management have been major concerns in California long before the latest emphasis on "back for the future" based wildfire and fuels management was introduced throughout the rest of the United States. Apache County believes much can be learned from looking at what is being done where population growth, homes and people encroaching into remote areas and large wildfires have been dealt with for many years.

Apache County believes the Fire Management portion of the Agency Proposed Plan should meet the basic needs as described in the following statement:

The Agency updated planning direction should be a road map for reducing the risk and adverse impacts of all types or classifications of fire within or adjacent to the Agency. The planning direction should be a cooperative effort between local, state and federal level land management and public safety entities. By placing the emphasis on what needs to be done long before a fire is ignited or starts naturally, the planning direction looks to: 1) increase public and firefighter safety, 2) reduce firefighting costs and property losses, and 3) contribute to ecosystem health. The above order of emphasis should be followed in all fire management activities on and adjacent to the Agency.

Apache County believes the foundation of the Agency updated fire planning direction should be built upon seven goals. Collectively, these goals provide a framework to address the protection of lives, property and natural resources from the destructive forces of wildland fire; contain cost of fire suppression and damage; and improve environmental resilience to wildland fire.

Apache County believes the central goals that are critical to reducing and preventing the impacts of fire revolve around both fire suppression and fire prevention efforts. The major components of these efforts are:

Improved availability and use of information on hazard and risk assessment

[4] http://cdfdata.fire.ca.gov/fire_er/fpp_planning_cafireplan

Local verses national operational planning (including concept and procedural plans), local land use plans (Community, County and State level), new development zoning requirements (Community and County level), and current inventories of existing developments (County level)

A shared vision among federal, state, county and local community level agencies with fire protection jurisdictions on how to implement county-based and community-based plans such as Community Wildfire Protection Plans (CWPP)

Establishing adequate fire suppression capabilities for, and an increased fire resistance in assets at risk such as remote communities, communication sites and other structures that serve the public whether publicly or privately owned. This should occur at the same priority as implementing fuels reduction projects around developed areas. Returning natural fire regimes in remote areas should be a lower priority

A shared vision of desired vegetative characteristics, fuel conditions and emergency response access among multiple fire protection jurisdictions and agencies

Agreed upon levels of fire suppression responsibility, resources and related services among multiple fire protection jurisdictions and agencies

Post fire recovery that emphasizes the safety of the public, protection of property and the ability of public and private downstream water users to continue their use of water

Apache County understands the Forest Service has its own planning rules, which must be followed. Also it is understood that a Forest Plan is not a project or site specific planning document, but implements direction at the program level. By offering the above simple and basic concept of fire management, Apache County believes the A-S updated Forest Plan will be a document that offers clear direction to the critical role the Agency plays in fire management and is not a document solely focused on returning "natural fire regimes" to the landscape.

Apache County does not agree that future fire management on the Agency needs to concentrate its efforts on returning "natural fire regimes" to most of the Forest as stated in the Fire Specialist Report and fire management analysis in the DEIS. Apache County states that it is not in the best interest of the public for the Agency to concentrate its fire, vegetation, soils, wildlife, watershed and other management efforts to changing the majority of the fire regime condition classes (FRCC) ratings for the Forest to a level 1.

While it is understood thinned and well manicured forest are much more resilient and resistant to fire, the Agency will never achieve a point in time that fire suppression and fuels management will not be one of its major responsibilities. Also by having much of the Forest in a low seral stage or fire induced sub-climax forest condition, many of the species of both plants and animals that are not fire tolerant will be diminished from current levels. Currently most species listed as threatened or endangered are not disturbance (fire) tolerant species. "*Arizona has 56 federally listed endangered or threatened species, including 37 animals and 19 plants. We have more species on the path to extinction than 41 other states in the United States. As habitat is degraded or destroyed, many species are negatively affected and their populations decline.*" [5] Also areas that are routinely impacted by disturbance such as fire do not have as high of species diversity as areas where physical disturbance is limited. "*Species diversity tends to be low in physically controlled ecosystems (subject to strong physiochemical limiting factors) and high in*

[5] http://arizona.sierraclub.org/political_action/tracker/SCR1023.html

biologically controlled ecosystems". (Odum, Eugene P., Fundamentals of Ecology, 3rd Edition, page 148)

Upon reviewing the Fire Specialist Report and the various management analysis sections in the DEIS, it is obvious that reducing fuel accumulations and vegetative densities makes up the A-S current fire management planning effort. This focus on returning to "natural fire regimes" and getting everything into FRCC1 is a national trend, which has evolved to the point that many resource managers believe the returning of "natural fire regimes" and FRCC 1 are the cure for almost every problem that may occur on a National Forest and surrounding area. If one subscribes to this latest management philosophy then the Agency should be in relatively good resource condition across a major portion of the Forest.

With the Rodeo-Chediski, Wallow, and multiple other fires burning over a million acres of the Agency in the period of 1997 to 2011 *(Fire Specialist Report, Table, page 15),* there has to be a developing mosaic pattern of FRCC and vegetative age classes across the Forest. The necessity to continue the emphasis on the use of fire to treat vegetation should be decreasing and the increased use of mechanical vegetative treatments and fire suppression efforts in and around developed areas should become ever more critical as large expanses of herbaceous fine fuels develop. Fine herbaceous fuels, while not burning with the intensity of woody materials, do burn in a much more flashy type of fire, which spreads more rapidly.

"The primary carrier of fire in the GR fuel models is grass. Grass fuels can vary from heavily grazed grass stubble or sparse natural grass to dense grass more than 6 feet tall. Fire behavior varies from moderate spread rate and low flame length in the sparse grass to extreme spread rate and flame length in the tall grass models." [6] These flashy type fires, when allowed to enter developed areas are just as prone to ignite structures and people's property as the uncharacteristic fires that are talked about throughout the Fire Specialist Report and fire effects analysis in DEIS.

Issue: The DEIS and Fire Specialist Report fail to address critical wildfire management variables.

Discussion: There is no doubt during a period prior to the western United States becoming settled by European man that fires often burned across the landscape, and tree densities and the accumulation of dead materials on the forest floor was much lower than occurs today. This effort of looking back to an idealistic vision of historic forest has evolved into the idea that in order to have healthy Forest we must manage for and return to pre-settlement conditions. This new forest management philosophy, as is with most trendy management philosophies, overlooks many variables that are critical to understand in order to succeed and achieve what is desired.

Variable 1) The increase of large record setting wildfires in the last five years have made some question the idea that the pre-European man conditions, which are now thought to be the panacea of forest management, may well be somewhat of an enigma. First, very few "natural fire regime" proponents realize the people who lived during the era of" natural fire regimes" did everything they could to move away from reoccurring wildfire. They experienced the constant

[6] http://www.fs.fed.us/rm/pubs/rmrs_gtr153.pdf

threat of homes being burned and people's lives being threatened as rapidly spreading fine fuel supported fires raced across the landscape. This was occurring when the population of the West was much smaller than today and much of the country was heavily impacted by grazing. The accumulation and unbroken expanses of fine fuel were much lower than they are today, but wildfires still dramatically impacted people's lives during this era. A return to "natural fire regimes" will increase the occurrence of flashy quick moving wildfire threatening or harming the public.

Variable 2) The change in fire management to a highly suppression oriented philosophy made up a large part of the conservation movement which allowed and supported the creation of the Forest Service, National Park Service, and BLM. There had to be more than merely ignorance of fire's role in the development of healthy forest ecosystems that drove these early pioneers of resource management to move into suppressing all wildfires. It may be that they lived through an era of extreme drought (late 1800's, early 1900's) where they witnessed the destruction of millions of acres of old growth forest by fire. Could it be we are moving into and are experiencing a similar set of conditions and outcomes? Are we dealing with the idea that if we have already burned the forests up we don't need to worry about them burning up again?

Variable 3) Another potential factor contributing to the current increase in large wildfires, which is beginning to be questioned, is the recent change in fire suppression tactics. It was not long ago that immediate detection and a quick response to initiate suppression actions on all fires during the hot dry part of the fire season is what made up wildland fire fighting. Prior to the use of aircraft in wildland firefighting many remote lookout towers and remote fire chaser cabins were built and used to facilitate this early detection and quick response. Most of these structures have been torn down and all signs of their existence removed due to their location within designated or proposed Wilderness areas. Because of the destruction of most fire fighting facilities within remote areas of the forest, aircraft quickly started to play an increasing role in fire suppression where they were used mainly to detect fires and to get firefighters to a fire while it was small and could be attacked directly and contained prior to becoming a major threat. Aircraft are now heavily used in wildland fire fighting much more to drop water and retardant than for transportation. Aircraft retardant drops are now being used as control lines, especially in remote rugged areas, which has led to more escaped fires.

Variable 4) More and more it is being documented that fires are not immediately initial attacked because they are in terrain that is considered to be too dangerous for crews to work. These fires are allowed to burn until they become large, quick moving crown fires or they burn to a point that they threaten communities or other high value areas. These fires are left to burn naturally for awhile, only to be manned later when they have become larger and much harder to suppress or manage. This action is justified by calling what is done the "appropriate suppression action". Letting fires burn for sometime before actual suppression action is taken fits well with the dramatic increase in the use of burn out suppression tactics, which are more widely accepted today than a few years ago.

Variable 5) There are many documented examples where crews backed off to an existing road or other feature, miles ahead of a progressing wildfire and lit off thousands of acres of unburned area with the hope they can contain what they have ignited. There are many documented cases where the burnout operations escaped control and more than doubled or tripled the size of the fire in just one day. Also there are many documented cases where the burn out operations and the main wildfire never burn together. The main wildfire ran out of fuels before it reached the

burn out area. When this occurs the burn out area is mapped and counted as part of the main fire and no one is made aware of what took place. This change in tactics has contributed to more small and medium size fires ending up as major multi-million dollar fires than occurred in the past.

There is no doubt that fuels accumulations and tree densities have slowly increased over the years due to past emphasis on fire suppression. This slow change in the characteristic of the forest does not account for the rapid increase in large fires that has occurred in the last ten to fifteen years. Each of the above overlooked variables, coupled with a prolonged period of drought, in the opinion of many experienced seasoned firefighters, has as much to do with the increase in large "uncharacteristic" fire as does the increase in tree density and fuel accumulations. The desire to burn as much of the Forest as possible in order to return to "natural fire regimes" will most assuredly keep any action to return to an aggressive suppression policy far from meaningful consideration until so many acres of the National Forests are burned the public steps in and demands a change.

Remedy: Reassess Agency fire management perspective based on successful management from other areas.

Issue: The Fire Specialist Report contains an incorrect statement regarding hazardous fuels reduction treatment emphasis.

Reference: *"since 2001, there has been a management emphasis to treat areas identified in the CWPPs and WUI."* (p10)

Discussion: The Agency guaranteed 5000 acres/year to the White Mountain Stewardship project, a ten year program (this is last year). The statement that there is management emphasis for treatment is not the case. The actual treatment is approximately 12% by acreage, which doesn't keep up with growth (growth is currently four times the extraction rate).

Remedy: Omit the statement or correct it to reflect the actual circumstances.

Issue: Fire Return Interval data in the Fire Specialist Report is not based on current, actual or measured events.

Discussion: Table 1 Fire frequency (fire interval) by major vegetation type, page 11, Fire Specialist Report, presents "Current Fire Return Interval" data based on the concept that fire will occur in the different Potential Natural Vegetative Types" (PNVT) at a given interval under current management, however the concept is the product of modeling rather than measurement.

While modeling is a tool used in scientific study, many times the result of models and the use of various terms associated with modeling can be very misleading. *"Although the concept of fire regime seems to be well understood by contemporary ecologists, certain terms descriptive of fire*

regimes have been used in the literature in a fairly haphazard manner, without adequate attention given to their precise meaning." [7]

The recent Wallow and Whitewater/Baldy Fires should be considered when stating fire return intervals under current management. The occurrence of these and other major wildfires during the current prolonged drought should lead fire ecologist to rethink their theories of fire return intervals under any management scenario.

Remedy: Review basis for "retuning natural fire regimes" and place more emphasis on fire suppression and prevention during periods of drought and during the time of year when high and extreme fire danger occurs. Recalculate fire interval based on most recent wildfire data and current forest conditions.

Issue: The Fire Specialist Report misrepresents the adverse environmental effects on affected communities.

Discussion: The last paragraph, page 26, of the Fire Specialist Report states *"Fire disturbance may have adverse environmental consequences on some resources (e.g. smoke affecting communities, vegetation structure) in the short term. Over the long term, however, these resources would benefit from fire disturbances that result in more sustainable and productive ecosystems and reduced risk of uncharacteristic wildfire".*

This statement is misleading and not true. The adverse impacts of smoke on communities will increase under a fire regime where fires burn across the landscape often. Smoke settling in a community is a problem for many residents whether it is generated from an "uncharacteristic" or "natural fire regime" fire. The occurrence and duration of smoke in the atmosphere will increase and will become a yearly re-occurring problem as "natural fire regimes" become more common across the landscape. The only way to reduce smoke related problems in communities is to increase mechanical treatment of the vegetative communities that are at risk of "uncharacteristic" fire.

Remedy: Include realistic impact of wildfire on human environment, including but not limited to smoke, air pollution, and short-term as well as cumulative socio-economic effects. Assess mechanical treatment vs. burning to reduce smoke and other negative effects. Include post-fire long-term and cumulative effects on human environment, such as cost for post-fire flooding damage prevention and damage reconstruction of infrastructure, the huge loss of revenue from activities shut down by fires.

2. Watershed

The following background information concerning the Apache County Board of Supervisors (Board of Supervisors) concept of watershed management is being offered in order to clarify the county's position dealing with future watershed management on the A-S National Forest. The following definition, objectives and steps of watershed management as adapted from information

[7] *http://www.ncrs.fs.fed.us/gla/reports/LSFireCycles.pdf*

found in "My Agriculture Information Bank"[8], while being very basic, reflects what Apache County believes is the philosophy of watershed management that needs to be followed in the process of updating the A-S Forest Plan.

Definition:

"Watershed management is a concept which recognizes the judicious management of the three basic resources, soil water and vegetation on a watershed basis, for achieving particular objectives dealing with the well being of the people. It includes the treatment of lands with the highest biological potential using widely accepted and well tested forest restoration and engineering practices."

Objective of watershed management:

- Production of food, fiber, fodder & fuel.
- Enhancement of water quality and increase useable water quantity.
- Minimizing over exploitation of resources.
- Providing enhanced water storage, flood control, and reduced sedimentation.
- Preserving wildlife habitat.
- Implementing erosion control measures, prevention of soil degradation and conservation of soil and water.
- Generating employment through natural resource production, development and use.
- Recharging of ground water to provide a secure water supply for public consumption, irrigation and other industrial use.
- Providing water based recreational opportunities and facility.

Steps in watershed management:

Watershed management involves the consideration, development and implementation of suitable land treatment measures based upon information pertaining to land, soil, water and vegetation problems within a watershed.

In order to have a practical solution to watershed management problems it is necessary to go through four management phases for full scale watershed management:

- Recognition phase.
- Restoration phase.
- Protection phase.
- Improvement phase.

Recognition Phase involves the following steps:

- Recognition of the problem(s).
- Analysis of the cause of the problem(s) and the effects of the problem on the local community.
- Development of alternative solutions to resolve the problem(s).

[8] http://www.agriinfo.in/?page=topic&superid=8&topicid=77

Necessary information is obtained from different surveys such as: soil surveys, land capability surveys, vegetative species composition and condition surveys, forest health surveys, facility/infrastructure condition surveys and socio economic survey, etc. This information serves as a basis for determining the watershed problems, priorities for land treatment, and the causes and effects of the problems on people and the land.

Restoration Phase includes two main steps.

- Select the most practical and implementable solution to problem(s).
- Implement the solution and monitor the results of the action.

Treatment should be applied to critical problem areas first.

Protection Phase:

This phase ensures that a watershed remains in a properly functioning condition through the avoidance of both natural and human caused activities that would degrade the watershed.

Improvement phase:

This phase deals with the long term landscape scale improvement in watershed health through the implementation of adaptive management and refined forest management practices to achieve the planned objectives for a watershed.

Apache County understands the Agency has its own planning rules, which must be followed. Also it is understood that a Forest Plan is not a project or site specific planning document. By offering the above simple and basic concept of watershed management, Apache County hopes the A-S updated Forest Plan will be a document offering solutions to degraded watershed conditions and not a document that focuses solely on restricting human activities.

Apache County does not agree that Agency watershed management needs to concentrate efforts on restricting human use of the land with the hope or expectation that nature will repair degraded watershed conditions. The County suggests that a more scientifically based and proactive program of watershed treatments financed by and made part of timber/forage production and subsequent sales will provide for properly functioning watersheds faster and with less dependence upon taxing the American public.

Issue: The DEIS fails to use scientific data as indicators.

Reference (1st & 2nd paragraph, page 12, Watershed Specialist Report & Chapter 3, 4th paragraph, page 64, DEIS):

Watershed condition reflects a range of variability from natural pristine (properly functioning) to degraded (severely altered state or impaired).

In general, the greater the departure from the natural pristine state, the more impaired the watershed condition is likely to be. Properly functioning watersheds are commonly referred to as healthy watersheds.

Watersheds with high integrity are in an unimpaired condition in which ecosystems show little or no influence from human actions.

Discussion: Apache County have great concerns over the contrived notion that a watershed has to be "*natural pristine*" and "*show little to no influence from human actions*" to be considered as properly functioning. Even though the above statements, which are found in both the Watershed Specialist Report and DEIS, are copied verbatim from the *Watershed Condition Classification Technical Guide, USDA Forest Service FS-978, July 2011,* Apache County believes these statements are totally false.

There is no evidence on the Agency and any other Forest in the Southwest that "*natural pristine*" areas and areas that "*show little to no influence from human actions*" are also superior functioning watersheds. In fact the opposite has been the case for many years. There are many examples where the forest has been managed using timber harvest techniques to reduce fuel loading and to maintain diverse vegetative communities, where watersheds are found to be functioning much better than areas set aside as wilderness or other hands off designations. A review of past timber sales conducted on the National Forest in Northern Arizona would be very useful in determining the influence of man's activities on watersheds.

Apache County believes using the concept of "*natural pristine*" and "*show little to no influence from human actions*" is an attempt to further the idea that total exclusion of managed resource production and use of the natural resources is necessary to have functioning watersheds. Looking back at the last ten years on the Agency should be enough of a lesson to know the lack of forest management in today's world is a prescription for disaster and degraded watersheds. (Over a million acres of a 2.1 million acre National Forest burned.)

The following characteristics of a functioning watershed are also found in the *USDA Forest Service, Watershed Condition Classification Technical Guide* and are directly associated with "*natural pristine*" and "*show little to no influence from human actions*" criteria. These characteristics of a functioning watershed are loaded with non quantifiable, value driven requirements and can only be answered by offering a value judgment, which would be based on emotions, speculation and opinion. This new definition of a functioning watershed is not science based where reliable and verifiable data is used. The new definition changes the meaning of "a functioning watershed" to something altogether different from what it originally meant. Most of the new "functioning watershed" criteria have nothing to do with the effects on the soils and the fate of the water as precipitation falls on forest landscapes. This change in the meaning of a long accepted management concept of "functioning watersheds" appears to be part of an attempt to further the idea that the total exclusion of man and his activities is necessary to have functioning watersheds.

Watersheds that are functioning properly have five important characteristics (Williams et al. 1997):

1. They provide for high biotic integrity, which includes habitats that support adaptive animal and plant communities that reflect natural processes.

2. They are resilient and recover rapidly from natural and human disturbances.

3. They exhibit a high degree of connectivity longitudinally along the stream, laterally across the floodplain and valley bottom, and vertically between surface and subsurface flows.

4. They provide important ecosystem services, such as high quality water, the recharge of streams and aquifers, the maintenance of riparian communities, and the moderation of climate variability and change.

5. They maintain long-term soil productivity.

Remedy: Use time tested monitoring of ground cover, soil loss, sediment loads entering key drainages and downstream water quality as indicators of functioning watersheds.

Issue: The DEIS erroneously provides impression that there are no direct effects

Reference: (1st paragraph, page 19, Watershed Specialist Report):

The land management plan provides a programmatic framework that guides site-specific actions but does not authorize, fund, or carryout any project or activity. Because the land management plan does not authorize or mandate any site-specific projects or activities (including ground-disturbing actions) there can be no direct effects.

Discussion: The concern with the above statement is that it fails to recognize the updated A-S Forest Plan will limit or restrict many land uses and associated treatments, and will force the use of other treatment methods such as fire. The restriction of management options, which is usually politically motivated, will have a direct effect on many resources that make up the Agency. While it is often said a land management plan provides a programmatic framework that guides site-specific actions, the truth is once they are finalized they become a binding direction for the management of a Forest due to the fear of litigation for not following the guidelines found in the Forest Plan. The Agency needs to be up front with the public and truly display the effects that developing and implementing an updated Forest Plan can have on their daily lives as well as the environment.

Remedy: Remove language that provides any impression that the updated Forest Plan will have no direct effects on the management of the Forest.

Issue: The DEIS fails to include impact of wildfires in analysis of watershed conditions.

Reference: (DEIS Chapter 3, p.65, last paragraph): *Figure 7 shows the watershed condition rating across the forests. It displays watershed conditions prior to the 2011 Wallow Fire. Analysis of the watershed conditions within the burned area of the Wallow Fire will occur in 2012. There are 50 watersheds potentially affected. Some watersheds were heavily affected, resulting in a probable shift to a lower class. The effects of the fire to watershed condition in some of these watersheds were minimal.*

Discussion: The concern with the above statement is that it clearly reveals that the effects on watershed condition and functionality of the Wallow Fire, which burned over a half million acres, are not being considered in the analysis of the effects of the Forest Plan update. Without displaying the accurate condition of 50, 6th code watersheds when establishing priority watersheds, determining the actual effects of the action alternatives is impossible. This lack of

accurate information renders the information displayed in the DEIS concerning the effect of each of the Alternatives mute.

Without having some idea of the potential for future flooding and damage due to the Wallow Fire, the public is left uninformed and unprotected. Without considering the effects on the 50, 6th code watersheds due to the Wallow fire, there is no way environmental consequences of each of the action alternatives can be accurately determined and displayed in the DEIS.

Remedy: Analyze the effects of the Wallow Fire in the *Watershed Condition Framework* classification process and then provide a new and accurate accounting of 6th code watershed classifications for the Forest. This new information should then be used to re-analyze the future watershed management requirements for the Forest and to determine the environmental consequences of each of the action alternatives. Once this information is available the Forest should re-release a new watershed section of the DEIS for public consideration and comment.

3. Wilderness

The following background information concerning the Apache County, Arizona concept of Wilderness management is being offered in order to clarify the county's position dealing with future Wilderness management on the A-S National Forest.

There is no doubt the continued effort to designate more and more areas on the A-S NF as congressionally designated Wilderness or to place much of the Forest under similar restrictive land use designations is an attempt to implement a preservation philosophy of land management across much of the Forest. This radical change from the current management of the A-S NF is being promoted by a few individuals who subscribe to the misconception that any human activities or use of land is somehow detrimental to the land and the only way to maintain a healthy environment is to remove human management and influences from the land.

It has been known for years that physical disturbance to vegetation, whether it is human caused or natural, plays an important role in ecosystem health. The unfounded idea of protecting ecosystems from human caused disturbance is necessary if healthy ecosystems are to exist in the future is nothing more than an emotional driven myth. *Natural and anthropogenic disturbances play an important role in wildland ecosystem health and stability. Depending on their nature, scale, intensity and distribution, some disturbances threaten ecosystem function, whereas others are required to sustain ecosystem health*[9].

Apache County does not subscribe to this hands-off philosophy of land management and believes that through the proper care and use of the A-S NF, the needs of the public can be met and the lands of the A-S NF can continue to support natural processes and remain in a healthy and productive condition. The attempts to restrict or limit human activity on the A-S NF as much as possible are misguided and derive from a small, but vocal segment of the population.

Wilderness management, while considered by some to provide the ideal ecological conditions and requires little to no management is not without it problems. "*When an area is designated by Congress as Wilderness, there are myriad responsibilities to maintain and enhance the wilderness character. Many management actions are necessary simply to protect the resource*

[9] http://www.fs.fed.us/rm/grassland-shrubland-desert/research/focal-areas/disturbance/

from degradation. Yet the essential character of Wilderness is to be "untrammeled by man," and many scholars and managers regard "stewardship" as the most appropriate perspective for safeguarding these unique resources in the future. Therefore, this report emphasizes the term wilderness stewardship, rather than wilderness management. Stewardship implies ***working with*** *(emphasis added) nature to perpetuate wilderness for the future, and any actions to be taken need to be considered from a diversity of philosophical, legal, and technical perspectives*[10]*."*

Apache County has no problem with having limited designated wilderness on the A-S NF and recognizes the intent of the Wilderness Act (Act) where it states in Sec. 2. (a) (*"In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify,* ***all areas*** *(emphasis added) within the United States and its possessions, leaving* ***no lands*** *(emphasis added) designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generation the benefits of an enduring resource of wilderness."*)

This statement makes it very clear that when passing the Act, Congress did not intend for vast expanses of federal land to be designated as wilderness, but small representative areas. When considering the emphasized words in the above statement, the intent of the Act cannot be made clearer. It was Congress's intent that settlement and growing mechanization, does not occupy and modify, all areas within the United States. There is nothing to indicate that Congress wanted settlement and use of mechanized equipment to be removed from as much federal land as possible. Also it was Congress's intent that the nation would not someday find itself with "no lands" designated for preservation and protection. The Act does not indicate that all roadless and undisturbed areas are to be considered for wilderness or there is to be as much land as possible designated as wilderness.

While the Wilderness Act states that wilderness should be *"an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvement or human habitation, which is protected and managed so as to preserve its natural conditions...) and (may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.) [Wilderness Act, Sec. 2, (c), (2) & (4)]* nowhere in the Act is it indicated that all vegetative communities or ecosystems need to be represented within a 'Wilderness" area. The Act does not indicate that wilderness areas are to be designated to provide "solitude or primitive and unconfined type recreation" only that a wilderness area *"has the outstanding opportunity for solitude or primitive and unconfined type of recreation".* [Wilderness Act, Sec. 2, (c), (2)]

An additional general concern dealing with wilderness and human activity restrictive management the A-S NF is considering, are the six additional restrictive land use categories (Wildlife Quite Areas, Natural Landscapes, Research Natural Areas, Recommended Research Natural Areas, Primitive Areas, and Recommended Wilderness) found in the Proposed Plan. While it will be argued by some staff of the A-S NF and many in the "environmental community" that all of these categories are needed and are authorized under current laws, Apache County wonders how much of this highly restrictive land use is needed and how much of it is an attempt to create pseudo wilderness.

[10] http://www.wilderness.net/nwps/documents/brown_report_full.pdf Executive Summary

It is clear when passing the Wilderness Act that Congress was withholding the authority to create Wilderness from the agencies and intended any additional wilderness establishment to be done by an act of Congress. *(no Federal lands shall be designated as "wilderness areas" except as provided for in this Act or by a subsequent Act.)* [Wilderness Act, Sec. 2, (a)] Also, Congress did not intend for wilderness management to be a dominating land use when it restricted the funding of wilderness management in the Act itself. *(No appropriation shall be available for payment of expenses or salaries for the administration of the National Wilderness Preservation System as a separate unit nor shall any appropriations be available for additional personnel stated as being required solely for the purpose of managing or administering areas solely because they are included within the National Wilderness Preservation System.)* [Wilderness Act, Sec. 2, (b)].

While Apache County is not opposed to a limited amount of land being set aside as part of the National Wilderness Preservation System as provided for in the Wilderness Act, it does not agree with the current attempt to restrict human activities on vast areas of the A-S NF. The implementation of various categories of land use restrictions (which are much like zoning ordinances found in a city) will keep the people from enjoying publically owned National Forest lands and appear to be an attempt to hide from the public the underlying preservation philosophy weaved into almost every segment of the Proposed Plan. It appears the A-S NF is attempting to force wilderness management on a major portion of the Forest without designating the newly set aside areas as wilderness. These restrictive land use categories are a way to avoid the intent of Congress when they withheld the authority to create wilderness from the agencies.

Issue: The DEIS uses circular reasoning for wilderness designation parameters.

Reference: Wilderness Specialist Report, page 10, second paragraph: *"In May and June of 2011, the Wallow Fire burned over 438,000 acres on the Apache NF and adjoining ownerships. Fire is considered a natural ecological process. The Wallow Fire affected all or portions of the following wilderness resources..."*

DEIS page 352, paragraph 2: *"Wildfire is considered a natural ecological process. Designated wilderness, the Blue Range Primitive Area and presidential additions, and potential wilderness that burned in the 2011 Wallow Fire retain their wilderness character."*

Discussion: This statement clearly indicates the Wallow Fire did impact many of the existing and potential wilderness areas and the Blue Range Primitive Area. An attempt to dismiss this tremendous impact on the ecosystems and other resources and values of these areas is made by stating *"Fire is considered a natural ecological process"*, which does not excuse the fact that these lands are now heavily impacted by man, do not exhibit primeval character and are not preserved in their natural conditions.

Remedy: Change designation of wilderness areas within the Wallow fire that were burned with moderate and high intensity. These areas should be managed to stop further degradation caused by erosion and be re-vegetated as quickly as possible to prevent the loss of their potential to produce PNVTs that will be beneficial to future generations.

Issue: The Wilderness Report gives the impression that proposed wilderness and other restrictive land use designations will have no direct effects.

Reference: Wilderness Specialist Report, page 11, first paragraph, page 11: *"The land management plan provides a programmatic framework that guides site-specific actions but does not authorize, fund, or carryout any project or activity. Because the land management plan does not authorize or mandate any site-specific projects or activities (including ground-disturbing actions) there can be no direct effects."*

Discussion: Proposed wilderness and other restrictive land use designations by their very nature will in fact limit or restrict many land use activities and associated treatments, and thus will force the use of alternative treatment methods such as fire. The restriction of management options on a large area of the A-S NF will have a direct effect on many resources, particularly where the Wallow Fire burned with a moderate to high intensity. Restricting ecosystem restoration efforts due to wilderness or other special land use designations will have a direct effect on the human environment.

Remedy: Revise documents to fairly describe the effects of wilderness or other restrictive land use designations on the human as well as the natural environment.

Issue: Report erroneously presumes there is a need for additional wilderness for recreational activities near populated areas.

Reference: Wilderness Specialist Report, page 13, first paragraph, page 13: *"No lands are recommended for wilderness in Alternative A. It does not contribute to meeting the regional need for additional wilderness near population centers or the addition of underrepresented landforms and ecosystem types in wilderness in the Southwestern Region."*

Discussion: The Wilderness Act does not require that wilderness areas be created as a special type of recreation area to be used by the people who live in population centers. Also, nowhere in the Wilderness Act does it direct National Forests to create wilderness areas in order to have all land forms and ecosystems in the Region represented in wilderness designation.

Remedy: Review analysis and remove any recommendation for designation of wilderness solely based upon the desire to provide recreation opportunities for a select segment of the population that enjoys hiking in "designated wilderness". Review analysis and remove recommendations for designation of wilderness solely based o representing all landforms and ecosystems within a given area.

Issue: Analysis proposes to circumvent Congressional intent in designation of wilderness.

Reference: Wilderness Specialist Report, page 14, third paragraph: *"Most of the areas identified as potential wilderness, but not recommended for wilderness, would be managed under Natural Landscape MA direction, which would help maintain wilderness characteristics. Areas not in the Natural Landscape MA and within IRAs would be managed consistent with the 2001 Roadless Area Conservation Rule (Roadless Rule), which would help maintain roadless characteristics"*

Discussion: It appears that the Agency proposes to develop what is for all practical purposes wilderness by managing lands not recommended for wilderness designation as though they were, in fact, designated wilderness. By not calling these lands wilderness but mandating many restrictions on human activities, the Congressional intent with respect to wilderness designation will be bypassed.

Also by managing Inventoried Roadless Areas (IRAs) under the 2001 Roadless Rule, these areas will not be open for the public to use and enjoy with motorized vehicles. Management under the Roadless Rule, while not as restrictive of human activities as designated wilderness is, will keep many areas from being developed and will preserve them for future attempts to designate wilderness. By placing large areas under restrictive land use designations the issue of wilderness designation will never be resolved. This appears to be an attempt by the Agency to create wilderness without authority through increasingly restrictive land use designations.

Remedy: Create proposals for managing the lands and resources of the A-S NF for the greatest benefit to the public and not give in to the demands of a select few who believe in a highly restrictive preservation oriented philosophy.

Issue: The DEIS erroneously assumes that all ecosystems must be represented in wilderness.

Reference: DEIS page 363, paragraph one: *"Recommending these additional acres would maintain manageability of the BRPA and would add eight underrepresented ecosystems to wilderness in the Southwestern Region."*

Discussion: Areas appear to be added to the Blue River Primitive Area to ensure that eight underrepresented ecosystems are contained in wilderness, when this is not the intent of designating wilderness. Rather, underrepresentation is only one characteristic that *may* make up the characteristics of a wilderness. *("...may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.")* [Wilderness Act, Sec. 2, (c), (4)]

Remedy: Remove any wilderness area recommendations solely based on underrepresentation.

Issue: The DEIS fails to disclose that only a minority of the public is in favor of wilderness.

Reference: DEIS page 364, paragraph one: *"Alternative B would address public desire for more wilderness by recommending 7,074 acres for inclusion in the National Wilderness Preservation System."*

Discussion: This statement indicates that the public desires more wilderness areas, which is misleading. While there may be a small segment of the public that want more lands designated as wilderness, it is common knowledge most segments of the public do not care whether lands are designated wilderness or not because they live in an urban setting and are not directly impacted by the designation. Also there is a growing segment of the public who do not want more of their federal lands locked up and rendered inaccessible to the average Forest visitor. Local members of the public are also more inclined to not want more wilderness, which has been recently demonstrated in many local town hall meetings.

Remedy: Disclose accurate data regarding what percentage of the public does or does not want more wilderness, and reassess recommendations for wilderness designation based upon a false notion that the public wants more wilderness.

Issue: The DEIS improperly uses Wilderness Act to bar public from A-S lands.

Reference: DEIS page 364, paragraph 3: *"This recommendation includes about 380 acres that would require additional action before designation, including decommissioning 2.3 miles of engineered timber sale roads and reducing signs of past timber treatments (approximately 278 acres)."*

Discussion: This statement indicates the A-S NF is willing to mislead the public by trying to erase the obvious signs of human presences on the land and make the 380 acres mentioned in the above statement meet the requirement for wilderness designation. If the A-S NF is willing to go to the trouble to alter the appearance of land so it can be designated wilderness, then it is obvious the Wilderness Act is being used as a tool to prevent average local citizens from using or enjoying National Forest System lands, even when it is not prohibited from doing so by an existing law.

Remedy: Review policy that enables the Wilderness Act to lock the public off of National Forest lands, especially when the lands do not meet the requirements for wilderness designation.

Issue: The DEIS incorrectly presumes that human activity always results in negative impact.

Reference (last paragraph, page 366, DEIS): *Recommended wilderness would provide greater protection for wildlife and wildlife habitats.*

Discussion: This statement is not true. Designation as "recommended wilderness", while creating the area as pseudo wilderness, will not automatically provide wildlife and wildlife habitat greater protection. A wilderness or even a pseudo wilderness area is just as prone to natural occurring events such as fire, disease, weather events and harm from humans as any other area of the Forest. This statement is based upon the idea that a pseudo wilderness designation will limit human activity within the designated area and the idea that any presence or activity of man has negative impacts on wildlife and wildlife habitat. This statement overlooks all of the positive measure that are done by humans to create, enhance and preserve wildlife and wildlife habitat, which will be prohibited from occurring on the "recommended wilderness" areas.

Remedy: Remove presumptive assumptions and conclusions that human activity creates negative impacts on wildlife and wildlife habitat; provide measurement data in cases of actual negative impact.

Issue: The DEIS incorrectly states water yield impacts are the same for all Alternatives.

Reference (1st paragraph, page 367, DEIS): There would be no effects to water availability and use under all alternatives.

Discussion: This statement is not true. All alternatives that designate areas as wilderness or create restricted land use areas will run the risk of preventing management that could greatly influence the production of clean useable water. Any designation of wilderness along with any restriction of human access or activities will most likely reduce the ability to manage the vegetation that occupies the land. The makeup of vegetative communities has a direct effect on the yield of water from an area.

After conversion to grassland in these watersheds, stream discharge increased by an average of 60%. However, in pre and post treatment condition, there was a high correlation between runoff and total precipitation. There was also a season affect that should be considered. March was the critical month in the runoff process. During the rainy period leading up to March, the increase of water yield in the converted watersheds was definite.[11]

Remedy: Remove incorrect reference and statements based on the idea that no management of forest would have the same effect on water yield as management or human activity.

Issue: The DEIS incorrectly states that wilderness designation will not affect the use of fire as a vegetation treatment tool.

Reference: (3rd paragraph, page 367, DEIS): *Recommended wilderness would affect the ability to mechanically treat vegetation to restore ecosystems and reduce fuel loading. The ability to use fire as a vegetation treatment would not be restricted under all alternatives.*

Discussion: This statement concerning the ability to use fire as a vegetation treatment is not true. In all the alternatives that designate wilderness or other restriction on human activities creating pseudo wilderness, restriction on wilderness fire fighting activities will also be implemented. The use of "light-on-the-land" fire fighting tactics due to wilderness designation will limit the construction of fire lines and will limit camping and providing for fighters near the area where the use of fire will occur. All of these restrictions on fire fighting tactics will limit the ability to use fire as a vegetation treatment under certain alternatives. Burning within designated wilderness areas carries with it many more restriction than burning outside of wilderness. Area access, smoke concerns, camp and helicopter landing areas, use of fire lines to contain and stop the spread of fire are all items that will be impacted by a wilderness designation and could prevent the treatment of vegetation within a wilderness area.

Remedy: Remove misleading statements implying that wilderness designation will not affect the use of fire as a vegetation treatment tool.

[11] http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=6844

PROPOSED LAND MANAGEMENT PLAN

Issue: Not all versions of the Plan are identical.

Discussion: Not all physical copies of the Plan match the PDF versions of the Plan, which makes discussion of the issues of the Plan difficult. It is not known where the differences might be in each version, nor whether the differences are sufficiently substantive as to render the whole public review process meaningless. Note that this means that some of the page references in these comments may not agree with page numbers of the versions used by the Revision Team.

Remedy: Identify and publicize all differences to the various versions of the Plan.

Issue: The Plan does not match the A-S NFs' Mission and Vision statements

Discussion: According to this section (pp 12-13) the mission is to achieve quality land management to meet the diverse needs of people under the "sustainable" multiple-use management concept. The goal is to sustain the multiple uses of resources in perpetuity while maintaining the long-term productivity of the land. The latter statement is redundant, since it would not be possible to sustain multiple use unless the long-term productivity were maintained. The emphasis throughout the plan seems to be less on meeting the diverse needs of people than on meeting the diverse "needs" of wildlife. It is interesting that the term "sustained yield" has been replaced with "sustainable", presumably because the former smacks of actually producing an economic benefit to people. Likewise in the vision statement there is mention of cultural heritage and economic benefit that seems to be obscured in the remainder of the document. The concept of "working lands" is a good one, but the concept is not prominent in the overall plan.

Issue: The Plan erroneously uses "pre-European settlement" as a basis for desired conditions.

Discussion: On page 15, the tone is set for the document by stating the outdated and pedestrian view that prior to European settlement "the A-S ecosystems were considered to be resilient" and functioning in some naturally harmonious way that these systems no longer do. This view is clearly unsubstantiated as the naturally recovering landscape burned by the Wallow Fire demonstrates. Nonetheless, this is the prevailing orthodoxy for the entire plan, to wit: conditions need to return to some natural state from which they have departed due to human intervention.

The Agency identifies "ranching, farming and forest use by settlers" as the primary drivers of ecological changes on the Forest (p. 15). Yet the Agency has been charged with the management of the Forest for over 100 years. Certainly the Agency has some culpability in the current conditions and "uncharacteristic responses such as the Rodeo-Chediski Fire of 2002…" Both

ranching and farming practices have changed in the past 100 years as have Forest management practices and policies. Placing blame on farmers and ranchers for current conditions gives the impression that Agency personnel harbor grudges against the local community, which certainly isn't the case.

The approach taken was to assume that ecological conditions present prior to the mid-18th century represented "desired conditions." Implicit in this assumption is that only those conditions, or something close to those conditions, are capable of providing "healthy" ecosystems with adequate "resilience", "diversity", and other nebulous characteristics. Any economic goods and services will only result to the extent that they contribute to attaining the desired conditions (e.g. timber cutting to thin forests to pre-settlement conditions) or as "by products" of "healthy, functioning ecosystems." (p 16). We have no quarrel with a goal of insuring that forest uses are compatible with the long-term productivity of the land (i.e. they are sustainable). However, the approach taken here suffers from several deficiencies:

1. Ecological conditions prior to the 1850s are not well-documented. This includes not only knowledge of the state of such ecosystems at that time, but the factors responsible for such conditions, the long term trends that we occurring, etc.
2. Ecological conditions present during historical times may not be possible to restore. Both natural factors and human influences are different today and thus the "pristine" conditions may not be achievable. For example, climatic conditions may be different from the early 1800s and further changes in climate may be expected.
3. Ecological conditions present in historical times may not be desirable for present uses and values. For example, the fire regime that occurred in the early 1800s was the result of lightning and Indian burning of the vegetation that existed then, and may not serve present needs and concerns at all.
4. The implied theme throughout the document is; Only the ecological conditions existing in the early 1800s are capable of sustainable and resilient ecosystems, thus any production of timber, forage, wildlife harvest or other resources can only be viewed as a byproduct of the ecosystem, i.e. it must not interfere with the "natural" balance of nature.

The approach and assumptions outlined above might be acceptable for an area managed as a nature preserve or National Park (although they may still be unrealistic to achieve), but are not appropriate for lands managed under the mission and vision statements for the A-S NF. The approach is oriented to the past, not the future. A more reasonable approach would be:

1. To establish those goods, services and values desired by people using the Forest and the population at large.
2. To compile information on the potential of the Forest lands to provide such benefits in a sustainable way.
3. To document the current condition of the Forest lands with respect to production of benefits and ecological conditions.
4. To describe the management actions required to achieve desired outputs and the costs and benefits of doing so. Costs and benefits include not only direct economic costs and benefits, but also positive and/or negative effects on other uses or ecological processes.

5. To establish desired conditions of soil, vegetation, water quality, etc. based on the analysis above and outline management designed to reach such conditions or maintain them where they are already met.
6. To provide a mechanism for monitoring and adaptation of management as needed.

Remedy: Change the starting point for desired conditions to a more realistic and current condition basis, as opposed to an unsubstantiated and idealistic, but probably not realistic, one.

Issue: The Plan erroneously assumes desired conditions for all riparian conditions are the same

Discussion: Page 33. Desired conditions identify large coarse woody debris for riparian areas, however obviously riparian areas throughout the A-S will not be the same; riparian areas of a 3,000 ft. desert area will not meet the same conditions as on a mountain at 10,000 ft. in a mixed conifer forest.

Page 34. "Willows are reproducing with all age-classes present" is not appropriate for all riparian stretches due to site limitations for willow, as per the above paragraph.

Remedy: Remove generalizations regarding riparian conditions.

Issue: The Plan Guidelines for desired conditions fail to define terms and do not provide sources or scientific basis for statements.

Discussion: Desired conditions for various types of areas are presented with little to no discussion of the basis for the statements. Some, but not all, examples include:

Guidelines for Riparian Areas, page 35 refers to herbaceous cover of 55% or greater and herbaceous height of "6-9 inches or longer" with no justification for these numbers. Furthermore, the type of ground cover is not specified as to whether it canopy, foliar, or basal, nor is species specified. There is no definition which provides understanding of whether the height is an overall average, or when and how it would be measured.

Desired conditions for grassland cover (page 56) are stated to be 35%, with heights of 10-31 inches. No research references are cited for the basis of these numbers, and no description of the kind of cover is provided (canopy, foliar or basal) or how and when the grassland cover will be measured Additionally, the statement that 10-18 inch grass growth from previous year to provide adequate hiding cover for antelope fawns needs reference and explanation, including where and how the grass will be measured, and what happens when drought or fire, for example, make the conditions impossible. Furthermore, there may be sites that are perfectly healthy where these heights are not obtainable due to many factors.

Guidelines for grasslands (page 57) lists 45% "Vegetative ground cover" for Great Basin grasslands, 35% for semidesert grasslands and 60% of Montaine grasslands with no accompanying description of the scientific basis for those numbers. It is not explained why this

is vegetative ground cover as opposed to total ground cover, nor is the kind of cover, canopy, foliar, or basal described. When, how and where measurements will occur is not included.

Objectives for livestock grazing (page 96) includes "establish at least one forage reserve on each ranger district." This seems an innocuous and sensible objective but it is not, since key information is missing, such as how the reserves will be selected, who will have access to them, who will do the maintenance on the fences and waters. It appears that livestock forage reserves may be just another way to reduce landscape stocking rates and marginalize the permittees.

Remedy: A better solution for pastures that are not currently in a grazing management plan for an active allotment is to get them in one. Only in this way will they be properly managed.

Issues: The Plan contains many errors and omissions.

Discussion: **Note that page numbers referenced in the following comments may not match page numbers of versions used by the Revision Team.**

Maintenance and Improvement of Ecosystem Health **(p15)** *"Ecosystem diversity provides for the distribution, diversity, and complexity of watershed and landscape scale features, including: natural disturbance regimes of terrestrial, aquatic, and riparian ecosystems. Communities, populations, and individual plant and animal species are uniquely adapted to and dependent upon ecosystem diversity.*

The following desired conditions describe the characteristics of the A-S NFs that provide ecosystem diversity. Ecosystem diversity is the primary means by which this Plan contributes to the maintenance and improvement of ecosystem health. Species diversity needs are integrated into all aspects of this Plan. Social and economic needs are also integrated wherever possible into ecosystem desired conditions." (p 11).

The statement quoted above illustrates several fundamental features that underlay a considerable part of this plan which we believe are flawed, scientifically questionable, or incorrect. "Ecosystem diversity" is not defined, but is equated with "distribution, diversity, and complexity" of landscapes, and these latter terms are also not defined.

"Diversity" can be expressed in many ways and at many scales, e.g. number of species, relative abundances of species, etc. Without defining the term, it is meaningless and not capable of measurement or interpretation. The second paragraph goes on to say that desired conditions describe the characteristics that provide ecosystem diversity. That does not add much to the concept, as it may be referring to species, species functional groups, vegetation and/or animal "communities", or the variability in geology, landform, soils, and history that affect the landscape.

The statement that "communities, populations and individual plant and animal species are uniquely adapted to and dependent upon ecosystem diversity" is another that is really meaningless since diversity is not defined. The statement seems to imply a view of ecosystems

(and their component communities, populations and species) as systems that have evolved a together over very long periods and achieved a balance (or climax condition) or equilibrium which was present in the 1850s but has since been "disturbed."

This view is consistent with earlier ecological thinking that considered ecosystems (with their component communities and populations) as distinct, stable entities with emergent properties that have evolved together. Most ecologists now recognize that ecosystems and communities vary more or less continuously due to environmental gradients and natural or man-caused disturbance. Classification of communities and sometimes even species is artificial and arbitrary, and, although it may serve a human purpose, does not reflect the basic processes and organization of natural systems.

The second paragraph also states that "species diversity needs" are integrated into all aspects of the plan. Without defining species diversity needs, the concept cannot be integrated into the plan. The statement indicates that "social and economic needs" are also integrated into the desired conditions for the plan "whenever possible," however it is not clear when it would not be possible, since the mission is to "serve people" and thus social and economic needs should always be integrated into desired conditions.

Overall Ecosystem Health

Background and Existing Conditions for Overall Ecosystem Health "Prior to the 1850s, the A-S NFs' ecosystems were resilient. The landscape was filled with a wide variety of vegetation that provided habitat for a diverse array of plants and animals. Fire, disease, and climatic changes were natural components of these functioning ecosystems. Beginning in the mid-1800s, ranching, farming, and forest uses by settlers began making substantial changes to the ecological and species diversity of the landscape. In some cases, the disturbances and underlying ecological processes that sustained diversity have been altered away from historic conditions4 and may not support the same native species distribution and abundance the forests once did. Natural disturbance processes (e.g., insects, disease, fire) are also now producing uncharacteristic responses, such as the Rodeo-Chediski Fire of 2002, in many ecosystems." (P 11)

The statement above further illustrates some of the points made previously. There is no way to demonstrate that the ecosystems were "resilient" prior to the 1850s. The implication is that they are not now "resilient" but no evidence is provided for such an implication. We can see that the landscapes are filled with a wide variety of vegetation and diverse plants and animals today, and that fire, disease, and climatic changes are still natural components of these ecosystems, and the ecosystems still function.

It is true that ranching, farming, and logging (and fire exclusion) changed the species composition and/or extent of some plant communities, which in turn impacted animal populations. It is possible, maybe even probable, that such activities actually increased the diversity of plant communities and species by increasing the amount of "disturbance" and introducing some new species. Other processes such as climate change, variation in species composition, changes in wildlife populations (e.g. elk, deer, predators, etc) or other "natural" factors are downplayed The implication is that alteration of the historic "natural" situation is necessarily a bad thing and not sustainable. That is not true. The Rodeo-Chediski fire would not have happened unless the Forest Service had implemented a long period of fire protection that

allowed increased tree cover and fuel buildup compared to earlier conditions. However, vegetation is now abundant in the burned area and, although it is different that before the fire, there is probably an increase in species diversity of plants and animals as a result (again, depending on how diversity is defined).

Note: The comments above were submitted (in slightly different form) to the Forest Service on August 21, 2009, with the provision that additional, more specific comments would follow. The rest of this section consists of those specific comments which have been added to the original submission.

"In addition, climate change5 is being added to the list of forces shaping the forests and grasslands of the A-S NFs." (p 12).

This statement reveals the weakness of an approach that looks backward to "pre-settlement" conditions as the basis for establishing desired conditions. Climate change will occur in the future, whether it is the "global warming" scenario popular with politicians or not. We commend the A-S NF for using caution in dealing with this hypothesis of global catastrophe.

The fact is that climate always has changed over various time scales in the past and will no doubt continue to do so for various reasons. Therefore to dwell on a particular point in historic time as the desired condition seems incredible. It is certainly useful to know what conditions were prior to white settlement, but that does not mean that such conditions are desirable or achievable now.

"The needs for fish, wildlife, and rare plants are found throughout the plan, rather than in one specific section." (p 12) The approach described here sets fish, wildlife, and rare plants apart from all other forest values and uses. That effectively means that no uses or management applied should change the number or distribution of these organisms that was present in the historic condition, i.e. the assumption is that all were at optimum levels in that condition. That may or may not be the case. At any rate, such treatment obscures the fact that optimum conditions for all species of plants and animals cannot be simultaneously achieved.

It would be more useful to analyze the needs of each species and describe how it would be affected by future management (either positively or negatively) and how it interacts with other species and/or forest management such as grazing, logging, and fire. The approach used in the plan appears to be aimed at removing these species from discussion of management alternatives.

"Landscape Scale Desired Condition" (p12) These statements are mostly questionable from an ecological and/or management standpoint. For example, "resilient to disturbances" is not defined. There is no way to know if it means that conditions will recover after "disturbance" or that they will change character and continue to function. Why (and how) can historical disturbances could "return" to their natural role, and why that should be the desired condition is not specified. It is unclear what it means that if natural disturbances will allow for shifting of plant communities…, but the "mosaic of plant communities is resilient to disturbance."

Habitat quality, distribution and abundance exist to support the recovery and/or stabilization of federally listed and other species, however there is no justification for this provided, and no

discussion of instances when such habitat never occurred on the site or is incapable of being produced now.

"The current soil condition rating is unsatisfactory or impaired on more than 30 percent of the A-S NFs, compared to the historic conditions of up to 5 percent. In addition, naturally unstable geology (Datil soils, slow geologic landslides) in the Apache Highlands and Blue Geographic Areas contributes to sediment loads in downstream rivers." (p14) No basis is provided for stating that soil conditions were only 5 percent unsatisfactory or impaired in "historic conditions." The implication is that a return to historic vegetation conditions would reduce the 30% of presently "impaired" soils to 5%, but no basis for the statement is provided. No discussion of the significance of the reference to "in addition, naturally unstable" areas contributing to sediment loads is provided, nor a description of what it is in addition to. It is unclear why naturally unstable areas did not apparently contribute sediment in the past.

"trending away from historic conditions" (p 14) This statement is symptomatic of flawed ecological theory in that all of these communities change over time.

"Soil erosion above the floodplain minimally contributes to the impairment of stream function or water quality."(p 15) "Minimally" needs to be defined, as does "impairment" and stream "function."

"Flooding does not disrupt normal stream characteristics..." (p 15) As written, this statement is ridiculous as flooding is out of human control .Major flooding will occur and will "disrupt" stream hydrology to varying degrees and periods of time. Management may mitigate such effects to some extent, but cannot prevent such "disruption."

"When compared to historic conditions, approximately 70 percent of inventoried streams have reduced quality of fish habitat. Native fish populations, especially Apache trout, have decreased 50 to 75 percent over the last 10 years. The alteration of habitats, isolation of populations, and introduction of non-native species have contributed to the decline of fish habitat and populations." (p16) It is not shown how the quality of fish habitat evaluated quantitatively for historic conditions. If there are data to substantiate the statement that native fish have decreased 50-75% over the past 10 years, the cause of such a decline should be disclosed as well support for the claim that aspects of fish habitat have changed that dramatically in only 10 years. Most of the alleged changes since "historic times" and the factors that allegedly caused them occurred prior to the past decade.

"Physical barriers or habitat alterations..." (p 16) This "condition" statement is not appropriate at the Forest level and is more appropriate on a project level. Additionally, global climate change may influence temperatures and water levels beyond the control of management.

"Fire is the most important natural disturbance..." (p17) This statement is not necessarily correct and should include reference to geologic processes and climatic fluctuations.

"Ranges of values presented in desired conditions account for natural variation in the composition and structure within a vegetation type. Desired conditions may differ within a vegetation type due to spatial variability in soils, elevation, aspect, or varying multiple-use needs. Site-specific areas may be managed for different desired conditions because of particular resource and species needs. The desired conditions do not necessarily represent historic conditions, since it may not be possible, nor desirable, to return to that condition." (p17)

We agree fully with the above statement and suggest it be emphasized repeatedly in the plan, rather than the existing emphasis on "restoring historic conditions." The statement supports our contention elsewhere in these comments that specifics of desired conditions and guidelines do not belong in a forest plan but should be included appropriately at a project level on a site-specific, case by case basis.

"Natural fire regimes are restored." (p18) There is no justification for including this as a desired condition. There is no reason to decide *a priori* whether a "natural" fire regime will provide desired tree density, structure, etc., unless it is also decided *a priori* that "natural" tree density, structure, etc. is the desired condition. Also, "restoring" a natural fire regime may or may not be possible or produce the desired forest outputs. (see preceding statement).

"Plant community attributes are within or moving closer to reference conditions." (p19) If this is a desired condition, then "reference conditions" needs to be identified. If "reference conditions" is the desired condition, the statement may be reasonable, but if "reference conditions" are uncritically assumed to the same a "historic conditions", then it is an inappropriate statement.

"The interface between riparian areas and uplands are referred to as xeroriparian which provide important wildlife habitat and help filter sediment." (p19) The term, xeroriparian, is not defined. The term is sometimes used to refer to ephemeral drainages that support vegetation less demanding of continuous water supply than true riparian species, but the usage here seems to apply a new meaning to the term.

"High elevation willows, such as Bebb's and Arizona, are reproducing in wet meadows." (p 21) This statement should be modified with "Where the potential and conditions exists"

"Sedimentation and compaction rarely adversely impact riparian areas." (p21) The terms,"rarely" and "adversely" need to be defined.

"The ecological condition of riparian areas is resilient to animal and human use." (p 21) It is unclear how ecological condition is defined in this context, or how the threshold is determined for "ecological condition" that distinguishes "resilient" from "non-resilient".

"Floodplains and wet meadows provide sufficient grass and forb cover and height (at least 6-9 inches tall) to trap sediment, mitigate flood energy, and provide wildife habitat." (p21)

Herbaceous vegetation heights (also stubble heights) are not resource objectives and have no place in this plan. They may be used as a measure of resource use indicator in specific project plans, and these should be specific as to when and where it will be measured, which species will be measured, whether culm height or leaf height will be measured and so on, as well as providing supporting studies that establish the relationship of the stubble height to the resource objective (i.e wildlife habitat, sediment trapping, etc)

"Vegetation associations are similar to historic patterns." (p 23) This statement assumes that vegetation patterns different from "historic" patterns will not provide for desirable and sustainable services and values for the forest. That is not necessarily correct and contradicts statements made elsewhere that historic conditions are not necessarily possible or desirable.

"Snags are typically 18 inches or greater DBH and average 1-2 per acre....." (p 24) Such statements are not appropriate for a forest-level plan and should be included in site-specific, project level plans where appropriate and where information supporting their use is available. This comment applies to similar statement scattered through the desired conditions for most forest types.

"Forest structure in the wildland-urban interface (WUI) may be composed of smaller, more widely-spaced groups of trees." (p 24) This statement, and similar ones found in desired conditions for other vegetation types, indicates that "desired conditions" stated for the forest in general will be modified in WUIs, presumably to protect dwellings and public safety. We do not object to that, but it does indicate that "historic conditions" are not always the desired condition. If desired conditions can be modified to fit the resource objectives in WUIs, they should be for other uses in other parts of the forest.

"Openings and dry meadows provide grass cover and height (at least 6 inches tall) to support prey species." (p 25) Specific height limits should not be in a Forest Plan. They may be appropriate as management indicators for project level, site specific plans when supported by known relationships to management objectives and when the protocol for measurement is specified.

"Current conditions within the piñon-juniper woodland are slightly departed from historic conditions. There are too many medium to very large trees with closed canopies and a lack of herbaceous species and small to medium size trees with open canopy. The current fire regime is

similar to historic conditions." (p 35) This statement is somewhat misleading because it seems to imply that increase of the extent of junipers and density of juniper is a minor consideration on the A-S, when, in fact large areas have a high and often increasing density of juniper that contributes to reduction of forage for wildlife and livestock as well as contributing to increased soil erosion.

We assume the statement refers to juniper stands which are considered to have been dominated by juniper since "historic times" and not to other communities that have been invaded by juniper. If so, it should be clarified.

All reference to "needle cast" as a proportion of ground cover should be removed. Since this is primarily a function of pine canopy cover it should be addressed on a project level.

"Healthy grasslands are important habitat for a variety of wildlife species and are essential to maintain pronghorn antelope populations. Grasslands of the A-S NFs have undergone dramatic changes over the last 130 years. Changes include encroachment by trees and shrubs, loss of perennial grass cover, loss of cool season species, increase in exposed soil surface, and the spread of non-native species. Over 65 percent of the semi-desert and Great Basin grasslands have been invaded by woody species. Fire plays a key role in the maintenance of the forests' grasslands. Currently, the three grasslands all show departure from historic conditions in structure and composition, with both semi-desert and Great Basin severely departed, and montane/subalpine grasslands moderately departed. Fire historically occurred every 10 to 30 years in the Great Basin and 2 to 10 years in the semi-desert. In the montane/subalpine grasslands fire occurred every 2 to 400 years (depending on the adjacent forest type)." (p 38)

There is no question that species composition and cover in the grasslands has changed from "historic conditions" and that lack of fire has been a major contributor in many cases. However, the changes vary depending on the ecological site potential and the environmental zone (i.e. semi-desert grassland, montane grassland, or Great Basin grasslands).

This statement gives the impression that these grasslands are all, or mostly, in a degraded state that does not provide for sustainable production or maintenance of site stability. That is not the case. The condition of the grasslands has generally improved greatly compared to conditions that existed 75-100 years ago and should be recognized.

It should also be recognized that, while in some cases the changes in species (especially woody plant increases) has resulted in increased erosion hazard or lower livestock forage production, habitat for some wildlife has benefited by such changes. Ground cover varies in density.

"Most areas provide dense grass cover while others may have little ground cover due to presence of Gunnison's prairie dog colonies and their associated species." (p36, and similar statements elsewhere)

This statement infers that dense grass cover is desirable or necessary, except where Gunnison's prairie dog is responsible for reduction of grass cover, where it is appropriate. The effects of inadequate ground cover on soil erosion are irrespective of cause. Thus statements such as these contradict Desired Conditions regarding sedimentation elsewhere in the plan. The statement tacitly admits that inadequate ground cover is acceptable under certain cases but not others.

Further, all references to Gunnison's prairie dog reintroduction should be accompanied by potential impacts on sedimentation increases in Apache trout habitat. These considerations likely require NEPA analysis and consultation with USFWS under requirements of the Endangered Species Act making any reference to Gunnison's prairie dog increases more of a site specific, project level consideration and not appropriate for the Forest-wide plan.

Woody (tree and shrub) canopy cover is less than 10 percent. Vegetative cover (herbaceous ground cover and litter) is generally between 45 and 80 percent in Great Basin grasslands, 35 to 70 percent in semi-desert grasslands, and ranges from 60 to 100 percent in montane/subalpine grasslands. These percentages may vary depending on the amount of surface rock11." (p40)

Specific levels of vegetation cover are not supportable for plan level Desired Conditions. Statements should say something like "Ground cover is adequate to prevent excessive erosion" and then more site- specific levels of cover designated on the project level where adequate information is available to support such targets.

"Average grass height varies by grassland type and yearly climatic conditions. Grass heights generally range from 11 to 26 inches in Great Basin grasslands, 10 to 25 inches in montane/subalpine grasslands, and 13 to 31 inches in semi-desert grasslands." (p41)

These figures serve no purpose and are inappropriate for a Forest level plan. If average grass height is useful for any purpose, then it should be site specific and described in terms of measurement protocol including season, species and location of measurement.

"Annually, grasslands provide forage and fawning cover and height (generally 15 to 19 inches high) for pronghorn antelope during the fawning period, May through June." (p41)

Again, herbaceous vegetation heights (also known as stubble heights) are not resource objectives and have no place in this plan. They may be used as a measure of resource use indicator in specific project plans, and these should be specific as to when and where it will be measured, which species will be measured, will culm height or leaf height be measured and so on.

"The modified landscape of the A-S NFs does not support, and may not be capable of supporting, the historic patterns of native species distribution and abundance it once did. Some species are now extinct, others have been extirpated from the forests, and many may never come back. Other species and subspecies have been introduced and are now self-sustaining (whether considered desirable or not). Basic wildlife needs such as food, water, and shelter and species and species groups associated with particular vegetation or with specific ecological characteristics (e.g., snags, logs, herbaceous understories) are addressed throughout the desired conditions for overall ecosystem health," (p 42)

The statement above conveys the impression that wildlife populations are drastically altered and probably reduced compared to "historic" times. That is not the case. It is true that a few species have become extinct, and we would agree that those very likely will not come back. Otherwise,

there have been changes in the relative abundance of other species. Predator control, water development, and changes in vegetation characteristics have been major factors.

The impression given is similar to that discussed for grasslands on page 38 (see above) that wildlife diversity and abundance has been decimated, in some cases irreversibly, and would benefit by restoring "historic condition". That may be true for certain species, but not for wildlife as a whole. Many wildlife species have thrived under modern wildlife and range management. As stated previously, the consideration of wildlife needs under overall ecosystem health confounds the reader's ability to distinguish the two. Wildlife needs and ecosystem health are not the same thing and should be separated in the discussion of plant objectives

'Desired Conditions for Wildlife Species' (p 42) It seems incredible that a Plan which purports to be heavily oriented toward wildlife would contain only two sentences describing the desired conditions for wildlife. The fact is that desired conditions for wildlife depend heavily on the species being considered and often the desired for two different species are contradictory. Failure to consider the specific needs of different species or species groups supports the underlying assumption that if "historic conditions" were restored optimum conditions for wildlife would result - an assumption that ignores the fact that some wildlife provide more benefits than others or have special concerns.

"The A-S NFs have over 30 lakes and reservoirs and more than 1,000 miles of rivers and streams, more than can be found in any other southwestern national forest." (p 45) Most of those lakes and reservoirs were built by people to provide water for irrigation or other uses. They are not a feature of "historic conditions."

"Desired Conditions for Invasive Species" (p 43) This entire section needs to be rethought and rewritten. As pointed out in the background statement, not all invasive species can be managed to meet the desired conditions as stated. Further, the ecological or economical consequences of different invasive species are not all the same. The desired conditions do not reflect that and are a recipe for failure of the plan in achieving those conditions.

"Desired Conditions for Motorized Opportunities" (p 47) We support caution in proliferation of roads and for closing roads that are redundant or poorly located. We also support control of excessive off road travel. We would support relocation of some roads to bypass stockponds, spring developments, corrals or other livestock and wildlife improvements as a means of reducing vandalism and disturbance of animals using these facilities. We also believe that some roads should be designated for administrative purposes and that such purposes should include the periodic use by grazing permittees to check, maintain and/or construct range improvements.

"Landscapes possess vegetation patterns and compositions that are naturally variable in appearance and ecological function, and contribute to scenic values." (p49) Any link between ecological function and "appearance" or "scenic values" has not been demonstrated.

"The Forest Service has recognized a role and responsibility to educate people about management and conservation of our Nation's forests and grasslands." (p51) We support the objective of the Agency to educate the public about their management - as long as it is objective and scientifically sound. We believe there is also a need for Agency employees, and those of other agencies, to learn more about the needs and values of local communities and economic interests as well.

"Members of affiliated Tribes have access to gather traditional forest resources" (p 54) "Traditional forest resources" is not defined. There is no way to know what it includes, or what difference, if any, non-Tribal activities such as hunting big game, cutting timber, grazing livestock, fishing for Apache trout that occur today might be different from Tribal.

"Livestock conflicts with wildlife rarely occur." (p55) The terms "conflict" and "rarely" need to be defined.

"Livestock grazing water developments provide safe access to water by wildlife. Livestock fences allow for wildlife passage." (p55) We agree that these are good concepts but should be qualified by the statement "where practical and economical to do so." For example, if the design or operation of a water development is expensive to install or difficult to keep functional, and especially where alternative water sources exist, this objective should not be a rigid requirement. Likewise, some fences (e.g. traps or corrals) may not require wildlife passage.

"Grass reserves are available on each Ranger District to provide forage during restoration activities and/or after natural disturbances." (p 55) "Grass reserves" should be developed on an allotment by allotment basis through proper range management. Designating "grass reserves" on a district by district basis will require additional financial considerations for improvement maintenance.

"Livestock grazing is in balance with available forage." (p 55) This statement only addresses stocking rate and may lead to continuation of the Agency's misguided efforts to establish proper stocking rates based on modeling approaches. We would prefer and statement that "Intensity, frequency, season and duration of livestock grazing is appropriate to accomplish resource management objectives."

"Geographic Area Desired Conditions" (p 59-74) Reason for these desired conditions not making any reference to grazing, hunting or logging should be supplied.

"Vegetation conditions support a healthy population of Montezuma Quail in suitable habitat." (p66) Define "healthy" and "suitable". More appropriate on a project by project level.

"Prairie dog colonies occur in appropriate habitat and support the wide array of species associated with them." (p 66) It is not stated how "appropriate" will be determined or how many prairie dogs will be enough

"Abundant grassy openings for prey species." (p66) "Abundant" is not defined and should be determined on a project level basis. Furthermore, some prey species may prefer dense brush or trees.

"highly erosive geologic formations are stable within their natural capability."(p70) This statement defies a rational response. Get rid of it so you don't embarrass yourself.

"In order to achieve overall ecosystem health and provide for species diversity, the A-S NF's focus on achieving satisfactory watershed conditions and restoring ecological functions, especially natural fire regimes." (p77) This statement equates the nebulous concept of species diversity (without a definition) and ecosystem health, another term which is not easy to define with "watershed condition" (also undefined) and restored ecological functions (also not defined). The example, "natural fire regime" again points to the basic assumption that only "natural" or "historic" conditions will provide these characteristics. We reject that assumption.

"The A-S NF's plan a concerted effort to restore ... watersheds by reducing degrading factors... Degrading factors include, but are not limited to, high vegetation departure from historic conditions, impaired or unsatisfactory soil condition, functioning-at-risk or non-functioning riparian areas, occurrence of invasive species, unmanaged grazing, and sedimentation from roads or trails." (p 77) This statement confuses "degrading factors" with the results of degradation. For example, unmanaged grazing, invasive species, or improper road construction may or may not contribute to degradation. Departure from historic conditions is not a degrading factor unless only "historic conditions" are considered to be undegraded.

Impaired soil condition, non-functioning riparian areas and sedimentation are not degrading factors; they are the effects of degrading factors. The confusion of this paragraph seems to reveal that the authors lack a clear grasp of the difference between historic conditions, natural processes, and management effects.

Additionally, there should be no "unmanaged grazing" on the A-S if the Agency is doing its job.

"Annually, enhance or restore 200 to 500 acres within high risk watersheds, including watersheds with state designated impaired or threatened waters14, to improve watershed condition and water quality.

Annually, enhance or restore 5 to 15 miles of stream habitat in order to restore structure, composition, and function of physical habitat for native fisheries.

Annually, treat 200 to 500 acres to restore desired composition, structure, and function of streams, floodplains, and riparian vegetation.

Within the planning period, enhance or restore 5 to 25 wet meadows or cienegas to proper hydrologic function and plant and animal species composition. Annually, work with the AGFD to reduce animal damage on native willows and other riparian species on an average of 5 miles of riparian habitat. " (p 78-79)

The A-S h has no way to know whether or not this or any of the other objectives that specify numbers or amounts can be accomplished. These statements are just setting up the Agency to be sued.

"Annually, resolve an average of five trespass cases." (p 88) That would be a good objective if there were five trespass cases per year, but not very good if there were 500. This is therefore a meaningless objective as stated, and should be reworded (e.g. Agency will control illegal use of the Forest).

"Affected Tribes are consulted when excavation projects and activities are planned in sites or areas of known religious or cultural importance. Tribes are invited to help identify archaeological sites that are the footprint of past occupations, and verify ancestral migrations and traditional use. Agreements are in place for repatriation of human remains and artifacts." (p 90) This provision should extend to other people as well some of whom may have important ancestral links to places and artifacts.

"Forest products are primarily a byproduct of moving towards vegetation desired conditions. Timber harvesting is used to help achieve vegetation desired conditions, as well as contribute to the local and regional economy." (p 90) Forest products should be a legitimate and planned use of the Forest in their own right, not just a "by product" of managing for historic conditions. By this statement the plan reveals clearly that its objective is to manage resources for nature's sake and not for human benefit. We reject that approach.

"Objectives" (p 91, Livestock grazing) These are not appropriate for Forest Plan level objectives and should be at the project level.

"Background for Heber Wild Horse Territory The Heber Wild Horse Territory includes approximately 19,700 acres in the Mogollon Geographic Area. The territory was established under the Wild Free Roaming Horse and Burro Act of 1971(Public Law 92-195) with the purpose of providing use by and for the protection of wild horses. The Heber Wild Horse Territory Management Plan is under development to include detailed management direction for the territory. Desired Conditions for Heber Wild Horse Territory The Heber Wild Horse Territory meets management objectives as outlined in the Heber Wild Horse Territory Management Plan." (p 105)

These horses may appear to be wild, but they are actually feral. That is common knowledge in the local community. The Heber Wild Horse Territory should be abolished.

"Livestock Grazing Suitability" - (p 112 Table 5) All of the areas designated as "generally not suitable" are merely designated for no livestock grazing. There is no inherent resource attribute that makes them not suitable for grazing except for these designations. Destocking an allotment due to trades for vacant allotment grazing capacity do not signify unsuitability for livestock grazing.

"In grasslands, maximum achievable cover height should be present in pastures with known antelope fawning areas each spring/summer. " (p 119) This statement effectively removes any known antelope fawning area from all livestock grazing without any evidence that properly managed grazing influences antelope fawning success. If other than only anecdotal evidence exists, then data should be provided.

"In grasslands, a moderate to high similarity index to reference conditions23 should be achieved. " (p 119-120). This statement is meaningless unless the attribute used (e.g. cover or production) and method of calculating similarity are defined. Also, the type and source of "reference conditions" must be identified. Finally, the relevance of the similarity index to management objectives must be established, and evidence that the desired level of similarity is achievable presented.

"Livestock Grazing" (p 125) This long list of "guidelines" is composed of statements that are either unnecessary, inappropriate for a Forest level plan, or contrary to other parts of the plan. Most of these guidelines could be covered by simply stating that livestock grazing will be carried out based on scientific principles of range management regarding the timing and intensity of grazing and with consideration for the needs of other forest uses. Specific references should be put in site-specific plans (allotment management plans or annual operating instructions), e.g. placement of salt, location of water developments or fences, etc.

The statements on "vacant allotments" are apparently included to encourage the closing of such allotments. Vacant allotments should be restocked unless livestock grazing on the allotment can be shown to be incompatible with resource needs or other uses.

Issue: Glossary terms are incorrect, misleading or incomplete.

Unique - The term "unique" is used repeatedly in this document, for example: "unique riparian vegetation types" (p. 5) "unique species", referring to plant and animal species claimed to be found only on the A-S NF. (p.5) "unique waters", referring to designation by ASDWR to certain streams. "Communities, populations, and individual plant and animal species are uniquely adapted to and dependent on ecosystem diversity.", implying a high degree of evolutionary organization (p11)

Unique means "one and only", "different from all others", "having no like or equal". Its root is the Latin unicus (single) or unus (one). (Webster's New World Dictionary of the American Language). The word sometimes is used to mean rare or unusual, although the dictionary indicates that some object to this usage.

The first three examples cited of the use of "unique" employ the latter, disputed meaning of the word, i.e. rare or unusual, since there is no reason to think that the more commonly accepted definition is appropriate. However, most readers would assume that the use of the term implies that these vegetation types, species or "waters" are like completely unlike those found anywhere else - which is not true. It would be better to use a term that indicated these attributes are of limited extent rather than "unique" as most people interpret the word. The fourth example implies a view of the degree of organization and balance in nature that is not supported by modern science.

Ecotone - Ecotone was a term used by Clements and other ecologists who espoused the concept that plant communities were comparable to organisms or quasi organisms with emergent properties. The transitions from one community to another were called ecotones. If one adopts the "continuum" or "individualistic" concept (e.g Gleason) plant species abundance is seen to vary in response to environmental gradients, thus "ecotones" are only zones of rapid change as opposed to more gradual change where environmental conditions are relatively constant. Thus, the definition used in this plan (a community sharing species of adjacent communities) would apply to any plant community, and thus has no meaning.

Herbivory is defined as "loss of vegetation due to consumption by another organism." It could just as well be called the "gain" of vegetation by another organism. Herbivory actually means the act of consumption of vegetation by an herbivore, or an animal that eats plants.

Livestock grazing -is defined as "foraging by permitted livestock" which implies that foraging that is not "permitted" is not grazing.

Resiliency - the concept of resiliency is somewhat controversial, but generally means a system that has the capacity to change in response to some stress and to recover from that stress. Resilience is different from stability - which is resistance to change. These concepts seem to be somewhat confused in this document.

Scenic integrity - This definition is confusing. In one place it says high scenic integrity is the "state of naturalness" or "without disturbance created by humans." In another, it says the highest scenic integrity ratings are given to those landscapes that have little or no deviation from the landscape character valued by constituents for its aesthetic quality, which could mean that scenic integrity is in the eye of the beholder. There is no reason to believe that the "historic condition" is the only landscape character that can be appropriately valued by "constituents".

1. Fire

The following comments address specific language found in the Agency Proposed Plan that are of concern to Apache County. There are numerous references to "*natural conditions, natural fire regimes, "fire adapted ecosystems"* and *"uncharacteristic fires"* scattered throughout the Proposed Plan. These references will not be addressed individually, but are dealt with in the assorted comments. The following comments are provided with the intention of being constructive in nature and are being offered to make the updated A-S Forest Plan a more realistic and implementable document.

Issue: The Plan implies that more is known about pre-European conditions than is in fact known.

Reference (last two paragraphs, page 15, first paragraph page 16, Proposed Plan):

Prior to the 1850s, the Apache-Sitgreaves NFs ecosystems were considered to be resilient. The landscape was filled with a wide variety of vegetation that provided habitat for a diverse array of plants and animals. Fire, disease, and climatic changes were natural components of these functioning ecosystems.

Beginning in the mid-1800s, ranching, farming, and forest uses by settlers began making substantial changes to the ecological and species diversity of the landscape. In some cases, the underlying ecological processes that sustained diversity have been altered from historic patterns (Forest Service, 2008b) and may not support the same native species distribution and abundance. Under current conditions, natural ecological processes (e.g., insects, disease, fire) are producing uncharacteristic outcomes (e.g., Rodeo-Chediski Fire of 2002, Wallow Fire of 2011) in many ecosystems.

Discussion: This description of the Apache-Sitgreaves National Forest prior to 1850 is pure conjecture and cannot be supported with science. There is limited antidotal information concerning the structure of forest ecosystems and the population levels of native species prior to the 1850's for the area that makes up the Agency. While there is no doubt the settlement of the western United States was destructive and altered the characteristics of many forest ecosystems, there is no way to now accurately document the structure of forest ecosystems and the population levels of native species prior to this era. No accurate science based pre-settlement data, which is necessary to reasonably compare current and past ecosystem characteristics is available. There isn't enough science based information about pre-1850 conditions to set this speculative condition as the desired future condition. The Agency should not mislead the public into

believing that some type of natural utopia existed on the lands that make up the Agency prior to the 1850's.

Remedy Reassess the description of the Agency prior to 1850 and disclose that while some data has been collected concerning fire intervals, not much is known about ecosystem and watershed health prior to the occupation of this area by European settlers.

Issue: The Plan improperly uses misleading language

Reference: (6th paragraph, page 16, Proposed Plan): *Natural ecological processes (e.g., fire, drought, wind, insects, disease, and pathogens) return to their innate role within the ecosystem. Fire, in particular, is restored to a more natural function.*

(2nd paragraph, page 19, Proposed Plan): *Smoke and visibility impairment from wildland fire that closely mimics what would occur naturally is generally acceptable.*

Discussion: This statement is very misleading since fire, drought, wind, insects, disease and pathogens are natural processes and have played the same role in ecosystems for millions of years. Just because ecosystems have changed due to human activities and influence, does not mean fire, drought, wind, insects, disease and pathogens do not destroy vegetation and consume biomass as has occurred since the beginning of time. The "uncharacteristic fire" (not desired) of today is just as natural when burning under current climatic and fuel conditions as a low intensity fire (desired) would be burning under different climatic and fuel conditions. By assigning the term *"Natural ecological processes"* to low intensity burns and alluding to high intensity fast moving crown fires as *"uncharacteristic"* is an attempt to assign good and evil emotional values to a natural process in hope of influencing people's opinions.

The idea that smoke which *"occurs naturally is generally acceptable"* is an attempt to make the value of being "natural" superior to smoke coming from a wildfire. Wildfires are natural occurring events and the smoke produced from a wildfire is no different than smoke from a fire that is allowed to burn to accomplish certain objectives.

Remedy: Replace biased language with neutral language and concentrate efforts on providing the public with simple and clear descriptions of the desired condition of the Forest in the future.

Issue: The Plan provides conflicting recommendations.

Reference (3rd paragraph, page 21, Proposed Plan): *Coarse woody debris retention and/or creation should be used as needed to help retain long term soil productivity.*

Discussion: The guideline for soil management conflicts directly with the idea presented throughout the plan that fire will create healthy ecosystems and watersheds by consuming accumulations of coarse woody debris. Clear non-conflicting guidelines concerning the creation and retention of coarse woody material is needed in order to reduce any confusion as to what needs to be accomplished when dealing with coarse woody debris on the Agency in the future.

This comment is one example of many where conflicting statements are being presented in this Proposed Plan. Throughout the Proposed Plan desired condition and guideline statements that pertain to ecosystem functions are presented to only be followed by statements pertaining to fire management that would not allow the desired ecosystem function to take place. As shown

above, accumulations of coarse woody material is desired to maintain soil productivity, but as stated in other portions of the Proposed Plan it is also desired to burn many areas at increasing intervals.

Remedy: Provide clear and understandable guidelines and remove/correct conflicting direction in the Proposed Plan.

Issue: The Plan overstates the role fire plays in shaping PNVT,

Reference: (6th paragraph, page 27, Proposed Plan): *All of these PNVTs vary, to some degree, in structure, composition, function, and natural ecological processes from what they were historically. Fire is among the most important natural ecological processes that shaped these vegetation communities.*

Discussion: In this background description of all PNVTs, the idea that fire is among the most important natural ecological processes that shapes vegetative communities is somewhat misleading. Fire does play a key role in the stand density and age class of plants located within a vegetative community and to a lesser degree does influence the species composition of a plant community. However climatic factors, elevation, aspect, length of growing season, soil nutrient levels, soil moisture levels and a host of other factors drive the potential nature vegetation type found at any particular location much more than fire. Fire may maintain a site at a lower secessional stage by burning at a high interval rate, but the secessional path set by many other factors is continually repeated no matter how often the area burns. It takes a change in soil characteristics or climatic conditions or one of the other key factors to definitively change the PNVT.

Remedy: Correct overstatements regarding the role fire plays in shaping PNVT that are used to justify the use of fire as a treatment and to justify letting fires burn in order to reduce fuel loads.

Issue: The Plan provides unclear, confusing descriptions of expected ecological functions

Reference: Desired condition statements, pages 28, 29 & 30 Proposed Plan

Discussion: As stated above, the desired conditions conflict with each other and many of them will not fit well with a policy that allows fire to establish the makeup and structure of plant communities. Many of the above desired conditions that deal with specific vegetative conditions such as plant density, species composition and herbaceous ground cover will degrade as fire intervals are increased across the forest. Also soil, watershed, and in some cases wildlife habitat conditions all depend upon an accumulation of litter and decaying plant material remaining on the soil surface. These important ecological functions will be adversely impacted and remain degraded as fire intervals increase.

The above desired condition statements all depend upon fire intervals being limited or distinct based upon PNVTs, which was not the case for the recent large wildfires that have occurred. There is no reason to expect that future fires will stop at vegetative community boundaries. This is especially true when the forested stands are more open and contain a well-established understory of herbaceous plants that accumulate and increase the potential for a fast flashy type wildfire.

Many of the statements are based upon speculation and value judgments and there is no way to measure whether they are being achieved. It is unclear if the Agency will be managed so fire is the dominant factor establishing ecosystem characteristics or will the Forest continue to manage for a well-described set of resource conditions that meet the needs of the public. Fire driven resource conditions do not produce properly functioning soils and watersheds and is not in line with what the public desires.

Remedy: Provide a clear and understandable description of the expected ecological functions of by the various vegetative communities. Remove conflicting program direction (fire program direction verses program direction for soil, watershed, wildlife and other resource programs) in the Proposed Plan.

Issue: The Plan management guidelines are unclear and confusing.

Reference: (Guidelines for All PNVTs, page 30, Proposed Plan):

During project design and implementation, precautions should be taken to reduce the potential for damage to residual vegetation in order to prevent premature or excessive mortality.

Landscape scale restoration projects should be designed to spread out treatments spatially and/or temporally to reduce implementation impacts and allow reestablishment of vegetation and soil cover.

Restoration methods, such as thinning or burning, should leave a mosaic of undisturbed areas within the larger treated project area, especially within meadows, openings, and swales, to retain or allow recolonization of small mammals and insects (e.g., long-tailed voles, fritillary butterflies).

Planned ignitions (prescribed fire) and unplanned ignitions (wildfires) may be used to meet desired resource conditions, maintain desired vegetation species, and enable natural fires to return to their historic role.

Discussion: Again, the above management guidelines conflict with each other and will not fit well with a policy that lets fire establish the makeup and structure of plant communities. The above management guidelines that deal with vegetation mortality, along with the spacing and preservation of specific vegetative patterns will degrade as fire intervals are increased across the forest.

The above guideline that deals with the uses of fire to meet desired resource conditions, maintain desired vegetation species, while enabling natural fires to return to their natural role makes the assumption that fires will always provide the favorable resource conditions and vegetation species desired by the public. There is no science based research that shows fires burning across the wildland landscape will provide what is desired by the public; in fact the opposite is usually the case, many of the resource conditions and vegetative species desires by the public are destroyed by fire.

Remedy: Provide clear and understandable guidelines. Remove conflicting program direction in the Proposed Plan.

Issue: The Plan fails to provide predetermined burning conditions to establish suppression thresholds.

Reference: (4th paragraph, page 31, Proposed Plan): *Wildfires (unplanned ignitions) are evaluated to determine if resource objectives can be achieved. If resource objectives can be achieved, appropriate strategies are determined at the time of the fire. When managing ignitions to achieve resource objectives, forest managers consider the needs and values of all resources (e.g., cultural resources, vegetation, recreation, public safety).*

Discussion: This Management Approach for all PNVTs appears to assume all wildfires have the potential to achieve desirable resource conditions. Also the management approach leaves the determination of potential beneficial effects of a wildfire to *"the time of the fire."* It has been shown in the past that during drought or seasonal hot/dry/windy conditions fire is going to have more severe impacts on resources than when the forest vegetation is not as prone to high intensity burning conditions.

The question needs to be asked as to why there are not predetermined burning conditions that can be shared with the public which establish when wildfires will be suppressed automatically. These predetermined parameters would allow for a decision on whether or not to allow a fire to burn without a bunch of people having to come together in a meeting to determine what action to take. A narrowing of the window where wildfires will be used to achieve resource conditions should be part of the Agency fire management program especially during this period of prolonged drought.

Many things such as fuel moisture reading from various locations on the Forest could be used as criteria for determining when wildfires will be automatically suppressed. The Forest needs to take a proactive approach to fire management and not wait for the National Weather Service or another agency to tell them when it is not appropriate to burn.

Remedy: Establish clear fire management parameters for the use of fire as a tool to meet resource objectives.

Issue: The Plan incorrectly assumes protection of people, property and infrastructure is discretionary.

Reference: (5th paragraph, page 31, Proposed Plan): *A protection objective or a combination of protection and resource objectives are assigned to all wildfires. The protection objective(s) may include the protection of people, private property, manmade infrastructure, or natural resources. Uncharacteristic or undesirable fire behavior due to unnatural fuel buildup, unusual environmental conditions, or proximity to infrastructure or sensitive natural resources may dictate a need for a protection objective(s) for wildfires.*

Discussion: This Management Approach for all PNVTs appears to leave the protection of people, private property and manmade infrastructure as something discretionary during the suppression of a wildfire. *"The protection objective(s) may include the protection of people, private property, and manmade infrastructure"*. This statement goes on to also indicate that only under certain circumstances will protection objective be needed. *"Uncharacteristic or undesirable fire behavior due to unnatural fuel buildup, unusual environmental conditions, or*

proximity to infrastructure or sensitive natural resources may dictate a need for a protection objective(s) for wildfires."

It is unclear why there are not permanent established objectives that deal with the health, safety and welfare of the public, which mandate suppressing wildfires. It is often said that firefighter safety is priority number one, but the Agency is proposing that there is discretion when dealing with the protection of people, private property and manmade infrastructure.

Remedy: Reprioritize the protection of people, their property and their infrastructure as non-discretionary when suppressing wildfires.

Issue: The Plan's Standard for timber and fire are needlessly different.

Reference: (last paragraph, page 36, Proposed Plan): *On lands suitable for timber production, timber harvest activities shall only be used when there is reasonable assurance of restocking within 5 years after final regeneration harvest. Restocking level is prescribed in a site-specific silviculture prescription for a project treatment unit and is determined to be adequate depending on the objectives and desired conditions for the plan area. In some instances, such as when lands are harvested to create openings for firebreaks and vistas or to prevent encroaching trees, it is appropriate not to restock.*

Discussion: While this Standard pertains to timber management activities, Apache County is concerned the same standard is not in effect for the use of fire to treat lands classified as suitable for timber production. Suitable timber production lands should be managed for timber production and the appropriate level of stocking of trees should be maintained regardless of whether the land is treated through mechanical timber harvest techniques or with fire.

Remedy: Apply the Standard found on the bottom of page 36 to the use of fire as well as timber harvest through mechanical means.

Issue: Landscape Desired Conditions are confusing and conflicting.

Reference: (Landscape Scale Desired Conditions and Mid-Scale Desired Conditions, page 56, Proposed Plan): *Litter provides for and maintains the natural fire regime (fire regime I). In semi-desert grasslands, the natural fire return interval is approximately every 2 to 10 years. In Great Basin grasslands the natural fire return interval is approximately every 10 to 30 years. In montane/subalpine grasslands it ranges from approximately 2 to 400 years, depending on the adjacent forested PNVT.*

Vegetative cover (herbaceous ground cover and litter) is between 45 and 80 percent in Great Basin grasslands, 35 to 70 percent in semi-desert grasslands, and 60 to 100 percent in montane/subalpine grasslands. These percentages may vary depending on the amount of surface rock as described in each ecological mapping unit.

Discussion: Again, the above desired condition statements conflict with each other. In the semi-desert grasslands a vegetative cover of 30 to 70 percent can't be maintained with a fire return interval of 2 to 10 years.

Fire may decrease plant cover in the short-term as the above ground portions of individual plants are killed... The impact of fire on grasslands is much more dependent on when and how often the fire occurs than on individual plant adaptations to fire (McPherson 1995). Fires that occur during the growing season (which varies depending on grassland type and location in the state) are much more damaging and the impacts last longer than fires that occur when plants are dormant.[12]

Remedy: Provide clear and understandable guidelines. Remove conflicting program direction in the Proposed Plan.

Issue: The Plan incorrectly relies on outdated data regarding past conditions.

Reference: (3rd paragraph, page 66, Proposed Plan): *Landscape scale (generally over 10,000 acres) disturbance events are recurring natural ecological processes with characteristic outcomes. However, given current (2011) departure from reference conditions, outcomes can be uncharacteristic where there are drastic changes in soil and vegetation components. These can lead to ecological succession away from desired conditions, which can be complicated by other factors like climate change and invasive species. When uncharacteristic outcomes occur, the landscape can take hundreds of years or more to recover to some level of stability. Where outcomes are uncharacteristic and there are needs to accelerate recovery, additional direction is provided to protect existing resources and facilitate recovery of soil and vegetation components and improve ecosystem health.*

Discussion: The above statement concerning the *"current (2011) departure from reference conditions, outcomes can be uncharacteristic where there are drastic changes in soil and vegetation components"* is a reference to the Wallow Fire and the *"uncharacteristic"* or undesired effect of this fire. The statements *"When uncharacteristic outcomes occur, the landscape can take hundreds of years or more to recover to some level of stability. Where outcomes are uncharacteristic and there are needs to accelerate recovery, additional direction is provided to protect existing resources and facilitate recovery of soil and vegetation components and improve ecosystem health."* highlights the impacts of the Wallow Fire and the years it is going to take to have stable ecosystems return.

There is a concern the Agency, while recognizing the tremendous impacts from an event such as the Wallow Fire, continues to proceed down the same path of downplaying fire prevention and suppression in favor of achieving speculation based conditions that up to this point in time have not shown to exist. Over the last 10 to 15 years *"uncharacteristic fires"* have replaced *"natural fire regimes"* and *"fire adapted vegetative communities"* have been reduced to charred trees and totally denuded eroding soils.

While looking at the past can sometimes aid in understanding what has led to current conditions, attempting to return to the past seldom will provide the desired conditions for the future. There are too many natural and human caused changes effecting today's ecosystems to ever hope to return to the ecosystems that may have once occurred over one hundred years ago.

Remedy: Plan and implement management based on actual current conditions that will achieve the desired conditions.

Issue: The Plan provides conflicting information about ignited fires in wilderness.

[12] http://www.wildfirelessons.net/documents/Living_With_Wildfire_in_AZ_Chapter_5.pdf

Reference: (Guidelines for Wilderness, page 121, Proposed Plan):

Planned ignitions should be considered to create favorable conditions that enable naturally occurring fires to return to their historic role or to achieve wilderness desired conditions.

Fire camps, helispots, and other temporary facilities should be located outside the wilderness boundary to protect wilderness character.

Firelines and spike camps (i.e., a remote camp usually near a fireline) should not be constructed adjacent to trails or camp areas to protect wilderness values.

Discussion: Again, the above Wilderness guideline statements send a conflicting message to the public. The first statement calls for planned ignitions in the Wilderness, while the last two statements set management restriction to preserve Wilderness character and Wilderness values. This sends the message to the public that the Agency is going to ignite fires in the Wilderness then limit suppression activities so it doesn't look like man was involved. This idea that the Agency has to deceive the public so they will support Wilderness Management is what is destroying the credibility of the agency.

If the true intent of wilderness management could ever be realized, fires would ignite and burn without any interference from man. However, this ideal wilderness situation will never be achieved because fires do not naturally stop at wilderness boundaries, but continue to burn the outside non wilderness lands managed under different laws where they destroy resources that are valued by the public.

Remedy: Correct conflicting guidelines. Fires should be ignited and managed within designated wilderness with utmost care so *"natural fires"* do not escape the wilderness and destroy valuable resources that provide benefits to the public.

Issue: The Plan establishes unnecessary Standards and Guidelines for fire management

Reference: (Standard for Recommended Wilderness, page 124 and Guidelines for Recommended Wilderness page 125, Proposed Plan): *Fire management activities shall be conducted in a manner compatible with maintaining wilderness characteristics (minimum impact suppression tactics).*

Planned ignitions should be considered to create favorable conditions that enable naturally occurring fires to return to their historic role or to achieve desired conditions.

Fire camps, helispots, and other temporary facilities should be located outside the recommended wilderness to protect wilderness values.

Discussion: Establishing fire management Standards and Guidelines for recommended wilderness areas will require these areas to be managed as pseudo wilderness areas. Implementing a different fire management prescription due to a desire to implement an idealist condition on the land should also consider the risk to surrounding lands and the potential increase in costs that will be associated with implementing this arbitrary land and fire management. There is no reason for the Agency to assume the risk of a wildfire burning out of the recommended wilderness areas and to take on the potential increase in costs to manage these areas until the areas are designated actual wilderness.

Remedy: Revise Guidelines so that recommended wilderness areas are managed as multiple use lands. Remove the extra burden of implementing arbitrary and potential costly fire management for these lands when nothing requires the change in fire management to take place.

2. Watershed

The *"Proposed Land Management Plan for the Apache-Sitgreaves National Forest"* (Proposed Plan) addresses watershed management in multiple places throughout the draft plan. Since there are numerous references to watershed management, which are often repeated, comments for each reference to watershed management will not be provided. When reading the Proposed Plan it is clear that watershed management is not something given high priority in the plan. It is obvious that "returning natural fire regimes" is the one management objective that takes precedence over all other management activities.

Where watershed management direction is found in the Proposed Plan, it calls for following national direction for watershed management as found in the (*Watershed Condition Classification Technical Guide, USDA Forest Service FS-978, July 2011, and Watershed Condition Frame Work, USDA Forest Service FS-977, May 2011).* While it is understood the various National Forest should follow national direction, the Proposed Plan offers very little information beyond what is found in the above mentioned documents.

While it is understood the Proposed Plan offers broad guidance and not specific on-the-ground project decisions, the Proposed Plan should provide enough National Forest specific information so the public has a valuable understanding of expected resource related management activities and outcomes of implementing a planned level of management. It is felt that the proposed plan, while thoroughly defining the desired conditions in the terms of emotion driven opinions, does not meet the expectation of adequately informing the public of what level of management and the expected outcomes are when addressing watershed management of the Forest in the next 10 to 15 years.

A desire for "*natural conditions, natural regimes, high biotic integrity, resilient watersheds, high degree of connectivity or providing important ecosystem services*" while sounding very noble does not offer any tangible outcomes that can be measured to determine success or failure of implemented watershed management activities; or used to adjust future management of the Forest. What may be *"natural, resilient, connected or important"* to one group of individuals, most likely will not meet the same criteria for other people. There is a dire to provide science-based management and measurable science based outcomes if the Proposed Plan is to be a meaningful and implementable document.

The following comments address specific language found in the A-S Forest Proposed Plan that is of concern to Apache County. The following comments are provided with the intention of being constructive in nature and are being offered to make the updated A-S Forest Plan a more realistic and implementable document.

Issue: The Plan fails to provide scientific parameters for "natural disturbance regime".

Reference: (3rd paragraph, page 15, Proposed Plan): *Ecosystem diversity provides for the distribution, diversity, and complexity of watershed and landscape scale features, including natural disturbance regimes of terrestrial, aquatic, and riparian ecosystems.*

Discussion: How much soil erosion, sediments deposited into the stream, stream banks being eroded and new gullies being formed are considered to be within the "natural disturbance regime". Watersheds that are degraded due to natural ignitions (e.g. lighting strike) are considered to be within the "natural disturbance regime" and acceptable, whereas watershed degraded due to human ignition (e.g. an abandoned campfire) are considered to be not within the "natural disturbance regime" and unacceptable. There is no discussion of the scientific basis of the impacts of different ignition starts on subsequent fire events, although conclusions are derived from the premise (being within the "natural disturbance regime" and outside the "natural disturbance regime"). There is no discussion of the impacts of the effects of different ignition types on priority watersheds or the implementation of watershed management activities.

Remedy: Establish tangible science-based criteria that can be measured using proven monitoring techniques so the public can understand and relate to what is taking place on their National Forest.

Issue: The Plan uses terms which are not defined and for which no measurements are provided.

Reference: (mid page, page 17, Proposed Plan): *Watersheds exhibit high geomorphic, hydrologic, and biotic integrity relative to their natural potential condition.*

Discussion: High geomorphic, hydrologic, biotic integrity and natural potential condition are not defined. Parameters for measurement for these terms are not provided.

The public needs simple, tangible and quantifiable information in order to understand and determine how their Forest is being cared for.

Remedy: Establish tangible science-based criteria that can be measured using proven monitoring techniques so the public can understand and relate to what is taking place on their National Forest.

Issue: The Plan fails to specify which watersheds are at issue and fails to provide proactive mitigation measures.

Reference: (mid page, page 17, Proposed Plan): *During the planning period, improve the condition class on at least 10 priority 6th level HUC watersheds by removing or mitigating degrading factors. Degrading factors include, but are not limited to: high departure from historic vegetation conditions, poor soil condition, nonfunctioning riparian areas, impaired species habitat, occurrence of invasive species, unmanaged grazing, and sedimentation from roads or trails.*

Discussion: This objective for overall ecosystem health, while stating the condition class of 10, 6th code watershed will be improved, gives no indication as to which watersheds are currently severely degraded and determined to be priority. Also the Proposed Plan gives no indication where these watersheds are located. With the recent Wallow Fire (spring of 2011) there must be multiple watersheds that were heavily impacted and contain large severely impacted areas. The

Proposed Plan should at least present the assessments of watershed degradation that was done through the BAER planning.

Also removing or mitigating degrading factors does not necessarily mean watershed conditions and functionality will improve. Once a disturbance (fire, excessive grazing, flooding etc.) has removed vegetation and ground cover, it will be necessary to deal with degraded watershed conditions for years. Even after the removal of the degrading factors, soils will continue to erode and sediments will continue to be transported down the stream channels. This prolonged erosion and sediment transport process is much more evident in the arid Southwest where the most streams are ephemeral and precipitation events are few and sporadic. Things like eroding headcuts and steep channel banks, as well as sheet erosion due to the lack of ground cover once started can take up to a hundred years or more to naturally stabilize. If all the A-S NF is planning to do is to remove or mitigate degrading factors without taking direct action to stop erosion, contain sediments and restore ground cover, it well be years before degraded watersheds improve in condition class.

The requirements of the Multiple *Use - Sustained Yield Act of 1960* (MUSY) (Public Law 86-517) means that coordination of the recovery of degraded watersheds with the production and sale of forest products, which once occurred on most western National Forest that sold timber, is the logical approach to watershed management. Use of timber sale receipts could again provide for a substantial watershed management program where thousands of acres are treated and returned to a stable watershed condition with very little investment coming from taxes paid by American citizens. This coordinated effort would also provide a significant number of jobs that would help support local communities.

Remedy: Coordinate the recovery of degraded watersheds with the production and sale of forest products. Use timber sale receipts to provide for watershed management programs, and employ local workforce when possible.

Issue: The Plan fails to realistically address mitigation of watershed degradation due to catastrophic wildfire.

Reference: (mid page 17 through to mid page 18, Proposed Plan):

In order to achieve overall ecosystem health and provide for species diversity, management focus is on achieving satisfactory watershed conditions and restoring ecological functions, especially natural fire regimes....

Forest managers utilize planned and unplanned ignitions to help reintroduce fire into the ecosystems, restore natural fire regimes, and remove excessive fuels. Fire may be used alone or in combination with other treatments.

Discussion: This management approach statement is little more than a reproduction of national direction and contains very little if any pertinent information concerning the A-S NF. While many buzzwords are included (*ecosystem health, species diversity, satisfactory watershed conditions, restoring ecological functions and natural fire regimes)* no information concerning watershed conditions and the need to implement future watershed management action on the A-S NF are presented. Again, with the recent Wallow Fire (spring of 2011) there must be multiple watersheds that were heavily impacted and contain large severely impacted areas. The Proposed

plan needs to acknowledge the degraded conditions from this record setting wildfire and set the stage (program direction) for dealing with these degraded watershed conditions. It will take longer than the life of this plan (10-15 years) to deal with the adverse impacts to watershed conditions from the Wallow Fire.

As stated above, removing or mitigating degrading factors does not necessarily mean watershed conditions and functionality will improve. Once a disturbance (fire, excessive grazing, flooding etc.) has removed vegetation and ground cover, it will be necessary to deal with degraded watershed conditions for years. Even after the removal of the degrading factor(s) (Wallow Fire), soils will continue to erode, sediments will continue to be transported down the stream channels, stream banks will be eroded, riparian areas will be scoured or swamped with sediments and water quality will continue to be degraded.

The Proposed Plan appears to be more concerned with returning natural fire regimes across the Forest than dealing with the adverse effects of the largest recorded wildfire in Arizona's history. If all the A-S NF is planning to do is to develop Watershed Restoration Action Plans (WRAP) for the priority watersheds and remove or mitigate degrading factors, it well be many years before the Wallow Fire created degraded watersheds will improve in condition class.

Remedy: Coordinate recovery of degraded watersheds due to the Wallow Fire with the production and sale of forest products. Use timber sale receipts to provide for a watershed management program to treat watersheds heavily impacted by the Wallow Fire. Use local workforce to coordinated support local communities.

Issue: The Plan fails to accurately address the effects of the Wallow Fire on soils conditions.

Reference: (2nd paragraph, page 20, Proposed Plan):

Apache-Sitgreaves NFs have areas with unsatisfactory soil condition. The current (2008) soil condition rating is satisfactory on 70 percent of the Apache-Sitgreaves NFs, compared to reference condition of at least 95 percent.

Discussion: The statement indicates that the current soils ratings were collected in 2008. This was prior to the 2011 Wallow Fire, which impacted and degraded soil conditions on hundreds of thousands of acres.

Remedy: Evaluate the effects of the Wallow Fire on soils conditions and provide a new and accurate accounting of soil ratings for the Forest. Use the new information to re-analyze the future watershed management requirements for the Forest and to determine the environmental consequences of each of the action alternatives. Once this information is available the Forest should re-release a new watershed management direction in the Proposed Plan.

Issue: The Plan fails to properly assess current soils conditions.

Reference: (mid page, page 20, & first paragraph, page 21, Proposed Plan):

Soils are stable within their natural capability4. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development.

Soils provide for diverse native plant species5. Vegetative ground cover is well distributed across the soil surface to promote nutrient cycling and water infiltration.

Vegetation and litter is sufficient5 to maintain and improve water infiltration, nutrient cycling, and soil stability.

Discussion: The above three statements of desired soil condition are in conflict with periodic burning as called for throughout the Proposed Plan. (Natural Fire Regime) Periodic fires burning across the landscape as proposed will limit the growth of not only undesired, but also desired vegetation, and will make the accumulation of litter and organic material very difficult the achieve.

Fires have significant effects on infiltration, evapotranspiration, soil moisture storage, and overland flow of water. Fire can substantially reduce interception by destroying both the vegetation canopy and the organic litter on the soil surface, thereby exposing the soil to raindrop impact and subsequent runoff and erosion. Fire can reduce infiltration into the soil by forming a water-repellent soil layer or plugging soil pores with fine ashy material. Percolation through the soil can also be reduced this way. Reduced infiltration and percolation in turn can increase surface runoff and sedimentation. Increases instream flow also may occur following fire because the removal of vegetation reduces transpiration losses by plants.[13]

The management concept of returning to "natural fire regimes" has been developed based upon the need to treat forest fuels in order to reduce the severity of large wildfires. Somehow this concept has evolved to indicate that "natural fire regimes" fix almost all of the resource problems encountered in a forest. There needs to be more research done before the idea that periodic burning provides the level of vegetation, litter and nutrient cycling necessary to sustain satisfactory soil conditions.

Parker pointed out several implications that revegetation processes have for prescribed fire management. Fire intensity, frequency, season, and diversity of fire-free intervals all affect the rate of establishment and composition of the postfire community. He also noted the importance of fully accomplishing the objectives of a prescribed burn: partial burning may invite a subsequent fire far more destructive than the prescribed burn, or may fail to stimulate germination of desired species.[14]

There is no doubt tree ring research shows periodic fires once occurred across the West prior to the settlement of the western forested lands. What is not clear is whether the Western Forests, during this era of periodic burning, were as healthy and functioning as what is being presented in the current thinking concerning forest management. It is highly probable that ecosystem health, watershed conditions and functionality, water quality and soil conditions were constantly changing and not always providing high quality water, vast expanses of diverse wildlife habitat and all other values that are important to forest managers today.

(Mori, Akira S., Ecosystem management based on natural disturbance: hierarchical context and non-equilibrium paradigm, Journal of Applied Ecology 2011, 48, 280-292)

[13] http://www.swhydro.arizona.edu/archive/V8_N2/feature5.pdf

[14] http://www.fs.fed.us/psw/publications/documents/psw_gtr109/psw_gtr109_92.pdf

Remedy: Utilize actual current conditions on the Forest as a basis for implementing programs to achieve desired future conditions.

Issue: The Proposed Plan does not address Wallow fire effects (beneficial or adverse) on watershed.

Reference: (Chapter 3 Management Area Direction)

Discussion: When reading the guidelines for each of the Management Areas presented in the Proposed Plan it is obvious that watershed management direction or guidelines were not included. While the selection of 10 priority watersheds and development of a WRAP for each of these watersheds is planned, it is evident this future effort will not address the current and potential future degraded watershed conditions that have (and will continue to) occur due to the Wallow Fire. There is a growing concern that much of the flooding, erosion and deposition of sediments that are, and will be, a result of the Wallow Fire will not be monitored and dealt with in a timely manner.

Apache County states that the current and future adverse impacts resulting from the Wallow Fire are and will continue to be of a significant magnitude to warrant emphasis in the Updated Forest Plan. Future management of the A-S NF (LMP direction/guidelines) should focus on dealing with these resource problems. Again the public should be informed of the current and potential future situations and made aware of what the A-S NF is planning to do to deal with the Wallow Fire adverse impacts that can severely affect their safety, health and welfare.

Remedy: Amend watershed management guidelines to address current and potential future conditions that may result from Wallow Fire.

3. Wilderness

The *"Proposed Land Management Plan for the Apache-Sitgreaves National Forest"* (Proposed Plan) addresses wilderness management in multiple places throughout the draft plan. Since there are numerous references to wilderness management, which are often repeated, comments for each reference to wilderness management will not be provided. When reading the Proposed Plan it is clear that wilderness management and other restrictive land use management targeting human activities are given high priority in the plan.

It is obvious that while it is difficult to add Congressional designated areas to the current National Wilderness Preservation System, the A-S NF is attempting to include as many acres as possible into one of the many special management designations (Wildlife Quite Areas, Natural Landscapes, Research Natural Areas, Recommended Research Natural Areas, Primitive Areas, and Recommended Wilderness) contained in the Proposed Plan to "in effect" create pseudo wilderness. Restricting human activities and protecting the land and forest resources from the public appears to be the one management objective that takes precedence over all other management objectives in this proposed plan. Throughout the Proposed Plan there is an underlying objective to keep as many people as possible from entering and being present on the Forest. This is especially evident for the lands the Forest has identified as not impacted by past human activities.

While there is some mention of the recent Wallow Fire in the Wilderness Specialist Report, the impacts of this very destructive wildfire and its long lasting changes to the ecosystems and "wilderness' characteristics of thousands of acres on the Forest are not mention in the Proposed Plan. The Proposed Plan, while providing a detailed description of the desired conditions for each of the various wilderness and related land use designations, fails to mention anything concerning the current condition. When reading the Proposed Plan, the public has no baseline (current conditions) to compare the desired conditions to. The desired conditions all appear to be the panacea of no human presence on the land. This disdain for human activities on National Forest lands has over run the reality of on-the-ground resource management and manifests itself in wilderness Management.

Issue: The Plan fails to use actual data for wildlife populations.

Reference: (last paragraph, page 112, Proposed Plan):

Wildlife quiet areas (WQAs) were first identified in the 1980s by the Apache-Sitgreaves NFs in cooperation with the AZGFD to provide relatively undisturbed habitat where big game and other wildlife could reside without disturbance from motorized vehicle use. Other reasons they were set aside include the need to address road-related erosion, provide for more effective use of the habitat, and provide the non-motorized hunter a high quality hunt experience without motorized impacts. These areas are recognized as key wildlife habitats. WQAs may also provide relatively undisturbed habitat and wildlife populations for research purposes.

Discussion: The concern with this statement is it gives the impression that the A-S NF is trying to implement "Travel Management" regulations by disguising their actions as a means to protect wildlife from disturbance caused by motorized vehicle use. The additional need for wildlife quite areas to address road-related erosion is an indication that the purpose of this questionable land use designation is to implement vehicle use restrictions. As is common with most controversial use restrictions, the emotional response connected with saving poor wildlife is used as a ploy to win over the public for an action that is based more on emotion and policy than actual science. This is an attempt to toy with the public's emotions to achieve emotionally driven resource management objectives.

Remedy: Base Standards on actual on-the-ground situations. Provide actual data concerning wildlife populations on the Forest and wildlife interaction with motorized vehicles.

Issue: The Plan misleads the public through the use of non-Wilderness landscape designations to achieve *de facto* Wilderness designations..

Reference: (4th paragraph, page 114, Proposed Plan):

These are generally undeveloped areas that are natural appearing and provide primitive and semiprimitive recreation experiences. Management activities are allowed but are primarily focused on ecosystem restoration. This management area includes most of the inventoried roadless areas (IRAs) that were identified in the 2001 Roadless Area Conservation Rule. IRAs are managed to protect and conserve their roadless character.

Discussion: The concern with this statement is it gives the impression the A-S NF is trying to implement pseudo wilderness status to large blocks of land on the Forest through the "Natural

Landscape" land use designation. Since the land involved *"includes most of the inventoried roadless areas (IRAs) that were identified in the 2001 Roadless Area Conservation Rule"*, it is obvious the agency is attempting to manage these lands as wilderness by calling them "Natural Landscapes". Even though the effort to make these roadless areas wilderness failed some years ago, the A-S NF and a few pro-wilderness supporters are willing to side step the law *("...no Federal lands shall be designated as wilderness except as provided for in this Act or by a subsequence Act")* [Wilderness Act, Sec.2, last sentence] and implement wilderness management for these lands in the updated A-S NF Land Management Plan.

Apache County sees this as an additional attempt to add wilderness areas to the National Wilderness Preservation System or implement wilderness management disguised under some other name on large blocks of the Forest. The Forest does not need to be protected from the public. The National Forests were created for the benefit of the people, not to become an ecosystem and wildlife preserve where humans are not welcome.

Remedy: Remove wording and change guidelines that lead to *de facto* wilderness management disguised as other designations.

Issue: The Plan misleads the public through the use of non-Wilderness RNA designations to achieve *de facto* Wilderness designations.

Reference (last two paragraph, page 117, Proposed Plan):

The recommended Corduroy RNA is approximately 3,350 acres. It provides a representation of high elevation vegetation types including aspen. This area may help researchers and foresters learn more about the multiple causes of sudden aspen decline (SAD), which is widespread across the Apache-Sitgreaves NFs and other Arizona national forests. SAD results in the death of aspen root systems, thus causing total loss of aspen clones from affected sites.

The recommended Corduroy RNA is approximately 3,350 acres. This area provides a representation of montane willow riparian PNVT, fens, and wetlands unique to the Apache-Sitgreaves NFs; it also provides habitat for several rare aquatic species: California floater, Three Forks springsnail, loach minnow, and Chiricahua leopard frog. This area provides research opportunities and serves as a reference for studying effects of fire, climate change, and other management activities. It may also serve as a research area for control of invasive species while maintaining native species.

Discussion: Apache County is concerned that these two proposed Research Natural Areas (RNA's) seem to be very large and represent a broad range of ecosystems. Again due to their rather large size it appears the A-S NF is not only proposing to create areas that will be protected and preserved for research and educational purposes, but is also establishing more acres of pseudo wilderness in order to protect these areas from the public. RNA's are not intended to serve as pseudo wilderness areas and should only encompass the lands necessary to serve as "baseline reference areas."

RNAs that are representative of common ecosystems in natural condition ***serve as baseline or reference areas****. To help answer resource management questions, the baseline areas of RNAs can be compared with similar ecosystems undergoing silvicultural or other land management*

prescriptions. In this way, RNAs make an important contribution to ecosystem management. http://www.fs.fed.us/rmrs/research-natural-areas/

The other concern dealing with these proposed RNA's is the lack of information provided concerning the current condition of these and the other areas being proposed as RNA's. How much of the area being proposed as RNA's in the Proposed Plan was burnt in the Wallow Fire? Were any of the lands being proposed as RNA's severely impacted by high intensity fire or the erosion and flooding that was a result of the Wallow Fire? These and other questions should be answered in a current condition description in the Proposed Plan.

While Apache County is not opposed to setting aside areas as RNA's, it is not willing to accept the A-S NF using this authority to create pseudo wilderness.

Remedy: Remove wording and change guidelines that lead to *de facto* wilderness management disguised as other designations.

Issue: The Plan misleads the public through the use of non-Wilderness primitive designations to achieve *de facto* Wilderness designations.

Reference (3rd and 5th paragraphs, page 123, Proposed Plan):

All wilderness standards and guidelines apply to the entire Blue Range Primitive Area and presidential recommended additions until congressional action has been taken.

The Apache-Sitgreaves NFs continue to manage the Blue Range Primitive Area and the presidential recommended additions as a primitive area until Congress acts on the 1971 wilderness recommendation. Should Congress not designate any portion of this management area as wilderness and release lands from primitive area status, the released lands would be managed as a part of the Natural Landscape Management Area.

Discussion: How long is the A-S NF going to wait for Congress to act on the Blue Range Primitive Area wilderness proposal? Forty-two years of no action by the Congress should be an indication that perhaps Congress does not believe the Blue Range Primitive Area is worthy of wilderness designation, or that this area becoming wilderness is not the best use of the land.

Again the A-S NF has managed this area as pseudo wilderness in violation of the Wilderness Act for many years. *("...no Federal lands shall be designated as "wilderness areas" except as provided for in this Act or by a subsequent Act.")* [Wilderness Act, Sec. 2, (a)] While the A-S NF has not called the Blue Range Primitive Area a wilderness area, managing it as such for 42 years could easily construe the area as a designated wilderness area.

Remedy: Remove wording and change guidelines that lead to *de facto* wilderness management disguised as other designations. Withdraw its recommendation to designate the Blue Range Primitive Area as wilderness and move forward managing the lands for the various resources values they contain.

CONCLUSIONS

With the lack of DEIS consistency information and compliance, and absent County coordination, cooperating agency and joint planning, the Agency cannot produce an accurate FEIS. Furthermore, the Deciding officer cannot find appropriate balance between the effects of the proposed action and/or activities vs. the benefits to society and the health, safety and welfare of the County and its environs. The County finds that the DEIS is incomplete, missing information, and is out of compliance with CEQ, and other related laws and regulations. In conclusion, the A-S NEPA process and DEIS for public full disclosure is fundamentally flawed, and thus the DEIS should be redone.

The Agency must correct the errors identified in these comments by issuing a Supplemental DEIS (SDEIS). A SDEIS must correct the many flaws that have been identified in the DEIS and provide the analyses that have identified as being missing from the DEIS. The SDEIS must accurately bring forward the key issues identified in Scoping and formulate sufficiently differentiated alternatives that are responsive to the Scoping issues that were identified. The DEIS must address the social factors that were omitted. It must clearly display an accurate "No Action" alternative which included all of the actual roads and trails located on the Forest and must include a full analysis of the impacts of the cross country travel closure, particularly in regards to the cumulative effects on the human environment; for example a reduced quality of experience.

The SDEIS cannot evade the necessity of qualitative discussions of effects and social factors by narrowing the range of the alternatives and reducing the scope of the analysis. There should not be an effort to pre-select the outcome of the analysis by altering or limiting the data that will be used in the formation of alternative and conducting the analysis. The analysis must address the effects of the different alternatives clearly and not depend on broad assertions of opinion.

4. Attachment 1: Federal, State and Local Coordination Requirements

National Forest Management Act (16 USC §1604)

Forest and Rangeland Renewable Resources Planning Act § 6 (16 USC 1604(a))

Multiple Use Sustained Yield Act of 1960, §3 (16 USC §530)

U.S Forest Service 219 Planning Rule: Coordination with Other Public Planning Efforts (36 CFR §219.7);

US Forest Service Manual (FSM) 1921.63(a);

US Forest Service Manual (FSM 1950.2)

US Forest Service Manual (FMS 1970) economic and social evaluation.

Integrated Resource Management Process—the Road to Ecosystem Management (USFS Region 3, 4th edition, appendix A)

National Environmental Policy Act §101(a), 102(c), (42 USC §4331(b)(5) & §4332(2))

Joint Planning (40 CFR §1506.2 (b)); Cooperating Agencies (40 CFR§1501.6)

President's Council on Environmental Quality Directive to Federal Agencies regarding Cooperating Agency, Feb. 2002

40 CFR §1501.7; 40 CFR §1503.1

Regulatory Flexibility Act (5 USC §601-612)

Proper Consideration of Small Entities in Agency Rulemaking - Presidential Executive Order 13272

Intergovernmental Cooperation Act (§401 and 3 USC §301)

Intergovernmental Review of Federal Programs - Presidential Executive Order 12372

Facilitation of Cooperative Conservation - Presidential Executive Order 13352

Environmental Justice - Presidential Executive Order 12898 §302(d)

Outdoor Recreation Act (16 USC §4601)

National Trails System Act (16 U.S.C. 1241

Presidential Executive Order 13195: Trails for America in the 21St. Century

Arizona Coordination Act

Apache County Board of Supervisors Resolution in Feb. 2010 notified Apache-Sitgreaves National Forest: The need to coordinate the Agency Forest Plan process

Catron County Ordinance 002-93: Catron County Environmental Planning & Review Process; and, Catron County Resolution 002-2010: County Board of Supervisors Asserting Legal Standing and Formally Invoking Coordination with All Federal and State Agencies Maintaining Jurisdiction Over Lands And/Or Resources Located Within The County of Catron, New Mexico

Ltr#0108

5. Attachment 2: Apache County Board of Supervisors CEQ Factors for Cooperating Agency

The President's Council on Environmental Quality (CEQ) spells out the requirements for cooperating agency status in the NEPA process in its 12 factors for determining CA acceptance or rejection. It is Apache County 's opinion is that it meets several of the factors.

If the US Forest Service needs more detailed information all they have to do is ask for more detail and clarification. The points below summarize but do not include all factors.

Jurisdiction by law (40 C.F.R. § 1508.15):

- *Does the agency have the authority to veto a proposal or a portion of a proposal? What about County roads including RS2477 roads that may be inadvertently closed?* Would it not be helpful to have counties as Cooperating Agencies to avoid such problems?
- *Does the agency have the authority to finance a proposal or a portion of a proposal?* Again, CA counties do provide cost-share for forest systems roads and other related financing.

Special expertise (40 C.F.R. § 1508.26]:

- *Does the cooperating agency have the expertise needed to help the lead agency meet a statutory responsibility?* Given the intermix of County and USFS roads; the county had the expertise to assist the Forest Service, and meet this factor.
- *Does the cooperating agency have the expertise developed to carry out an agency mission?* The Apache County has provided such expertise for years. Agency/USFS should seek Apache County expertise regarding the existing roads.
- *Does the cooperating agency have the related program expertise or experience?* Given the County roads on the Agency as well as the USFS roads contracted by the County, it would meet this factor. In addition, the County has expertise through it's Cooperative Extension branch as well as specialized expertise to assist in socioeconomics, Wildland Urban interface, watershed management to name a few. With open and honest dialogue, the County can bring a variety of resources to assist the Forest Service especially given the time crunch and the shortage of manpower to complete the EIS.
- *Does the cooperating agency have the expertise regarding the proposed actions' relationship to the objectives of regional, State and local land use plans, policies and controls (1502.16(c))?* Given the above as well as further discussion, it would be a factor for Apache County.

Ltr# 004

Janice K. Brewer
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.azdeq.gov

Henry R. Darwin
Director

February 20, 2013

Ms. Michelle Davalos, Forest Planner
Plan Revision Team
Apache-Sitgreaves National Forests
PO Box 640
30 S. Chiricahua Drive
Springerville, AZ 85938

RE: Apache Sitgreaves National Forests: Scoping Letter for Proposed Land Management Plan, Programmatic Draft Environmental Impact Statement (DEIS)

Dear Ms. Davalos:

The ADEQ Air Quality Division has reviewed your letter dated February 4, 2013, requesting a Scoping Letter for the Proposed Land Management Plan, Programmatic Draft Environmental Impact Statement (DEIS). The parts of your project that are located within the T03S-R28E, T03S-R29E, T03S-R30E and T04S-R30E sections are part of a sulfur dioxide (SO_2) maintenance plan area. As described, it may have a de minimis impact on air quality. Disturbance of particulate matter from off highway vehicles and vehicles traveling over unpaved roads as well as smoke from fires is anticipated. Considering prevailing winds, to comply with other applicable air pollution control requirements and minimize adverse impacts on public health and welfare, the following information is provided for consideration:

PRESCRIBED FIRE ACTIVITIES

Fire creates smoke that includes a complex mix of air pollutants. Prescribed fire planning should minimize the effects of smoke on public health, public nuisance, and visibility in Federal Class I Areas. Prescribed fire activities must also comply with the requirements of Title 18, Chapter 2, Article 15 of the Arizona Administrative Code entitled "Forest and Range Management Burns." For further information regarding requirements for prescribed burns, please contact the Environmental Program Specialist at (602) 771-2363.

Northern Regional Office
1801 W. Route 66 • Suite 117 • Flagstaff, AZ 86001
(928) 779-0313

Southern Regional Office
400 West Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

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Ltr# 004
Ms. Michelle Davalos
Plan Revision Team
February 20, 2013
Page 2

The following rules applicable to reducing dust from open areas, dry washes or riverbeds, roadways and streets are enclosed:

- Arizona Administrative Code R18-2-604 and R18-2-605
- Arizona Administrative Code R18-2-804

Should you have further questions, please do not hesitate to call me at (602) 771-2375, or Lhamo LeMoine at (602) 771-2373.

Very truly yours,

Diane L. Arnst

Diane L. Arnst, Manager
Air Quality Legal Support Section

Enclosures (2)

cc: Sherri Zendri, Administrative Counsel
Lhamo LeMoine, Administrative Secretary
File No. 303445

R18-2-605. Roadways and Streets
A. No person shall cause, suffer, allow or permit the use, repair, construction or reconstruction of a roadway or alley without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Dust and other particulates shall be kept to a minimum by employing temporary paving, dust suppressants, wetting down, detouring or by other reasonable means.
B. No person shall cause, suffer, allow or permit transportation of materials likely to give rise to airborne dust without taking reasonable precautions, such as wetting, applying dust suppressants, or covering the load, to prevent particulate matter from becoming airborne. Earth or other material that is deposited by trucking or earth moving equipment shall be removed from paved streets by the person responsible for such deposits.

Historical Note
Adopted effective July 14, 1979 (Supp. 79-4). Former Section R9-3-605 renumbered without change as Section R18-2-605 (Supp. 87-3). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-605 renumbered to R18-2-805, new Section R18-2-605 renumbered from R18-2-405 effective November 15, 1993 (Supp. 93-4).

R18-2-606. Material Handling
No person shall cause, suffer, allow or permit crushing, screening, handling, transporting or conveying of materials or other operations likely to result in significant amounts of airborne dust without taking reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods to prevent excessive amounts of particulate matter from becoming airborne.

Historical Note
Section R18-2-606 renumbered from R18-2-406 effective November 15, 1993 (Supp. 93-4).

R18-2-607. Storage Piles
A. No person shall cause, suffer, allow, or permit organic or inorganic dust producing material to be stacked, piled, or otherwise stored without taking reasonable precautions such as chemical stabilization, wetting, or covering to prevent excessive amounts of particulate matter from becoming airborne.
B. Stacking and reclaiming machinery utilized at storage piles shall be operated at all times with a minimum fall of material and in such manner, or with the use of spray bars and wetting agents, as to prevent excessive amounts of particulate matter from becoming airborne.

Historical Note
Section R18-2-607 renumbered from R18-2-407 effective November 15, 1993 (Supp. 93-4).

R18-2-608. Mineral Tailings
No person shall cause, suffer, allow, or permit construction of mineral tailing piles without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Reasonable precautions shall mean wetting, chemical stabilization, revegetation or such other measures as are approved by the Director.

Historical Note
Section R18-2-608 renumbered from R18-2-408, new Section R18-2-408 adopted effective November 15, 1993 (Supp. 93-4).

R18-2-609. Agricultural Practices
A person shall not cause, suffer, allow, or permit the performance of agricultural practices outside the Phoenix and Yuma planning areas, as defined in 40 CFR 81.303, which is incorporated by reference in R18-2-210, including tilling of land and application of fertilizers without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne.

Historical Note
Section R18-2-609 renumbered from R18-2-409 effective November 15, 1993 (Supp. 93-4). Amended by final rulemaking at 6 A.A.R. 2009, effective May 12, 2000 (Supp. 00-2). Amended by final rulemaking at 11 A.A.R. 2210, effective July 18, 2005 (Supp. 05-2).

R18-2-610. Definitions for R18-2-611
The definitions in Article 1 of this Chapter and the following definitions apply to R18-2-611:
1. "Access restriction" means restricting or eliminating public access to noncropland with signs or physical obstruction.
2. "Aggregate cover" means gravel, concrete, recycled road base, caliche, or other similar material applied to noncropland.
3. "Artificial wind barrier" means a physical barrier to the wind.
4. "Best management practice" means a technique verified by scientific research, that on a case-by-case basis is practical, economically feasible, and effective in reducing PM_{10} emissions from a regulated agricultural activity.
5. "Chemical irrigation" means applying a fertilizer, pesticide, or other agricultural chemical to cropland through an irrigation system.
6. "Combining tactic operations" means performing two or more tillage, cultivation, planting, or harvesting operations with a single tractor or harvester pass.
7. "Commercial farm" means 10 or more contiguous acres of land used for agricultural purposes within the boundary of the Maricopa PM_{10} nonattainment area.
8. "Commercial farmer" means an individual, entity, or joint operation in general control of a commercial farm.
9. "Committee" means the Governor's Agricultural Best Management Practices Committee.
10. "Cover crop" means plants or a green manure crop grown for seasonal soil protection or soil improvement.
11. "Critical area planting" means using trees, shrubs, vines, grasses, or other vegetative cover on nonagricultural land.
12. "Cropland" means land on a commercial farm that:
a. Is within the time-frame of final harvest to plant emergence;
b. Has been tilled in a prior year and is suitable for crop production, but is currently fallow; or
c. Is a farm road.

ARTICLE 8. EMISSIONS FROM MOBILE SOURCES (NEW AND EXISTING)

R18-2-801. Classification of Mobile Sources

A. This Article is applicable to mobile sources which either move while emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or agricultural equipment used in normal farm operations.

B. Unless otherwise specified, no mobile source shall emit smoke or dust the opacity of which exceeds 40%.

Historical Note

Adopted effective February 26, 1988 (Supp. 88-1). Amended effective September 26, 1990 (Supp. 90-3). Amended effective February 3, 1993 (Supp. 93-1). Former Section R18-2-801 renumbered to Section R18-2-801, new Section R18-2-801 renumbered from R18-2-601 effective November 15, 1993 (Supp. 93-4).

R18-2-802. Off-road Machinery

A. No person shall cause, allow or permit to be emitted into the atmosphere from any off-road machinery, smoke for any period greater than 10 consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be exempt from this requirement for the first 10 minutes.

B. Off-road machinery shall include trucks, graders, scrapers, rollers, locomotives and other construction and mining machinery not normally driven on a completed public roadway.

Historical Note

Adopted effective February 26, 1988 (Supp. 88-1). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-802 renumbered to Section R18-2-802, new Section R18-2-802 renumbered from R18-2-602 effective November 15, 1993 (Supp. 93-4).

R18-2-803. Heater-planer Units

No person shall cause, allow or permit to be emitted into the atmosphere from any heater-planer operated for the purpose of reconstructing asphalt pavements smoke the opacity of which exceeds 20%. However three minutes' spot time in any one hour shall not constitute a violation of this Section.

Historical Note

Adopted effective February 26, 1988 (Supp. 88-1). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-803 renumbered to Section R18-2-805, new Section R18-2-803 renumbered from R18-2-605 effective November 15, 1993 (Supp. 93-4).

R18-2-804. Roadway and Site Cleaning Machinery

A. No person shall cause, allow or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than 10 consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be exempt from this requirement for the first 10 minutes.

B. In addition to complying with subsection (A), no person shall cause, allow or permit the cleaning of any site, roadway, or alley without taking reasonable precautions to prevent particulate matter from becoming airborne. Reasonable precautions may include applying dust suppressants. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means.

Historical Note

Adopted effective February 26, 1988 (Supp. 88-1). Amended effective September 26, 1990 (Supp. 90-3). Amended effective February 3, 1993 (Supp. 93-1). Former Section R18-2-804 renumbered to Section R18-2-804, new Section R18-2-804 renumbered from R18-2-604 effective November 15, 1993 (Supp. 93-4).

R18-2-805. Asphalt or Tar Kettles

A. No person shall cause, allow or permit to be emitted into the atmosphere from any asphalt or tar kettle smoke for any period greater than 10 consecutive seconds, the opacity of which exceeds 40%.

B. In addition to complying with subsection (A), no person shall cause, allow or permit the operation of an asphalt or tar kettle without minimizing air contaminant emissions by utilizing all of the following control measures:

1. The control of temperature recommended by the asphalt or tar manufacturer;
2. The operation of the kettle with lid closed except when charging;
3. The pumping of asphalt from the kettle or the drawing of asphalt through cocks with no dipping;
4. The dipping of tar in an approved manner;
5. The maintaining of the kettle in clean, properly adjusted, and good operating condition;
6. The firing of the kettle with liquid petroleum gas or other fuels acceptable to the Director.

Historical Note

Adopted effective February 26, 1988 (Supp. 88-1). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-805 renumbered to Section R18-2-805, new Section R18-2-805 renumbered from R18-2-605 effective November 15, 1993 (Supp. 93-4).

c. If the burning would occur at a solid waste facility in violation of 40 CFR 258.24 and the Director has not issued a variance under A.R.S. § 49-763.01.

E. Open outdoor fires of dangerous material. A fire set for the disposal of a dangerous material is allowed by the provisions of this Section, when the material is too dangerous to store and transport, and the Director has issued a permit for the fire. A permit issued under this subsection shall contain all provisions in subsection (D)(3) except for subsections (D)(3)(c) and (D)(3)(f). The Director shall permit fires for the disposal of dangerous materials only when no safe alternative method of disposal exists, and burning the materials does not result in the emission of hazardous or toxic substances either directly or as a product of combustion in amounts that will endanger health or safety.

F. Open outdoor fires of household waste. An open outdoor fire for the disposal of household waste is allowed by provisions of this Section when permitted in writing by the Director or a delegated authority. A permit issued under this subsection shall contain all provisions in subsection (D)(3) except for subsections (D)(3)(c) and (D)(3)(f). The permittee shall conduct open outdoor fires of household waste in an approved waste burner and shall either:

1. Burn household waste generated on-site on farms or ranches of 40 acres or more where no household waste collection or disposal service is available; or
2. Burn household waste generated on-site where no household waste collection and disposal service is available and where the nearest other dwelling unit is at least 500 feet away.

G. Permits issued by a delegated authority. The Director may delegate authority for the issuance of open burning permits to a county, city, town, air pollution control district, or fire district. A delegated authority may not issue a permit for its own open burning activity. The Director shall not delegate authority to issue permits to burn dangerous material under subsection (E). A county, city, town, air pollution control district, or fire district with delegated authority from the Director may assign that authority to one or more private fire protection service providers that perform fire protection services within the county, city, town, air pollution control district, or fire district. A private fire protection provider shall not directly or indirectly condition the issuance of open burning permits on the applicant being a customer. Permits issued under this subsection shall comply with the requirements in subsection (D)(3) and be in a format prescribed by the Director. Each delegated authority shall:

1. Maintain a copy of each permit issued for the previous five years available for inspection by the Director;
2. For each permit currently issued, have a means of contacting the person authorized by the permit to set an open fire if an order to extinguish open burning is issued; and
3. Annually submit to the Director by May 15 a record of daily burn activity, excluding household waste burn permits, on a form provided by the Director for the previous calendar year containing the information required in subsections (D)(5)(c) and (D)(3)(g).

H. The Director shall hold an annual public meeting for interested parties to review operation of the open outdoor fire program and discuss emission reduction techniques.

I. Nothing in this Section is intended to permit any practice that is a violation of any statute, ordinance, rule, or regulation.

Historical Note

Adopted effective May 14, 1979 (Supp. 79-1). Amended effective October 2, 1979 (Supp. 79-5). Correction, subsection (C) repealed effective October 2, 1979, not shown (Supp. 80-1). Former Section R9-3-602 renumbered without change as Section R18-2-602 (Supp. 87-3). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-602 renumbered to R18-2-802, new Section R18-2-602 renumbered from R18-2-401 effective November 15, 1993 (Supp. 93-4). Amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1).

R18-2-603. Repealed

Historical Note

Adopted effective May 14, 1979 (Supp. 79-1). Former Section R9-3-603 renumbered without change as Section R18-2-603 (Supp. 87-3). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-603 renumbered to R18-2-803, new Section R18-2-603 renumbered from R18-2-405 effective November 15, 1993 (Supp. 93-4). Repealed effective October 8, 1996 (Supp. 96-4).

R18-2-604. Open Areas, Dry Washes, or Riverbeds

A. No person shall cause, suffer, allow, or permit a building or its appurtenances, or a building or subdivision site, or a driveway, or a parking area, or a vacant lot or sales lot, or an urban or suburban open area to be constructed, used, altered, repaired, demolished, cleared, or leveled, or the earth to be moved or excavated, without taking reasonable precautions to limit excessive amounts of particulate matter from becoming airborne. Dust and other types of air contaminants shall be kept to a minimum by good modern practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping, continuous watering, detouring, fencing access, or other acceptable means.

B. No person shall cause, suffer, allow, or permit a vacant lot, or an urban or suburban open area, to be driven over or used by motor vehicles, trucks, cars, cycles, bikes, or buggies, or by animals such as horses, without taking reasonable precautions to limit excessive amounts of particulates from becoming airborne. Dust shall be kept to a minimum by using an approved dust suppressant, or adhesive soil stabilizer, or by paving, or by barring access to the property, or by other acceptable means.

C. No person shall operate a motor vehicle for recreational purposes in a dry wash, riverbed or open area in such a way as to cause or contribute to visible dust emissions which then cross property lines into a residential, recreational, institutional, educational, retail sales, hotel or business premises. For purposes of this subsection "motor vehicles" shall include, but not be limited to trucks, cars, cycles, bikes, buggies and 3-wheelers. Any person who violates the provisions of this subsection shall be subject to prosecution under A.R.S. § 49-463.

Historical Note

Adopted effective May 14, 1979 (Supp. 79-1). Former Section R9-3-604 renumbered without change as Section R18-2-604 (Supp. 87-3). Amended effective September 26, 1990 (Supp. 90-3). Former Section R18-2-604 renumbered to R18-2-804, new Section R18-2-604 renumbered from R18-2-404 and amended effective November 15, 1993 (Supp. 93-4).

Ltr#101

From:	Dave Dorum
To:	FS-ASNF Planning
Cc:	Chris Bagnoli; Joyce M. Francis; Laura Canaca
Subject:	Apache-Sitgreaves National Forests Proposed Land Management Plan and DEIS
Date:	Wednesday, May 15, 2013 7:56:34 PM
Attachments:	ProposedLandManagementPlanDEIS_AGFDCommentLetter20130515.pdf

David Dorum
Arizona Game and Fish Department
Habitat Program Manager, Region 1
2878 E. White Mountain Blvd.
Pinetop, Arizona 85935
Off. (928) 367-4281
Cell (928) 245-2781
FAX (928) 367-1258
E-Mail: ddorum@azgfd.gov

Advocating for the needs of wildlife on behalf of the citizens of Arizona.

A society grows great when old men plant trees whose shade they know they shall never sit in. Greek proverb.

Ltr#101

THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT
5000 W. CAREFREE HIGHWAY
PHOENIX, AZ 85086-5000
(602) 942-3000 • WWW.AZGFD.GOV
REGION I, 2878 E. WHITE MOUNTAIN BLVD., PINETOP, AZ 85935

GOVERNOR
JANICE K. BREWER
COMMISSIONERS
CHAIRMAN, J.W. HARRIS, TUCSON
ROBERT E. MANSELL, WINSLOW
KURT R. DAVIS, PHOENIX
EDWARD "PAT" MADDEN, FLAGSTAFF
DIRECTOR
LARRY D. VOYLES
DEPUTY DIRECTOR
TY E. GRAY

May 15, 2013

Apache-Sitgreaves National Forests
Plan Revision Team
PO Box 640
Springerville, AZ 85938

Re: Proposed Land Management Plan and Programmatic DEIS

Dear Plan Revision Team:

The Arizona Game and Fish Department (Department) has reviewed the Proposed Land Management Plan (Plan) and Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan (DEIS) dated January 2013. The Department understands that the Plan is strategic in nature, providing broad guidance and information for future project and activity decision making on the Apache-Sitgreaves National Forests (A-S). Once completed, it will replace the current plan, written in 1987, and serve to guide management on the A-S for the next 10 to 15 years. The Department further understands that decisions for specific land management activities will be made later with additional opportunity for Department and public involvement.

Lands administered by the A-S play a vital role in providing wildlife habitat as well as opportunities for wildlife related recreation in north-eastern Arizona. Public lands, managed under the principle of multiple use, form the cornerstone of wildlife habitat and are essential for maintaining Arizona's wildlife heritage and wildlife recreational opportunities into the future. As Arizona's human population continues to grow throughout the life of this Plan and adjacent lands become increasingly impacted by development it is anticipated that wildlife and the public will become increasingly dependent on lands administered by the A-S. It is therefore essential that the next forest plan not only adequately address current wildlife habitat and recreational needs, but also provide for the high quality habitat and the maintenance of wildlife connectivity both within and across the A-S that will be essential for sustaining healthy populations of wildlife within a more fragmented Arizona landscape.

The Department is therefore pleased with the Plan's stated emphasis on the maintenance and improvement of ecosystem health. We agree that sustainable supplies of resources, recreation, and wildlife habitat are byproducts of healthy functioning ecosystems. Based on the overall benefits to wildlife and their habitats, the balanced mix of public recreational and access opportunities (see attached Arizona Game and Fish Commission Policy related to access), the

Department generally supports the Proposed Alternative with consideration of our comments below.

For your consideration the Department offers the following comments:

Wildlife Quiet Areas

In the summer of 1984, Department and A-S personnel initiated the identification of Wildlife Quiet Areas (WQAs) for public motorized vehicle access closures. The accumulation of past activities on forest lands had resulted in a vast network of roads, with extensive portions of the A-S having three or more miles of road per square mile of forest land. Studies had shown that vehicular traffic on forest roads evokes an avoidance response by elk, resulting in reduced habitat effectiveness (Hershey and Leege 1976, Lyon 1979, 1983, Marcum 1976, Perry and Overly 1976, Rost and Bailey 1979, Thomas, et al 1979, Witmer and deCalesta 1985) Studies With such an extensive road network and increasing use of recreational vehicles on the A-S, Department biologists identified the opportunity to designate quiet areas as an approach to mitigate impacts of vehicular traffic on wildlife while still allowing necessary wildlife and habitat management activities.

Resulting from these efforts are the eight current WQAs (Beaver Turkey Ridge, Hulsey Bench, Middle Mountain, Open Draw, St. Peters Dome, Upper Coyote, Willow Springs-Horse Trap, and Woolhouse), and two additional areas (Palomino and Carr Lake) that have been managed as WQAs but that have not been officially designated as such. The Department considers the WQAs to have succeeded in addressing the initial purposes for which they were developed, with no additional impediments to the Department's ability to manage wildlife in these areas. The Department supports these areas for their benefits to wildlife as well as the hunting and wildlife viewing public.

It has been noted by Department wildlife biologists familiar with these areas that the amount and proximity of vehicular traffic to big game species influences their activity levels and behaviors (M. Godwin and B. Birkeland, personal communication). During times when all forest use is reduced, such as in late winter; elk, deer and pronghorn are commonly seen in more open areas in clear view of roads, and are not as commonly observed in these areas during higher forest use periods. During higher forest use times, elk, deer and pronghorn can be observed more often in open spaces away from roads within the WQAs, and it is not uncommon to encounter these animals loafing and feeding in the open during daylight hours.

Current observations and field contacts by Department personnel confirm that a specific segment of the hunting public seek out these WQAs (M. Godwin, B. Birkeland, and D. Cagle, personal communication). In the early through late-1990's, elk hunter check stations were operated during most Game Management Unit (GMU) 4A elk hunts. Over those years several hundred hunters were contacted. The check station operators noted hunters that used these WQAs encountered more bull elk and bears than hunters who hunted areas outside the WQAs (D. Cagle, personal communication). Hunters also often noted increased elk rutting behavior observed within these WQAs than in areas more accessible to motorized travel (M. Godwin and D. Cagle, personal communication).

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A specific example is the Woolhouse WQA located in GMU 3B adjacent the towns of Show Low and Pinetop-Lakeside. It is a popular hunting area for late bull and cow elk hunters. This area is known as a consistent elk wintering location, and 30 to 40 vehicles may be parked along the area's perimeter on opening weekend mornings.

In addition to the eight designated WQAs proposed for retention in the Plan, the Department requests that the Carr Lake and Palomino areas be officially designated as WQAs as well. Although not designated as such, these areas have been closed to public motorized use and have been managed as WQAs for at least the past 20 years. Located within the high use Rim Lakes Recreation corridor, they provide significant benefits to wildlife and the public, including a nearby place for wildlife to retreat from the high levels of vehicular traffic and recreational use which occur throughout most of the summer and fall months. They also provide an easily accessible location for visitors to the Rim Lakes Recreational Area to go who desire to experience a less crowded and noisy environment where there is a high probability of observing wildlife. In addition, officially designating these areas as WQAs would preserve a popular hunting area for hunters who seek out and have grown accustomed to a hunting experience away from motorized vehicles. The Department supports the inclusion of these areas as WQAs given the current management of these areas and given this designation would not impede the Department's ability to actively manage wildlife in the area.

The Plan also includes designation of two additional WQAs (Cottonwood and Bear Springs). In the interest of improving the hunting experience in these areas, the Department supports such designation. These portions of the Black Mesa Ranger District are located in GMU 3C along the Mogollon Rim and border the Fort Apache Indian Reservation (FAIR). This area is heavily roaded, and also experiences significant utilization by woodcutters in the fall. Hunters in the field contacted by Department personnel have routinely brought up the issue of too many OHV's and roads in these areas negatively impacting the quality of their hunts (B. Birkeland, personal communication). Most hunters also reported that shortly after sunrise there were woodcutters scattered throughout the woods and in densities so high that it was often difficult to be in an area and not hear, or have wildlife disturbed by the sound of chainsaws. It is also not uncommon for hunters to state that due to all of the disturbance occurring in GMU 3C in the fall, game animals are being pushed and staying on the FAIR during this time period where they remained inaccessible to these hunters. It should be noted that this portion of the FAIR has fewer roads and OHVs are not allowed. Having two small WQA's totaling 5,799 acres in this portion of GMU 3C would help meet the needs of these hunters who are seeking a quieter and more secluded hunting experience. Due to the size and configuration of these areas, they would remain easily accessible by foot to hunt, with the majority of the area within a mile from the nearest road. In addition to the benefit to an important segment of hunters, game species including deer, turkey, elk, bear, and mountain lion will benefit by having an area of less disturbance.

The Department thanks the A-S for working with our Regional Staff throughout the Forest Plan Revision process to identify these areas. The Department looks forward to working with the A-S to emphasize the importance of these critical areas through the creation and installation of additional interpretive and regulatory signage.

Wilderness Areas

The Department recognizes the long-term value to wildlife and the public that wilderness designations may provide, as long as the ability to actively manage wildlife is maintained in these areas. Impacts from the continued and irreversible loss of habitat resulting from development and transportation infrastructure is a major concern to the Department, and is the leading challenge facing the Department in maintaining Arizona's wildlife heritage and wildlife recreational opportunities into the future. The Department is not opposed to wilderness designations that do not affect our ability to manage wildlife, the public's ability to access public lands, or limits multiple use on public lands.

Also of concern, however, is the continued ability of the Department to adequately manage Arizona's wildlife. As wildlife habitat becomes more restricted and fragmented, the Department will need to provide a more proactive approach to wildlife management in an effort to maintain and improve declining populations of game and nongame species. A strictly hands-off approach to maintenance of biological diversity and long-term species viability is no longer a feasible option.

Although a wilderness designation offers much value, the Department has experienced significant restrictions in its ability to fulfill its public trust responsibilities resulting from such special land use designations. The Department therefore requests that full consideration be given to, and provisions provided, that ensure the ability of the Department to fulfill its public trust responsibilities through active wildlife management within wilderness areas. Specific management actions which may be necessary, and may necessitate the use of motorized equipment include, but are not restricted to: periodic fish surveys and non-native fish removal utilizing nets or battery and gas powered electrofishing equipment, construction or maintenance of fish barriers, chemical stream renovations, fish stocking, low-level aerial wildlife surveys, research, and law enforcement flights, wildlife capture, construction of temporary release pens, construction and maintenance of wildlife waters, providing salt and mineral supplements, depredation, and wildlife mortality investigations.

Currently, there are three designated wilderness areas within the A-S (Mount Baldy, Escudilla, and Bear Wallow) totaling 23,234 acres. The Plan includes preliminary administrative recommendations for two additions to existing wilderness areas. These are the 6,813 acre Escudilla Wilderness addition, and the 261 acre Bear Wallow Wilderness addition, which would, if designated by Congress, increase total acres of designated wilderness to 30,308.

Site Specific Comments

Chevelon Lake: Although not included in the Proposed Alternative, the Department does not support the inclusion of Chevelon Lake as a recommended wilderness. As discussed in the DEIS, this inclusion would pose significant impacts on current public recreational opportunities as well as the Department's ability to manage this important sportfish area and assure public safety. Chevelon Lake offers boating and fishing recreation, where gas motors up to 10hp are allowed. A Chevelon Lake wilderness designation would compromise the public's ability to continue these boating uses and would further limit the Department's ability to invest in associated boating facilities. In addition to the recreational impacts, the ability of the Department to manage sportfish populations and

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angling/boating recreation on this lake would be adversely impacted. Standard lake population surveys are completed annually to inform management of lake fish populations, with these surveys requiring the use of motorized boats. Additionally, the Department must maintain motorized access to and around the dam to adequately monitor and maintain this structure. Inadequate maintenance of this dam can create a safety issue to those using the lake and those downstream of the lake, and presents liabilities that the Department is not willing to assume.

Wild and Scenic Rivers

Although there are no designated wild and scenic rivers on the A-S, approximately 339 miles of 23 rivers are eligible to be included in the National Wild and Scenic Rivers System. The Department requests that the A-S coordinate closely with the Department regarding any development of management direction for these areas to ensure that full consideration is given to the potential impacts on the ability of the Department to continue to manage fish and wildlife resources, and thus maintain and enhance those identified values. Specific management actions which may be necessary to maintain and enhance fisheries values including such activities as periodic fish surveys and non-native fish removal utilizing nets or battery and gas powered electrofishing equipment, construction or maintenance of fish barriers, and chemical renovations.

These areas also possess outstandingly remarkable wildlife related recreational values. The Department believes that hunting, fishing, and watchable wildlife opportunities are key components of these values, and that future management of these areas should allow for the continued use of these areas by the public for wildlife related recreational activities.

Fish Barrier Maintenance: The Department is concerned, however, about how certain rivers were analyzed and classified in the 2009 Eligibility Report for the National Wild and Scenic River System, Apache-Sitgreaves National Forests, which excluded portions of several rivers around man-made fish barriers. Those portions were classified as not eligible because they were described as no longer flowing in a natural condition due to the existence of structures which had modified the waterway. This approach was requested and supported by A-S and Department fish biologists at the time, with these barriers being identified as necessary for native fish recovery efforts undertaken on A-S.

For the 2009 analysis, two segments of two streams, Fish Creek and East Fork Lower Colorado River (LCR) were requested to be excluded and classified as not eligible for WSR designation given the same conditions involving existing man-made fish barriers, but were not. The Department is concerned that the eligibility and suitability of these segments and the associated management that is required to maintain and possibly modify barriers will conflict with and hinder the ability to secure the major investment and accompanying biological objectives represented in these man-made structures as watershed conditions change. For example, hydrologic changes in some watersheds following the Wallow Fire have triggered a need to modify several Apache trout fish barriers to handle the increased flood flows. Maintaining the Fish Habitat outstanding remarkable value (ORV) of these streams can only happen by ensuring that those barriers do not fail.

For Fish Creek, there was no excluded section for the fish barrier. Instead, the segments changed because of the fish barrier, but did not exclude it, thus the location of that barrier falls within the recreational segment. The 2009 analysis stated that there is a low, naturalized fish barrier, which is inaccurate. That barrier did include an original boulder drop, but was significantly modified with a wall of gabions. This barrier has since been significantly damaged by extreme flood flows immediately following the Wallow Fire in 2011, impairing the Apache trout Fish Habitat ORV in Fish Creek. Long term plans are to replace this barrier.

The East Fork LCR, included an excluded segment for two gabion fish barriers, but did not include an exclusion for another fish barrier upstream at Colter Dam. Colter Dam was originally built for irrigation storage and consists of a moderately large earthen dam. It has since been abandoned for irrigation use. Currently all streamflow in the East Fork LCR at this point must drop through an 18-20 inch outlet pipe, which has a 5-6 foot vertical drop before coming out the bottom side of Colter Dam. This vertical drop through the pipe currently acts as a fish barrier even though it was not designed nor built for that purpose. This is a positive feature for Apache trout above Colter Dam because the two gabion fish barriers further downstream are currently not effective. Work is in progress to seal these gabion barriers, but they may always be suspect because of their flawed design. Colter Dam would be a positive feature to maintain on the East Fork LCR for Apache trout recovery, as it has functioned as a very effective fish barrier. The classification of the East Fork LCR is Scenic, which by definition is free of impoundments. The Department contends that Colter Dam is an impoundment, and that the 2009 analysis overlooked this feature

Aspen

Aspen is an important component of forest vegetation communities due to its role in providing for greater wildlife diversity. The Department has noted its concerns relative to the decline of aspen on the A-S and supports a holistic approach to address this issue. Such an approach must principally focus on forest health and restoration on a landscape scale (e.g. mechanical vegetation treatments and planned and unplanned fire), while also addressing the multiple factors which can lead to excessive ungulate browsing. Recent large fire events, such as the Three Forks, Chitty, K-P Thomas Complex, and most recently the Wallow Fire, demonstrate the utility of landscape scale treatments in promoting aspen regeneration. In these burn areas, the Department has observed considerable aspen regeneration with corresponding minimal impacts from herbivory. The Department supports further research and monitoring to improve understanding of the complex relationship among aspen and other biotic and abiotic factors, and to support the development of management responses that adequately consider and address these factors over time..

The Department does not support the general representation made in the DEIS (pages 138 and 139) that, in the wet mixed conifer and spruce-fir community, there is an overrepresentation of vegetation structural states that are lacking aspen regeneration due to elk browsing. There is no question that, absent areas impacted by large fire events, aspen regeneration is lacking in these areas. This condition, however, is likely due to numerous and interrelated factors beyond a single factor such as elk browsing. The representation of low/lacking aspen regeneration being solely attributable to a single wildlife species is

unsubstantiated by data and fails to acknowledge and consider multiple factors impacting aspen regeneration.

Motorized Opportunities

The Department appreciates the immense challenge faced by the A-S in reaching an appropriate balance between public motorized travel, resource and wildlife protection, and non-motorized recreational uses of A-S lands. The Department recognizes the negative impacts on wildlife and wildlife habitat from unrestricted cross-country motorized travel, and therefore supports the proposed prohibition of motorized cross-country travel, except where authorized. The Department looks forward to continued coordination with the A-S on the Travel Management Plan. A critical component of which will be the continued availability of the variety of outdoor activities currently found on the A-S, including motorized big game retrieval.

General Comments

- Although collectively, many of the desired conditions, guidelines, standards, and objectives included in the Plan would help support and improve wildlife habitat and wildlife recreational opportunities on the A-S, the Department is concerned that the Plan relies too heavily on desired conditions. As defined in the Plan, desired conditions are normally expressed in broad, general terms, have no specific date by which they are to be completed, and are aspirations and not commitments. As such, the Department questions how these desired conditions will translate into the necessary implementable management actions that are vital to making significant progress toward realizing the Plan's emphasis of ecological restoration. The Department therefore recommends translation of these desired conditions into more actionable standards or guidelines, where doing so, would better enable achievement of the ecological restoration identified in the plan.

- The Department strongly supports Plan objectives of treating on average up to 35,000 acres of forest per year, up to 15,000 acres of woodlands per year, and up to 25,000 acres of grasslands per year. The Plan should, however more clearly stress the need and intent to focus mechanical thinning efforts on the overabundant small diameter trees within the forested vegetation types.

- The Department understands the unique and vital role that fire plays in the maintenance of wildlife habitat within fire adapted ecosystems, and acknowledges the need to restore natural fire regimes on the A-S. The Department therefore supports the proposed desired conditions, standards, guidelines, and management approaches that enhance the ability of fire (both planned and unplanned ignitions) to function in its natural ecological role.

- The Department supports the objective of establishing forage reserves as opportunities arise. Such reserves can significantly aid in the facilitation of forest and grassland restoration activities, such as the application of prescribed fire, by providing forage to livestock and wildlife where such activities would impact localized, short-term forage availability. The A-S should also consider allowing for the utilization of forage reserves by permittees conducting habitat restoration on their Arizona State Land Department leases and private grazing lands when conducted as part of a landscape scale restoration project.

- Monitoring is mentioned numerous times throughout the DEIS and Plan, thus highlighting its importance. The Department agrees that monitoring is critical to future adaptive management, and without which the A-S will not know if movement toward desired conditions is needed or being achieved. Unfortunately, insufficient detail is provided in the Plan, including Chapter 5 - Monitoring Strategy, and the DEIS for the reader to evaluate the sufficiency of the proposed monitoring. The Department recommends that additional detail be provided on monitoring implementation.

Page Specific Comments (suggested edits are indicated in italics and strikethrough)

- Plan, 6th Level HUC Watershed Scale Desired Conditions, page 23: "Streamflow provide connectivity among fish populations and provide unobstructed routs critical for fulfilling needs of aquatic, riparian dependent, and many upland species of plants and animals *except as needed for native species recovery and management.*" Recovery of native fishes would not be possible in most locations on the A-S without the use of man-made fish barriers (in the absence of a natural emigration barrier).

- Plan, 6th Level HUC Watershed Scale Desired Conditions, page 23: "Water quality meets the needs of *all desirable* aquatic species, *including* ~~such as~~ the California floater, northern and Chiricahua leopard frog, and invertebrates that support fish populations."

- Plan, Background for Aquatic Habitat and Species, page 25: The Department is only aware of 23 nonnative fishes that are currently found on the A-S, not 25. There have been others that were stocked many years ago, but did not establish and do not persist on the A-S today. The Department also recommends characterizing the lower elevation warm water habitat as "cyprinid and catostomid (minnow and sucker families) streams" instead of only cyprinid. Mineral Creek should be added to the list of streams that are totally diverted.

- Plan, Desired Conditions for Aquatic Habitat and Species, 4th and 5th Level HUC Watershed Scale Desired Conditions, page 25: "Streamflows, habitat, and water quality support native *and desirable nonnative* aquatic and riparian-dependent species and habitat."

- Plan, Desired Conditions for Aquatic Habitat and Species, 6th Level HUC Watershed Scale Desired Conditions, page 25: "Habitat and ecological conditions are capable of providing for self-sustaining populations of native *and desirable nonnative*, riparian dependent plant and animal species."

- Plan, Desired Conditions for Aquatic Habitat and Species, 6th Level HUC Watershed Scale Desired Conditions, page 26: "Desirable nonnative fish species, *and native fish species (ie. Apache trout, Gila trout, roundtail chub)* provide recreational fishing in waters where those opportunities are not in conflict with recovery of native fish species."

- Plan, Guidelines for Aquatic Habitat and Species, page 26: "To prevent degradation of native species habitat and the incidental or accidental introduction of diseases or nonnative species, *when transferring* aquatic species ~~should not be transferred~~ through management activities from one 6th code watershed to another. *Measures should be taken*

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to prevent the spread of non-target fish species, invasive species, parasites, or diseases." As written, this did not allow critical management actions to recover rare species such as T&E fish and candidate species. Preventing the introduction of diseases and undesirable nonnative species is important, but it should not preclude necessary conservation actions, or even desired recreational wildlife management actions, when these actions are supported by recovery, conservation, or management plans.

- Plan, Guidelines for Aquatic Habitat and Species, page 26: "Projects and activities should avoid damming or impounding free-flowing waters to provide streamflows needed for aquatic and riparian-dependent species, *except as needed for native species recovery and management, or instream structures that improve stream functionality and stability or improve aquatic habitat conditions for aquatic species.*"

- Plan, Management Approaches for Aquatic Habitat and Species, page 27: "The Apache-Sitgreaves NFs cooperate with the Arizona Game and Fish Department (AZGFD), *the state wildlife agency with authority over wildlife management in Arizona* to protect and reintroduce native aquatic species where appropriate and control or eradicate nonnative species *where appropriate*." The Department recommends the proceeding edits to clarify the Department's wildlife management authority, and that control or eradiation of nonnative species on the A-S is not an appropriate management action in all circumstances.

- Plan, Desired Conditions for All PNVTs, Landscape Scale, page 29: "Herbivory is in balance with available forage (i.e., grazing and browsing by authorized *and unauthorized* livestock, wild horses, *feral horses and hogs*, and wildlife do not exceed available forage production within established use levels)."

- Plan, Desired Conditions for All PNVTs, Landscape Scale, page 29: Add "*The A-S is free of unauthorized, feral, and trespass livestock.*" The Department has become increasingly concerned over the negative impacts of unauthorized, feral, and trespass livestock on wildlife habitat. Department personnel have noted significant increases in the numbers of these animals over recent years, and expects this nearly exponential growth to continue. The Department urges the A-S to include the above Desired Condition and to take prompt, substantive action to address this growing threat to ecosystem health on the A-S.

- Plan, Desired Conditions for All PNVTs, Fine Scale Desired Conditions, page 30: "Herbaceous vegetation amount and structure (e.g. plant density, height, litter, seed heads) provides habitat to support *wildlife, including* prey species." Plan, page 30, All PNVTs, Fine scale.

- Plan, Mid-Scale Desired Conditions for Riparian Areas, page 34: "Willows (e.g. Bebb, Geyer, Arizona) are *free of disease, and* reproducing with all age classes present." The Department believes that the A-S has failed to acknowledge the significant role that disease has played in the loss of willows across the A-S.

- Plan, Mid-Scale Desired Conditions, page 34: Within the Plan it states that treated wastewater may be used to provide wetland habitats. However the value of treated wastewater is not mentioned as a desired condition for riparian values. The Department recommends that the following desired condition be incorporated into the Plan.

"Wetlands created with treated wastewater from municipalities provide additional critical wildlife habitat."

- Plan, Objectives for Riparian Areas, page 34: "Within the planning period, relocated, repair, improve, or decommission a minimum of 4 miles of National Forest Systems roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. *These activities should promote adequate trail access that addresses public recreational access needs (e.g. fishing and hiking) and minimizes creation of additional unauthorized trails.*"

- Plan, Management Approaches for Riparian Areas, page 35: In the last paragraph the word "elk" should be replaced with "ungulate". In addition, the preceding paragraph should more strongly emphasize the need for landscape scale restoration treatments within the context of riparian area management.

- Plan, Pinon-Juniper Savanna, Landscape scale, page 54: Scattered shrubs and a continuous herbaceous understory, including native grasses, forbs, and annuals, are present to support a natural fire regime *and provide for wildlife needs.*

- Plan, Pinon-Juniper – Persistent Woodland, Mid-scale, page 54: "Grass and forb cover is maximized, based on site capability, to protect and enrich soils *and provide for wildlife needs.*

- Plan, Desired Conditions for Grasslands, Landscape scale, page 56: "*Herbaceous vegetation and* litter provides for and maintains the natural fire regime (fire regime I)…".

- Plan, Background for Wildlife and Rare Plants, page 59: In the last paragraph it states that "Other species have been introduced, such as Rocky Mountain elk and crayfish." The Department considers elk to be a native Arizona species. Although it is likely that Merriam's elk, which were present in Arizona prior to the Yellowstone introductions of Rocky Mountain elk had been extirpated from the state, the genetic differences, and the significance of these differences between the two populations (based on very limited samples) is uncertain at this time. Accordingly, the Department views it wholly inappropriate to present elk, a desired native species that provides significant economic and social benefits to the forest and local communities, in the same context as crayfish, which is a clearly undesirable and destructive nonnative species.

- Plan, Background for Wildlife and Rare Plants, page 59: Although the Plan briefly discusses and makes mention of the economic importance of forest products, including timber and livestock, the significant economic contribution to the local communities and counties provided by wildlife residing on the A-S is lacking. The Department recommends that the A-S acknowledge the economic contribution of wildlife (hunting, fishing, wildlife viewing) and provide such information within the Background for Wildlife and Rare Plants section. The Department looks forward to working with the A-S to provide additional detailed information regarding the economic benefits of wildlife.

- Plan, Background for Wildlife and Rare Plants, page 60: The reference to "Mexican wolf" should be changed to "Mexican gray wolf".

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- Plan, Guidelines for Wildlife and Rare Plants, page 60: Add *"Right-of-way fencing where pronghorn antelope may be present should be placed and constructed in a manner that considers maximizing fence and road permeability for pronghorn antelope while addressing public safety concerns."*

- Plan, Guidelines for Wildlife and Rare Plants, page 61: "Prairie dog controls should not be authorized except when consistent with approved State of Arizona Gunnison's prairie dog conservation strategies, *or as authorized by the Arizona Game and Fish Commission.*" It should be clear that this guideline does not apply to hunting activities as authorized by the Arizona Game and Fish Commission.

- Plan, Guidelines for Wildlife and Rare Plants, page 61: "The needs of localized species (e.g. New Mexico meadow jumping mouse, Bebb willow, White Mountain paintbrush) should be considered and provided for during project activities to ensure their limited or specialized habitats are not lost *or degraded.*

- Plan, Management Approaches for Wildlife and Rare Plants, page 62: Reference is made to the Arizona Wildlife and Fisheries Comprehensive Plan. This is an outdated plan. A more appropriate reference would be the State Wildlife Action Plan as well as the Wildlife 20/20 Arizona Game and Fish Department's Strategic Plan.

- Plan, Management Approaches for Wildlife and Rare Plants, page 63: Promoting healthy population of predators while, reducing livestock conflicts with wildlife is discussed. It should be noted that predator control may also be required to reduce conflict and meet management objectives for wildlife prey species such as pronghorn, especially where degraded habitat conditions or other factors influence the natural predator prey relationship.

- Plan, Objectives for Invasive Species, page 64: Eradication of cowbirds is included as an objective in this section. Please note that such actions need to be coordinated with the Department and appropriate permitting obtained.

- Plan, Guidelines for Invasive Species, page 64: "Projects and activities, *except as needed for wildlife conservation and management projects (i.e. native species recovery and management, and sportfish stocking)*, should not transfer water between drainages or between unconnected water bodies within the same drainage to avoid spreading disease and aquatic invasive species. *For projects and activities where water transfers will occur, measures should be taken to prevent the spread of non-target fish species, invasive species, parasites, or diseases.*"

- Plan, Guidelines for Landscape Scale Disturbance Events, page 66: "Erosion control mitigation features should be implemented to protect significant resource values and infrastructure such as stream channels, roads, structures, threatened and endangered species, and cultural resources. *The use of nonnative grass seed for aerial seeding should be discouraged.*" The Department is concerned with the use by the A-S of "non-persistent" nonnative grass seed to mitigate wildfire impacts. Although the Department acknowledges the need for erosion control mitigation following a large fire event, the use of nonnative seed, as occurred following the Wallow Fire, has resulted in unintended consequences. These include concentrating elk within seeded locations, discouraging

normal daily and seasonal movement patterns, outcompeting native forbs and grasses, and impacting aspen regeneration.

- Plan, Background for Overall Recreational Opportunities, page 68: Add boating to the list of primary recreational activities. Kayaking and canoeing are becoming very popular activities on some lakes such as Fool Hollow, Bear Canyon, and Woods Canyon, in addition to some motorized boating recreation.
- Plan, Background for Developed Recreation, page 72: In addition to the A-S and State Parks, Fool Hollow Lake Recreation Area is operated through a partnership with the Arizona Game and Fish Department and the City of Show Low.
- Plan, Background for Motorized Opportunities, page 73: The final sentence in this paragraph states "These roads and trails are also needed for forest management." It is unclear if the A-S is also considering unauthorized roads (user-created) as being needed for forest management. The Department recommends clarification.
- Plan, Desired Conditions for Motorized Opportunities, page 73: "*Open NFS roads and* motorized trails are easily identified on the ground (e.g., well marked, *and marked open unless closed*).
- Plan, Standards for Motorized Opportunities, page 74: "Motorized vehicle travel shall be managed to occur only on the designated system of NFS roads and motorized trails and designated motorized areas." It should be made clear in this standard that there will be authorized exemptions, including motorized big game retrieval.
- Plan, Standards for Motorized Opportunities, page 74: "Unless specifically authorized, motorized cross-country travel shall be managed to occur only in designated motorized areas." It should be made clear in this standard, that motorized big game retrieval is included in the activities that are specifically authorized.
- Plan, Management Approaches for Motorized Opportunities, page76: "The Apache-Sitgreaves NFs coordinate with Federal Highways Administration, *Arizona Game and Fish Department*, and ADOT to facilitate transportation needs, planned improvements, and transportation conditions. Apache-Sitgreaves NFs work with ADOT *and Arizona Game and Fish Department* to alleviate concerns with scenic resources; maintenance activities; use of herbicides; use of deicing agents; and creation of turnouts, parking lots, and wildlife crossings."
- Plan, Desired Conditions for Livestock Grazing, page 95: "Livestock grazing is in balance with available forage (i.e. grazing and browsing by authorized *and unauthorized* livestock, wild horses, *feral horses and hogs*, and wildlife do not exceed available forage production within established use levels)"
- Plan, Desired Conditions for Livestock Grazing, page 95: Add "Livestock Grazing does not negatively affect wildlife habitat and populations." This mirrors a desired condition under Managed Recreation on page 69.

- Plan, Standards for Livestock Grazing, page 96: "New or reconstructed fencing shall allow for wildlife passage, except where specifically intended to exclude wildlife (e.g. elk). *Construction of new fences parallel to existing fences shall not be allowed unless there is concurrent removal of the existing unneeded fence.*"
- Plan, Guidelines for Livestock Grazing, page 96: "New livestock watering facilities shall be designed to allow wildlife access and escape. *Existing livestock watering facilities shall be modified as opportunities arise to allow for wildlife access and escape.*"
- Plan, Guidelines for Livestock Grazing, page 96: "Efforts (e.g. temporary fencing, increased herding, herding dogs) should be made to prevent transfer of disease from domestic sheep and goats to bighorn sheep wherever bighorn sheep occur. Permit conversions to domestic sheep or goats should not be allowed in areas *adjacent to or* inhabited by bighorn sheep *or areas identified by the Arizona Game and Fish Department for bighorn sheep reintroductions.*"
- Plan, Desired Conditions for Community-Forest Intermix, page 106: "Native grasses, forbs, shrubs, and litter (i.e., fine fuels) are abundant enough to maintain and support natural fire regimes, protect soils, *provide for wildlife needs*, and support water infiltration."
- Plan, Guidelines for Energy Corridors, page 110: "Energy corridors should be managed as nonmotorized areas ~~to avoid~~ *where* conflicts with corridor maintenance needs *exist*, ~~although maintenance activities may use motorized equipment.~~" The Department believes that utilizing energy corridors for motorized use, where these uses can be compatible, can limit additional habitat degradation by helping to meet motorized recreational demands while reducing the need for additional NFS motorized roads and trails in less disturbed areas.
- Plan, Desired Conditions for Wild Horse Territory, page 111: "Grazing is in balance with available forage (i.e., grazing and browsing by authorized *and unauthorized* livestock, wild horses, *feral horses and hogs*, and wildlife do not exceed the available forage production within established use levels)."
- Plan, Background for Recommended Research Natural Areas, page 118: The recommended Sandrock Research Natural Area is described as having been excluded from domestic grazing for 25 years. Though the intent was to exclude livestock grazing for the period described, livestock were present on Sandrock throughout the entire period.
- Plan, Desired Conditions for Recommended Research Natural Areas, page 118: "The Three Forks Closure Area (30 acres) of the recommended Three Forks RNA is free from human trampling and other disturbances to protect very sensitive and unique species, such as the Three Forks springsnail, California floater, New Mexico meadow jumping mouse, *and* Chiricahua leopard frog~~, and loach minnow~~." Loach minnow have never been documented within the actual closure area. Loach minnow have been documented within the mainstem of the East Fork Black River, which runs parallel to but not within or through the closure area. Designated Critical Habitat for loach minnow also exists on the East Fork Black River but not within the closure area.

- Plan, Background for Wilderness, page 120: Add to the first paragraph regarding Mt. Baldy wilderness. "The East Fork Little Colorado River and West Fork Little Colorado River originate on Mt. Baldy and flow throughout the year through this wilderness, providing habitat for the threatened Apache trout." This language mirrors language provided for the Bear Wallow Wilderness and Bear Wallow Creek.

- Plan, Standards for Wilderness, page 121: "Party size of 12 persons and/or 12 head of stock for *recreational* hiking and riding groups in Mount Baldy Wilderness shall not be exceeded. A party size of 6 persons for overnight *recreational* camping shall not be exceeded." This standard should not apply to wildlife and fisheries management activities (e.g. stream renovation and fish restocking activities).

- Plan, Standards for Wilderness, page 121: "Party size of 12 persons and/or 15 head of stock for *recreational* hiking and riding groups in Escudilla and Bear Wallow Wilderness and the Blue Range Primitive Area shall not be exceeded." This standard should not apply to wildlife and fisheries management activities (e.g. stream renovation and fish restocking activities).

- Plan, Motorized Use Suitability, page 131: The footnote for table 8 describes exemptions per the Travel Management Rule. The Department requests the allowances for motorized big game retrieval be included within this footnote.

- Plan, Motorized Use Suitability, page 132: Table 9 indicates that NFS motorized trails <50" are not suitable within energy corridors. The Department believes that utilizing energy corridors for motorized use, where these uses can be compatible, can limit additional habitat degradation by helping to meet motorized recreational demands while reducing the need for additional NFS motorized roads and trails in less disturbed areas.

- Plan, Programmatic Agreements, page 255: Add to the list of agreements: Memorandum of Understanding between the Apache-Sitgreaves National Forests, Arizona Game and Fish Commission, U.S. Fish and Wildlife Service, Arizona Trout Unlimited, Federation of Fly Fishers, and Wildlife Conservation Council for the restoration of native trout on the Apache National Forest.

- DEIS, Impacts Associated with Nonnative Fish Species, pages 132-133: The wording used to describe impacts of nonnative fish on page 132 and of fish stocking on page 133 is inappropriate and disproportionate to the descriptions given to other impacts on native fish species. The statement that the Department continues to impact native fish throughout the A-S through stocking and management of nonnative fish is misleading and unnecessarily confrontational. The Department does not dispute that nonnative fish are a major cause of the current status of many native fishes on the A-S. However, the impact is not at the level that it used to be decades ago. There are numerous processes in place to minimize additional impacts of nonnative fishes, especially fish stocking. The Department goes through intensive consultation with the U.S. Fish and Wildlife Service on all stocking activities to determine impacts on native wildlife and to gain associated clearances for those stocking activities. In most cases, there are no impacts or it is minimal, and in those few cases where an impact to native wildlife has been identified, the Department actively mitigates those impacts. The Department therefore asks that a

more pragmatic and balanced discussion of nonnative fish and fish stocking exist by replacing current narrative with language similar to that within the Livestock Grazing impacts section on page 130, which states that livestock grazing activities can have numerous impacts…, and that livestock also have the potential to introduce nonnative species.

- DEIS, Pronghorn Antelope, page 249: "Semi-desert grasslands which on the forests occurs below the Mogollon Rim is isolated by topography and dense woodlands, supports limited numbers of pronghorn, and is not currently managed for the species by the AZGFD." This is not correct. Although pronghorn numbers may be limited, this area is currently managed for pronghorn. In fact, the Department has worked with the A-S and NGOS to fund habitat improvement projects in the semi-desert grasslands with pronghorn as one of the focus species for the work.

In addition to the comments above, the Department would like to highlight its support for the inclusion of the following desired conditions, guidelines, and standards.

- Plan, Standards for Water Resources, page 23: "Consistent with existing water rights, water diversions or obstructions shall at all times allow sufficient water to pass downstream to preserve minimum levels of waterflow that maintain aquatic life and other purposes of national forest establishment."

- Plan, Guidelines for Water Resources. Page 24: "Short-term impacts in watersheds containing Outstanding Arizona Waters may be allowed when long-term benefits to water quality, riparian areas, and aquatic resources would occur."

- Plan, Desired Conditions for All PNVTs, Landscape Scale Desired Conditions, page 28: "Fire (planned and unplanned ignitions) maintains and enhances resources and, as nearly as possible, is allowed to function in its natural ecological role."

- Plan, Desired Conditions for All PNVTs, Landscape Scale Desired Conditions, page 28: "Vegetative connectivity provides for species dispersal, genetic exchange, and daily and seasonal movements across multiple spatial scales."

- Plan, Desired Conditions for All PNVTs, Landscape Scale Desired Conditions, page 28: "Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth forests."

- Plan, Desired Conditions for All PNVTs, Landscape Scale Desired Conditions, page 29: "Old or large trees, multistoried canopies, large coarse woody debris, and snags provide the structure, function, and associated vegetation composition as appropriate for each forested and woodland PNVT."

- Plan, Desired Conditions for All PNVTs, Landscape Scale Desired Conditions, page 29: "Vegetation provides products such as wood fiber or forage to help meet local and

regional needs in a manner that is consistent with other desired conditions on sustainable basis within the capacity of the land."

- Plan, Desired Conditions for All PNVTs, Mid-Scale Desired Conditions, page 29: "Vegetation conditions provide hiding and thermal cover in contiguous blocks for wildlife. Native plant species are present in all age classes and are healthy, reproducing, and persisting."
- Plan, Desired Conditions for All PNVTs, Mid-Scale Desired Conditions, page 29: "Grasses, forbs, shrubs, and litter are abundant and continuous to maintain and support natural fire regimes."
- Plan, Desired Conditions for Riparian Areas, Fine Scale Desired Conditions, page 34: "Floodplains and wet meadows provide sufficient herbaceous cover (55 percent of greater) and height (9 inches or longer) to trap sediment, mitigate flood energy, and provide wildlife cover."
- Plan, Guidelines for Riparian Areas, page 35: "Wet meadows and active floodplains with riparian-obligate species should provide sufficient herbaceous cover (55 percent of greater) and height (6 to 9 inches or longer) to trap sediment, mitigate flood energy, stabilize banks, and provide for wildlife and plant needs."
- Plan, Desired Conditions for Forests: Ponderosa Pine, Landscape Scale Desired Conditions, page 40: "Grasses, forbs, shrubs, needles, leaves, and small trees support the natural fire regime. The greater proportion (60 to 85 percent or greater) of soil cover is composed of grasses and forbs as opposed to needles and leaves."
- Plan, Desired Conditions for Forests: Ponderosa Pine, Landscape Scale Desired Conditions, page 40: "Frequent, low to mixed severity fires (fire regime I), occurring approximately every 2 to 17 years, are characteristic in this PNVT."
- Plan, Desired Conditions for Forests: Ponderosa Pine, Fine Scale Desired Conditions, page 41 "Trees typically occur in irregularly shaped groups and are variably spaced with some tight clumps. Crowns in the mid- to old-aged groups are interlocking or nearly interlocking providing for species such as Abert's squirrel."
- Plan, Desires Conditions for Grasslands, Landscape Scale Desired Conditions, page 56: "Prairie dogs are present and support healthy grassland soil development and the diversity of other species associated with them such as western burrowing owl."
- Plan, Desires Conditions for Grasslands, Fine Scale Desired Conditions, page 57: "During the critical pronghorn fawning period (May through June), cool season grasses and forbs provide nutritional forage; while shrubs and standing grass growth from the previous year provide adequate hiding cover (10 to 18 inches) to protect fawns from predation." Please see attached white paper for further detail.
- Plan, Guidelines for Grasslands, page 57: "Grassland and openings should provide for sufficient vegetative cover [...] to prevent accelerated erosion, dissipate rainfall, facilitate the natural fire regime, and provide wildlife and insect habitat."

- Plan, Guidelines for Grasslands, page 57: "New fence construction or reconstruction where pronghorn antelope may be present should have a barbless bottom wire which is 18 inches from the ground to facilitate movement between pastures and other fenced areas. Pole and other type of fences should also provide for pronghorn antelope passage where they are present."
- Plan, Guidelines for Wildlife and Rare Plants, page 61: "Modifications, mitigations, or other measures should be incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives."
- Plan, Standards for Developed Recreation, page 72: "Where trash facilities are provided, they shall be bear resistant."
- Plan, Desired Conditions for Motorized Opportunities, page 74: "The location and design of roads and trails does not impede wildlife and fish movement."
- Plan, Guidelines for Motorized Opportunities, page 75: "Roads and motorized trails should be designed and located so as to not impede terrestrial and aquatic species movement and connectivity."
- Plan, Standards for Livestock Grazing, page 96: "New or reconstructed fencing shall allow for wildlife passage, except where specifically intended to exclude wildlife (e.g. elk fencing)."
- Plan, Guidelines for Special Uses, page 101: "Target ranges may be appropriate in the General Forest or Community-Forest Intermix Management Areas because of the wide spectrum of recreation opportunities that can be provided in these areas. Other areas should be avoided."
- Plan, Guidelines for Wild Horse Territory, page 112: "When wild horse populations exceed the appropriate management level, horses should be removed in accordance with the "Heber Wild Horse Territory Management Plan" (when completed)." The Department urges the A-S to prioritize the completion of the Heber Wild Horse Territory Management Plan, as it will be an essential component in helping the A-S achieve ecological restoration and meet Desired Conditions.
- Plan, Guidelines for Wilderness, page 121: "Planned ignitions should be considered to create favorable conditions that enable naturally occurring fires to return to their historic role or to achieve wilderness conditions."

The Department would like to thank the A-S for this opportunity to provide comment, as well as your efforts throughout the planning process to engage the Department and the public. In addition to the comments provided above, the Department has provided written comment to the A-S regarding various aspects of the forest plan revision in letters dated July 8, 2007; October 16, 2008; February 18, 2009; August 31, 2009; January 29, 2010; and May 5, 2010. We request that those previous comments be incorporated here by reference. We look forward to continued cooperation and coordination with the A-S. If you have any questions concerning this letter,

please contact Dave Dorum, Habitat Program Manager for the Pinetop Region at 928-367-4281 or ddorum@azgfd.gov.

Thank you,

Chris Bagnoli

Chris Bagnoli
Pinetop Regional Supervisor

cc: Joyce Francis, Habitat Branch Chief
Laura Canaca, Projects Evaluation Program Supervisor

Literature Cited

Hershey, J. Terry, and Leege, A. Thomas. 1976. Influences of Logging On Elk Summer Range In North-Central Idaho. P. 73-80. Elk-Logging-Roads Symposium., University of Idaho.

Lyon, L. Jack. 1979. Habitat Effectiveness For Elk As Influenced by Roads and Cover. Journal of Forestry. 77:658-660.

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Marcum, C. Les. 1976. Habitat Selection and Use During Summer and Fall Months by a Western Montana Elk Herd. P. 91-96. Elk-Logging-Roads Symposium., University of Idaho.

Perry, Charles, and Overly, Robert. 1976. Impact of Roads on Big Game Distribution in Portions of the Blue Mountains of Washington. P. 62-68. Elk-Logging-Roads Symposium., University of Idaho.

Rost, R. Gregory, and Bailey, A. James. 1979. Distribution of Mule Deer and Elk In Relation to Roads. Journal of Wildlife Management. 43:634-641.

Thomas, W. Jack. 1979. Roads and Habitat Effectiveness. P. 122-123. in Wildlife Habitats in Managed Forests of the Blue Mountains of Oregon and Washington. USDA Forest Service. Agricultural Handbook. 553.

Witmer W. Gary, and deCalesta, S. David. 1985. Effect of Forest Roads on Habitat Use by Roosevelt Elk. Northwest Science. 59:122-125.

Ltr#101

Arizona Game and Fish Department Comments – A-S Plan and DEIS
May 15, 2013

Approved Commission Policy

A 2.38. Travel Management and Access upon Arizona's Public Lands for the Enjoyment of Arizona's Wildlife Resources and Outdoor Recreation

Effective: *03/09/2013*
Policy Process Owner: *Habitat Branch Chief*

The Arizona Game and Fish Department is responsible for management of all wildlife on public lands. Wildlife is held in trust for the public and access should not be denied or restricted without cause.

The Arizona Game and Fish Commission recognizes and promotes multiple use on public lands managed by the US Forest Service and the Bureau of Land Management. Every citizen should have access to their multiple use public lands unless there are reasons to deny access founded in sound science and affirmative analysis, and not a presumption of harm.

It is the policy of the Arizona Game and Fish Commission to place a high priority on conserving existing access and modes of access for hunting, fishing, trapping, shooting, wildlife watching, OHV use, dispersed camping and other responsible forms of outdoor recreation; and to place a high priority on improving access upon such lands in areas of the State where access is currently difficult or nonexistent.

It is unacceptable for a federal multiple use land management agency to establish regulations that the public cannot understand; that the federal land manager cannot effectively enforce; or that the land manager imposed upon state and local enforcement authorities an unreasonable and unenforceable mandate that denies reasonable and sufficient access to citizens. The Department will actively advocate for access issues and seek to maintain the Commission's legal standing to seek remedies for decisions that injure the Department's ability to meet the Commission's strategic objectives for wildlife management or management of recreational activities under the Commission's jurisdiction.

Forest Plan Preferred Alternative proposed desired condition on grasslands and pronghorn fawning cover

The Apache-Sitgreaves National Forest has released the draft Environmental Impact Statement (DEIS) and the Proposed Land Management Plan. AGFD's Pinetop Region has received comments of concern relative to the habitat parameters stated within the proposed forest plan referring to *"desired condition"* of grassland habitats. Specifically the comments related to the content of Chapter 2, Forest Direction, pages 55-57, and were specific to vegetative heights described within the "*Fine-Scaled Desired Condition*" (less than 10 acres). The "*desired condition*" described in this subsection was stated as follows;

> *"During the critical pronghorn fawning period (May through June), cool season grasses and forbs provide nutritional forage; while shrubs and standing grass growth from the previous year provide adequate hiding cover (10 to 18 inches) to protect fawns from predation"*

This specific reference is made to fine scale (less than 10 acres) and, again, describes the "*desired condition*". This desired condition term is used throughout the plan as a goal without a timeline, and without defined plan objectives in place to attempt to achieve the desired condition. The proposed Forest Plan Chapter 1, "Background" on page 6 defines desired conditions as:

"Desired Conditions"

> *Desired conditions set forth the desired social, economic, and ecological attributes of the Apache-Sitgreaves NFs. They attempt to paint a picture of what we (the public and Forest Service) desire the forests to look like or the goods and services we desire them to provide. Desired conditions are normally expressed in broad, general terms and are timeless in that there is no specific date by which they are to be completed. Desired conditions may only be achievable over a long timeframe (in some cases, several hundred years). In some cases, a desired condition matches the current condition, so the goal is to maintain the existing condition. Desired conditions are aspirations and are not commitments or final decisions approving projects.*
>
> *To be consistent with the desired conditions of the plan, a project or activity, when assessed at the appropriate spatial scale described in the plan (e.g., landscape scale), must be designed to meet one or more of the following conditions:*
>
> - *Maintain or make progress toward one or more of the desired conditions of a plan without adversely affecting progress toward, or maintenance of, other desired conditions; or*
> - *Be neutral with regard to progress toward plan desired conditions; or*
> - *Maintain or make progress toward one or more of the desired conditions over the long term, even if the project or activity would adversely affect progress toward or maintenance of one or more desired conditions in the short term; or*
> - *Maintain or make progress toward one or more of the desired conditions over the long term, even if the project or activity would adversely affect progress toward other desired conditions in a negligible way over the long term.*
> - *The project documentation should explain how the project is consistent with desired conditions and describe any short-term or negligible long-term adverse*

> *effects the project may have concerning the maintenance or attainment of any desired condition."*

Pinetop Regional Discussion:
Two publications (listed below) were reviewed in the Pinetop Region's discussion of pronghorn grasslands habitat. There are a number of research and habitat investigations that are cited within these two wildlife publications with substantial data supporting characteristics described within many pronghorn habitats.

> **Pronghorn: Ecology and Management, Bart W. O'Gara and Jim D. Yoakum, 2004.**
> **A Field Guide to Pronghorn Management: Biological and management principles and practices designed to sustain pronghorn populations from Canada to Mexico, Compiled by E.I. Anthonise, R.E. Autenrieth, D.E. Brown, J. Cancino, R.M. Lee, R.A. Ockenfels, B.W. O'Gara, T.M. Pojar, and J.D. Yoakum, 2006**

The information found within the reference materials seem to support at least three substantial influences on pronghorn fawn survival which include; quality of forage available to pronghorn does during late gestation through early lactation, vegetative cover available to fawns for concealment, and predation. These factors are not independent of each other and are interconnected in terms of the survivability of pronghorn fawns. Other habitat and landscape characteristics beyond vegetation can be attributed to hiding or concealment cover and include: rocks, natural and manmade depressions, and the general characteristics of the terrain flow and slope.

Vegetation characteristics for higher elevation grassland habitats that pronghorn use and that exist on the Springerville Ranger District of the Apache-Sitgreaves National Forest in east central Arizona are generally providing fawning cover under current management approaches. Fawn survival and pronghorn recruitment are better on these areas of the A-S Forest pronghorn habitats than all other pronghorn habitats found within Game Management Unit 1 of the Pinetop Region. This is evidenced by the recruitment documented by wildlife manager surveys across the last several years.

The Region supports a desired condition in the forest plan that indicates the important factors in fawn survival including:

1. Quality of forage available to pronghorn does during late gestation through early lactation
2. Vegetative cover available to fawns for concealment
3. Predation
4. That critical period for fawns being from birth to 14 days when they are more dependent on hiding cover than their ability to flee from predators (this reference was first found in work conducted in central Arizona pronghorn habitats by Ockenfels et al., 1992 as cited in Home Ranges, Movement Patterns, and Habitat Selection of Pronghorn in Central Arizona, March 1994)
5. That fawning on the A-S Forest generally takes place from late April through early June

The desired condition should include adequate forage to meet nutritional needs of does and residual and current year's growth of new forage to provide for fawning cover.

The Management direction for the grasslands habitat should be crafted to consider:

1. The Arizona Game and Fish Department will be working toward identifying fawning areas over the life of the Forest Plan
2. AZGFD will be evaluating affinity to fawning areas within the pronghorn habitats of the eastern half of the A-S forest south to Black River throughout the life of the Forest Plan.
3. Habitat characteristics of fawning areas that pronghorn does have demonstrated at least some affinity by repeated selection for during the fawning period should begin to be quantitatively and qualitatively described for future management considerations.

The Pinetop Region did reference habitat characteristics for fawning areas measured over many habitats and two general habitat types as listed in the table below taken from the *Habitat Characteristics and Requirements* chapter of **Pronghorn: Ecology and Management** literature referenced above.

Characteristics of vegetation at pronghorn fawn bedding areas in shrubsteppe and grassland habitats.

		Percent of cover type			Height in inches	
Biome	Location	Shrub	Grass	Forb	(avg)	Source
Shrubsteppe	Montana	21	32	14	12	Pyrah (1974)
	Idaho	21	-	16*	16	Autenrieth (1976)
	Oregon	17	11	8	15	Trainer et al. (1983)
Grassland	Alberta	3	66	3	19	Barrett (1982)
	Texas	3	16	3	22	Carson and Bryant (1997)
	Arizona	8	13	7	16	Tiver and Miller

*Grasses and forbs data combined

The original comments provided to the A-S biologists supported a fawning area cover guideline of 10-18". This guideline was based on the best available scientific information, much of which was derived from the above refereneed research materials and the supporting research referenced within those documents.

In addition, after discussions relative to these guidelines took place the region initiated an inquiry statewide with pronghorn managers, game specialists and Habitat Program Managers. There was a unanimous support for the forest plan desired conditions currently stated with specific supporting information forwarded by three individuals and agreed upon and supported by all other comments from all that returned comments. It was clear there is statewide support for those general guidelines. The information provided included previously reference materials and specific information not previously referenced from the 22nd Annual Pronghorn Proceedings relative to work conducted by Dana Warnecke.

Other information provided indicated that similar guidelines are being currently used in other forests including the Kaibab National Forest.

There is no direct comparison between these habitats and those that exist on the A-S Forest. However, one can generally surmise fawning cover is a quantifiable characteristic of pronghorn

habitats. Management direction should lead the forest to evaluating these habitats across the life of the plan in conjunction with AZGFD data on fawning areas.

The best advice may have been found in the Pronghorn: Ecology and Management,

...too little or too much of any environmental component can be a limiting factor affecting a species' survival or occupancy of a habitat.... However, pronghorn fawning areas with limited herbaceous plants or shrub cover afford insufficient cover to conceal neonates effectively from predation. Conversely, an overabundance of shrubs can provide more stalking cover for predators, thereby increasing fawn losses to predators (Bodie 1978). Security cover requirements for pronghorn on grasslands are not the same on shrubsteppes. Care should be exercised in applying cover standards in one area to other habitats.

It is clear that cover for fawn concealment is critical but exactly what that looks like or what the composition of that concealment has not been evaluated for the variety of pronghorn habitats found on the A-S Forest. What does not seem to be in question is that adequate fawn recruitment is essential for maintaining healthy pronghorn populations, and that nutrition and fawn hiding cover are crucial factors in promoting fawn survival and recruitment.

Ltr#0034

From:	Victoria Carella
To:	FS-ASNF Planning
Cc:	Mark Edelman; Lani Drew; Tim Bolton
Subject:	Review Comments: The Apache-Sitgreaves National Forests Proposed Land Management Plan and DEIS
Date:	Wednesday, May 08, 2013 12:20:45 PM
Attachments:	DEIS Recreation Opportunity Spectrum Apache-Sitgreaves National Forests Review Comments.pdf
Importance:	High

Mr. James E. Zornes,

Attached please find the Arizona State Land Department's ("Department") review comments on the above-mentioned project which the Department submits as part of the official public record.

The Department appreciates the opportunity to comment. Should you have any questions, feel free to contact me.

Sincerely,

Victoria Carella
Project Manager
602-542-2677
vcarella@azland.gov

Ltr#0034

APACHE-SITGREAVES NATIONAL FORESTS – FOREST PLAN DEIS JANUARY 2013

RECREATION OPPORTUNITY SPECTRUM

ARIZONA STATE LAND DEPARTMENT REVIEW COMMENTS

Apache Forest Area – Apache and Greenlee Counties

1. State Trust land abuts the full length of the northern border of this area. The proposed designations along this border impact approximately 45 sections of State Trust land.

2. The majority of the proposed designations is Semi-Primitive Motorized (SPM). Motorized use is generally permitted.

   Access and motorized use through State Trust land is allowed only on designated routes permitted by the Arizona State Land Department.

3. Another designation shown that impacts State Trust land is Roaded Natural (RN). Conventional motorized use is provided for in this designation. Although this designation is shown around various types of roads, the swath of the designation on either side of the roads is quite extensive.

   Access and motorized use through State Trust land is allowed only on designated routes permitted by the Arizona State Land Department.

4. The last designation shown that impacts State Trust land is Semi-Primitive Non-Motorized (SPNM). In this designation motorized use is generally not permitted.

   Non-motorized access through State Trust land is allowed only on designated routes permitted by the Arizona State Land Department.

Apache-Sitgreaves Area – Navajo County

1. State Trust land abuts, in a checker-board fashion, the full length of the northern border of this area. The proposed designations along this border impact approximately 20 sections of State Trust land.

2. In the proposed designation Semi-Primitive Motorized (SPM), motorized use is generally permitted.

   Access and motorized use through State Trust land is allowed only on designated routes permitted by the Arizona State Land Department.

3. Another designation shown that impacts State Trust land is Roaded Natural (RN). Conventional motorized use is provided for in this designation. Although this designation is shown around various types of roads and utility corridors, the swath of the designation on either side of these is quite extensive.

   Access and motorized use through State Trust land is allowed only on designated routes permitted by the Arizona State Land Department.

4. The last designation shown that impacts State Trust land is Semi-Primitive Non-Motorized (SPNM). In this designation motorized use is generally not permitted.

   Non-motorized access through State Trust land is allowed only on designated routes permitted by the Arizona State Land Department.

Ltr#0040

From: Pascal Berlioux
To: FS-ASNF Planning
Subject: REPLACES AND SUPERSEDES - Eastern Arizona Counties Organization comments on the A/S Forest Plan PDEIS
Date: Friday, May 17, 2013 11:46:51 PM
Attachments: image001.png
ECO comments on the A-S Land Management Plan PDEIS 5-15-13.pdf

Dear Responsible Official;
Please find attached for your consideration AN UPDATED VERSION of the Eastern Arizona Counties Organization comments on the A/S Forest Plan PDEIS, including PAGE NUMBERING AND VARIOUS EDITS.
This document REPLACES AND SUPERSEDES the document sent previously.
Sincerely

Pascal Berlioux, Ph.D. MBA
Executive Director
Eastern Arizona Counties Organization
550 N. 9th Place
Show Low, AZ 85901
pberlioux@easternarizonacounties.us
Cell: (928) 637 3037

Eastern Arizona Counties Organization
Economy - Ecology
Land - People - Future

From: Pascal Berlioux [mailto:pberlioux@easternarizonacounties.us]
Sent: Thursday, May 16, 2013 7:12 PM
To: 'asnf.planning@fs.fed.us'
Subject: Eastern Arizona Counties Organization comments on the A/S Forest Plan PDEIS

Dear Responsible Official;
Please find attached for your consideration the Eastern Arizona Counties Organization comments on the A/S Forest Plan PDEIS.
Sincerely

Pascal Berlioux, Ph.D. MBA
Executive Director
Eastern Arizona Counties Organization
550 N. 9th Place
Show Low, AZ 85901
pberlioux@easternarizonacounties.us
Cell: (928) 637 3037

Eastern Arizona Counties Organization
Economy - Ecology
Land - People - Future

Ltr#0040

Eastern Arizona Counties Organization
Economy - Ecology
Land - People - Future

May 15, 2013

Apache-Sitgreaves National Forests - Plan Revision Team
P.O. Box 640
Springerville, AZ 85938

Electronic filing: asnf.planning@fs.fed.us

File Code: Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Re: Eastern Arizona Counties Organization comments on the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Dear Responsible Official,

The Eastern Arizona Counties Organization would like to offer comments on the above referenced proposed project.

PART 1 - EASTERN ARIZONA COUNTIES ORGANIZATION OBJECTIVES AS EXPRESSED IN ITS PLANS, POLICIES AND FOUNDING DOCUMENTS

EASTERN ARIZONA COUNTIES ORGANIZATION

The Eastern Arizona Counties Organization is a local government organization created in 1993 by joint resolutions of the Boards of Supervisors and an Intergovernmental Agreement (IGA) between the Counties of Apache, Gila, Graham, Greenlee and Navajo to implement Presidential Executive Order 12372 (P.E.O. 12372) *Intergovernmental Review of Federal Programs* related to the clearinghouse process for review of Federal programs which affect the custom, cultures and economic well-being of the Counties. Following the Arizona Governor Executive Orders 90-21 and 83-6 the *Policies and Procedures for Arizona's Review Process in Compliance with Presidential Executive Order 12372* were established, and Apache, Gila, Graham, Greenlee and Navajo Counties regrouped in the Eastern Arizona Counties Organization were designated as County Official Reviewers (COR) for the explicate review of direct federal projects for the U.S . Department of Agriculture and its respective agencies which include the Forest Service, Soil Conservation Service and Farmers Home Administration, U.S. Department of the

Interior and its respective agencies which include the Bureau of Land Management, National Park Service and U.S. Fish and Wildlife Service affecting their areas. For 20 years since its creation, the Eastern Arizona Counties Organization has been representing the custom, culture, health, safety and economic well-being needs of its county members' residents and visitors with Federal and State agencies engaging in Federal and State projects addressing a broad range of issues, with an emphasis on natural resources management issues.

The five counties of the Eastern Arizona Counties Organization: Apache, Gila, Graham, Greenlee and Navajo Counties (the Counties), are located in eastern Arizona along and beneath the Mogollon Rim that marks the southern edge of the Colorado plateau. Seven characteristics of the five counties of the Eastern Arizona Counties Organization are particularly relevant to the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan:

1) The large number of National Forests located in the Counties: Coconino National Forest, Apache National Forest, Sitgreaves National Forest, Tonto National Forest, Prescott National Forest and Coronado National Forest.

2) The overwhelmingly large proportion of the land area of the Eastern Arizona Counties Organization being designated as national forests, federal, state or tribal land, and/or under federal or state management.
   - In Apache County the Federal agencies control 11% of the land; Tribal Authorities and the Bureau of Indian Affairs 67%; the State of Arizona 9%; and, individual or corporate ownership only 13%.
   - In Gila County the Federal agencies control 55% of the land; Tribal Authorities and the Bureau of Indian Affairs 40%; the State of Arizona 1%; and, individual or corporate ownership only 4%.
   - In Graham County Federal agencies control 38% of the land; Tribal Authorities and the Bureau of Indian Affairs 36%; the State of Arizona 16%; and, individual or corporate ownership only 10%.
   - In Greenlee County Federal agencies control 77% of the land; the State of Arizona 15%; and, individual or corporate ownership only 8%.
   - In Navajo County Federal agencies control 9% of the land; Tribal Authorities and the Bureau of Indian Affairs 67%; the State of Arizona 6%; and, individual or corporate ownership only 18%.

3) The disproportionately large impact that landscape scale catastrophic wildfires in the national forests of the Southwest have had on the ecological, social and economic life of the Counties and neighboring eastern Arizona counties. Four of the five largest wildfires in Arizona, including two of the largest wildfires in the nation, have occurred within the five counties of the Eastern Arizona Counties Organization in the last decade: the Rodeo Chediski Fire of 2002 that consumed 460,000 acres; the Willow Fire of 2004 that burned 120,000 acre; the Cave Creek Complex Fire of 2005 that blazed through 244,000 acres and the Wallow Fire of 2011 that charred 538,000 acres.

4) The disproportionately large impact that outdoor recreational activities conducted on national forests lands, such as, but not limited to, dispersed camping, cross-country motorized travel, big game hunting, dispersed shooting, dispersed fishing or hiking, etc. by local residents of and visitors to the Counties recreating from metro Arizona to the Rim Country, have on the economic well-being and the economic development of the Counties.

5) The steady reliance of the Counties residents on firewood cutting and gathering permits, and dispersed firewood access in the local national forests for meeting their energy needs.

6) The outstanding and continued requirement for and commitment by the Counties to proactively participate, and assume leadership roles, in forest and watershed restoration and wildfire prevention and mitigation efforts at local and landscape scales, such as the White Mountain Stewardship Project and the Four Forest Restoration Initiative that the Counties have been instrumental in creating and fostering.

As such, the Eastern Arizona Counties Organization has a special interest in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan.

While the Eastern Arizona Counties Organization recognizes that it is only one of the many constituents of the U.S. Forest Service, and does not seek special consideration in the current comments and review process, we urge the Responsible Official to pay careful attention and give due consideration to the following comments in view of the uncommonly large effect that Forest Service land management decisions regularly have directly, or may occasionally have indirectly, on the Counties residents or visitors enjoyment, custom, culture, health, safety and economic well-being.

The Eastern Arizona Counties Organization is actively involved, and assumes a leadership role, in several forest restoration efforts directly involving the Apache-Sitgreaves National Forests, and has gained considerable experience working with the Forest Service. The Eastern Arizona Counties Organization, therefore, understands particularly well the issues at hand, the management processes engaged, the desired future conditions, and the difficulties and challenges involved. The Eastern Arizona Counties Organization appreciates fully the Apache-Sitgreaves National Forests' intent to ensure an adaptive land management planning process that is inclusive, efficient, collaborative and science-based to promote healthy, resilient, diverse and productive national forests and grasslands; to support natural resources-based rural economic development and employment; and, to ensure the enjoyment of the Apache-Sitgreaves National Forests by current and future generations in a balanced approach of preservation, conservation and sustainable exploitation of the natural resources.

In a spirit of continuous improvement, and based on direct practitioner knowledge and experience gained through a uniquely long, diverse, often productive and sometimes difficult participation in the Forest Service planning and implementation processes, the Eastern Arizona Counties Organization would like to share its comments, its appreciation for the obvious work put into the Apache-Sitgreaves National Forests Land Management Plan and its Programmatic Draft Environmental Impact Statement, and its concerns and suggestions as follows.

PRELIMINARY COMMENT

The Eastern Arizona Counties Organization would like to preface any subsequent comment by the observation that the quality and thoroughness of the work exhibited in both the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan and the Proposed Land Management Plan for the Apache-Sitgreaves National Forests is outstanding. The Eastern Arizona Counties Organization is fully conscious of the fact that an enormous commitment was made and delivered upon by the Apache-Sitgreaves National Forests Land Management Plan team, and that a legitimate pride of ownership must rest with the authors of the above mentioned documents, as well as the Specialist Reports and other documents not published with the Programmatic Draft

Environmental Impact Statement or the Land Management Plan but nonetheless part of the project record.

The Eastern Arizona Counties Organization urges the Apache-Sitgreaves National Forests Land Management Plan team to consider the Counties comments NOT as a critic of their work, but rather as a goodwill effort toward continuous improvement of both the Programmatic Draft Environmental Impact Statement and the Land Management Plan, and a proactive effort by the Counties to disclose its objectives, plans and policies AND THE RATIONALES THAT SUPPORT THEM, and to facilitate the statutorily required consistency review, coordination action and conflict reduction regarding potential discrepancies between the Apache-Sitgreaves National Forests Land Management Plan and the Counties objectives as expressed in its plans and policies and as discussed in this document.

ASSESSMENT & LAND MANAGEMENT PLAN
ROLE OF THE EASTERN ARIZONA COUNTIES ORGANIZATION

The Eastern Arizona Counties Organization recognizes that the Assessment and Land Management Plan development are Forest Service-driven technical processes, and the Eastern Arizona Counties Organization generally supports the analysis mechanisms deployed by the Apache-Sitgreaves National Forests to complete the assessment and the technical part of the management planning.

Although the Eastern Arizona Counties Organization and the Counties retain and employ many talented individuals at the peak of the knowledge curve in their respective fields, the Eastern Arizona Counties Organization does not generally define its role in the public lands management process as a role of science provider or resources technical specialist. Rather, as a body representing the most direct and local expression of democratic government at the individual district or national forest level, the Eastern Arizona Counties Organization more generally defines its role at the policy-making level as it relates to public lands management processes.

Therefore, although several of the following comments organized under the following headers do apply to the assessment and land management plan development processes, they purposefully do not address specific technical mechanisms thereof, and the Eastern Arizona Counties Organization is generally satisfied that the USFS methodology is generally satisfactory, and that the studies that the Apache-Sitgreaves National Forests, in their expertise deem reliable, are adequate to support the Apache-Sitgreaves National Forests technical conclusions {Lands Council v. McNair 537 F.3d 981 - 9th Cir. 2008}.

The Eastern Arizona Counties Organization will, therefore, focus its engagement in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan process, and its comments and suggestions, at the policy-making level and on whether the proposed Apache-Sitgreaves National Forests Land Management Plan serves the Counties residents' or visitor's enjoyment, custom, culture, health, safety and economic well-being. The Eastern Arizona Counties Organization will further focus its engagement on whether the proposed Apache-Sitgreaves National Forests Land Management Plan contributes to the objectives of the Counties as expressed in its plans and policies; on how the proposed Apache-Sitgreaves National Forests Land Management Plan impacts related planning efforts by the Counties; and on the compatibility with and interrelated impacts of the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization plans and policies.

COORDINATION BETWEEN THE APACHE-SITGREAVES NATIONAL FORESTS LAND MANAGEMENT PLAN AND THE EASTERN ARIZONA COUNTIES ORGANIZATION OBJECTIVES, PLANS AND POLICIES

Per the requirements contained in the 2012 Planning Rule, Title 36 — *Parks, Forests, And Public Property*, Part 219 — *Planning*, Subpart A — *National Forest System Land Management Planning*, Section 4 - *Requirements for public participation*, sub section (b) *Coordination with other public planning efforts*, the Eastern Arizona Counties Organization expects that: "The responsible official shall coordinate land management planning with the equivalent and related planning efforts of federally recognized Indian Tribes, Alaska Native Corporations, other Federal agencies, and State and local governments" (36 CFR 219.4 (b)(1)).

The Eastern Arizona Counties Organization further expects that: "The results of this review shall be displayed in the environmental impact statement (EIS) for the plan", and that "this review shall include consideration of: (i) The objectives of federally recognized Indian Tribes, Alaska Native Corporations, other Federal agencies, and State and local governments, as expressed in their plans and policies; (ii) The compatibility and interrelated impacts of these plans and policies; (iii) Opportunities for the plan to address the impacts identified or to contribute to joint objectives; and, (iv) Opportunities to resolve or reduce conflicts, within the context of developing the plan's desired conditions or objectives" (36 CFR 219.4 (b)(2)).

The Eastern Arizona Counties Organization posits that these statutory requirements are meant by the US Congress to imply more than a perfunctory review process resulting in a check mark in a 'coordination box' and imply a sincere and proactive resolution effort to reduce and resolve potential conflicts between aspects of the Apache-Sitgreaves National Forests Land Management Plan and objectives expressed in the Counties plans and policies such as, but not limited to, those relevant to motorized big game retrieval, dispersed motorized camping and the reasonable allowance of motorized travel in and motorized access to the Apache-Sitgreaves National Forests, or those relevant to the unique rural economic development and employment role resting on natural resources such timber, grazing or mineral resources located within the Apache-Sitgreaves National Forests.

EASTERN ARIZONA COUNTIES ORGANIZATION REQUEST FOR COOPERATING AGENCY STATUS

The Eastern Arizona Counties Organization is committed to resolve or reduce potential conflicts between the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization plans and policies, and understands that such resolution must take place within the context of developing the Apache-Sitgreaves National Forests Land Management Plan's desired conditions or objectives.

To this effect, it is the intent of the Eastern Arizona Counties Organization to avail itself of the opportunity contained in the 2012 Planning Rule that specifies that: "Where appropriate, the responsible official shall encourage States, counties, and other local governments to seek cooperating agency status in the NEPA process for development, amendment, or revision of a plan" (36 CFR 219.4 (a)(1)(iv)).

EASTERN ARIZONA COUNTIES ORGANIZATION OBJECTIVES AS EXPRESSED IN ITS PLANS AND POLICIES

EASTERN ARIZONA COUNTIES ORGANIZATION PLAN

The Eastern Arizona Counties Organization policy making decisions and management actions are guided by the Eastern Arizona Counties Organization long term plan. This plan guides the actions of the Board of Directors and staff toward meeting the present and future enjoyment, custom, culture, health, safety and economic well-being needs of the Counties residents or visitors. The Eastern Arizona Counties Organization planning effort integrates the principles of:

1) Monitoring the effects and impacts of the implementation of the Counties policies, as well as the direct, indirect, individual and cumulative effects and impacts on the Counties and its residents and visitors of the policy decisions and management actions taken by state and federal agency partners;
2) Monitoring all relevant demographic, social, economic, cultural and other variables, whether internal or external, which are relevant to the County policy making decisions and management actions; and,
3) Dynamic and generally informal adaptive management.

As such, the Eastern Arizona Counties Organization plan is an ever evolving dynamic plan that constantly adapts, often informally, in response to the evolving ecological, economic, social and cultural environment, and it is formulated as much through the regular deliberations of the Eastern Arizona Counties Organization Board of Supervisors and the resulting resolutions of the Board as it is in the formal planning documents.

For the purpose of compliance with the statutory requirements of coordination between the Apache-Sitgreaves National Forests land management plan and the Eastern Arizona Counties Organization's objectives as expressed in its plans and policies (36 CFR 219.4 (b)), the Eastern Arizona Counties Organization plan, defined as the accumulation of the formal Eastern Arizona Counties Organization planning documents AND the Eastern Arizona Counties Organization public record of Board of Directors deliberations and decisions, is hereby entered into the Apache-Sitgreaves National Forests Land Management Plan NEPA record.

EASTERN ARIZONA COUNTIES ORGANIZATION OBJECTIVES RELATING TO THE APACHE-SITGREAVES NATIONAL FORESTS LAND MANAGEMENT PLAN

The Eastern Arizona Counties Organization appreciates and supports the extensive and thorough analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team for this Programmatic Draft Environmental Impact Statement, and the discussion of the effects of the no action alternative and the three action alternatives on the following resources: air; soil; watershed; water resources; riparian; fisheries; vegetation; forest health; fire; wildlife and rare plants; nonnative species; recreation; infrastructure; wild and scenic rivers; inventoried roadless areas; wilderness resources; research natural areas; scenic resources; lands and special uses; cultural resources; Indian rights and interests; forest products; livestock grazing; minerals and energy; and, socioeconomic resources.

In the interest of conciseness, and considering that multiple resources analyzed individually by the Apache-Sitgreaves National Forests Land Management Plan team in the Programmatic Draft Environmental Impact Statement are regrouped in a smaller number of overarching natural resources management policy objectives for the Eastern Arizona Counties Organization, the Counties analysis and comments will be focused on seven sets of natural resources management objectives critical to the Counties and relevant to these comments.

In no particular order, the seven sets of natural resources management objectives relevant to these comments are:

1) Rangelands Resources Management Objectives
   Rangelands Resources Management Objectives address issues such as, but are not limited to, grazing availability, suitability, sustainability; ecological, economic and social carrying capacity; access; contribution to rural economic development; and, contribution to local Western custom and culture.

2) Forest Products Resources Management Objectives
   Forest Products Management Resources Objectives address issues such as, but are not limited to, logging availability, suitability, sustainability, productivity, access; contribution to rural economic development; and, contribution to rural Western custom and culture.

3) Mineral and Energy Resources Management Objectives
   Mineral and Energy Resources Management Objectives address issues such as, but are not limited to, the availability, suitability, sustainability, productivity, access, and contribution to rural economic development of (a) solid, liquid or gaseous mineral resources and (b) solar, wind, hydropower, geothermal and other natural renewable energy resources.

4) Motorized Travel and Recreation Management Objectives
   Motorized Travel And Recreation Management Objectives address issues such as, but are not limited to, motorized access; motorized travel; motorized big game retrieval; motorized dispersed camping; motorized gathering of firewood; motorized access to dispersed fishing; motorized recreation opportunities; inventoried roadless areas; wilderness area designation; motorized access to grazing and logging opportunities; contribution of motorized access, recreation and travel to rural economic development; and, contribution to local Western custom and culture.

5) Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives
   Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives address issues such as, but are not limited to, protection of Counties residents and visitors; protection of collective and individual real properties; protection of transportation, energy and water collection and distribution infrastructures; ecological restoration of forested ecosystems; local scale restoration projects; landscape scale restoration projects; social license required for the non-conflictual and non-litigious implementation of restoration efforts (such as the one requested in public statements by former USFS Southwestern Regional Forester Corbin Newman for the Four Forest Restoration Initiative); industry development required to implement and fund restoration efforts through economically viable utilization of the wood products; and, long term guarantees of wood supply necessary to attract private investments in a small diameter utilization infrastructure in northeastern Arizona.

6) Watersheds Restoration Objectives
   Watershed Restoration Objectives address issues such as, but are not limited to, ecological restoration of watersheds; protection and development of water collection and distribution infrastructures; monetization of watershed ecosystem services; downstream consumption contribution to upstream production investments and maintenance; and, interactions between watershed functions and multiple use functions.

7) Management Areas Designation Objectives
Management Areas Designation Objectives address issues such as, but are not limited to, the nomination, designation, and management of (a) inventoried roadless areas (which are technically not management areas *per se* but are an administrative designation) and (b) wilderness areas, primitive areas, research natural areas, wildlife quiet areas, and wild and scenic rivers; and, effects on socioeconomic resources and impacts on the other County objectives.

These seven sets of natural resources management objectives critical to the Eastern Arizona Counties Organization and the Counties and relevant to these comments overlap considerably with the five "issues that served as the basis for alternatives development strategy" (PDEIS, page 11) in the Apache-Sitgreaves National Forests Land Management Plan:

1)	Strategy for Restoring Vegetation	>>>>	Forests & watersheds restoration
2)	Amount of Wildlife Quiet Areas	>>>>}	Management areas designation &
3)	Amount of Wilderness	>>>>}	multiple objectives
4)	Type and Amount of Recreation Opportunities	>>>>	Motorized recreation and travel
5)	Availability of Wood Products	>>>>	Forest products / rangelands / minerals
	(PDEIS, page 11)		(Counties objectives)

The Eastern Arizona Counties Organization will, therefore, format comments articulated around the seven sets of natural resources management objectives critical to the Counties and relevant to these comments, with the understanding that the seven sets of objectives match closely the five issues that served for the development of alternatives in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan.

For the purpose of compliance with the statutory requirements of coordination between the Apache-Sitgreaves National Forests land management plan and the Eastern Arizona Counties Organization objectives as expressed in its plans and policies (36 CFR 219.4 (b)), this document: *Eastern Arizona Counties Organization Comments On The Programmatic Draft Environmental Impact Statement For The Apache-Sitgreaves National Forests Land Management Plan* is hereby incorporated in the Counties expressed plans and policies.

The Eastern Arizona Counties Organization, therefore, expects that: i) the Responsible Official shall coordinate land management planning with the Eastern Arizona Counties Organization's equivalent and related planning efforts (36 CFR 219.4 (b)(1)); ii) the consistency review and coordination action shall include consideration of the objectives of the Eastern Arizona Counties Organization as expressed in its plans and policies (including the formal Eastern Arizona Counties Organization planning documents, the Eastern Arizona Counties Organization public record of Board of Directors deliberations and decisions, and the Eastern Arizona Counties Organization Comments On The Programmatic Draft Environmental Impact Statement For The Apache-Sitgreaves National Forests Land Management Plan); and, iii) the Responsible Official shall consider opportunities to resolve or reduce conflicts, should some arise between the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization plans (36 CFR 219.4 (b)(2)).

REQUEST FOR DISCLOSURE OF CONSISTENCY REVIEW AND COORDINATION ACTIONS

Per the requirements of 36 CFR 219.4 (b)(2), 40 CFR 1502.16(c) and 40 CFR 1506.2 the Eastern Arizona Counties Organization hereby requests that the results of the consistency review and coordination

actions between the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization objectives as expressed in its plans and policies shall be displayed in the Programmatic Environmental Impact Statement For The Apache-Sitgreaves National Forests Land Management Plan.

PART 2 – GAP ANALYSIS AND SUGGESTED CORRECTIVE ACTIONS FOR THE PROGRAMMATIC FINAL ENVIRONMENTAL IMPACT STATEMENT

As previously noted, although the Eastern Arizona Counties Organization and the Counties retain and employ many talented individuals at the peak of the knowledge curve in their respective fields, the Eastern Arizona Counties Organization does not generally define its role in the public lands management process as a role of science provider or resources technical specialist. Rather, as a body representing the most direct and local expression of democratic government at the individual district or national forest level, the Eastern Arizona Counties Organization more generally defines its role at the policy-making level as it relates to public lands management processes. The Eastern Arizona Counties Organization certainly intends to produce very action-specific comments when NEPA analyses of specific management actions implementing the Apache-Sitgreaves National Forests Land Management Plan are subsequently offered for public comments, but in its current comments on the Programmatic Environmental Impact Statement For The Apache-Sitgreaves National Forests Land Management Plan, the Eastern Arizona Counties Organization believes that it is appropriate to comment at the programmatic level, from a Forest Service perspective, and at the objectives level, from a Counties policy perspective.

RANGELANDS RESOURCES MANAGEMENT OBJECTIVES

The Eastern Arizona Counties Organization understands that the 1982 and 2012 Planning Rules require that the capability and suitability for producing forage for grazing animals on national forests lands be determined, and that the capability for producing forage for grazing animals is defined as the potential of an area of land to produce forage depending upon current conditions and site conditions such as climate, slope, landform, soil chemistry, physics and biology, geology, disturbances such as natural fire, etc., as well as the application of management practices. The Eastern Arizona Counties Organization therefore understands and appreciates that the FUNDAMENTAL capability of the lands on the Apache-Sitgreaves National Forests to produce forage for grazing animals, as determined in the 1980s during the first round of forest planning, has not changed significantly since this first evaluation.

Land suitability analysis

In view of the above, the Eastern Arizona Counties Organization understands why: "the criteria for suitability for livestock grazing would be the same in all action alternatives," why such criteria are "very similar to the existing direction (Alternative A) under the 1987 plan," and why "the acres suitable for livestock grazing in the action alternatives would be very similar" (PDEIS, page 451).

Simultaneously, the Eastern Arizona Counties Organization believes that rangelands resources in the West in general, in the Southwest in particular, and in the national forests of Arizona specifically, are under unprecedented stress as a function of landscape scale uncharacteristic disturbances such as catastrophic wildfires, the cumulative effects of decades of management practices on lands classified as rangelands, forestlands and timberlands, and other stressors, as well as a possible climate warming trend, whether caused by human activities or by cyclical natural variations as have occurred naturally

and repeatedly in the historical, pre-historical and geological record for millenniums predating the industrial age and even the existence of the human species. The Eastern Arizona Counties Organization therefore supports the designation of appropriate size Recommended Research Natural Areas, considered not suitable for grazing, in order to improve rangeland resources management science and practice.

Consequently, the Eastern Arizona Counties Organization supports the minimal reduction of the acreage deemed suitable as rangelands from 1.93 million acres in the current classification (Alternative A – the no action alternative) to 1.9 million acres in all action alternatives (Alternatives B, C and D) (PDEIS p. 451), provided that the research conducted on the Research Natural Areas removed from suitable grazing lands is designed to quantify and improve the understanding of the ecosystem processes unfolding on these rangelands and how they relate to improved management practices.

Eastern Arizona Counties Organization Rangelands Resources Management Objectives

The Eastern Arizona Counties Organization Rangelands Resources Objectives for the upcoming planning cycle include, among others:

1) Restore encroached grasslands, including the most departed semi-desert, Great Basin, and montane subalpine grasslands that have been invaded by trees (subalpine grasslands) and shrubs (semi desert and Great Basin grasslands) by removing trees and shrubs where economically feasible, promoting a mixture of native perennial grass species, implementing the periodic prescriptive use of mixed classes of livestock matching animal feeding habits with specific plant material, and reintroducing a regime of cool surface fires in order to reduce trees and shrubs colonization and erosion hazards, and to increase livestock forage production.

2) Adopt management practices that discourage the establishment of nonnative species and eradicate invasive weed species that have little to no forage value, recognizing the fact that the ecological or economic consequences of different exotic species are not all the same, and that the persistence of some nonnative species that are not necessarily undesirable or controllable, such as Kentucky bluegrass or Bermuda grass, may be beneficial from a socioeconomic perspective and a balanced management for multiple resource objectives.

3) Allocate grass reserves on an allotment-by-allotment basis through proper range management, rather than on a district-by-district basis, which requires additional financial considerations for improvement maintenance.

4) Shift the grassland management process from the concept of balancing livestock grazing with available forage (PDEIS p. 451) – which only addresses stocking rate, toward the concept of managing the intensity, frequency, seasonality, duration and classes of livestock grazing to accomplish the rangelands resources management objectives.

5) Emphasize adaptive management of the rangelands using a three tier rangelands resources management monitoring approach of quantitative monitoring using standard measurements such as stocking rate, ground cover, etc.; qualitative monitoring using measurements such as species composition, age, nutritional value, etc.; and, effectiveness monitoring using outcome measurements such as range health, soil water holding capacity, soil organic content, livestock weight gain, presence of wildlife indicator species, etc., in order to measure whether the management actions produce the site specific and cumulative direct and indirect effects expected.

6) Integrate the scientific research and implement the science-based recommendations developed by rangelands resources management peer-reviewed expert scientists such as Allan Savory of the Savory Institute; Steve Rich of the Rangeland Restoration Academy; Eric Schwennesen of Resource Management International; Dr. Lamar Smith, Associate Professor Emeritus at the University of Arizona; Dr. Jerry Holechek, Professor at New Mexico State University; and Dr. J. Wayne Burkhardt, Professor Emeritus at University of Nevada, Reno.

7) Support the efforts and the agenda of the Arizona Grazing Lands Conservation Association as follows:
   - Promoting voluntary approaches for the management of grazing lands;
   - Promoting respect of private property rights;
   - Strengthening partnerships between grazing lands managers and others who support the purposes of the Association;
   - Increasing economic, environmental, and social stability on grazing lands;
   - Increasing the information base from which to make sound policy and management decisions on grazing lands;
   - Closing the gap between availability of knowledge and application of said knowledge on grazing lands;
   - Enhancing the rancher's ability to achieve greater profitability on an ecologically sound and sustainable basis; and,
   - Educating the public through the dissemination of scientific knowledge on the conservation and management of grazing lands in Arizona.

8) Preserve the contributions of the rangelands resources to the rural economic development of the Arizona counties at a minimum at the current level of approximately 66 jobs and $713,000 in labor income annually, and double this contribution to the approximately 120 jobs and $1.3 million in labor income annually that can be supported by the full utilization of the available animal unit months (AUMs).

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization objectives, plans and policies

All Alternatives – rangelands restoration

Because very few grassland areas would be treated in Alternative A, the no action alternative, and in Alternative C, averaging around 500 acres per year (PDEIS p. 19 & 23), and, conversely, up to 25,000 acres per year of grasslands (primarily the Great Basin and semi-desert types) would be treated in Alternative B, the Preferred Alternative, and Alternative D, to remove encroaching woody species (PDEIS p. 21 & 25), the Eastern Arizona Counties Organization is supportive of Alternative B relating to rangelands restoration.

All Alternatives - rangelands resources management

However, because in essence all the alternatives (Alternative A – no action, and all the action alternatives – Alternatives B, C and D) are substantially the same relating to rangelands resources management, the Eastern Arizona Counties Organization believes that there is no real benefit in comparing the alternatives in detailed comments.

Rather, the Eastern Arizona Counties Organization believes that it may be more productive to address what are, in the Eastern Arizona Counties Organization's analysis, shortcomings in all three action alternatives (Alternatives B, C and D) relating to rangelands resource management, as follows:

- The Eastern Arizona Counties Organization is substantially more concerned with the underpinning of the rangelands management guiding principles than with the technical specifics of individual management actions. As expressed in the writing of Dr. Smith (2010) on behalf of the Arizona Grazing Lands Conservation Association, the "vegetation, soils, wildlife and other factors that existed at the time of Anglo American settlement were the result of is history (climate, fire frequency, etc.), including the influences of native Americans, up to that time. This has all been altered and the vegetation, soils and wildlife have responded to the changes that have occurred, not only in the management applied to it by Anglo Americans but by changes in climate, soil erosion, introductions of new species, and extinction of some original species. In some cases the changes have been marked (e.g. in conversion of some grasslands to shrublands) and in some cases they have been fairly minor (e.g. mountain grasslands or chaparral). All the action alternatives share a common goal of 'restoration' of 'historical' conditions, which are considered the only condition which is 'sustainable,' and an approach which considers any economic production from the forest as incidental to that goal. We believe that this goal is based on questionable scientific assumptions and, in any case, does not provide due consideration for sustainable multiple uses and economic benefits from the forest."

- The Eastern Arizona Counties Organization believes that the concepts of ecological maintenance guiding Alternative A, and the ecological restoration concepts guiding Alternatives B, C and D, relating to rangelands resources management, are not sufficiently specific for establishing scientific principles of rangelands resources management in a Programmatic Environmental Impact Statement, even though some specifics may be considered in the Range Specialist Report. The Eastern Arizona Counties Organization believes that the rangelands resources management process needs to be modified to include:
  I. Maximum management flexibility in terms of seasonal use, any use at all, numbers of livestock, classes of livestock, mixed combination of classes of livestock, intensity of grazing, duration of grazing, use of livestock as a prescription management tool through herding, attracting, temporary fencing, etc., matching livestock classes with desired outcome, etc.;
  II. Real time three tier rangelands resources management quantitative monitoring using standard measurements such as stocking rate, ground cover, etc.; qualitative monitoring using measurements such as species composition, age, nutritional value, etc.; and, effectiveness monitoring using outcome measurements such as range health, soil water holding capacity, soil organic content, livestock weight gain, presence of wildlife indicator species, etc.;
  III. Dynamic real time adaptive management allowing the permittees to make required management adjustments on their own initiative in response to short-term variables such as seasonable precipitations, temperature, unexpected events, or any combination thereof.

- The Eastern Arizona Counties Organization observes that the entire discussion on monitoring strategy, aside from the incidental use of the word 'monitoring' in various other contexts, in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan occupies the whole of 2 lines: "All action alternatives include the same monitoring strategy as identified in chapter 5 of the proposed plan" (PDEIS p. 28) in the 681 page document. The Eastern Arizona Counties Organization further observes that the

Monitoring Strategy in the Apache-Sitgreaves National Forests Land Management Plan is only a brief 1 page discussion of monitoring in general terms along with a 3 page table of planned monitoring questions, monitoring methods, units of measure, and frequency of measurements (p. 135 – 139) in a 283 page document.

- The Eastern Arizona Counties Organization further observes that there are only 14 instances of the use of the words 'adaptive management' in the entire Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, and that there are a grand total of 17 lines dedicated to the discussion in very general terms, of adaptive management in the 681 page document (PDEIS p. 43-44). The Eastern Arizona Counties Organization further observes that are only 7 instances of the use of the words 'adaptive management' in the 283 page Apache-Sitgreaves National Forests Land Management Plan itself.

- The Eastern Arizona Counties Organization is concerned that the scarce mentions of monitoring and adaptive management in the Programmatic Draft Environmental Impact Statement and the Apache-Sitgreaves National Forests Land Management Plan may reflect an insufficient role for monitoring and adaptive management in the current planning process. This would be in contradiction with the requirement of the 2012 national Planning Rule and its proposed implementation directives.

- Conversely, in the absence of true adaptive management, the Eastern Arizona Counties Organization believes that specific guidelines regarding the timing, intensity, classes and duration of grazing, with consideration for the needs of other forest resources management, should be included in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, as well as a restocking plan for all vacant allotments, unless livestock grazing on such allotments can be shown to be incompatible with rangelands resources management purposes and needs.

- The Eastern Arizona Counties Organization fully appreciates the rich socio-economic presentation provided in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan (PDEIS p. 468 – 485), the brief economic impact analysis (PDEIS p. 485 – 489), and social consequences analysis (PDEIS p. 489 – 491) also provided. However, the Eastern Arizona Counties Organization believes that the economic impact analysis provided by the Apache-Sitgreaves National Forests Land Management Plan team is heavily biased toward demonstrating the favorable economic impact of grazing on public land allotments on the permittees' profitability. While focusing on the benefits provided is laudable, the Eastern Arizona Counties Organization also believes that a more complete analysis needs to include a calculation of the economic costs of the constraints imposed on the permittees by the rigidity of the current rangelands resources management agency administrative processes that considerably limit the ability of the permittees to optimally manage the land and the livestock.

- Finally, the Eastern Arizona Counties Organization is concerned that, in the Apache-Sitgreaves National Forests Land Management Plan team's own analysis, the current level of economic contribution of approximately 66 jobs and $713,000 in labor income annually is only approximately half of the estimated 120 jobs and $1.3 million in labor income annually that can be supported by the full utilization of the available animal unit months (AUMs) (PDEIS p. 491).

Requested and Suggested Corrective Actions for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

The Eastern Arizona Counties Organization therefore respectfully requests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan designate the new proposed Research Natural Areas removed from suitable rangelands for the specific purpose of quantifying and improving the understanding of the rangelands resources ecosystem processes and how they relate to improved management practices.

The Eastern Arizona Counties Organization further respectfully requests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include up to 25,000 acres per year of grasslands restoration (primarily the Great Basin and semi-desert types) to remove encroaching woody species as identified in Alternative B.

The Eastern Arizona Counties Organization also respectfully requests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include a specific plan under conventional management to reach full utilization of the available animal unit months and to realize the full economic impact of approximately 120 jobs and $1.3 million in labor income annually.

The Eastern Arizona Counties Organization likewise respectfully suggests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include specific guidelines for a rangelands resources adaptive management plan that provides clear quantitative, qualitative and effectiveness monitoring requirements, and a more balanced approach between the goal of restoration and the goal of economic production, as the need for restoration in rangelands may not carry the same clear and present benefits as restoration in forestlands.

FOREST PRODUCTS RESOURCES MANAGEMENT OBJECTIVES

The Eastern Arizona Counties Organization appreciates and supports the extensive and thorough analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team on forest products, when addressing affected environment, lands tentatively suitable for timber production, allowable sale quantity (ASQ), long term sustained yield capacity (LTSYC), wood and tree products availability, forested / overgrown lands, deforested / early development lands, climate change considerations, and cumulative environmental consequences.

Circumstantial constraints and challenges for the Eastern Arizona Counties Organization AND the Apache-Sitgreaves National Forests planning efforts

The Eastern Arizona Counties Organization recognizes that the issues of forested ecosystem restoration and forest products management are fundamentally different, and are typically not discussed simultaneously in ecosystems non-departed or little departed from characteristic historical conditions. However, as the Forest Service and the Eastern Arizona Counties Organization both generally acknowledge, current conditions in the forested ecosystems, and especially in the ponderosa pine and dry or wet mixed conifers dominated forests of eastern Arizona, are considerably departed from historical conditions and at risk of continued uncharacteristic disturbances such as landscape scale catastrophic crown fires or insect infestations.

The Eastern Arizona Counties Organization acknowledges and appreciates the efforts endeavored by the Forest Service, and particularly the Apache-Sitgreaves National Forests, to pioneer larger scale restoration efforts such as the White Mountains Stewardship Project. The Eastern Arizona Counties Organization has been and continues to be supportive of the White Mountain Stewardship Project and of its funding, as a practical tool to initiate larger scale treatments and to incentivize the creation of a small diameter trees utilization infrastructure. Simultaneously, the Eastern Arizona Counties Organization acknowledges that the model of subsidized restoration treatments is not scalable at landscape scale, as is required to restore the forests of Arizona, for lack of agency funding. As proposed in the Four Forest Restoration Initiative, an initiative that the Eastern Arizona Counties Organization was instrumental in creating, fostering and developing, landscape scale forest ecological restoration appears currently feasible only if it is funded by the economically viable utilization of the forested byproducts of restoration by private industry. While relatively new to the discussion of ecological restoration funding, the concept of ecosystem service monetization is actually not a novation when it comes to forest products, as timber sales have for centuries been an established form of natural resources valuation and have funded the management of the resources.

As a consequence, the Eastern Arizona Counties Organization proposes that both the Counties and the Apache-Sitgreaves National Forests operate under very specific circumstantial constraints when it comes to forest products resources management, inasmuch as the forest products industry in Arizona is simultaneously an economic growth and a rural employment engine desperately, AND the funding mechanism for landscape scale restoration in eastern Arizona - BOTH of which are critical objectives for the Eastern Arizona Counties Organization, as well as stated priorities for the Apache-Sitgreaves National Forests.

The inherent circumstantial challenge faced by the Eastern Arizona Counties Organization and the Apache-Sitgreaves National Forests is that the priorities typically considered when managing forest products, such as a sustained yield of harvest volumes on a regulated non-declining even-flow basis for the long term, uneven age structures, long term sustained yield capacity (LTSYC), non-declining allowable sale quantity (ASQ), etc. are augmented and complicated by the overwhelming priority to complete landscape scale restoration as rapidly as possible for fear of massively disruptive landscape scale catastrophic crown fires and/or landscape scale insect infestations.

Owing to the fact that for the foreseeable future and for the next five decades of the planning cycle, green forest products will likely be byproducts of restoration treatments, and green forest products will likely continue to be at risk of destruction by catastrophic fires if landscape scale restoration is not expeditiously implemented, the Eastern Arizona Counties Organization suggests that forest products management actions for the upcoming planning cycle must be dictated not only by traditional silviculture science and best practices, but primarily by the absolute priority of implementing landscape scale restoration as expeditiously as possible using mechanical treatments that produce the forest products necessary to not only sustain the existing forest industry in the White Mountains, but to allow robust natural resources-based rural economic development through the creation of an entirely new infrastructure of small diameter trees utilization at industrial scale.

Eastern Arizona Counties Organization Forest Products Resources Objectives

The Eastern Arizona Counties Organization Forest Products Resources Objectives for the upcoming planning cycle therefore include, among others:

1) Create in eastern Arizona the wood supply conditions necessary for private industry investments in a new economically viable small diameter trees and residual biomass utilization infrastructure

capable of funding the initial ecological restoration thinning of at least 50,000 acres of ponderosa pine and/or mixed conifer dominated forests annually for the next 20 years, and then the maintenance of the desired future conditions in subsequent decades.

2) Sustain in the White Mountains the wood supply conditions necessary for the continued development and growth of the existing local industry, with expanded economically viable small diameter trees and residual biomass utilization facilities capable of funding the initial ecological restoration thinning of at least 15,000 acres of ponderosa pine and/or mixed conifer dominated forests annually for the next 20 years, then the maintenance of the desired future conditions in subsequent decades.

3) Wherever possible, prioritize forest byproducts treatments (mechanical treatments) funded by economically viable utilization, over non-byproducts treatments (fire as first entry thinning treatments) in order to create and sustain the wood supply necessary for a new era of forest products industry-based economic growth and employment in eastern Arizona with multiple industrial scale new investments.

4) Subordinate for as long as required in the upcoming planning cycle the scientific silviculture priorities and traditional forest products management methods for sustained yield of harvest volumes on a regulated non-declining even-flow basis for the long term, to the overriding priority of implementing as expeditiously as possible landscape scale restoration based primarily on mechanical treatments producing forest products (see *Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives*).

Land suitability analysis

The Eastern Arizona Counties Organization understands and appreciates the fact that the criteria for designation of suitable timberlands must incorporate ecological and economic realities that have evolved since the previous planning cycle. Specifically, the Eastern Arizona Counties Organization supports the removal from the suitability analysis of lands that have suffered irreversible soil resource damages during high intensity fires such as the Rodeo Chediski and Wallow fires (24,000 acres); lands that have experienced inadequate restocking post high intensity fires such as the Rodeo Chediski and Wallow fires (57,000 acres); and lands located on steep slopes (40% and more) where cable logging would be required but could not be made economically feasible owing to the limited harvestable forest products (up to 80,000 acres) (PDEIS p. 426 & 431).

Consequently, the Eastern Arizona Counties Organization supports the reduction of the acreage deemed suitable as timberlands from 765,000 acres in the current classification (Alternative A, the no action alternative) to approximately 600,000 acres (Alternatives B and C) (PDEIS p. 431).

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization objectives, plans and policies

Per the above remarks, considerable overlap currently exists and will continue to exist for the upcoming planning cycle between the issues of forest products resources management and forested ecosystems restoration and catastrophic wildfire prevention in the Apache-Sitgreaves National Forests. For the purpose of adhering to the classification of issues identified in the seven sets of natural resources management objectives critical to the Counties, the Eastern Arizona Counties Organization comments will address separately these two issues, with the understanding that a holistic approach to both the

Counties objectives and the Apache-Sitgreaves National Forests Land Management Plan needs to integrate and interweave these two, and other, issues.

Alternatives D and A

Based on the above, the Eastern Arizona Counties Organization wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

The Eastern Arizona Counties Organization understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and the Eastern Arizona Counties Organization acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, the Eastern Arizona Counties Organization cannot support an alternative that would result in, among others, the unavailability of ANY suitable timberland whatsoever in the Apache-Sitgreaves National Forests (PDEIS p. 430). This alternative is so departed from the White Mountains residents' past, current, and foreseeable future custom, culture and economic well-being needs, and from the Eastern Arizona Counties Organization Forest Products Resources Objectives, that it does not warrant any further discussion from the Counties perspective.

Similarly, the Eastern Arizona Counties Organization cannot support an alternative that would result in, among others, taking a 42 year gamble on the completion of the thinning of all forested overgrown lands (PDEIS p. 444) before another catastrophic forest fire on the scale of the Rodeo Chediski Fire or Wallow Fire hits the White Mountains again and renders all discussions of restoration moot. Alternative A, the no action alternative, is therefore so departed from the White Mountains residents' past, current, and foreseeable future health, security and economic well-being needs, and from the Eastern Arizona Counties Organization Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives, that it does not warrant any further discussion from the Counties perspective.

Alternative B

Because the Eastern Arizona Counties Organization believes that the forests of eastern Arizona are in a state of clear and present danger that must be addressed as an emergency by federal, state and local governments and their agencies, the Eastern Arizona Counties Organization does not favor Alternative B, the preferred alternative, relating to Forest Products, in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan.

Specifically, in the Apache-Sitgreaves National Forests' own analysis, under Alternative B it would require 34 years to thin all forested overgrown lands (PDEIS p. 444), and it would not even be possible to reduce the backlog of overgrowth to the desired level of long term sustained yield capacity (LTSYC) in the five decades of the planning cycle (PDEIS p. 440). This is clearly in contradiction with the Eastern Arizona Counties Organization overriding priority of implementing landscape scale restoration as expeditiously as possible.

Additionally, under Alternative B green forest products volume would be significantly reduced due to the extensive use of moderate and/or high severity fire to thin trees on forested lands during the planning period, including on some suitable timberlands (PDEIS p. 438). The maximum allowable sale quantity (ASQ) volume for Alternative B would be 122,000 CCF per year, barely exceeding the total harvest of 103,000 CCF in 2011 (PDEIS p. 438) and, therefore clearly insufficient to support the growth of the existing small local wood industry, and blatantly insufficient to support the expected requirements of the Four Forest Restoration Initiative second analysis area associated contract(s). Admittedly, under Alternative B the first decade could provide high volumes of non-ASQ wood products from treatments of

non-suitable timberlands in addition to the allowable sale quantity (ASQ) volume, but this could only happen as a function of focusing on restoring grasslands and other non-suitable timberlands (PDEIS p. 443), which may be a debatable priority.

This is clearly in contradiction with the Eastern Arizona Counties Organization objective of creating the wood supply conditions for private industry investments in a new economically viable small diameter trees and residual biomass utilization infrastructure capable of funding the initial ecological restoration thinning of at least 50,000 acres of ponderosa pine and/or mixed conifer dominated forests annually for the next 20 years. This is also clearly in contradiction with the Eastern Arizona Counties Organization objective of, wherever possible, prioritizing forest byproducts treatments (mechanical treatments) funded by economically viable utilization, over non-byproducts treatments (fire as first entry thinning treatments) in order to create and sustain the wood supply necessary for a new era of forest products industry-based economic growth and employment in eastern Arizona with multiple industrial scale new investments.

Alternative C

The Eastern Arizona Counties Organization appreciates and supports the realism of the Apache-Sitgreaves National Forests Land Management Plan team when stating: "the alternatives were realistically designed to reflect anticipated budgets and workforce capabilities" (DEIS p. 440). It is therefore not a criticism of the work produced by the Apache-Sitgreaves National Forests Land Management Plan team but a simple reality for the Eastern Arizona Counties Organization to observe that, as stated in the Apache-Sitgreaves National Forests' own analysis: "none of the alternatives would actually treat enough acres fast enough to fully reach desired conditions within the first 5 decades" (DEIS p. 440).

Alternative C clearly addresses more closely the Eastern Arizona Counties Organization Forest Products Resources Management Objectives. Under Alternative C it would require 'only' 23 years to thin all forested overgrown lands, as compared to 34 for Alternative B (PDEIS p. 444), and the maximum allowable sale quantity (ASQ) volume would be 268,000 CCF per year, more than twice the 122,000 CCF authorized under Alternative B (PDEIS p. 438). Under Alternative C, average annual mechanical treatments acres would rise to 24,000 acres as opposed to 20,000 acres in Alternative B, and burning as a thinning tool treatments would be reduced from 29,000 acres in Alternative B to 13,000 acres in Alternative C (PDEIS p. 430).

However, the Eastern Arizona Counties Organization is concerned by the prospective industry annual requirements expressed at the *Bridge the Gap* meeting held in Eagar on November 17, 2012 as follows:

- Existing pellet plant in Show Low: 40,000 CCF
- Existing saw mill in Heber: 15,000 CCF
- Existing sawmill in Eagar: 25,000 CCF
- New sawmill in Eagar: 65,000 CCF
- Power plant in Snowflake: 75,000 CCF
- Other small industries: 10,000 CCF
- Total existing industries: 230,000 CCF

In addition:

- Second analysis area of 4FRI associated contract(s): 215,000 CCF

Clearly, under Alternative C the requirements of EITHER the existing and developing industry OR the expected appropriate scale industry recently contracted and to be implemented under the Four Forest Restoration Initiative (4FRI) can be met, but NOT BOTH.

The Eastern Arizona Counties Organization fully understands and appreciates that a healthy amount of optimism is reflected in the requirements expressed by the existing and developing industry in the White Mountains, and that a healthy amount of skepticism can be logically derived from the difficulties of the 4FRI contractor to raise the capital necessary to execute their business plan. Nonetheless, consideration must be given to the steady growth of the existing industry and the possibility that the 4FRI contract may be executed by entities other than the current contractor, provided the Forest Service deems it to be in the best interest of the government to re-assign the contract at the request of the current contractor as the a result of a merger or acquisition.

The Eastern Arizona Counties Organization also fully understands and appreciates that trees cut from non suitable lands can also provide wood and tree products for local markets. However, as identified in the Apache-Sitgreaves National Forests analysis: "Cuts from non suitable lands may be a one-time entry, such as removing encroaching trees from grassland. Subsequent cuts may not be needed if desired conditions can be maintained with fire" (PDEIS p. 441). Therefore, even though the estimated annual wood product volumes potentially available to offer in the first decade from all lands, suitable timberlands and non-suitable lands, could be as high as 730,000 CCF, including non-industrial sizes and species (PDEIS p. 442), it is unrealistic to expect long term sustained contributions from non suitable lands to the availability of steady volumes of industrial forest products.

The Eastern Arizona Counties Organization is, therefore, concerned that the maximum legally allowable sale quantity (ASQ) volume identified in Alternative C may/will prove inadequate if/when the 4FRI contract is executed IN ADDITION to the requirements of the existing industry. Similarly, but at a lesser degree, the Eastern Arizona Counties Organization is also concerned that the maximum allowable sale quantity (ASQ) volume identified in Alternative C may prove a limiting factor for the continued long term growth of the existing industry, even without considering the 4FRI contract. This concern is increased by the projections that the Alternative C estimated annual ASQ volume will steadily decrease from 268,000 CCF in the first decade down to 178,000 CCF by the fifth decade of the planning cycle (PDEIS p. 439).

The Eastern Arizona Counties Organization realizes that the Apache-Sitgreaves National Forests team always has the option to initiate an Amendment to its Forest Land Management Plan, but questions whether it would not be more strategic to include in the upcoming Programmatic Final Environmental Impact Statement the analysis and subsequent legal authority for the Responsible Official to meet multiple resources objectives including a maximum allowable sale quantity (ASQ) volume of 450,000 CCF annually.

Requested and Suggested Corrective Actions for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

The Eastern Arizona Counties Organization respectfully requests that the current Alternative B in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan be rejected relating to Forest Products. Specifically, under Alternative B:

1) Not enough acres are logged annually for the implementation of ecological restoration at the required pace;
2) Valuable forest products resources are wasted owing to the unnecessary treatment with fire as a thinning tool of acres that can be treated with mechanical thinning;

3) The maximum allowable sale quantity (ASQ) volume of 122,000 CCF per year provides only approximately half the short term foreseeable requirements of the existing or currently developing industry in the White Mountains.

The Eastern Arizona Counties Organization therefore respectfully requests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan at a minimum include the provisions of current Alternative C relating to Forest Products in order to:

1) Increase the number of acres logged annually in order to accelerate the pace of ecological restoration;
2) Increase the amount of forest byproducts resources by prioritizing, wherever possible, mechanical thinning treatments over fire as a thinning tool treatments; and,
3) Increase the maximum allowable sale quantity (ASQ) volume to 268,000 CCF per year to meet the short term foreseeable requirements of the existing and currently developing industry in the White Mountains.

Further, the Eastern Arizona Counties Organization respectfully suggests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include the necessary analysis, and the resulting authority for the Responsible Official to SIMULTANEOUSLY implement a restoration program designed to support the existing and currently developing industry in the White Mountains AND the contract(s) expected to result from the second analysis of the Four Forest Restoration Initiative, including a maximum allowable sale quantity (ASQ) volume of 450,000 CCF annually.

MINERAL AND ENERGY RESOURCES MANAGEMENT OBJECTIVES

The Eastern Arizona Counties Organization appreciates and supports the analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team on minerals and energy when addressing leasable minerals, locatable minerals, salable minerals and energy.

However, the Eastern Arizona Counties Organization believes that in the interest of relevance and conciseness, detailed comments on the Apache-Sitgreaves National Forests mineral and energy resources management plan and the Eastern Arizona Counties Organization Mineral and Energy Resources Management Objectives RELATING TO the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, are not warranted due to the facts that:

- There are no known leases on the Apache-Sitgreaves National Forests for the following leasable mineral resources: oil, gas, oil shale, coal, or geothermal (PDEIS p. 462);
- The potential for locatable minerals on the Apache-Sitgreaves National Forests is low because of the existing geology (PDEIS p. 464);
- There are no known oil and gas resources on the Apache-Sitgreaves National Forests (PDEIS p. 465);
- Potential for geothermal development is limited as only small areas are underlain by thermal waters (PDEIS p. 465);
- Wind energy potential is low on the Apache-Sitgreaves National Forests because of sporadic winds and the terrain (PDEIS p. 466);
- The quantities of stone, sand, and gravel removed from the Apache-Sitgreaves National Forests are not expected to differ between all the alternatives (PDEIS p. 491);

- Owing to the fact that most of the firms that extract stone, sand, and gravel exist outside of the economic impact study area, the extraction of minerals from the Apache-Sitgreaves National Forests is not expected to support employment and income in the local economy (PDEIS p. 491).

The Eastern Arizona Counties Organization is satisfied that under all alternatives, decisions regarding mineral activities on the Apache-Sitgreaves National Forests would align with law, regulation, and policy and would be consistent with plan decisions for other resource areas (PDEIS p. 466).

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization objectives, plans and policies

Alternative D

The Eastern Arizona Counties Organization wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

The Eastern Arizona Counties Organization understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and the Eastern Arizona Counties Organization acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, the Eastern Arizona Counties Organization cannot support an alternative that would result in, among others, the withdrawing from mineral entry in the future of approximately 34% of the Apache-Sitgreaves National (PDEIS p. 467). This alternative is so departed from the White Mountains residents' past, current, and foreseeable future custom, culture and economic well-being needs, and from the Eastern Arizona Counties Organization Mineral and Energy Resources Management Objectives, that it does not warrant any further discussion from the Counties perspective.

MOTORIZED TRAVEL AND RECREATION MANAGEMENT OBJECTIVES

The Eastern Arizona Counties Organization fully understands and appreciates that an opportunity to comment on the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan is not the appropriate forum to comment on the Draft Environmental Impact Statement for Public Motorized Travel Management Plan, and that no specific management decision will be made and no specific management action will result from the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan. Nonetheless, since the Programmatic Final Environmental Impact Statement will establish the framework for future management decisions and actions, such as the Public Motorized Travel Management Plan, it is appropriate for the Eastern Arizona Counties Organization to communicate its motorized travel and recreation management objectives, to comment on the Alternatives listed in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan relating to motorized travel and recreation, and to request that the Responsible Official for the Apache-Sitgreaves National Forests Land Management Plan conduct the statutorily required consistency review, coordination action and conflict resolution between the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization Motorized Travel And Recreation Management Objectives as expressed in the Counties plans and policies and as contained in this document.

Importance of dispersed motorized travel and recreation for the Eastern Arizona Counties Organization

As identified in the Apache-Sitgreaves National Forests analysis, the number of off-highway vehicles (OHVs) used in Arizona has risen dramatically. Almost 500,000 households within the State have at least one OHV, and as many as 30,000 new ATVs and motorcycles are purchased annually (Arizona State Parks, 2009). While the use of OHVs is increasing statewide, OHV recreation is disproportionally important to the economy of rural counties such as the Counties of the Eastern Arizona Counties Organization. A survey conducted in 2003 by the Arizona State Parks identified the recreation impact of OHV recreation on the Counties as follows:

Apache County

OHV use:
- 34% of households are OHV users, compared to the state percentage of 21%.
- 6% of all Arizona OHV trip destinations for past 12 months were to Apache County.
- 896,479 OHV Recreation Days occur annually in Apache County, of which:
  - 153,125 OHV Recreation Days (17%) are from Apache County residents; and,
  - 743,354 OHV days (83%) are from other Arizona residents visiting the County.
- 70% of Apache County OHV households are satisfied with their overall OHV experience.

OHV economic impact:
- OHV Trips - Fuel/Gasoline: $11.8 M
- Lodging/Campgrounds: $8.6 M
- Restaurants/Bars: $8.1 M
- Groceries/Liquor: $9.4 M
- Other (event fees, souvenirs, etc.): $9.7 M
- Total OHV recreation trips expenditures: $47.6 M
- Expenditures on off-highway vehicles: $13.3 M
- Expenditures on tow-vehicles and trailers: $10.6 M
- Expenditures on OHV equipment: $22.6 M
- Total OHV expenditures: $94.1 M
- Total impact, including the multiplier effect: $101.9 M
- Salaries and wages: $12.8 M
- Full-time and part-time jobs: 842

Gila County

OHV use:
- 36% of households are OHV users, compared to the state percentage of 21%.
- 8% of all Arizona OHV trip destinations for past 12 months were to Gila County.
- 1,262,607 OHV Recreation Days occur annually in Gila County, of which:
  - 228,071 OHV Recreation Days (18%) are from Gila County residents; and,
  - 1,034,536 OHV days (82%) are from other Arizona residents visiting the County.
- 60% of Gila County OHV households are satisfied with their overall OHV experience.

OHV economic impact:
- OHV Trips - Fuel/Gasoline: $16.7 M
- Lodging/Campgrounds: $12 M
- Restaurants/Bars: $11.5 M

- Groceries/Liquor: $13.3 M
- Other (event fees, souvenirs, etc.): $13.6 M
- Total OHV recreation trips expenditures: $67.1 M
- Expenditures on off-highway vehicles: $16.9 M
- Expenditures on tow-vehicles and trailers: $9.4 M
- Expenditures on OHV equipment: $27.1 M
- Total OHV expenditures: $120.5 M
- Total impact, including the multiplier effect: $137.6 M
- Salaries and wages: $22.3 M
- Full-time and part-time jobs: 1,322

Graham County

OHV use:
- 34% of households are OHV users, compared to the state percentage of 21%.
- 5% of all Arizona OHV trip destinations for past 12 months were to Graham County.
- 209,712 OHV Recreation Days occur annually in Graham County, of which:
  - 66,020 OHV Recreation Days (31%) are from Graham County residents; and,
  - 143,694 OHV days (69%) are from other Arizona residents visiting the County.
- 82% of Graham County OHV households are satisfied with their overall OHV experience.

OHV economic impact:
- OHV Trips - Fuel/Gasoline: $3.4 M
- Lodging/Campgrounds: $1.8 M
- Restaurants/Bars: $2.2 M
- Groceries/Liquor: $2.7 M
- Other (event fees, souvenirs, etc.): $2.3 M
- Total OHV recreation trips expenditures: $12.4 M
- Expenditures on off-highway vehicles: $6.7 M
- Expenditures on tow-vehicles and trailers: $2.6 M
- Expenditures on OHV equipment: $10.6 M
- Total OHV expenditures: $32.3 M
- Total impact, including the multiplier effect: $37.5 M
- Salaries and wages: $6.2 M
- Full-time and part-time jobs: 348

Greenlee County

OHV use:
- 48% of households are OHV users, compared to the state percentage of 21%.
- 5% of all Arizona OHV trip destinations for past 12 months were to Greenlee County.
- 88,926 OHV Recreation Days occur annually in Greenlee County, of which:
  - 32,787 OHV Recreation Days (37%) are from Greenlee County residents; and,
  - 56,139 OHV days (63%) are from other Arizona residents visiting the County.
- 79% of Greenlee County OHV households are satisfied with their overall OHV experience.

OHV economic impact:
- OHV Trips - Fuel/Gasoline: $1.5 M
- Lodging/Campgrounds: $0.7 M
- Restaurants/Bars: $0.9 M

- Groceries/Liquor: $1.2 M
- Other (event fees, souvenirs, etc.): $0.97 M
- Total OHV recreation trips expenditures: $5.3 M
- Expenditures on off-highway vehicles: $2.2 M
- Expenditures on tow-vehicles and trailers: $0.1 M
- Expenditures on OHV equipment: $4.1 M
- Total OHV expenditures: $11.7 M
- Total impact, including the multiplier effect: $12 M
- Salaries and wages: $0.8 M
- Full-time and part-time jobs: 50

Navajo County

OHV use:

- 36% of households are OHV users, compared to the state percentage of 21%.
- 7% of all Arizona OHV trip destinations for past 12 months were to Navajo County.
- 744,630 OHV Recreation Days occur annually in Navajo County, of which:
  - 438,831 OHV Recreation Days (59%) are from Navajo County residents; and,
  - 305,798 OHV days (41%) are from other Arizona residents visiting the County.
- 73% of Navajo County OHV households are satisfied with their overall OHV experience.

OHV economic impact:

- OHV Trips - Fuel/Gasoline: $15.3 M
- Lodging/Campgrounds: $4.9 M
- Restaurants/Bars: $8.9 M
- Groceries/Liquor: $11.5 M
- Other (event fees, souvenirs, etc.): $8.1 M
- Total OHV recreation trips expenditures: $48.7 M
- Expenditures on off-highway vehicles: $25.9 M
- Expenditures on tow-vehicles and trailers: $7.4 M
- Expenditures on OHV equipment: $32.9 M
- Total OHV expenditures: $114.9 M
- Total impact, including the multiplier effect: $128.5 M
- Salaries and wages: $20.1 M
- Full-time and part-time jobs: 1,099

While the study is aging (2003), the trends that it represents are constant, and the growing importance of motorized travel and recreation in Arizona, and in the Eastern Arizona Counties is obvious. Further, the economic growth for the 5 years after the study was conducted (2003 to 2008), and its positive influence on recreation activities, has been offset by the economic slump over the last 5 years (2008 to 2013), and its negative influence on recreation activities. For all practical purposes, the 2003 data may reflect fairly accurately the 2013 situation. Certainly, all the jobs sustained by motorized travel and recreation in Arizona are not located in the Counties, as many OHV days occurring in the Counties are enjoyed by other Arizona residents or visitors, but regardless of their distribution between the Counties and metro Arizona, in any economy 3,661 jobs are significant, and in the current economy they are critical.

It must also be noted over 65% of the motorized recreational activities involved some level of dispersed access to the lands:

Apache County

64% of the recreational activities involved some level of dispersed access to the lands:

- Camping: 19%
- Fishing: 15%
- Sightseeing: 12%
- Hunting: 11%
- Driving back roads: 7%

Gila County

64% of the recreational activities involved some level of dispersed access to the lands:

- Sightseeing 15%
- Hunting 14%
- Driving back roads 13%
- Camping 12%
- Fishing 10%

Graham County

64% of the recreational activities involved some level of dispersed access to the lands:

- Camping: 14%
- Sightseeing: 11%
- Driving back roads: 10%
- Fishing: 10%
- Picnicking: 10%
- Hunting: 9%

Greenlee County

59% of the recreational activities involved some level of dispersed access to the lands:

- Camping 13%
- Fishing 14%
- Sightseeing 11%
- Hunting 11%
- Picnicking 10%

Navajo County

79% of the recreational activities involved some level of dispersed access to the lands:

- Camping: 22%
- Trail riding: 12%
- Hunting: 12%
- Driving back roads: 11%
- Sightseeing: 9%
- Fishing: 8%
- Picnicking: 5%

The fact that over 65% of the motorized recreational activities involved some level of dispersed access to the lands is relevant to the implementation of the upcoming Travel Management Rule as it illustrates the need to maintain some level of authorized cross-country travel for reasonably dispersed activities.

Circumstantial constraints and challenges for the Eastern Arizona Counties Organization AND the Apache-Sitgreaves National Forests planning efforts

The Eastern Arizona Counties Organization understands that in December 2005, the Forest Service issued a regulation at the national level known as the Travel Management Rule (TMR) and developed in response to the increasing effects of OHV recreation and the potential for OHV use to adversely affect forest and grassland resource. The Eastern Arizona Counties Organization appreciates that the Apache-Sitgreaves National Forests Land Management Plan team is under direct instructions to implement a public motorized travel management plan that will designate roads, trails, and areas where motorized vehicle use can occur and eliminate most motorized cross-country travel (PDEIS p. 321).

The Eastern Arizona Counties Organization further understands and appreciates the fact that irresponsible OHV use can indeed adversely affect forest and grassland resources, and that the popularity of this new mode of recreation may require reasonable regulations in order to maintain a well-considered balance between the enjoyment of the Apache-Sitgreaves National Forests' visitors, and the need to preserve and conserve the resources contained in the Apache-Sitgreaves National Forests for the enjoyment of future generations.

The Eastern Arizona Counties Organization is therefore NOT advocating for the Apache-Sitgreaves National Forests team to disregard the Travel Management Rule or for the continuation of unregulated and ever increasing motorized cross-country travel and the continued proliferation of unauthorized user-created routes. However, the Eastern Arizona Counties Organization IS advocating for a SENSIBLE APPROACH to implementing the Travel Management Rule requirements in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan that address the preservation and conservation needs of the resources, complies with the national Travel Management Rule, and still allows the Counties residents and visitors to recreate sensibly using motorized transportation.

Land suitability analysis

The Eastern Arizona Counties Organization understands the difference that exists between (a) motorized cross-country travel, to which approximately 80% of the Apache-Sitgreaves National Forests lands are currently open (PDEIS p. 321) and to which most of the Apache-Sitgreaves National Forests land will be closed (aside from specially designed OHV areas) as the result of the implementation of the national Travel Management Rule (PDEIS p. 329), and (b), motorized on-trail travel, to which 60% to 80% of the Apache-Sitgreaves National Forests lands will remain suitable for future consideration under Alternative B (63%) or Alternative C (80%).

However, the Eastern Arizona Counties Organization is concerned by the creeping trend that characterizes public land management in the West in general, in the national forests of the West in particular and specifically in the Arizona national forests, toward an ever increasing limitation of motorized access to and motorized travel in (NOT including cross-country travel) the public lands under management by federal agencies. Specifically, under Alternative B, the Preferred Alternative, only 63% of the Apache-Sitgreaves National Forests lands would remain open for future consideration of new motorized areas and trails. This is a drastic reduction from the current level and the level considered under Alternative C (80%).

Based on the merit of the action alternatives presented, and in further consideration of the monumental change that the elimination of indiscriminate cross-country travel will represent for the culture and custom of the residents of and visitors to the Counties, the Eastern Arizona Counties Organization wants to register its objection to further restrictions on future consideration of new motorized areas and trails in Alternative B.

Eastern Arizona Counties Organization Motorized Travel and Recreation Management Objectives

The Eastern Arizona Counties Organization Motorized Travel and Recreation Management Objectives for the upcoming planning cycle therefore include, among others:

1) Authorize dispersed and safe motorized camping consistent with the reasonable enjoyment of safety, privacy, comfort, custom and culture.
   The authorized dispersed and safe motorized camping allows the parking of motorized vehicles and/or trailers at the distance from the closest legally open road or trail necessary for the dispersed camping site defined as a 300 feet radius around the motorized vehicle or trailer to be safe from traffic, to not be directly exposed to dust or projections caused by traffic, and to be distant from adjacent dispersed camping site by at least 300 feet if such is the desire of the camper(s). Access to dispersed camping sites previously used and established in the local custom and culture as demonstrated by tangibles evidences of previous use such as fire pits, improvements, etc. is allowed.

2) Authorize motorized big game retrieval for all species of game meeting the definition of 'big game' in the Arizona Game and Fish Department hunting regulations or, alternatively, for all 'big game' animals requiring a hunting tag, with the exception of turkeys.
   The authorized motorized big game retrieval consists of one trip each way from the downed animal to the closest legally open road or trail, regardless of distance, by the most direct route compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

3) Authorize dispersed motorized collection of firewood.
   The authorized motorized collection of firewood consists of the minimum number of trips each way, as defined based on the transport capacity of the vehicle and the trailer, from the downed tree to the closest legally open road or trail, regardless of distance, in the authorized firewood collection area, by the most direct route compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

4) Authorize dispersed recreational shooting.
   The authorized motorized dispersed recreational shooting consists of one trip each way from the natural or artificial obvious terrain feature used as a backstop, such as pit, berth or features similar in their functionality relating to safe dispersed shooting, to the closest legally open road or trail, regardless of distance but not more than one mile, by the most direct route compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

5) Implement sensible restrictions on indiscriminate cross-country travel in order to preserve and conserve the resources contained in the Apache-Sitgreaves National Forests for the enjoyment of future generations.
   Indiscriminate cross-country travel consists of traveling cross-country in a motorized vehicle not intended to reach a specific dispersed camp site, downed animal, downed tree in an authorized

firewood collection area, or terrain feature used as a shooting backstop, or not required for an emergency response to a specific justifiable circumstance such as danger to limb or life. Motorized scouting for a site is considered different from reaching a specific site and is not authorized.

6) Retain the suitability for future consideration of new motorized areas and trails of at least 75% of the Apache-Sitgreaves National Forests.

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization objectives, plans and policies

Alternatives D and A

Based on the above, the Eastern Arizona Counties Organization wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

The Eastern Arizona Counties Organization understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and the Eastern Arizona Counties Organization acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, the Eastern Arizona Counties Organization cannot support an alternative that would result in, among others, the closing of approximately 50% of the Apache-Sitgreaves National Forests to future consideration of new motorized areas and trails (PDEIS p. 328). This alternative is so departed from the White Mountains residents' past, current, and foreseeable future custom, culture and economic well-being needs, and from the Eastern Arizona Counties Organization Motorized Travel and Recreation Management Objectives, that it does not warrant any further discussion from the Counties perspective.

Also, because the implementation of the national Travel Management Rule is not an option but a requirement for the Apache-Sitgreaves National Forests Responsible Official, Alternative A, the no action alternative that would continue to allow cross-country travel in most areas (PDEIS p. 334), is not a realistic alternative. Even under Alternative A, the Apache-Sitgreaves National Forests will be required by the national authorities to promptly implement the Travel Management Rule. Therefore, discussing the merits of Alternative A based on the fact that it would assumedly continue to allow cross-country travel in most areas is not warranted from the Counties perspective, inasmuch as the upcoming implementation of the national Travel Management Rule will eliminate most cross country motorized travel. Setting the framework in the Forest Plan for the continuation of SOME cross country motorized travel as outlined in the Eastern Arizona Counties Organization Motorized Travel and Recreation Management Objectives seems to be a more productive perspective.

Alternatives B and C

Because all of the action alternatives would prohibit motorized cross-country travel, except where authorized (PDEIS p. 334), and because the major difference between Alternative B and Alternative C is the amount of land that would remain suitable for future consideration of new motorized areas and trails, the Eastern Arizona Counties Organization would like to focus its comments on Alternatives B and C relating to motorized travel and recreation, specifically on the issue of authorized cross-country travel and suitability for future consideration of new motorized areas and trails.

Authorized cross-country travel

The Eastern Arizona Counties Organization believes that the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan misses an opportunity to identify the criteria to be used by the Responsible Official for the upcoming implementation of the national Travel Management Rule, and for the upcoming decision making process regarding the authorization of cross-country travel.

Based on the recent implementation of the national Travel Management Rule in neighboring national forests (Coconino National Forest and Kaibab National Forest), or on the ongoing NEPA processes for the implementation of the national Travel Management Rule (Tonto National Forest and Apache-Sitgreaves National Forests), the Eastern Arizona Counties Organization would like to share the following concerns with the Apache-Sitgreaves National Forests Land Management Plan team regarding the lack of specificity in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan relating to motorized cross-country travel:

- *The travel management plans generally limit the species of big game allowed for motorized big game retrieval to elk, bear and deer.*
  The Eastern Arizona Counties Organization believes that the limitation of motorized big game retrieval to only a few species is arbitrary and does not meet the intent of the motorized big game retrieval exemption mechanism. Specifically, other big game species such as, but not limited to, sheep, antelopes, mountain lions, javelina, etc., may in the present and/or in the future be hunted within the confines of the Arizona national forests and should qualify for motorized big game retrieval.

- *The travel management plans generally limit motorized big game retrieval to a one mile corridor off either side of allowable roads.*
  The Eastern Arizona Counties Organization believes that corridor width is only one of two criteria that must be considered in order to meet the intent of the motorized big game retrieval exemption mechanism. Specifically, the intent of the exemption mechanism is not to define corridor width, but land coverage. Therefore, the intent can only be met and the analysis can only be completed if the density of the allowed road network is taken into consideration. For example, road networks such as the ones present in the Williams or Tusayan districts of the Kaibab National Forest allow for a one mile corridor off either side of allowable roads to cover the vast majority of the acreage of the districts and do not, therefore, unduly limit the ability of hunters to retrieve big game with motorized vehicles. Simply said, if roads exist every two miles, a one mile corridor on each side of each road makes a one mile corridor rule viable. If roads only exist every 10 miles, the same one mile corridor becomes unviable. Therefore, the width of the corridor off either side of allowable roads allowed for motorized big game retrieval should not be constant from one forest to the next or one district to the next, given possible variation in allowed road network density. The Eastern Arizona Counties Organization therefore requests that an analysis of land coverage resulting from the combined values of corridor width AND road network density be performed and that, if necessary, districts featuring a lower density of roads be managed with either no corridor, or wider corridors as required in order to allow motorized big game retrieval to happen on at least 95% of the hunting areas in each district.

- *The travel management plans generally limit dispersed camping to a 300 feet corridor off either side of the edge of designated roads or trails.*
  The Eastern Arizona Counties Organization believes that the limitation to a 300 feet corridor off either side of the edge of designated roads or trails is inadequate because it restricts access to numerous camping sites in the Arizona national forests that have become deeply ingrained in the custom and culture of the residents of and visitors to the White Mountains. It is widely recognized that the legislators' intent was for the National Environmental Policy Act (NEPA) processes to clearly integrate an assessment of the social impacts of a proposed action or project. Further, it is widely recognized that the Council on Environmental Quality (CEQ) has made unambiguous interpretations of the law in its implementation guidance, to the effect that Forest Service Environmental Impact Statements (EIS) must integrate the impact of proposed actions on the custom and culture of the Counties. The Eastern Arizona Counties Organization therefore believes that the implementation of the Travel Management Rule would fail to meet the requirements to reasonably accommodate the culture and custom of the residents of and visitors to the Counties if such historically popular motorized camping sites were artificially outlawed due to their inaccessibility in a new travel management plan. Additionally, the Eastern Arizona Counties Organization believes that the 300 feet distance must be managed with flexibility so that the authorized dispersed and safe motorized camping allows the parking of motorized vehicles and/or trailers at the distance from the closest legally open road or trail necessary for the dispersed camping site defined as a 300 feet radius around the motorized vehicle or trailer to be safe from traffic, to not be directly exposed to dust or projections caused by traffic, and to be distant from adjacent dispersed camping site by at least 300 feet if such is the desire of the camper(s).

- *The travel management plans generally do not specifically address firewood gathering.*
  Firewood gathered in the Arizona national forests is an important and necessary energy resource to many residents of rural counties. The Eastern Arizona Counties Organization therefore recommends that motorized access be allowed for the purpose of firewood gathering in areas specifically designated for motorized firewood gathering, or that the authorized motorized collection of firewood consist of the minimum number of trips each way, as defined based on the transport capacity of the vehicle and the trailer, from the downed tree to the closest legally open road or trail in the authorized firewood collection area, by the most direct route compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

- *The travel management plans generally do not specifically address dispersed shooting.*
  Yet, the Forest Service in its own analysis states: "Ceasing or limiting off-road vehicle use of the ASNFs would limit or restrict most dispersed recreational shooting to areas along roads open for public use, increasing the risk to human health and safety" (Draft Environmental Assessment Second Knoll Shooting Range p. 27). The Eastern Arizona Counties Organization believes that not every recreational shooter will use the developed shooting facilities, such as the upcoming Second Knoll Shooting Range, especially when using such facilities would necessitate more than one-half to one full hour of travel. Therefore, the Eastern Arizona Counties Organization believes that for safety reasons dispersed shooting should be included in the provisions of authorized cross-country travel with the following restrictions: authorized motorized dispersed recreational shooting shall consist of one trip each way from the natural or artificial obvious terrain feature used as a backstop, such as pit, berth or terrain feature similar in

their functionality relating to safe dispersed shooting, to the closest legally open road or trail, not more than one mile away by the most direct route compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

Suitability for future consideration of new motorized areas and trails

- *The travel management plans generally do not address the economic impact on the Counties of implementing the national Travel Management Rule.*
  Yet, it is widely recognized that the legislators' intent was for the National Environmental Policy Act (NEPA) processes to clearly integrate an assessment of the economic impacts of a proposed action or project. Further, it is widely recognized that the Council on Environmental Quality (CEQ) has made unambiguous interpretations of the law in its implementation guidance to the effect that Forest Service Environmental Impact Statements must integrate the impact of proposed actions on the economic well-being needs of the Counties. The Eastern Arizona Counties Organization recognizes and understands the importance of protecting the national forests natural resources while providing access and opportunities to the public, as well as to those whose livelihoods depend on the national forest lands. Simultaneously, the Counties must operate under the economic constraint of an overwhelming majority of the land area in the Counties being designated as federal land or under federal management, and, therefore, exempt from local taxation: 78% in Apache County; 95% in Gila County; 74% in Graham County; 77% in Greenlee County; and 76% in Navajo County. Historically, the Counties economy and the Counties residents have depended heavily on both natural resources-based industries and recreation opportunities. The ability of the Counties to maintain a robust and diverse economy has been eroded over the last forty years, in large part due to the restrictions of access to and use of the lands under federal management. The Eastern Arizona Counties Organization is keenly aware of the detrimental effects caused by national forests rules and management plans restricting business and outdoors recreational opportunities. Additional roadless areas designations, roads closure, limitation of suitability for future consideration of new motorized areas and trails, and indiscriminate cross-country motorized travel restrictions would further decrease the recreational opportunities that the Counties are able to offer to their residents and visitors, further constraining an already difficult economic outlook.

Requested and Suggested Corrective Actions for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

The Eastern Arizona Counties Organization respectfully requests that the current Alternative B in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan be rejected with respect to motorized travel and recreation. Specifically, under Alternative B:

1) Almost 40% of the lands in the Apache-Sitgreaves National Forests would not be suitable for future consideration of new motorized areas and trails.
2) No guidance is included for the upcoming implementation of the national Travel Management Rule and for authorized cross-country travel.

The Eastern Arizona Counties Organization therefore respectfully requests that, at a minimum, the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan:

1) Include the provisions of current Alternative C relating to motorized travel and recreation in order to retain suitability of 80% of the lands of Apache-Sitgreaves National Forests for future consideration of new motorized areas and trails.
2) Include guidance for the upcoming implementation of the national Travel Management Rule and for authorized cross-country travel in order to simultaneously achieve the required preservation and conservation objectives AND allow reasonable motorized access, travel and recreation for dispersed camping, big game retrieval, firewood collection, and dispersed shooting as outlined in the above comments and the Eastern Arizona Counties Organization Motorized Travel and Recreation Management Objectives.

FORESTED ECOSYSTEMS RESTORATION AND CATASTROPHIC WILDFIRE PREVENTION OBJECTIVES

The Eastern Arizona Counties Organization appreciates and supports the fact that Alternative B, the Preferred Alternative, includes a clear priority for restoration treatments (PDEIS p. 21), as does Alternative C (PDEIS p. 23), as does Alternative D (PDEIS p. 25), and as also does Alternative A, the no action alternative (PDEIS p. 19), despite the fact that restoration treatments were not emphasized in the 1987 Plan.

Circumstantial constraints and challenges for the Eastern Arizona Counties Organization AND the Apache-Sitgreaves National Forests planning efforts

As previously noted, the Eastern Arizona Counties Organization recognizes that the issues of forested ecosystem restoration and forest products management are fundamentally different, and are typically not discussed simultaneously in ecosystems non-departed or little departed from characteristic historical conditions. However, as the Forest Service and the Eastern Arizona Counties Organization both generally acknowledge, current conditions in the forested ecosystems, and especially in the ponderosa pine and dry or wet mixed conifers dominated forests of eastern Arizona, are considerably departed from historical conditions and at risk of continued uncharacteristic disturbances such as landscape scale catastrophic crown fires or insect infestations.

Also as previously noted, the Eastern Arizona Counties Organization acknowledges and appreciates the efforts endeavored by the Forest Service, and particularly the Apache-Sitgreaves National Forests, to pioneer larger scale restoration efforts such as the White Mountains Stewardship Project. The Eastern Arizona Counties Organization has been and continues to be supportive of the White Mountain Stewardship Project and of its funding as a practical tool to initiate larger scale treatments and to incentivize the creation of a small diameter trees utilization infrastructure. Simultaneously, the Eastern Arizona Counties Organization acknowledges that the model of subsidized restoration treatments is not scalable at landscape scale, as is required to restore the forests of Arizona, for lack of agency funding. As proposed in the Four Forest Restoration Initiative, an initiative that the Eastern Arizona Counties Organization was instrumental in creating, fostering and developing, landscape scale forest ecological restoration appears currently feasible only if it is funded by the economically viable utilization of the forested byproducts of restoration by private industry. While it is actually not a novation when it comes to forest products, as timber sales have been for centuries an established form of natural resources valuation and have funded the management of the resources, the concept of ecosystem service monetization is relatively new to the discussion of ecological restoration funding, and its full implications are still being tested.

As a consequence, the Eastern Arizona Counties Organization proposes that both the Counties and the Apache-Sitgreaves National Forests operate under very specific circumstantial constraints when it comes

to forest restoration, inasmuch as the forest products industry in Arizona is the funding mechanism for landscape scale restoration in eastern Arizona, which imposes the concept of social acceptability or 'social license' for the re-introduction of appropriate scale industry logging activities at the landscape scale on the Apache-Sitgreaves National Forests.

Eastern Arizona Counties Organization Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives

The Eastern Arizona Counties Organization Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives for the upcoming planning cycle therefore include, among others:

1) Design and implement landscape-scale, consensus-based, industry-supported accelerated community protection and forested ecosystems restoration in the 2.4 million acre ponderosa pine and mixed conifer dominated forest of the Mogollon Rim.

2) Develop and sustain the social license required by Southwestern Regional Forester Corbin Newman as a prerequisite to the implementation of industry-supported landscape scale restoration.

3) Create in eastern Arizona the wood supply conditions for private industry investments in a new economically viable small diameter trees and residual biomass utilization infrastructure capable of funding the initial ecological restoration thinning of at least 50,000 acres of ponderosa pine and/or mixed conifer dominated forests annually for the next 20 years, then the maintenance of the desired future conditions in subsequent decades.

4) Wherever possible, prioritize forest byproducts treatments (mechanical treatments) funded by economically viable utilization, over non-byproducts treatments (fire as first entry thinning treatments) in order to create and sustain the wood supply necessary for a new era of forest products industry-based economic growth and employment in eastern Arizona with multiple industrial scale new investments.

5) Subordinate for as long as required in the upcoming planning cycle the scientific silviculture priorities and traditional forest products management methods for sustained yield of harvest volumes on a regulated non-declining even-flow basis for the long term, to the overriding priority of implementing as expeditiously as possible landscape scale restoration based primarily on mechanical treatments producing forest products.

6) Subordinate for as long as required in the upcoming planning cycle the scientific silviculture priorities and traditional forest products management methods for uneven age management to the overriding necessity of sustaining the social license required to implement landscape scale restoration expeditiously and in a non-conflictual and non-litigious manner, relating to the protection of old growth and the retention of large trees (upcoming old growth where vegetative structural stages (VSS) 5 and 6 are deficient).

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization objectives, plans and policies

As also previously noted, although the Eastern Arizona Counties Organization and the Counties retain and employ many talented individuals at the peak of the knowledge curve in their respective fields, the Eastern Arizona Counties Organization does not generally define its role in the public lands management

process as a role of science provider or resources technical specialist. Rather, as a body representing the most direct and local expression of democratic government at the individual district or national forest level, the Eastern Arizona Counties Organization more generally defines its role at the policy-making level as it relates to public lands management processes.

Further, for clarification, the Eastern Arizona Counties Organization wants to emphasize that although it generally supports the use of Best Available Scientific Information (BASI) for management decision, the Counties do not support the exclusive use of technical sciences to formulate policies or to make strategic decisions that have an important impact on, and therefore must integrate, social sciences in the decision making process. For example, the Eastern Arizona Counties Organization believes that while there is no science in the long debated issue of a diameter cap for restoration treatments, that question is nevertheless irrelevant as the issue of large trees retention is not a technical issue but rather a social issue that cannot be adequately addressed by an exclusively scientific approach.

Therefore, the Eastern Arizona Counties Organization comments relating to forested ecosystems restoration and catastrophic wildfire prevention will purposefully not address technical issues of silviculture, such as uneven aged composition, regeneration openings, sustained yield timber production, etc., but be focused instead on what the Counties believe to be the crux of the successful and timely implementation of the overriding priority of landscape scale scientifically AND socially acceptable – if admittedly imperfect – ecological restoration and catastrophic wildfire prevention, as follows:

- Social acceptability of proposed treatments;
- Speed of completion of landscape scale restoration; and,
- Prioritization of treatments.

As previously stated, the Eastern Arizona Counties Organization appreciates and supports the realism of the Apache-Sitgreaves National Forests Land Management Plan team when stating: "the alternatives were realistically designed to reflect anticipated budgets and workforce capabilities" (DEIS p. 440). It is therefore not a criticism of the work produced by the Apache-Sitgreaves National Forests Land Management Plan team, but rather a simple reality for the Eastern Arizona Counties Organization to observe, as stated in the Apache-Sitgreaves National Forests' own analysis, that: "none of the alternatives would actually treat enough acres fast enough to fully reach desired conditions within the first 5 decades" (DEIS p. 440).

Alternative A

Alternative A uses both mechanical and burning treatments for timber management and to reduce threats to communities from wildfire. On average, approximately 17,000 acres per year would be treated in the forested potential natural vegetation types (PNVTs), primarily in ponderosa pine (PDEIS p. 19). Alternative A would require 42 years to thin all forested overgrown lands (PDEIS p. 444), and would emphasize mechanical treatments around communities and in the Community Forest Intermix Management Area (CFIMA), a subset of the Community Wildfire Protection Plans (CWPPs), many of which have already been treated and now only require follow up maintenance thinning (PDEIS p. 445). Alternative A would use diameter caps for some projects (PDEIS p. 444).

The Eastern Arizona Counties Organization believes that the pace and priorities of Alternative A do not meet the ecological needs of the Apache-Sitgreaves National Forests, nor the safety, health and economic well-being needs of the White Mountains residents and visitors, nor the Eastern Arizona Counties Organization Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives.

Alternative B

Alternative B uses both mechanical and burning treatments for timber management and to reduce threats to communities from wildfire. The majority of treatments, from 5,000 to 35,000 acres per year, in the forested potential natural vegetation types (PNVTs) would occur in ponderosa pine, although there would be treatments in all forested PNVTs (PDEIS p. 21), and up to 25,000 acres per year of grasslands (primarily the Great Basin and semi-desert types) would be treated to remove encroaching woody species (PDEIS p. 21). However, Alternative B would produce harvest volumes below the long term sustained yield capacity (LTSYC) and would, therefore, continue to result in overgrown forests that would be more susceptible to uncharacteristic disturbances such as severe wildfire or insect/disease outbreaks (DEIS p. 440). Further, Alternative B would require 34 years to thin all forested overgrown lands (PDEIS p. 444). Alternative B would not use 16-inch diameter caps (DEIS p. 443). In Alternative B, cutting would be prioritized in areas identified in community wildfire protection plans (CWPPs) and priority watersheds which include large acreages of untreated pine and dry mixed conifer forests (PDEIS p. 444).

The Eastern Arizona Counties Organization believes that an intelligent implementation of the exception mechanisms identified in the Four Forest Restoration Initiative stakeholders-approved document *Old Growth Protection and Large Tree Retention Strategy* (OGPLTRS) would allow Alternative B to proceed without using 16-inch diameter caps.

However, the Eastern Arizona Counties Organization believes that even though the priorities of Alternative B are adequate, the pace of restoration under Alternative B does not meet the ecological needs of the Apache-Sitgreaves National Forests, nor the safety, health and economic well-being needs of the White Mountains residents and visitors, nor the Eastern Arizona Counties Organization Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives.

Alternative C

Alternative C primarily uses mechanical treatment methods. The majority of treatments, from 5,500 to 55,000 acres per year, in the forested potential natural vegetation types (PNVTs) would occur in ponderosa pine, although there would be treatments in all forested PNVTs (PDEIS p.23). Under Alternative C the reduction of the most amount of overgrowth backlog would take place in the first 3 decades, and it would continue to remove more backlog in decade 4 until it levels off at decade 5 (DEIS p. 440). Multiple resource objectives would be best met by balancing forest wood volume growth rates with removal of forest wood volumes. This would reduce the risk of uncharacteristic wildfires and other extreme or long-lasting disturbances (DEIS p. 440). Alternatives C would not use 16-inch diameter caps (DEIS p. 443). Alternative C would require 23 years to thin all forested overgrown lands (PDEIS p. 444). Alternative C would emphasize treatments on suitable timberlands, the Community Forest Intermix Management Area, and other lands that can contribute wood products (PDEIS p. 444).

The Eastern Arizona Counties Organization believes that an intelligent implementation of the exception mechanisms identified in the Four Forest Restoration Initiative stakeholders-approved document *Old Growth Protection and Large Tree Retention Strategy* (OGPLTRS) would allow Alternative C to proceed without using 16-inch diameter caps.

Despite the fact that Alternative C does not include significant grassland restoration as currently planned, the Eastern Arizona Counties Organization believes that the priorities and pace of restoration under Alternative C provide the closest match to the ecological needs of the Apache-Sitgreaves National

Forests, the safety, health and economic well-being needs of the White Mountains residents and visitors, and the Eastern Arizona Counties Organization Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives.

Alternative D

Alternative D emphasizes natural processes, primarily burning (planned and unplanned ignitions), with limited mechanical treatments. The majority of treatments, from 7,500 to 50,000 acres per year in the forested potential natural vegetation types (PNVTs), would occur in ponderosa pine, although there would be emphasis to treat all forested PNVTs (PDEIS p. 25). It would produce the least wood product volumes, due to its emphasis on using fire as the primary treatment method, as well as a 16-inch diameter cap imposed on these few acres that are mechanically thinned or cut (PDEIS p. 443). Alternative D would require 24 years to thin all forested overgrown lands (PDEIS p. 444). Alternatives D would emphasize mechanical treatments around communities and in the Community Forest Intermix Management Area (CFIMA), a subset of the community wildfire protection plans (CWPPs), many of which have already been treated and now only require follow up maintenance thinning (PDEIS p. 445), and burning treatments in the forested potential natural vegetation types (PNVTs) would occur in ponderosa pine, although there would be emphasis to treat all forested PNVTs.

The Eastern Arizona Counties Organization believes that even though the pace of restoration under Alternative D is adequate, the priorities and types of treatment under Alternative D do not meet the ecological needs of the Apache-Sitgreaves National Forests, nor the custom, culture and economic well-being needs of the White Mountains residents and visitors, nor the Eastern Arizona Counties Organization Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives.

Requested and Suggested Corrective Actions for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

The Eastern Arizona Counties Organization respectfully requests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include the provisions of Alternative C relating to forested ecosystems restoration and catastrophic wildfire prevention treatment types, scale, pace and prioritization.

The Eastern Arizona Counties Organization further respectfully requests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include the provisions of Alternative B relating to the restoration of 25,000 acres per year of grasslands (primarily the Great Basin and semi-desert types).

The Eastern Arizona Counties Organization also respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include specific guidelines to integrate the provisions of the Four Forest Restoration Initiative stakeholders-approved document *Old Growth Protection and Large Tree Retention Strategy* (OGPLTRS) to allow treatments to proceed without using 16-inch diameter caps while retaining the social license necessary for an expeditious, non-conflictual and non-litigious implementation of landscape scale restoration.

WATERSHED RESTORATION OBJECTIVES

The Eastern Arizona Counties Organization appreciates and supports the analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team using the Watershed Condition Framework (WCF) and assessment tool when addressing Class 1 (Functioning), Class 2 (Functioning-At-Risk) and Class 3 (Impaired) watersheds; Watershed Condition Framework (WCF) for 6th level Hydrologic Unit Code (HUC) watersheds (sub watersheds) condition; and, priority watershed treatment objectives.

While the Eastern Arizona Counties Organization agrees with the technical definition provided by the Apache-Sitgreaves National Forests Land Management Plan team: "Watershed condition is the state of the physical and biological characteristics and processes within a watershed that affect the hydrologic and soil functions that support aquatic ecosystems" (PDEIS p. 63), the Counties also believe that a critical social consequence of the physical and biological characteristics and processes should be added to the definition to read: " ... that support aquatic ecosystems AND THE PRODUCTION OF WATER FOR DOWNSTREAM CONSUMPTION."

Critical role of the Mogollon Rim watersheds for Arizona

Uncharacteristic landscape scale forest crown fires in eastern Arizona have a demonstrated negative impact on the conservation and operation of the watersheds in which they take place. In addition to the damages caused to communities and ecosystems by the fires themselves, the most common negative effects on watersheds documented after the Rodeo-Chediski Fire, some areas of the Wallow Fire, and the Schultz Fire, among others, are: uncharacteristic runoffs, catastrophic flooding, accelerated and aggravated soil erosion, streams and reservoirs sedimentation, and long term severe disturbance of the watershed functions.

The Rim Country constitutes a large portion of the watersheds that contribute significantly to the water supply of the metro Arizona and greater Phoenix area. The threat of additional uncharacteristic landscape scale forest crown fires in eastern Arizona, especially on the south slopes of the Mogollon Rim, raises serious concern about the conservation and operation of the eastern Arizona watersheds. Additionally, the specific threat to the East Clear Creek watershed poses an existential threat to the town of Payson water supply.

With the growing realization that uncharacteristic landscape scale forest crown fires affect the conservation and operation of the watersheds in which they take place, efforts to protect watersheds have been recently initiated in the Southwest. Several of these efforts focus on the monetization of the ecosystem services provided by the watersheds, and on an attempt to enroll the financial contribution of the downstream beneficiaries of the services (water consumers in this case) to the financial costs of protecting the upstream provider areas and the utility corridors delivering the services (forests, watersheds, and water collection and distribution infrastructures at risk of catastrophic fires in this case). Such efforts were pioneered by the Denver Forest to Faucet project in Colorado, or the Santa Fe Municipal Watershed Protection project in New Mexico, among others. In Arizona, with the active contribution of the Eastern Arizona Counties Organization, an effort to create the Arizona Watersheds Investment Fund (AWIF) is underway, and in Flagstaff, Ballot Question #405 received electors' approval in November 2012 for the issuance of a $10 million municipal bond to finance the restoration treatments of high threat areas in the Rio de Flag and Lake Mary watersheds to provide greater protection to the community from the impacts of fires and floods.

Three watershed issues are of particular concern to the Eastern Arizona Counties Organization:

1) After years of collaborative debate, the model of industry supported restoration is recognized by most stakeholders as the only model that has the economic capability to be scaled up to landscape scale. However, the sole implementation of this model is insufficient, inasmuch as industry supported restoration is not applicable in areas where:
   - the merchantable material yield is insufficient for mechanical treatments to be economically viable;
   - access by mechanical harvesting equipment is restricted, such as in steep slopes, high erosion areas, riparian areas, etc.

   Mechanical treatments implemented in low productivity areas, and non-mechanical treatments such as fire as a thinning tool, or hand thinning, are therefore viable candidates for ecosystem services funding. Systematized ecosystem services monetization is required in order to participate to the overall funding of landscape scale restoration.

2) Conversely, despite the logic of its concept, the keen interest of some stakeholders weary of a potentially dominant role of the wood industry in the relationship with the Forest Service, and the momentum that the monetization of ecosystem services in general - and watershed services in particular - is expected to gain, the monetization of watershed services is unlikely to be able to bear the full cost of restoration which is estimated to be approximately $1,000 per acre in eastern Arizona, resulting in an estimated total cost of approximately $1 billion for the 1 million acres requiring thinning restoration treatments. Continued education is required to simultaneously ensure that:
   - the model of ecosystem services monetization funding is not viewed as an alternative to the model of industry supported funding;
   - the model of industry supported funding is not viewed as an alternative to the model of ecosystem services monetization funding; and,
   - both models, and possibly others, are viewed as complementary to each other.

3) The restoration of forested ecosystems, ponderosa pine and mixed conifer dominated, in the watersheds of the slopes of the Mogollon Rim in general, and specifically in the East Clear Creek watershed, is an objective priority, after the direct protection of communities and infrastructures, among other areas in eastern Arizona also in need of restoration treatments.

Eastern Arizona Counties Organization Watersheds Restoration Objectives

The Eastern Arizona Counties Organization Watersheds Restoration Objectives for the upcoming planning cycle therefore include, among others:

1) Prioritize restoration and catastrophic fire prevention treatments in the watersheds, after the direct protection of communities and infrastructures, on the slopes of the Mogollon Rim in general, and specifically in the East Clear Creek watersheds, the Verde River watersheds, the Little Colorado River watersheds, the Upper Gila River watersheds and the Upper Salt River watersheds.

2) Develop the Arizona Watersheds Investment Fund (AWIF), and/or similar initiatives in order to fund restoration treatments that cannot be funded by the wood industry utilization of the forest byproducts of restoration in areas where the merchantable material yield is insufficient for mechanical treatments to be economically viable, and/or access by mechanical harvesting equipment is restricted, such as in steep slopes, high erosion areas, riparian areas, etc.

3) Develop in parallel and in a complementary manner all models of watershed restoration funding such as industry funding, ecosystem services funding, municipal bonds funding, etc.

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization objectives, plans and policies

Degrading factors and selection of priority watersheds

The Eastern Arizona Counties Organization believes that a clear distinction must be made between degrading factors and the effects of degrading factors, and between natural processes and management effects. The Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan lists as common degrading factors: high road density, poor aquatic habitat conditions, poor fire regime conditions, poor aquatic biota conditions, and impaired soil conditions (PDEIS p. 65). High road density and poor fire regime conditions may contribute to watershed degradation, but impaired soil condition, non-functioning riparian or aquatic areas, and sedimentation are not degrading factors; rather, these are the effects of degrading factors. The Eastern Arizona Counties Organization is concerned that a proper causality analysis is required to design effective restoration actions.

The Eastern Arizona Counties Organization agrees with the prioritization methodology used to designate watersheds, but is concerned that "the selection of these watersheds is ongoing; and, once selected, will be a major consideration for implementation of projects in some alternatives" (PDEIS p. 64). Considering the fact that according to the Watershed Condition Framework (WCF), only 32% of the Apache-Sitgreaves National Forests 176 6th level Hydrologic Unit Code watersheds (HUCs) are currently considered to be functioning properly (Class 1), and a full 68% are functioning-at-risk (Class 2) (PDEIS p. 65), and considering the critical importance and scarcity of water resources in metro Arizona, the Eastern Arizona Counties Organization believes that the watershed treatments prioritization effort must be given a higher priority and potentially larger resources so that the preservation treatments of Class 1 watersheds and the restoration treatments of Class 2 watersheds can be appropriately prioritized. Similarly, the Eastern Arizona Counties Organization believes that it is critical to complete expeditiously the analysis of the 50 watersheds potentially affected by the recent Wallow Fire as some - but not all - watersheds were heavily affected, resulting in a probable shift to a lower class (PDEIS p. 65).

Alternative A

Based on the above, the Eastern Arizona Counties Organization wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative A, the no action alternative, relating to watershed restoration objectives.

The Eastern Arizona Counties Organization understands that watershed restoration was not an objective of actuality when the 1987 Plan was developed. However, the Eastern Arizona Counties Organization cannot support an alternative that would result in, among others, the designation of zero priority watersheds to be treated during the upcoming planning cycle in the Apache-Sitgreaves National Forests (PDEIS p. 67). This alternative is so departed from the White Mountains residents' past, current, and foreseeable future safety, health and economic well-being needs, and from the Eastern Arizona Counties Organization Watersheds Restoration Objectives, that it does not warrant any further discussion from the Counties perspective.

Alternatives B, C and D

Alternative B, the Preferred Alternative, and Alternative D both concentrate treatments in priority watersheds and allow a better opportunity for restoring or maintaining watersheds across the forests (PDEIS p. 67). Under both Alternatives B and D, 10 watersheds are designated as priority watersheds to be treated in the 15 year planning period (PDEIS p. 67). Alternative C also has an objective to treat 10 priority watersheds in the potential natural vegetation types (PNVTs) that can contribute to economic sustainability (PDEIS p. 67).

Since it is unclear to the Eastern Arizona Counties Organization whether the 10 priority watersheds designated under Alternatives, B, C and D have higher or lower priority levels as compared to each other, the Counties favor Alternative C relating to watershed restoration objectives due to the fact that, in general, Alternative C more closely meets the various Eastern Arizona Counties Organization and Counties objectives.

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

The Eastern Arizona Counties Organization respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include a revised analysis differentiating more clearly between degrading factors and the effects of degrading factors on physical and biological watershed characteristics and processes that affect the hydrologic and soil functions, and between natural processes and management effects, so that a proper causality analysis can improve the design of effective restoration and management actions.

MANAGEMENT AREAS DESIGNATION OBJECTIVES

The Eastern Arizona Counties Organization appreciates and supports the analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team for management areas designation when addressing community forest intermix, high use developed recreation areas, energy corridors, the Heber Wild Horse Territory, natural landscape, inventoried roadless areas (which are technically not management areas *per se* but an administrative designation), recommended and current wilderness areas, the Blue Range Primitive Area, recommended and current research natural areas, wildlife quiet areas, and wild and scenic rivers.

The Eastern Arizona Counties Organization appreciates and supports the fact that certain characteristics of landscapes, viewscapes or bioscapes are unique and deserve protection, preservation and conservation; that a balanced approach to the enjoyment of all requires a spectrum of management areas extending from high use developed recreation areas to pristine wildernesses; that the enjoyment of future generations may require protection, preservation and conservation management actions that may constrain current generations; that areas of wildlife undisturbed habitats are necessary for big game and other wildlife to reside with minimal disturbance from motorized vehicle use; that preserving the natural character of the national forest landscape is important to any of these goals; that scientific research in ecosystems characteristics and functions are necessary for the continuous improvement of management decisions; and, that designations by Congress and/or Presidential Order must be implemented.

Eastern Arizona Counties Organization Management Areas Designation Objectives

The Eastern Arizona Counties Organization Management Areas Designation Objectives for the upcoming planning cycle therefore include, among others:

1) Maintain a balanced approach in the designation of management areas including general forest area, community forest intermix, high use developed recreation areas, energy corridors, the Heber Wild Horse Territory, natural landscape, inventoried roadless areas (which are technically not management areas *per se* but an administrative designation), recommended and current wilderness areas, the Blue Range Primitive Area, recommended and current research natural areas, wildlife quiet areas and wild and scenic rivers, that meets (a) the requirements of management for multiple resource objectives and (b) the safety, health, economic well-being, custom and culture needs of the Eastern Arizona Counties Organization residents and visitors.

2) Prevent the departure from the current condition of balanced management for multiple resource objectives by the designation of inappropriately large management areas of more than 10% of the land area individually or 25% collectively, characterized by the restriction of most multiple resource objectives management or enjoyment activities such as, but not restricted to, wilderness areas or primitive areas.

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization objectives, plans and policies

Alternative D

The Eastern Arizona Counties Organization wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

The Eastern Arizona Counties Organization understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and the Eastern Arizona Counties Organization acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, the Eastern Arizona Counties Organization cannot support an alternative that would result in, among others, the recommendation for the designation of 25% of the Apache-Sitgreaves National Forests as Wilderness Areas (PDEIS p. 26), in addition to the existing 10% of the Apache-Sitgreaves National Forests already managed as a Primitive Area. This alternative is so departed from the White Mountains residents' past, current, and foreseeable future custom, culture, safety and economic well-being needs, and from the Eastern Arizona Counties Organization Management Areas Designation Objectives, that it does not warrant any further discussion from the Counties perspective.

Alternatives B

The Eastern Arizona Counties Organization is concerned that 20% of the Apache-Sitgreaves National Forests would be designated as Natural Landscape Areas under Alternative B, the Preferred Alternative. While the Eastern Arizona Counties Organization appreciates the need for retaining the natural landscape characteristics of the Arizona national forests, and understands that Natural Landscape Areas provide primitive and semi-primitive recreation opportunities, both non-motorized and motorized, and that management activities for ecological restoration purposes may occur in them (PDEIS p. 608), the Counties are concerned that such management activities for ecological restoration purposes are limited (PDEIS p. 608), and that such Natural Landscape Areas may, therefore, remain at high risk of

uncharacteristic landscape scale disturbances such as non-natural high severity crown fires or insect infestation.

Conversely, the Eastern Arizona Counties Organization realizes that such Natural Landscape Areas may be designated in areas where management activities for ecological restoration purposes may already be limited by physical characteristics such as terrain inaccessibility and/or economic unviability of industry supported mechanical treatments. The Eastern Arizona Counties Organization therefore requests further information on the potential location of the proposed 405,000 acres of Natural Landscape Areas under Alternative B.

Alternative C

It is unclear to the Eastern Arizona Counties Organization why the 322,000 acres currently designated as Inventoried Roadless Areas (IRAs), which are technically not management areas *per se* but an administrative designation (Alternative A, the no action alternative), and that are maintained under Alternative B, the Preferred Alternative, and Alternative D, would be eliminated under Alternative C (PDEIS p. 349). Considering that the 17 Inventoried Roadless Areas (IRAs) on the Apache-Sitgreaves National Forests include rough, broken terrain with steep-sided canyons and are located in low population areas (PDEIS p. 346) and are generally not easily accessible by motorized vehicles, and considering that the Inventoried Roadless Areas (IRAs) are not technically management areas but do overlay a variety of management areas, including management areas already prohibiting motorized travel, the benefits of this proposed elimination is not immediately obvious to the Counties.

The Eastern Arizona Counties Organization therefore requests further information on the rationale supporting the proposed elimination of the existing 322,000 acres of Inventoried Roadless Areas (IRAs) under Alternative C.

Other management area designations under all action alternatives (Alternatives B, C and D)

The Eastern Arizona Counties Organization observes the continued creeping trend toward ever increasing restrictive management area designations in the action alternatives of the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, such as increasing wilderness areas from 23,000 acres to 30,000 acres (PDEIS p. 362-363); increasing research natural areas from 2,500 acres to 8,000 acres (PDEIS p. 372); and, increasing wildlife quiet areas from 59,000 acres to 65,000 acres (PDEIS p. 254). However, the Counties remain satisfied that the acreage increase of these areas is essentially insignificant in relation to the 2.1 million acre total land area of the Apache-Sitgreaves National Forests.

Therefore with the exceptions of (a) the recommendation for the designation of 25% of the Apache-Sitgreaves National Forests as Wilderness Areas under Alternative D; (b) the request for further information on the potential location of the proposed 405,000 acres of Natural Landscape Areas under Alternative B; and, (c) the request for further information on the rationale supporting the proposed elimination of the existing 322,000 acres of Inventoried Roadless Areas (IRAs) under Alternative C, the Eastern Arizona Counties Organization supports the management area designations under all action alternatives (Alternatives B, C and D) as follows:

- Community Forest Intermix: ~61,000 acres (3%);
- High Use Developed Recreation Area: ~17,000 acres (1%);
- Energy Corridor: ~2,500 acres (<1%);
- Wild Horse Territory: ~19,000 acres (1%);
- Wildlife Quiet Area: ~50,000 acres (2%);

- Research Natural Area: ~8,000 acres (<1%);
- Primitive Area: ~200,000 acres (10%); and,
- Existing Wilderness: ~23,000 (1%).

Suggested corrective actions for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

The Eastern Arizona Counties Organization respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include specific information on the potential location of the proposed 405,000 acres of Natural Landscape Areas under Alternative B.

The Eastern Arizona Counties Organization further respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include information on the rationale supporting the proposed elimination of the existing 322,000 acres of Inventoried Roadless Areas (IRAs) under Alternative C.

PART 3 – PLANNING ISSUES

In its review of the proposed directives revising the Forest Service handbook (FSH 1909.12) and the Forest Service manual (FSM 1920) and establishing procedures and responsibilities for implementing the 2012 national forest system land management planning regulation set out at 36 CFR part 219, the Eastern Arizona Counties Organization identified issues and shortcomings that are of a nature to affect the Programmatic Draft Environmental Impact Statement For The Apache-Sitgreaves National Forests Land Management Plan.

The Eastern Arizona Counties Organization fully understands that the opportunity to comment on the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan is neither an opportunity to comment on the 2012 Planning Rule or its implementation directives, nor an opportunity to comment on a specific proposed management action, such as a travel management plan or a restoration project. Nonetheless, precisely because the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan will establish the parameters for all subsequent management actions in the Apache-Sitgreaves National Forests in the upcoming planning cycle, the Eastern Arizona Counties Organization believes that it is critical for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan to specifically set forth, in order to become part of any subsequent management action, guidelines on how to conduct the monitoring, adaptive management framework, use of best available scientific information to inform the land management planning process, public participation and the role of collaboration, and the objection process.

MONITORING

The Eastern Arizona Counties Organization observes that the entire discussion on monitoring strategy, aside from the incidental use of the word 'monitoring' in various other contexts, in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan occupies, in a 681 page document, the whole of 2 lines: "All action alternatives include the same monitoring strategy as identified in chapter 5 of the proposed plan" (PDEIS p. 28). The Eastern Arizona

Counties Organization further observes that the Monitoring Strategy referred to in the Apache-Sitgreaves National Forests Land Management Plan is only an approximately 1 page long very brief discussion of monitoring in the most general terms, and a 3 page table of planned monitoring questions, monitoring methods, units of measure, and frequency of measurements (p. 135 – 139) in a 283 page document.

The Eastern Arizona Counties Organization is concerned that the scarce mention of monitoring in the Programmatic Draft Environmental Impact Statement and the Apache-Sitgreaves National Forests Land Management Plan and the very cursory 'Monitoring Strategy' included in the Apache-Sitgreaves National Forests Land Management Plan may reflect an insufficient role for monitoring in the current planning process. This would be in contradiction with the requirement of the 2012 national Planning Rule and its proposed implementation directives.

The Eastern Arizona Counties Organization appreciates and supports the important role given to monitoring in the proposed directives. We believe that the content of the proposed directives is adequate, although sometimes very succinct, when addressing 31.1 - Best Available Scientific Information for Monitoring; 31.2 - Public Participation for Monitoring; 32.1 - Developing the Plan Monitoring Program; 32.11 - Selecting Monitoring Questions; 32.12 - Selecting Monitoring Indicators; 32.13 - Content of the Plan Monitoring Program; 32.13a - Select Watershed Conditions; 32.13b - Ecological Conditions for Terrestrial, Riparian and Aquatic Ecosystems, and At Risk Species; 32.13c - Focal Species; 32.13d - Visitor Use, Visitor Satisfaction, and Recreation Objectives; 32.13e - Climate Change and Other Stressors; 32.13f - Desired Conditions and Objectives; 32.13g - Productivity of the Land; 32.2 - Documenting the Plan Monitoring Program; 32.3 - Transitioning to the Plan Monitoring Program; and 32.4 - Changing the Plan Monitoring Program.

Issue

However, the Eastern Arizona Counties Organization believes that the proposed directives miss a critical opportunity to address and correct what is arguably the Achilles' heel of many, if not most, monitoring efforts endeavored by national forests staff. Specifically, however well planned, monitoring is often not implemented or superficially or partially implemented for lack of resources or funding.

Additionally, the Eastern Arizona Counties Organization also believes that the proposed directives do not address a critical weakness in the concept of 31.2 - *Public Participation for Monitoring*, in particular the multi-party monitoring section thereof. Specifically, while the Eastern Arizona Counties Organization applauds the Forest Service for including in the proposed directives the concept of public participation in monitoring, and specifically multi-party monitoring, we believe that the Forest Service misses a critical opportunity to build robustness in the system by failing to make the findings of multi-party monitoring boards binding on the Forest Service Responsible Official.

Suggested corrective actions for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

<u>Monitoring implementation plan</u>

The Eastern Arizona Counties Organization suggests that the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan be expanded to include in very specific terms the requirements for quantitative, qualitative and effectiveness monitoring processes, and the resources allocation and funding necessary to implement them - somewhat akin to

the structured quality control plans and budgets common in the business world - to ensure that strategic monitoring plans are quantifiably and qualitatively implemented.

Specifically, the Eastern Arizona Counties Organization suggests that a very specific monitoring implementation plan and budget be added to the planning and NEPA review process of all projects, be submitted to public review and comments in the Draft Environmental Impact Statements (DEIS), be included in the Records of Decisions (ROD), and be included in the Final Environmental Impact Statements (FEIS) for all projects, so as to ensure that monitoring will actually be implemented and funded.

Practically, the Eastern Arizona Counties Organization suggests a three tier monitoring plan be articulated as follows:

1) Quantitative implementation compliance monitoring.
   The purpose of the quantitative implementation compliance monitoring is to answer the question "Was the job done?" While generally this assessment is made by the Forest Service contract management team when a contractor is involved, it is suggested that this step becomes the beginning of the process rather than what is often the end of it.

   Specific quantitative implementation compliance monitoring measures can be defined at the planning stage and specific resources requirements can be calculated at the planning stage. The plan must include, disclose and commit the responsible official to provide the resources and budget required.

2) Qualitative implementation compliance monitoring.
   The purpose of the qualitative implementation compliance monitoring is to answer the question "Was the job done correctly?" The need for qualitative implementation monitoring increases rapidly with the complexity of the actions undertaken. For example, complex forest restoration prescriptions implemented using designation by description (DxD) or designation by prescription (DxP) create substantial room for interpretation by the operators and may result in outcomes substantially different on the ground from those intended by the resources specialists who write the prescriptions. Verifying that implementation complies not only quantitatively but also qualitatively with the management decision is especially important when the third tier of monitoring is intended, as effectiveness can only be meaningfully analyzed if the actual treatments outcomes are aligned with the intended outcomes.

   Specific qualitative implementation compliance monitoring measures can be defined at the planning stage and specific resources requirements can be calculated at the planning stage. The plan must include, disclose and commit the Responsible Official to provide the resources and budget required.

3) Effectiveness monitoring.
   The purpose of the effectiveness monitoring is to answer the question "Do the outcomes of the management decision produce the intended effects?" The need for effectiveness monitoring increases rapidly with the complexity and spatial and temporal scopes of the actions undertaken, especially in projects where cumulative effects analysis assumes a speculative nature owing to the scale and duration of the management action. For example, landscape scale forest restoration over 2 million acres in 20 years, as endeavored in the Four Forest Restoration Initiative - an initiative that the Eastern Arizona Counties Organization was instrumental in creating and fostering - is largely inconceivable without the concept of adaptive management,

as we know the Forest Service realizes. However, adaptive management is but an empty rhetoric, and any management action and the NEPA analysis thereof is flawed, if robust three tier monitoring as described here herein is not implemented.

Specific effectiveness monitoring processes can be defined at the planning stage and specific resources requirements can be calculated at the planning stage. The plan must include, disclose and commit the Responsible Official to provide the resources and budget required.

The Eastern Arizona Counties Organization further suggests that in addition to the requirement for three functionally different and complementary tiers, the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan specifically direct the responsible officials to include robust qualitative and effectiveness indicators since easy to collect and process quantitative indicators, such as acres treated, tons of biomass removed or forage utilization, often yield very little meaningful information on the resulting health and resilience of a forest stand/or the health and productivity of a grazing range for example.

Multi-party monitoring

The Eastern Arizona Counties Organization suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan be expanded to include in very specific terms the requirements for the responsible officials to be bound by the findings of multi-party monitoring boards.

The Eastern Arizona Counties Organization fully appreciates and understands that there are concerns that such dispositions could violate the Federal Advisory Committee Act (FACA), or that federal line officials are not authorized to share their decision making authority. However, it is not suggested here that responsible officials surrender their decision making authority to a multi-party monitoring board, but be required to act upon the findings of a multi-party monitoring board in a manner that appropriately addresses the issues raised by the multi-party monitoring board.

Please refer to the *Public Participation and the Role of Collaboration* section of this letter, here under, for further discussion of this substantial issue.

ADAPTIVE MANAGEMENT FRAMEWORK

The Eastern Arizona Counties Organization observes that there are only 14 instances of the use of the words 'adaptive management' in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, and that there are a grand total of 17 lines dedicated to the discussion of adaptive management in the 681 page Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan (PDEIS p. 43-44). The Eastern Arizona Counties Organization further observes that are only 7 instances of the use of the words 'adaptive management' in the 283 page Apache-Sitgreaves National Forests Land Management Plan itself.

Although there is an approximately 1 page very brief discussion of monitoring and a 3 page table of planned monitoring questions, monitoring methods, units of measure, and frequency of measurements in the Apache-Sitgreaves National Forests Land Management Plan (p. 135 – 139), the Eastern Arizona Counties Organization is concerned that the scarce mention of monitoring and adaptive management in the Programmatic Draft Environmental Impact Statement and the Apache-Sitgreaves National Forests

Land Management Plan may reflect an insufficient role for adaptive management in the current planning process. This would be in contradiction with the requirement of the 2012 national Planning Rule and its proposed implementation directives.

The Eastern Arizona Counties Organization appreciates and supports the important role given to the adaptive management framework in the proposed directives. We believe that the key features of adaptive management included in the proposed directives are adequate when addressing: 1. Characterizing explicitly uncertainty and assumptions; 2. Testing assumptions and collecting data using appropriate temporal and spatial scales; 3. Analyzing new information obtained through monitoring and project experience; 4. Learning from feedback between monitoring and decisions; 5. Adapting assumptions and strategies to design better plans and management direction; 6. Making iterative and responsive decisions, evaluating results, and adjusting actions on the basis of what has been learned; and 7. Creating an open and transparent process that shares learning internally and with the public.

Issue

However, the Eastern Arizona Counties Organization believes that the proposed directives miss a critical opportunity to provide substantially clear directives to responsible officials in actually implementing adaptive management, by limiting recommendations to a one and a half page general description of the three phases of planning (assessment, planning, and monitoring) in Title 36, Code of Federal Regulations, part 219 (36 CFR part 219). Specifically, the Eastern Arizona Counties Organization acknowledges that the Forest Service includes some measure of action in paragraph d of its third step (monitoring): "*d. Adapt planning and management activities based on learning from the results of the analysis. This adaptation takes the form of modifying assumptions, models, data, and understanding of the system. This knowledge is then used to inform the planning process that leads to adjustment of plans and projects*." Nonetheless, the Eastern Arizona Counties Organization believes that an entire fourth step of what is generally accepted by academia and the professional world as the adaptive management framework is missing from the proposed directive, namely: corrective action in the implementation of a large scale and long duration management action.

The Eastern Arizona Counties Organization does not fault the Forest Service or the Code of Federal Regulations (36 CFR part 219) for a truncated framework, as many management actions, especially in national forests over the last quarter century, have been implemented at a scale and scope sufficiently limited such that what had been learned from the execution of a given project could only be applied to other projects, considering the rapid completion of small projects. However, as large, long and extremely complex management actions such as landscape scale forest restoration are endeavored, the likes of the Four Forest Restoration Initiative include more than 2 million acres over 20 years, the need for adaptive and very probably corrective action within the existing project and within the existing NEPA Record of Decision is clearly emerging.

Suggested corrective actions for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

The Eastern Arizona Counties Organization suggests that the three phases of planning (assessment, planning, and monitoring) in Title 36, Code of Federal Regulations, part 219 (36 CFR part 219) designed to support a framework for adaptive management that will facilitate learning and continuous improvement in plans and agency decision making, be augmented in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan with a fourth phase that outlines clearly the responsibility and authority of responsible officials to implement adaptive and, if necessary, corrective action during the implementation of large scale, long

duration specific projects as a response to quantitative, qualitative, and effectiveness monitoring of the project.

The Eastern Arizona Counties Organization further suggests that in order to avoid the difficulty and complexity of having to complete new and different NEPA analyses prior to implementing adaptive or corrective action during the implementation of a given project, the NEPA analysis of complex, large scale, long term projects be specifically designed from inception to formalize the inclusion of a four phase adaptive management framework, and to include the possibility for and the responsibility of the line officers to implement a range of actions as may be necessary to adapt to the emergence of data from effectiveness monitoring, and to meet the purpose and need of the proposed action and preferred alternative.

USE OF BEST AVAILABLE SCIENTIFIC INFORMATION TO INFORM THE LAND MANAGEMENT PLANNING PROCESS

The Eastern Arizona Counties Organization appreciates and supports the important role given to the use of best available scientific information to inform the land management planning process in the proposed directives when addressing: 42.1 - Use of Best Available Scientific Information; 42.11 - Integration of the BASI in the Planning Process; 42.11a - Assessment Phase; 42.11b - Planning Phase; 42.11c – Monitoring; 42.12 - Characteristics of Quality Scientific Information; 42.13 - BASI Determination Process; 42.14 - Attributes of the BASI: Uncertainties, Risks, and Assumptions; 42.15 - Sources of Scientific Information; 42.16 - Data Quality; 42.17 - Documentation of the BASI in the Planning Process; 42.17a - Documentation of the BASI in the Assessment Report; 42.17b - Documentation of the BASI in the Plan Decision Document; and 42.2 - Optional Science Reviews in the Land Management Planning Process.

The Eastern Arizona Counties Organization further appreciates and supports the important role given to assessing social and economic sustainability and multiple uses in the assessment process when addressing: 13.1 - Assessing Social, Cultural, and Economic Conditions; 13.11 - Social, Cultural, and Economic Context; 13.12 - Important Social, Cultural, and Economic Influences on the Plan Area; 13.13 - How the Plan Area Influences Key Social, Cultural, and Economic Conditions; 13.14 - Sources of Relevant Existing Information for Social, Cultural, and Economic Conditions; 13.2 - Assessing Benefits People Obtain from the NFS Plan Area; 13.3 - Assessing Multiple Uses; 13.31 - Outdoor Recreation; 13.32 – Range; 13.33 – Timber; 13.34 – Watershed; 13.35 - Fish and Wildlife; 13.4 - Assessing Recreation Settings, Opportunities and Access, and Scenic Character; 13.5 - Assessing Renewable and Nonrenewable Energy and Mineral Resources; 13.6 - Assessing Infrastructure; 13.7 - Assessing Areas of Tribal Importance; 13.8 - Assessing Cultural and Historic Resources and Uses; and 13.9 - Assessing Land Status and Ownership, Use, and Access Patterns.

Issue

However, the Eastern Arizona Counties Organization believes that the proposed directives miss a critical opportunity to provide substantially clear directives to responsible officials in actually integrating social and economic sustainability and multiple uses, and in integrating social and economic science into the framework of best available scientific information to inform their land management planning process and their management decision making process. Specifically, the assessment of the social, cultural and economic values becomes essentially an exercise in futility if these values are not reflected in the management decisions and do not balance other values.

The Eastern Arizona Counties Organization clearly supports robust science and the full integration of ecological, biological diversity, restoration and conservation values in the management process, and the Eastern Arizona Counties Organization is on record for participating and often leading efforts designed to reintroduce to the ecosystems of eastern Arizona such natural ecologically sustainable processes as a frequent surface fire regime. Nevertheless, the Eastern Arizona Counties Organization is observing, and when necessary is committed to mitigate, a probably natural temptation by some scientists to develop and implement pure uncompromised and uncompromising science, or the currently accepted state of best science - which often proves to be a temporary state - to the detriment of the enjoyment, custom, culture, health, safety and economic well-being of the people. An example would be the forcible and inflexible implementation of rigid travel management rules in the national forests of Arizona in apparent disregard of not only the characteristics of individual forests, but also of people's long established custom, culture, need and right to recreate, hunt or procure firewood in these forests. Such rules may make sense when protecting relatively limited acreages of national forests in states comprising mostly private land, but they create an unreasonable burden when regulating access to upward of 50% of the land in a County. Additionally, blind application of out of context science promulgated at national level may trigger fundamentally unscientific decisions when, for example, identical travel management rules are being implemented across fundamentally different ecosystems in ponderosa pine dominated forests, pinion juniper dominated forests, wet or dry mixed conifer forests, and across multiple national forests characterized by fundamentally different densities of road systems.

Additionally, the Eastern Arizona Counties Organization is also observing, and when necessary is also committed to mitigate, the fact that the same temptation to develop and implement pure uncompromised and uncompromising science as discussed in the above paragraph, also often causes the weakening of the social consensus with stakeholders who would support the implementation of management decisions based on a balanced approach, but are unwilling to support the invasive implementation of a monolithic and intransigent interpretation of science. An would be the current reluctance of many stakeholders to support the Four Forest Restoration Initiative NEPA DEIS, owing to the science-based decision to cut some of the last remaining old growth or old and large trees in the Southwest in order to create regeneration openings in the name of scientifically driven silviculture. Such decisions may make sense in forests featuring well balanced classes of vegetative structural stages (VSS), but are difficult to accept in forests where older VSS classes (VSS 5 and 6) are in recognized drastic deficit while younger VSS classes (VSS 2, 3 and 4) are overabundant and choke the landscape, transforming it into a ticking fire bomb.

Suggested corrective actions for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

The Eastern Arizona Counties Organization suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan provide clear and unambiguous guidelines to responsible officials to integrate social and economic sustainability and social and economic science into the framework of best available scientific information to inform their land management planning process and their management decision making process.

Specifically, the Eastern Arizona Counties Organization suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan instruct responsible officials to implement substantive - even though possibly scientifically imperfect - management actions that move the ecosystems significantly toward the desired future conditions when such actions are supported by social consensus, rather than spend years attempting to forcibly impose, and possibly trigger litigation of, management actions that may be deemed scientifically more perfect but that do not benefit from the support of the social consensus. In other terms, the Eastern Arizona

Counties Organization suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan emphasize executing well the less than perfect projects now, over developing scientifically perfect projects that are never implemented.

To quote a famous Arizonan: "Extremism in the defense of liberty is no vice" (Barry Goldwater), but the Eastern Arizona Counties Organization would like to propose to the Forest Service that extremism in the pursuit of best available scientific information (BASI) may become counterproductive when it results in paralysis by analysis, or inaction by litigation.

PUBLIC PARTICIPATION AND THE ROLE OF COLLABORATION

The Eastern Arizona Counties Organization appreciates and supports the important role given to public participation and the role of collaboration in the proposed directives. We believe that the content of the proposed directives is adequate, although sometimes succinct, when addressing 43.02 - Principles of Public Participation; 43.1 - Guidance for Public Participation; 43.11 - Guidance for Collaboration; 43.12 - Developing a Public Participation Strategy; 43.13 - Federal Advisory Committee Act Committees; 43.14 - Engaging a Diverse Set of Stakeholders; 43.15 - Opportunities for American Indians and Alaska Natives; 43.16 - Participation and Coordination with Other Related Planning Efforts; 43.17 - Participation during Phases of Planning; 43.17a - Participation during Assessments; 43.17b - Participation during Development, Revision, or Amendment of Plan Components; 43.17c - Participation during Monitoring Program Development; 43.17d - Participation during Monitoring Evaluation Report Reviews; 43.18 - Substantive Formal Comment; and 43.19 - Participation during Pre-decisional Administrative Review.

Issue

However, the Eastern Arizona Counties Organization believes that the proposed directives miss a critical opportunity to provide substantially clear directives to responsible officials on the two fundamental and overlapping aspects of public participation and the role of collaboration. Specifically, sustained and meaningful public participation and engagement require that the public's input actually influence substantially the decision making process, and sustained meaningful collaboration requires that the products of collaboration be honored by the Forest Service.

The Eastern Arizona Counties Organization has acquired a long, ineffective, inefficient, unproductive and oftentimes frustrating experience of responsible officials paying lip service to public participation and to the role of collaboration, and the Eastern Arizona Counties Organization believes that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan must refocus the concept of public participation and collaboration away from complying with a process and managing the problem, toward developing executable products and resolving the problem.

Suggested corrective actions for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

The Eastern Arizona Counties Organization recognizes that, under current federal statutes, Forest Service line officers are not allowed to share their decision making authority. Nonetheless, the Eastern Arizona Counties Organization believes that a statutory monopoly of decision making authority does not necessarily imply an operational monopoly on decision content. Therefore, the Eastern Arizona Counties Organization suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan emphasize that while the line officers retain their sole legal ability to make the decision, they are also required by law and regulation "to meet the needs

of present and future generations" (Forest Service Mission Statement), as expressed through public participation and collaboration among other channels.

The Eastern Arizona Counties Organization further suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan direct responsible officials allow the public to participate meaningfully in, influence substantially, and when appropriate alter the content of their decision, while they retain their statutory decision making authority.

The Eastern Arizona Counties Organization further suggests that a special role and a special forum be organized in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, for local elected officials such as County Supervisors to represent the socio economic interests of local populations in the decision making process of the Forest Service responsible officials. As the most local and often the most directly involved elected representatives in the democratic constitutional process, local elected officials can play a tremendously significant role in representing their constituents with line officers and ensure that federal employees temporarily assigned to a national forest are given the best possible opportunity to integrate local custom, culture and economic well-being into their decision making process.

OBJECTION PROCESS

The Eastern Arizona Counties Organization appreciates the attempt made by the Forest Service to give the public more effective involvement, support their collaborative processes and result in better decision-making (U.S. Forest Service Chief Tom Tidwell) by replacing the previous appeal process with the new pre-decisional administrative review, or objection process, to be applied under federal regulation to all projects and activities that implement land-management plans and that are documented in an environmental assessment or environmental impact statement.

The Eastern Arizona Counties Organization acknowledges that the U.S. Forest Service announced on March 26, 2013 the final rule governing the objection process for projects and activities implementing land-management plans, and that the final rule was published in the Federal Register on March 27, 2013 after a review of public comments submitted in response to the publication of the proposed rule in 2012. Consequently, the Eastern Arizona Counties Organization fully acknowledges that this comment letter is not an opportunity to comment on the objection process.

Issue

However, the Eastern Arizona Counties Organization believes that specific comments on the application of the objection process as implemented in the proposed directives, and presumably in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan DOES provide an opportunity to address concerns about the objection process implementation, as follows:

Among other significant differences, a critical difference between the previous appeal process and the new objection process is that an objection must be filed prior to an actual decision being made and published. This creates a potentially difficult situation inasmuch as there is a possibility, and in certain cases a probability, that several objections may be filed by several different parties. The resolutions of these objections may result in a final decision significantly different from the one disclosed in the document published with the notice of a plan subject to objection. Although the list of objections will be public, the timing of filing of potential objections within the objections filing period may result in the

requirement for the public to decide to file or abstain to file an objection based on the speculation of what other parties may decide to file, and what the resolutions to such objections might be. Additionally, since a final decision may be influenced significantly by the resolution of an objection that, by definition, happens only after the comments period is closed, parties may be unwillingly put in a situation where pursuant to 51.52 - *Issues Not Based on Previously Submitted Substantive Formal Comments*, their potential objection may be ineligible.

Additionally, the Eastern Arizona Counties Organization is concerned that Chapter 50 *Objection Process* in general, paragraph 51.66 - *Reviewing Officer Response to Objections* and paragraph 51.6 - *Resolution of Objections* in particular, and specifically paragraph 51.6 section 4: "The reviewing officer responds to the outstanding issues in the objection; The reviewing officer's response may include instructions to the responsible official as part of the disposition of the objection. The response must be sent to the objecting party(ies) by certified mail, return receipt requested, and posted online" (36 CFR 219.57(b) and sec. 51.64) are focused on the administrative process of disposing of an objection rather than on the substantial process of actually resolving it.

Suggested corrective actions for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

The Eastern Arizona Counties Organization suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan guide and direct the reviewing officers to exercise careful judgment in their resolution or rejection of objections, in relation to the true material importance of the objections – as opposed to their symbolic or emotional importance, and the potential effect of litigation on the implementation of the project.

In so suggesting, the Eastern Arizona Counties Organization wants to emphasize that it does not promote indiscriminate and aberrant acceptance of any and all parties' whims or irrational demands, but suggests instead a well-considered costs and benefits analysis by Forest Service responsible officials, line officers and reviewing officers of public input into their decision process in view of the relative actual significance or lack thereof of such input or demands, and the overwhelming urgency to act, even if imperfectly, in some specific cases such as the protection of the Southwest forests against catastrophic landscape scale wildfires.

SUMMARY

Alternative D

The Eastern Arizona Counties Organization wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

The Eastern Arizona Counties Organization understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and the Eastern Arizona Counties Organization acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, the Eastern Arizona Counties Organization cannot support an alternative that would result in, among others,:

I. The withdrawing from mineral entry in the future of approximately 34% of the Apache-Sitgreaves National (PDEIS p. 467);

II. The unavailability of any suitable timberland whatsoever in the Apache-Sitgreaves National Forests (PDEIS p. 430);
III. The closing of approximately 50% of the Apache-Sitgreaves National Forests to future consideration of new motorized areas and trails (PDEIS p. 328);
IV. The recommendation for the designation of 25% of the Apache-Sitgreaves National Forests as Wilderness Areas (PDEIS p. 26).

Alternative D is so departed from the White Mountains residents' and visitors' past, current, and foreseeable future custom, culture and economic well-being needs, and from the Eastern Arizona Counties Organization Mineral and Energy Resources Management Objectives, that it does not warrant any further discussion from the Counties perspective.

Selected Alternative

The Eastern Arizona Counties Organization believes that neither Alternative B, the Preferred Alternative nor Alternative C, as discussed in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, are fully satisfactory as they stand.

The Eastern Arizona Counties Organization respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include elements from both Alternative B and Alternative C, as follows:

- Include the provisions of Alternative B relating to the restoration treatment of up to 25,000 acres per year of grasslands (primarily the Great Basin and semi-desert types) to remove encroaching woody species.
- Include the provisions of Alternative C relating to Forest Products in order to:
  - Increase the number of acres logged annually in order to accelerate the pace of ecological restoration;
  - Increase the amount of forest byproducts resources by prioritizing, wherever possible, mechanical thinning treatments over fire as a thinning tool treatment;
  - Increase the maximum allowable sale quantity (ASQ) volume to 268,000 CCF per year to meet the foreseeable requirements of the existing and currently developing industry in the White Mountains.
- Include the provisions of current Alternative C relating to motorized travel and recreation in order to retain the suitability of 80% of the lands of the Apache-Sitgreaves National Forests for future consideration of new motorized areas and trails.
- Include the provisions of Alternative C relating to forested ecosystems restoration and catastrophic wildfire prevention treatment types, scale, pace and prioritization.
- Include the provisions of Alternative C relating to watershed restoration objectives.
- Include the provisions of Alternatives B and C relating to the designation of management areas as follows:
  - Community Forest Intermix: ~61,000 acres (3%);
  - High Use Developed Recreation Area: ~17,000 acres (1%);
  - Energy Corridor: ~2,500 acres (<1%);
  - Wild Horse Territory: ~19,000 acres (1%);
  - Wildlife Quiet Area: ~50,000 acres (2%);
  - Research Natural Area: ~8,000 acres (<1%);
  - Primitive Area: ~200,000 acres (10%); and,
  - Existing Wilderness: ~23,000 (1%).

In addition, the Eastern Arizona Counties Organization respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include the following:

- Designate the new proposed Research Natural Areas removed from suitable rangelands for the specific purpose of quantifying and improving the understanding of the rangelands resources ecosystem processes and how they relate to improved management practices.
- Include specific guidelines for a rangelands resources adaptive management plan that provides clear quantitative, qualitative and effectiveness monitoring requirements, and a more balanced approach between the goal of restoration and the goal of economic production, as the need for restoration in rangelands may not carry the same clear and present benefits as restoration in forestlands.
- Alternatively, include a specific plan under conventional management to reach full utilization of the available animal unit months to result in the full economic impact of approximately 120 jobs and $1.3 million in labor income annually.
- Include the necessary analysis, and the resulting authority, for the Responsible Official to simultaneously implement a restoration program designed to support the existing and currently developing industry in the White Mountains, and the contract(s) expected to result from the second analysis of the Four Forest Restoration Initiative, including a maximum allowable sale quantity (ASQ) volume of 450,000 CCF annually.
- Include guidance for the upcoming implementation of the national Travel Management Rule and for authorized cross-country travel, in order to simultaneously achieve the required preservation and conservation objectives and allow reasonable motorized access, travel and recreation for dispersed camping, big game retrieval, firewood collection and dispersed shooting as outlined in the above comments and in the Eastern Arizona Counties Organization Motorized Travel and Recreation Management Objectives.
- Include specific guidelines to integrate the provisions of the Four Forest Restoration Initiative stakeholders-approved document *Old Growth Protection and Large Tree Retention Strategy* (OGPLTRS) to allow mechanical treatments to proceed without using 16-inch diameter caps, while retaining the social license necessary for an expeditious, non-conflictual and non-litigious implementation of landscape scale restoration.
- Include a comparative analysis of prioritization of the 10 priority watersheds designated under Alternatives, B, C and D, if they are different and have higher or lower priority levels as compared to each other.
- Include a revised analysis differentiating more clearly between degrading factors and the effects of degrading factors on the physical and biological characteristics and processes of watersheds that affect the hydrologic and soil functions, and between natural processes and management effects, so that a proper causality analysis can improve the design of effective restoration and management actions.
- Include specific information on the potential location of the proposed 405,000 acres of Natural Landscape Areas under Alternative B.
- Include specific information on the rationale supporting the proposed elimination of the existing 322,000 acres of Inventoried Roadless Areas (IRAs) under Alternative C.
- Include in very specific terms the requirements for a quantitative, qualitative and effectiveness monitoring strategy, a very specific monitoring implementation plan, and a specific monitoring budget with required resources allocation and funding, to the planning and NEPA review process of all management projects, to be submitted to public review and comments in (a) the Draft Environmental Impact Statements (DEIS), (b) the Records of Decisions (ROD) and (c) the Final Environmental Impact Statements (FEIS) of all management projects, in order to ensure that monitoring will actually be implemented and funded.

- Include in very specific terms the requirements for the responsible officials to be bound by the findings of multi-party monitoring boards and to act upon the findings of multi-party monitoring boards in a manner that appropriately addresses the issues raised by the multi-party monitoring boards.
- Include in very specific terms a fourth phase that outlines clearly the responsibility and authority of responsible officials to implement adaptive and, if necessary, corrective management action during the implementation of large scale, long duration specific projects as a response to the quantitative, qualitative, and effectiveness monitoring of the project, in addition to the three phases of planning (assessment, planning, and monitoring) identified in Title 36, Code of Federal Regulations, part 219 (36 CFR part 219) and designed to support a framework for adaptive management.
- Include clear and unambiguous guidelines to responsible officials to integrate social and economic sustainability and social and economic science into the framework of best available scientific information to inform their land management planning process and their management decision making process.
- Include clear and unambiguous guidelines to responsible officials to implement substantive - even though possibly scientifically imperfect - management actions that move the ecosystems significantly toward the desired future conditions, when such actions are supported by social consensus, rather than spend years attempting to forcibly impose, and possibly trigger litigation of, management actions that may be deemed scientifically more perfect but that do not benefit from the support of the social consensus.
- Include an emphasis on executing well the less than perfect projects now, over developing scientifically perfect projects that are never implemented.
- Include an emphasis on allowing the public to meaningfully participate in, influence substantially, and, when appropriate, alter the content of the decision of responsible officials while they retain their statutory decision making authority.
- Include a special forum for local government elected officials such as County Supervisors to represent the socio economic interests of the local residents in the decision making process of the Forest Service responsible officials.
- Include clear and unambiguous guidelines for reviewing officers to exercise careful judgment in their resolution or rejection of objections, in relation to the true material importance of the objections – as opposed to their symbolic or emotional importance, and the potential effect of litigation on the implementation of the project.

Finally, the Eastern Arizona Counties Organization respectfully requests that the Responsible Official conduct:

1) An extensive and exhaustive consistency review between the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan and the Counties' seven sets of natural resources management objectives relevant to these comments, as follows:
   - I. Rangelands Resources Management Objectives
   - II. Forest Products Resources Management Objectives
   - III. Mineral and Energy Resources Management Objectives
   - IV. Motorized Travel and Recreation Management Objectives
   - V. Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives
   - VI. Watersheds Restoration Objectives
   - VII. Management Areas Designation Objectives

Ltr#0040

2) A comprehensive coordination action between the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization objectives, plans and policies as expressed in the Counties planning documents, the Counties Board of Supervisors public record of deliberations and decisions, and the Counties comments on the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan as expressed in this document.

3) An effective conflict resolution and conflict reduction process aimed NOT AT MANAGING potential discrepancies but at RESOLVING potential discrepancies between the Apache-Sitgreaves National Forests Land Management Plan and the Eastern Arizona Counties Organization objectives, plans and policies, their compatibility and their interrelated impacts, and emphasizing their joint objectives.

The Eastern Arizona Counties Organization further requests to be kept informed as the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan project progresses. The Eastern Arizona Counties Organization hereby reserves its right to provide further comments as the process unfolds, and requests that the Forest Service commit to receiving and integrating further comments from the Eastern Arizona Counties Organization as provided.

Thank you for your consideration.

Respectfully submitted,



On behalf and with the approval of the Board of Directors,

Pascal Berlioux, Ph.D. MBA
Executive Director
Eastern Arizona Counties Organization
pberlioux@easternarizonacounties.us

Ltr#0159

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

May 14, 2013

RECEIVED
MAY 20 2013
MAILROOM

Ms. Michelle Davalos
Forest Planner
Apache-Sitgreaves National Forests
P.O. Box 640
30 South Chiricahua Drive
Springerville, Arizona 85938

Subject: Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, Apache, Coconino, Greenlee, and Navajo Counties, Arizona (CEQ# 20130028)

Dear Ms. Davalos:

The U.S. Environmental Protection Agency has reviewed the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The EPA commends the Forest Service for the commitment to ecological restoration and adaptive management demonstrated in the proposed Apache-Sitgreaves National Forests Land Management Plan (Plan) revision. The revised Plan includes important new information and land management strategies on topics, such as invasive species and climate change, that have become central management challenges since the Plan was first implemented. We strongly support the ongoing collaboration between the Kaibab, Coconino, and Apache-Sitgreaves National Forests to sustainably manage Arizona's federal ponderosa pine and mixed conifer forests, both through revisions of your respective land management plans, as well as through the Four Forest Restoration Initiative (4FRI), which is also undergoing NEPA review. We will submit comments on the 4FRI DEIS later this month.

Based on our review of the subject DEIS, we have rated the Preferred Alternative and the document as *LO-1, Lack of Objections – Adequate* (see enclosed EPA Rating Definitions). The EPA recognizes the need for the use of mechanical thinning and prescribed fire and wildfire to achieve long-term restoration objectives. We commend the Forest Service for committing, in the Preferred Alternative, to strong best management practices and soil and water conservation measures to protect sensitive resources during mechanical harvest and fire treatments. We would also like to acknowledge the thorough description, in the DEIS, of the possible effects of climate change on the Apache-Sitgreaves National Forests, and for including Appendix A: "Climate Change Trends and Apache-Sitgreaves NFs Land Management Planning" in the Plan. Appendix A, with its comprehensive analysis of climate change trends, possible effects, and management strategies to avoid or mitigate these effects, is an excellent supplement to the DEIS and one of the finest treatments of climate change that my office has seen in a NEPA document. We recommend that the Final EIS and Record of Decision include a commitment to implement these mitigation strategies.

We recognize the challenge the Forest Service faces by implementing a management plan that will rely heavily on prescribed burns and wildfire to achieve restoration objectives. We commend the Forest Service for preparing an "Air Quality Specialist Report" for this Plan that explains these challenges. Though the planning area has good air quality, and meets all federal ambient air quality standards, the fine particulate matter generated during wildland fire does present a human health risk. We recommend that the Forest Service implement BMPs and work with the interagency Smoke Management Group to reduce emissions from prescribed burns and wildfires to the greatest possible extent. We also recommend that the Forest Service analyze and include a description, in the FEIS, of the potential for further reductions in air emissions, in future forest treatments, by lessening or eliminating pile burning of residual fuels in favor of biomass energy production.

We appreciate the opportunity to review this DEIS, and are available to discuss our comments. When the Final EIS is released, please send one CD copy to this office. If you have any questions, please contact me at 415-972-3521, or contact Jason Gerdes, the lead reviewer for this project. Jason can be reached at 415-947-4221 or gerdes.jason@epa.gov.

Sincerely,

Kathleen Martyn Goforth, Manager
Environmental Review Office

Enclosure: Summary of the EPA Rating System

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

Ltr#0141

From:	Sluyter, Cheryl
To:	FS-ASNF Planning
Cc:	Martin, Tommie
Date:	Friday, May 17, 2013 5:05:57 PM
Attachments:	Statement for Apache Sitgreaves.pdf

Please find attached the Gila County Coments on the Programmatic Draft Environmental Impact Statement for Apache-Sitgreaves National Forest Land Management Plan.

Thank you
Cheryl Sluyter
Assitant to Tommie Martin
Supervisor District 1
Gila County

Ltr#0141

Tommie C. Martin, District I
610 E. Hwy 260, Payson, 85547
(928) 474-2029
tmartin@gilacountyaz.gov

Michael A. Pastor, District II
(928) 402-8753
mpastor@gilacountyaz.gov

John D. Marcanti, District III
(928) 402-8726
jmarcanti@gilacountyaz.gov

GILA COUNTY
BOARD OF SUPERVISORS
1400 E. Ash Street
Globe, Arizona 85501

Don E. McDaniel, Jr.
County Manager
(928) 402-4344
dmcdaniel@gilacountyaz.gov

Marian Sheppard
Clerk of the Board of Supervisors
(928) 402-8757
msheppard@gilacountyaz.gov

May 15, 2013

Apache-Sitgreaves National Forests - Plan Revision Team
P.O. Box 640
Springerville, AZ 85938

Electronic filing: asnf.planning@fs.fed.us

File Code: Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Re: Gila County comments on the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Dear Responsible Official:

Gila County would like to offer comments on the above referenced proposed project:

GILA COUNTY COMMENTS IN SUMMARY

Alternative D

Gila County wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

Gila County understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and Gila County acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, Gila County cannot support an alternative that would result in, among other things:

I. The withdrawing from mineral entry in the future of approximately 34% of the Apache-Sitgreaves National (PDEIS p. 467);
II. The unavailability of any suitable timberland whatsoever in the Apache-Sitgreaves National Forests (PDEIS p. 430);

III. The closing of approximately 50% of the Apache-Sitgreaves National Forests to future consideration of new motorized areas and trails (PDEIS p. 328);
IV. The recommendation for the designation of 25% of the Apache-Sitgreaves National Forests as Wilderness Areas (PDEIS p. 26).

Alternative D is so departed from the White Mountains residents' and visitors' past, current, and foreseeable future custom, culture and economic well-being needs, and from the Gila County Mineral and Energy Resources Management Objectives, that it does not warrant any further discussion from the County's perspective.

Selected Alternative

Gila County believes that neither Alternative B, the Preferred Alternative nor Alternative C, as discussed in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, are fully satisfactory as they stand.

Gila County respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include elements from both Alternative B and Alternative C, as follows:

- Include the provisions of Alternative B relating to the restoration treatment of up to 25,000 acres per year of grasslands (primarily the Great Basin and semi-desert types) to remove encroaching woody species.
- Include the provisions of Alternative C relating to Forest Products in order to:
  - Increase the number of acres logged annually to accelerate the pace of ecological restoration;
  - Increase the amount of forest byproducts resources by prioritizing, wherever possible, mechanical thinning treatments over fire as a thinning tool treatment;
  - Increase the maximum allowable sale quantity (ASQ) volume to 268,000 CCF per year to meet the foreseeable requirements of the existing and currently developing industry in the White Mountains.
- Include the provisions of current Alternative C relating to motorized travel and recreation in order to retain the suitability of 80% of the lands of the Apache-Sitgreaves National Forests for future consideration of new motorized areas and trails.
- Include the provisions of Alternative C relating to forested ecosystems restoration and catastrophic wildfire prevention treatment types, scale, pace and prioritization.
- Include the provisions of Alternative C relating to watershed restoration objectives.
- Include the provisions of Alternatives B and C relating to the designation of management areas, as follows:
-

Community Forest Intermix:	~61,000 acres (3%)
High Use Developed Recreation Area:	~17,000 acres (1%)
Energy Corridor:	~2,500 acres (<1%)
Wild Horse Territory:	~19,000 acres (1%)
Wildlife Quiet Area:	~50,000 acres (2%)
Research Natural Area:	~8,000 acres (<1%)
Primitive Area:	~200,000 acres (10%)
Existing Wilderness:	~23,000 (1%)

In addition, Gila County respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include the following:

- Designate the new proposed Research Natural Areas removed from suitable rangelands for the specific purpose of quantifying and improving the understanding of the rangelands resources ecosystem processes and how they relate to improved management practices.
- Include specific guidelines for a rangelands resources adaptive management plan that provides clear quantitative, qualitative and effectiveness monitoring requirements, and a more balanced approach between the goal of restoration and the goal of economic production, as the need for restoration in rangelands may not carry the same clear and present benefits as restoration in forestlands.
- Alternatively, include a specific plan under conventional management to reach full utilization of the available animal unit months to result in the full economic impact of approximately 120 jobs and $1.3 million in labor income annually.
- Include the necessary analysis, and the resulting authority, for the Responsible Official to simultaneously implement a restoration program designed to support the existing and currently developing industry in the White Mountains, and the contract(s) expected to result from the second analysis of the Four Forest Restoration Initiative, including a maximum allowable sale quantity (ASQ) volume of 450,000 CCF annually.
- Include guidance for the upcoming implementation of the national Travel Management Rule and for authorized cross-country travel, in order to simultaneously achieve the required preservation and conservation objectives and allow reasonable motorized access, travel and recreation for dispersed camping, big game retrieval, firewood collection and dispersed shooting as outlined in the above comments and in the Gila County Motorized Travel and Recreation Management Objectives.
- Include specific guidelines to integrate the provisions of the Four Forest Restoration Initiative stakeholders-approved document *Old Growth Protection and Large Tree Retention Strategy* (OGPLTRS) to allow mechanical treatments to proceed without using 16-inch diameter caps, while retaining the social license necessary for an expeditious, non-conflictual and non-litigious implementation of landscape scale restoration.
- Include a comparative analysis of prioritization of the 10 priority watersheds designated under Alternatives, B, C and D, if they are different and have higher or lower priority levels as compared to each other.
- Include a revised analysis differentiating more clearly between degrading factors and the effects of degrading factors on the physical and biological characteristics and processes of watersheds that affect the hydrologic and soil functions, and between natural processes and management effects, so that a proper causality analysis can improve the design of effective restoration and management actions.
- Include specific information on the potential location of the proposed 405,000 acres of Natural Landscape Areas under Alternative B.
- Include specific information on the rationale supporting the proposed elimination of the existing 322,000 acres of Inventoried Roadless Areas (IRAs) under Alternative C.
- Include in very specific terms the requirements for a quantitative, qualitative and effectiveness monitoring strategy, a very specific monitoring implementation plan, and a specific monitoring budget with required resources allocation and funding, to the planning and NEPA review process of all management projects, to be submitted to public review and comments in (a) the Draft Environmental Impact Statements (DEIS), (2) in the Records of

Decisions (ROD) and (3) in the Final Environmental Impact Statements (FEIS) of all management projects, in order to ensure that monitoring will actually be implemented and funded.

- Include in very specific terms the requirements for the Responsible Officials to be bound by the findings of multi-party monitoring boards and to act upon the findings of multi-party monitoring boards in a manner that appropriately addresses the issues raised by the multi-party monitoring boards.
- Include in very specific terms a fourth phase that outlines clearly the responsibility and authority of Responsible Officials to implement adaptive and, if necessary, corrective management action during the implementation of large scale, long duration specific projects as a response to the quantitative, qualitative, and effectiveness monitoring of the project, in addition to the three phases of planning (assessment, planning, and monitoring) identified in Title 36, Code of Federal Regulations, part 219 (36 CFR part 219) and designed to support a framework for adaptive management.
- Include clear and unambiguous guidelines to Responsible Officials to integrate social and economic sustainability and social and economic science into the framework of best available scientific information to inform their land management planning process and their management decision making process.
- Include clear and unambiguous guidelines to Responsible Officials to implement substantive - even though possibly scientifically imperfect - management actions that move the ecosystems significantly toward the desired future conditions, when such actions are supported by social consensus, rather than spend years attempting to forcibly impose, and possibly trigger litigation of, management actions that may be deemed scientifically more perfect but that do not benefit from the support of the social consensus.
- Include an emphasis on executing well the less than perfect projects now, over developing scientifically perfect projects that are never implemented.
- Include an emphasis on allowing the public to meaningfully participate in, influence substantially and, when appropriate, to alter the content of the decision of Responsible Officials while they retain their statutory decision making authority.
- Include a special forum for local government elected officials such as County Supervisors to represent the socio economic interests of the local residents in the decision making process of the Forest Service Responsible Officials.
- Include clear and unambiguous guidelines for reviewing officers to exercise careful judgment in their resolution or rejection of objections, in relation to the true material importance of the objections – as opposed to their symbolic or emotional importance, and the potential effect of litigation on the implementation of the project.

Finally, Gila County respectfully requests that the Responsible Official conduct:

1) An extensive and exhaustive consistency review between the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan and Gila County's seven sets of natural resources management objectives relevant to these comments, as follows:

   I. Rangelands Resources Management Objectives
   II. Forest Products Resources Management Objectives
   III. Mineral and Energy Resources Management Objectives

   IV. Motorized Travel and Recreation Management Objectives
   V. Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives
   VI. Watersheds Restoration Objectives
   VII. Management Areas Designation Objectives

2) A comprehensive coordination action between the Apache-Sitgreaves National Forests Land Management Plan and the Gila County objectives, plans and policies as expressed in the County planning documents, the County Board of Supervisors public record of deliberations and decisions, and the County comments on the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan as expressed in this document.

3) An effective conflict resolution and conflict reduction process aimed NOT AT MANAGING potential discrepancies but at RESOLVING potential discrepancies between the Apache-Sitgreaves National Forests Land Management Plan and the Gila County objectives, plans and policies, their compatibility and their interrelated impacts, and emphasizing their joint objectives.

Gila County further requests to be kept informed as the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan project progresses. Gila County hereby reserves its right to provide further comments as the process unfolds, and requests that the Forest Service commit to receiving and integrating further comments from Gila County as provided.

GILA COUNTY COMMENTS IN DETAIL

PART 1 - GILA COUNTY OBJECTIVES AS EXPRESSED IN ITS PLANS AND POLICIES

GILA COUNTY

Gila County is located in central Arizona beneath the Mogollon Rim that marks the southern edge of the Colorado plateau. Seven characteristics of Gila County are particularly relevant to the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan:

1) The large number of National Forests located in the County and its neighboring Arizona counties: Tonto National Forest, Prescott National Forest, Coconino National Forest, Apache National Forest, Sitgreaves National Forest and Coronado National Forest.

2) The overwhelmingly large proportion of the land area of Gila County being designated as national forests, federal, state or tribal land, and/or under federal or state management. In Gila County the Forest Service controls 55% of the land; Tribal Authorities and the Bureau of Indian Affairs 40%; the State of Arizona 1%; and, individual or corporate ownership only 4%.

3) The disproportionately large impact that landscape scale catastrophic wildfires in the national forests of the Southwest have had on the ecological, social and economic life of the County and neighboring eastern Arizona counties. Four of the five largest wildfires in Arizona, which includes two of the largest wildfires in the nation, have occurred within Gila County and its neighboring counties in the last decade: the Rodeo Chediski fire of 2002 that consumed 460,000 acres; the Willow Fire of 2004 that burned 120,000 acres; the Cave Creek Complex fire of 2005 that blazed through 244,000 acres; and, the Wallow fire of 2011 that charred 538,000 acres. Prior to these recent fires, the deadly Dude Fire of 1990, while burning 'only' 24,000 acres, was the largest forest fire in modern Arizona times. It destroyed 60 homes, caused the evacuation of 1,100 people, and -- worst of all -- killed 6 firefighters.

4) The disproportionately large impact that outdoor recreational activities conducted on national forests lands -- such as, but not limited to, dispersed camping, cross-country motorized travel, big game hunting, dispersed shooting, dispersed fishing or hiking, etc., by local residents of and visitors to the County recreating from metro Arizona to the Rim Country -- have on the economic well-being and the economic development of the County.

5) The steady reliance of Gila County residents on firewood cutting and gathering permits, and dispersed firewood access in the local national forests for meeting their energy needs.

6) The outstanding and continued requirement for and commitment by the County to proactively participate, and assume leadership roles, in forest and watershed restoration and wildfire prevention and mitigation efforts at local and landscape scales. Gila County has, for example, been instrumental in creating and fostering both the White Mountain Stewardship Project and the Four Forest Restoration Initiative.

As such, Gila County has a special interest in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan.

While Gila County recognizes that it is only one of the many constituents of the U.S. Forest Service, and does not seek special consideration in the current comments and review process, we urge the Responsible Official to pay careful attention and give due consideration to the following comments in view of the uncommonly large impact that Forest Service land management decisions regularly have directly, or may occasionally have indirectly, on the enjoyment, custom, culture, health, safety and economic well-being of County residents or visitors.

Gila County is actively involved, and assumes a leadership role, in several forest restoration efforts directly involving the Apache-Sitgreaves National Forests, and has gained considerable experience working with the Forest Service. Gila County, therefore, understands particularly well the issues at hand, the management processes engaged, the desired future conditions, and the difficulties and challenges involved. Gila County appreciates fully the Apache-Sitgreaves National Forests' intent: to ensure an adaptive land management planning process that is inclusive, efficient, collaborative and science-based to promote healthy, resilient, diverse and productive national forests and grasslands; to support natural resources-based rural economic development and employment; and, to ensure the enjoyment of the Apache-Sitgreaves National Forests by current and future generations in a balanced approach of preservation, conservation and sustainable exploitation of the natural resources.

In a spirit of continuous improvement, and based on direct practitioner knowledge and experience gained through a uniquely long, diverse, often productive and sometimes difficult participation in the Forest Service planning and implementation processes, Gila County would like to share its comments, its appreciation for the obvious work put into the Apache-Sitgreaves National Forests Land Management Plan and its Programmatic Draft Environmental Impact Statement, and its concerns and suggestions as follows.

PRELIMINARY COMMENT

Gila County would like to preface any subsequent comment by the observation that the quality and thoroughness of the work exhibited in both the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan and the Proposed Land Management Plan for the Apache-Sitgreaves National Forests is outstanding. Gila County is fully conscious of the fact that an enormous commitment was made and delivered upon by the Apache-Sitgreaves National Forests Land Management Plan team, and that a legitimate pride of ownership must rest with the authors of the above mentioned documents, as well as the Specialist Reports and other documents not published with the Programmatic Draft Environmental Impact Statement or the Land Management Plan but nonetheless part of the project record.

Gila County urges the Apache-Sitgreaves National Forests Land Management Plan team to consider the County comments as NOT critical of their work, but rather as a goodwill effort toward continuous improvement of both the Programmatic Draft Environmental Impact Statement and the Land Management Plan, and a proactive effort by the County to disclose its objectives, plans and policies AND THE RATIONALES THAT SUPPORT THEM, and to facilitate the statutorily required consistency review, coordination action and conflict reduction regarding potential discrepancies between the Apache-Sitgreaves National Forests Land Management Plan and the County objectives as expressed in its plans and policies and as discussed in this document.

ASSESSMENT & LAND MANAGEMENT PLAN ROLE OF GILA COUNTY

Gila County recognizes that the Assessment and Land Management Plan development are Forest Service-driven technical processes, and Gila County generally supports the analysis mechanisms deployed by the Apache-Sitgreaves National Forests to complete the assessment and the technical part of the management planning.

Although Gila County retains and employs many talented individuals at the peak of the knowledge curve in their respective fields, Gila County does not generally define its role in the public lands management process as a role of science provider or resources technical specialist. Rather, as a body representing the most direct and local expression of democratic government at the individual district or national forest level, Gila County more generally defines its role at the policy-making level as it relates to public lands management processes.

Therefore, although several of the following comments organized under the following headers do apply to the assessment and land management plan development processes, they purposefully do not address specific technical mechanisms thereof, and Gila County is generally satisfied that the USFS methodology is generally satisfactory, and that the studies that the Apache-Sitgreaves

National Forests, in their expertise deem reliable, are adequate to support the Apache-Sitgreaves National Forests technical conclusions (Lands Council v. McNair 537 F.3d 981 - 9th Cir. 2008).

Gila County will, therefore, focus its engagement in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan process, and its comments and suggestions, at the policy-making level and on whether the proposed Apache-Sitgreaves National Forests Land Management Plan serves the County residents' or visitors' enjoyment, custom, culture, health, safety and economic well-being.

Gila County will further focus its engagement on whether the proposed Apache-Sitgreaves National Forests Land Management Plan contributes to the objectives of the County as expressed in its plans and policies; on how the proposed Apache-Sitgreaves National Forests Land Management Plan impacts related planning efforts by the County; and, on the compatibility with and interrelated impacts of the Apache-Sitgreaves National Forests Land Management Plan and Gila County plans and policies.

COORDINATION BETWEEN THE APACHE-SITGREAVES NATIONAL FORESTS LAND MANAGEMENT PLAN AND THE GILA COUNTY OBJECTIVES, PLANS AND POLICIES

Per the requirements contained in the 2012 Planning Rule, Title 36 — *Parks, Forests, And Public Property*, Part 219 — *Planning*, Subpart A — *National Forest System Land Management Planning*, Section 4 - *Requirements for public participation*, sub section (b) *Coordination with other public planning efforts*, Gila County expects that: "The responsible official shall coordinate land management planning with the equivalent and related planning efforts of federally recognized Indian Tribes, Alaska Native Corporations, other Federal agencies, and State and local governments" (36 CFR 219.4 (b)(1)).

Gila County further expects that: "The results of this review shall be displayed in the environmental impact statement (EIS) for the plan", and that "this review shall include consideration of: (i) The objectives of federally recognized Indian Tribes, Alaska Native Corporations, other Federal agencies, and State and local governments, as expressed in their plans and policies; (ii) The compatibility and interrelated impacts of these plans and policies; (iii) Opportunities for the plan to address the impacts identified or to contribute to joint objectives; and, (iv) Opportunities to resolve or reduce conflicts, within the context of developing the plan's desired conditions or objectives" (36 CFR 219.4 (b)(2)).

Gila County posits that these statutory requirements are meant by the US Congress to imply more than a perfunctory review process resulting in a check mark in a 'coordination box' and imply a sincere and proactive resolution effort to reduce and resolve potential conflicts between aspects of the Apache-Sitgreaves National Forests Land Management Plan and objectives expressed in the County plans and policies such as, but not limited to, those relevant to motorized big game retrieval, dispersed motorized camping and the reasonable allowance of motorized travel in and motorized access to the Apache-Sitgreaves National Forests, or those relevant to the unique rural economic development and employment role resting on natural resources such timber, grazing or mineral resources located within the Apache-Sitgreaves National Forests.

GILA COUNTY REQUEST FOR COOPERATING AGENCY STATUS

Gila County is committed to resolve or reduce potential conflicts between the Apache-Sitgreaves National Forests Land Management Plan and the Gila County plans and policies, and understands that such resolution must take place within the context of developing the Apache-Sitgreaves National Forests Land Management Plan's desired conditions or objectives.

To this effect, it is the intent of Gila County to avail itself of the opportunity contained in the 2012 Planning Rule that specifies that: "Where appropriate, the responsible official shall encourage States, counties, and other local governments to seek cooperating agency status in the NEPA process for development, amendment, or revision of a plan" (36 CFR 219.4 (a)(1)(iv)).

GILA COUNTY OBJECTIVES AS EXPRESSED IN ITS PLANS AND POLICIES

GILA COUNTY PLAN

Gila County policy making decisions and management actions are guided by the Gila County long term plan. This plan guides the actions of the County Board of Supervisors and the County Management staff toward meeting the present and future enjoyment, custom, culture, health, safety and economic well-being needs of the County residents or visitors. The Gila County planning effort integrates the principles of:

1) Monitoring the effects and impacts of the implementation of the County policies, as well as the direct, indirect, individual and cumulative effects and impacts on the County and its residents and visitors of the policy decisions and management actions taken by state and federal agency partners;
2) Monitoring all demographic, social, economic, cultural and other variables, whether internal or external, which are relevant to the County policy making decisions and management actions; and,
3) Dynamic and generally informal adaptive management.

As such, the Gila County plan is an ever evolving dynamic plan that constantly adapts, often informally, in response to the evolving ecological, economic, social and cultural environment, and it is formulated as much through the regular deliberations of the Gila County Board of Supervisors and the resulting resolutions of the Board as it is in the formal planning documents.

For the purpose of compliance with the statutory requirements of coordination between the Apache-Sitgreaves National Forests land management plan and Gila County's objectives as expressed in its plans and policies (36 CFR 219.4 (b)), the Gila County plan, defined as the accumulation of the formal Gila County planning documents AND the Gila County public record of Board of Supervisors deliberations and decisions, is hereby entered into the Apache-Sitgreaves National Forests Land Management Plan NEPA record.

GILA COUNTY OBJECTIVES RELATING TO THE APACHE-SITGREAVES NATIONAL FORESTS LAND MANAGEMENT PLAN

Gila County appreciates and supports the extensive and thorough analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team for this Programmatic Draft Environmental Impact Statement, and the discussion of the effects of the no action alternative and the three action alternatives on the following resources: air; soil; watershed; water resources; riparian; fisheries; vegetation; forest health; fire; wildlife and rare plants; nonnative species; recreation; infrastructure; wild and scenic rivers; inventoried roadless areas; wilderness resources; research natural areas; scenic resources; lands and special uses; cultural resources; Indian rights and interests; forest products; livestock grazing; minerals and energy; and, socioeconomic resources.

In the interest of conciseness, and considering that multiple resources analyzed individually by the Apache-Sitgreaves National Forests Land Management Plan team in the Programmatic Draft Environmental Impact Statement are regrouped in a smaller number of overarching natural resources management policy objectives for Gila County, the County analysis and comments will be focused on seven sets of natural resources management objectives critical to the County and relevant to these comments.

In no particular order, the seven sets of natural resources management objectives relevant to these comments are:

1) Rangelands Resources Management Objectives
   Rangelands Resources Management Objectives address issues such as, but are not limited to, grazing availability, suitability, sustainability; ecological, economic and social carrying capacity; access; contribution to rural economic development; and, contribution to local Western custom and culture.

2) Forest Products Resources Management Objectives
   Forest Products Management Resources Objectives address issues such as, but are not limited to, logging availability, suitability, sustainability, productivity, access; contribution to rural economic development; and, contribution to rural Western custom and culture.

3) Mineral and Energy Resources Management Objectives
   Mineral And Energy Resources Management Objectives address issues such as, but are not limited to, the availability, suitability, sustainability, productivity, access, and contribution to rural economic development of (a) solid, liquid or gaseous mineral resources and (b) solar, wind, hydropower, geothermal and other natural renewable energy resources.

4) Motorized Travel and Recreation Management Objectives
   Motorized Travel And Recreation Management Objectives address issues such as, but are not limited to, motorized access; motorized travel; motorized big game retrieval; motorized dispersed camping; motorized gathering of firewood; motorized access to dispersed fishing; motorized recreation opportunities; inventoried roadless areas; wilderness area designation; motorized access to grazing and logging opportunities; contribution of motorized access, recreation and travel to rural economic development; and, contribution to local Western custom and culture.

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5) Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives
   Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives address issues such as, but are not limited to, protection of County residents and visitors; protection of collective and individual real properties; protection of transportation, energy and water collection and distribution infrastructures; ecological restoration of forested ecosystems; local scale restoration projects; landscape scale restoration projects; social license required for the non-conflictual and non-litigious implementation of restoration efforts (such as the one requested in public statements by former USFS Southwestern Regional Forester Corbin Newman for the Four Forest Restoration Initiative); industry development required to implement and fund restoration efforts through economically viable utilization of the wood products; and, long term guarantees of wood supply necessary to attract private investments in a small diameter utilization infrastructure in northeastern Arizona.

6) Watersheds Restoration Objectives
   Watershed Restoration Objectives address issues such as, but are not limited to, ecological restoration of watersheds; protection and development of water collection and distribution infrastructures; monetization of watershed ecosystem services; downstream consumption contribution to upstream production investments and maintenance; and, interactions between watershed functions and multiple use functions.

7) Management Areas Designation Objectives
   Management Areas Designation Objectives address issues such as, but are not limited to, the nomination, designation, and management of (a) inventoried roadless areas (which are technically not management areas ***per se*** but are an administrative designation) and (b) wilderness areas, primitive areas, research natural areas, wildlife quiet areas, and wild and scenic rivers. Also addressed are affects on socioeconomic resources and impacts on the other County objectives.

These seven sets of natural resources management objectives critical to Gila County and relevant to these comments overlap considerably with the five "issues that served as the basis for alternative development strategy" (PDEIS, page 11) in the Apache-Sitgreaves National Forests Land Management Plan:

1)	Strategy for Restoring Vegetation	>>>>	Forests & watersheds restoration
2)	Amount of Wildlife Quiet Areas	>>>>}	Management areas designation &
3)	Amount of Wilderness	>>>>}	multiple objectives
4)	Type and Amount of Recreation Opportunities	>>>>	Motorized recreation and travel
5)	Availability of Wood Products	>>>>	Forest products / rangelands / minerals
	(PDEIS, page 11)		(County objectives)

Gila County will, therefore, format comments articulated around the seven sets of natural resources management objectives critical to the County and relevant to these comments, with the understanding that the seven sets of objectives match closely the five issues that served for the development of alternatives in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan.

For the purpose of compliance with the statutory requirements of coordination between the Apache-Sitgreaves National Forests land management plan and the Gila County objectives as expressed in its plans and policies (36 CFR 219.4 (b)), this document: *Gila County Comments On The Programmatic Draft Environmental Impact Statement For The Apache-Sitgreaves National Forests Land Management Plan* is hereby incorporated in the County expressed plans and policies.

Gila County, therefore, expects that: i) the Responsible Official shall coordinate land management planning with Gila County's equivalent and related planning efforts (36 CFR 219.4 (b)(1)); ii) the consistency review and coordination action shall include consideration of the objectives of Gila County as expressed in its plans and policies (including the formal Gila County planning documents, the Gila County public record of Board of Supervisors deliberations and decisions, and the Gila County Comments On The Programmatic Draft Environmental Impact Statement For The Apache-Sitgreaves National Forests Land Management Plan); and, iii) the Responsible Official shall consider opportunities to resolve or reduce conflicts, should some arise between the Apache-Sitgreaves National Forests Land Management Plan and the Gila County plans (36 CFR 219.4 (b)(2)).

REQUEST FOR DISCLOSURE OF CONSISTENCY REVIEW AND COORDINATION ACTIONS

Per the requirements of 36 CFR 219.4 (b)(2), 40 CFR 1502.16(c) and 40 CFR 1506.2 Gila County hereby requests that the results of the consistency review and coordination actions between the Apache-Sitgreaves National Forests Land Management Plan and the Gila County objectives as expressed in its plans and policies shall be displayed in the Programmatic Environmental Impact Statement For The Apache-Sitgreaves National Forests Land Management Plan.

PART 2 – GAP ANALYSIS AND SUGGESTED CORRECTIVE ACTIONS FOR THE PROGRAMMATIC FINAL ENVIRONMENTAL IMPACT STATEMENT

As previously noted, although Gila County retains and employs many talented individuals at the peak of the knowledge curve in their respective fields, Gila County does not generally define its role in the public lands management process as a role of science provider or resources technical specialist. Rather, as a body representing the most direct and local expression of democratic government at the individual district or national forest level, Gila County more generally defines its role at the policy-making level as it relates to public lands management processes. Gila County certainly intends to produce very action-specific comments when NEPA analyses of specific management actions implementing the Apache-Sitgreaves National Forests Land Management Plan are subsequently offered for public comments, but in its current comments on the Programmatic Environmental Impact Statement For The Apache-Sitgreaves National Forests Land Management Plan, Gila County believes that it is appropriate to comment at the programmatic level, from a Forest Service perspective, and at the objectives level, from a County policy perspective.

RANGELANDS RESOURCES MANAGEMENT OBJECTIVES

Gila County understands that the 1982 and 2012 Planning Rules require that the capability and suitability for producing forage for grazing animals on national forests lands be determined, and

that the capability for producing forage for grazing animals is defined as the potential of an area of land to produce forage depending upon current conditions and site conditions such as climate, slope, landform, soil chemistry, physics and biology, geology, disturbances such as natural fire, etc., as well as the application of management practices. Therefore, Gila County understands and appreciates that the FUNDAMENTAL capability of the lands on the Apache-Sitgreaves National Forests to produce forage for grazing animals, as determined in the 1980s during the first round of forest planning, has not changed significantly since this first evaluation.

Land suitability analysis

In view of the above, Gila County understands why: "the criteria for suitability for livestock grazing would be the same in all action alternatives," why such criteria are "very similar to the existing direction (alternative A) under the 1987 plan," and why "the acres suitable for livestock grazing in the action alternatives would be very similar" (PDEIS, page 451).

Simultaneously, Gila County believes that rangelands resources in the West in general, in the Southwest in particular, and in the national forests of Arizona specifically, are under unprecedented stress as a function of landscape scale uncharacteristic disturbances such as catastrophic wildfires, the cumulative (?) effects of decades of management practices on lands classified as rangelands, forestlands and timberlands, and other stressors, as well as a possible climate warming trend, whether caused by human activities or by cyclical natural variations. These natural variations have occurred repeatedly in the historical, pre-historical and geological record for millenniums predating the industrial age and even the existence of the human species. Therefore, Gila County supports the designation of appropriately sized (?) Recommended Research Natural Areas, considered not suitable for grazing, in order to improve rangeland resources management science and practice.

Consequently, Gila County supports the minimal reduction of the acreage deemed suitable as rangelands from 1.93 million acres in the current classification (Alternative A – the no action alternative) to 1.9 million acres in all action alternatives (Alternatives B, C and D) (PDEIS p. 451), provided that the research conducted on the Research Natural Areas removed from suitable grazing lands is designed to quantify and improve the understanding of the ecosystem processes unfolding on these rangelands and how they relate to improved management practices.

Gila County Rangelands Resources Management Objectives

The Gila County Rangelands Resources Objectives for the upcoming planning cycle include, among others:

1) Restore encroached grasslands, including the most departed semi-desert, Great Basin, and montane subalpine grasslands that have been invaded by trees (subalpine grasslands) and shrubs (semi desert and Great Basin grasslands) by removing trees and shrubs where economically feasible, promoting a mixture of native perennial grass species, implementing the periodic prescriptive use of mixed classes of livestock matching animal feeding habits with specific plant material, and reintroducing a regime of cool surface fires in order to reduce trees and shrubs colonization and erosion hazards, and to increase livestock forage production.

2) Adopt management practices that discourage the establishment of nonnative species and eradicate invasive weed species that have little to no forage value, recognizing the fact that the ecological or economic consequences of different exotic species are not all the same, and that the persistence of some nonnative species that are not necessarily undesirable or controllable, such as Kentucky bluegrass or Bermuda grass, may be beneficial from a socioeconomic perspective and a balanced management for multiple resource objectives.

3) Allocate grass reserves on an allotment-by-allotment basis through proper range management, rather than on a district-by-district basis, which requires additional financial considerations for improvement maintenance.

4) Shift the grassland management process from the concept of balancing livestock grazing with available forage (PDEIS p. 451) -- which only addresses stocking rate -- toward the concept of managing the intensity, frequency, seasonality, duration and classes of livestock grazing to accomplish the rangelands resources management objectives.

5) Emphasize adaptive management of the rangelands using a three tier rangelands resources management monitoring approach of quantitative monitoring using standard measurements such as stocking rate, ground cover, etc.; qualitative monitoring using measurements such as species composition, age, nutritional value, etc.; and, effectiveness monitoring using outcome measurements such as range health, soil water holding capacity, soil organic content, livestock weight gain, presence of wildlife indicator species, etc., in order to measure whether the management actions produce the site specific and cumulative direct and indirect effects expected.

6) Integrate the scientific research and implement the science-based recommendations developed by rangelands resources management expert scientists such as Allan Savory of the Savory Institute; Steve Rich of the Rangeland Restoration Academy; Eric Schwennesen of Resource Management International; Dr. Lamar Smith, Associate Professor Emeritus at the University of Arizona; Dr. Jerry Holechek, Professor at New Mexico State University; and Dr. J. Wayne Burkhardt, Professor Emeritus at University of Nevada, Reno.

7) Support the efforts and the agenda of the Arizona Grazing Lands Conservation Association as follows:
   - Promoting voluntary approaches for the management of grazing lands;
   - Promoting respect of private property rights;
   - Strengthening partnerships between grazing lands managers and others who support the purposes of the Association;
   - Increasing economic, environmental, and social stability on grazing lands;
   - Increasing the information base from which to make sound policy and management decisions on grazing lands;
   - Closing the gap between availability of knowledge and application of said knowledge on grazing lands;
   - Enhancing the rancher's ability to achieve greater profitability on an ecologically sound and sustainable basis; and,
   - Educating the public through the dissemination of scientific knowledge on the conservation and management of grazing lands in Arizona.

8) Preserve the contributions of the rangelands resources to the rural economic development of the Arizona counties at a minimum at the current level of approximately 66 jobs and $713,000 in labor income annually, and double this contribution to the approximately 120 jobs and $1.3 million in labor income annually that can be supported by the full utilization of the available animal unit months (AUMs).

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Gila County Objectives, Plans and Policies

All Alternatives – rangelands restoration

Because very few grassland areas would be treated in Alternative A, the no action alternative, and in Alternative C, averaging around 500 acres per year (PDEIS p. 19 & 23), and, conversely, up to 25,000 acres per year of grasslands (primarily the Great Basin and semi-desert types) would be treated in Alternative B, the Preferred Alternative, and Alternative D, to remove encroaching woody species (PDEIS p. 21 & 25), Gila County is supportive of Alternative B as relates to rangelands restoration.

All Alternatives - rangelands resources management

However, because in essence all the alternatives (Alternative A – no action, and all the action alternatives – Alternatives B, C and D) are substantially the same as relates to rangelands resources management, Gila County believes that there is no real benefit in comparing the alternatives in detailed comments.

Rather, Gila County believes that it may be more productive to address what are, in Gila County's analysis, shortcomings in all three action alternatives (Alternatives B, C and D) as relates to rangelands resource management, as follows:

- Gila County is substantially more concerned with the underpinning of the rangelands management guiding principles than with the technical specifics of individual management actions. As expressed in the writing of Dr. Smith (2010) on behalf of the Arizona Grazing Lands Conservation Association, the ["vegetation, soils, wildlife and other factors that existed at the time of Anglo American settlement were the result of is history (climate, fire frequency, etc.), including the influences of native Americans, up to that time.

  This has all been altered and the vegetation, soils and wildlife have responded to the changes that have occurred, not only in the management applied to it by Anglo Americans but by changes in climate, soil erosion, introductions of new species, and extinction of some original species. In some cases the changes have been marked (e.g. in conversion of some grasslands to shrublands) and in some cases they have been fairly minor (e.g. mountain grasslands or chaparral).

  All the action alternatives share a common goal of 'restoration' of 'historical' conditions, which are considered the only condition which is 'sustainable,' and an approach which considers any economic production from the forest as incidental to that goal. We believe that this goal is based on questionable scientific assumptions and, in any case, does not provide due consideration for sustainable multiple uses and economic benefits from the

forest."] Is all of this a direct quote? If so, it should be exactly reproduced; if not, there are some issues which need repair.

- Gila County believes that the concepts of ecological maintenance guiding Alternative A, and the ecological restoration concepts guiding Alternatives B, C and D, as relates to rangelands resources management, are not sufficiently specific for establishing scientific principles of rangelands resources management in a Programmatic Environmental Impact Statement, even though some specifics may be considered in the Range Specialist Report. Gila County believes that the rangelands resources management process needs to be modified to include:

  I. Maximum management flexibility in terms of seasonal use, any use at all, numbers of livestock, classes of livestock, mixed combination of classes of livestock, intensity of grazing, duration of grazing, use of livestock as a prescription management tool through herding, attracting, temporary fencing, etc., matching livestock classes with desired outcome, etc.;
  II. Real time three tier rangelands resources management quantitative monitoring using standard measurements such as stocking rate, ground cover, etc.; qualitative monitoring using measurements such as species composition, age, nutritional value, etc.; and, effectiveness monitoring using outcome measurements such as range health, soil water holding capacity, soil organic content, livestock weight gain, presence of wildlife indicator species, etc.;
  III. Dynamic real time adaptive management allowing the permittees to make required management adjustments on their own initiative in response to short-term variables such as seasonable precipitations, temperature, unexpected events, as well as combinations of all of these.

- Gila County observes that the entire discussion on monitoring strategy, aside from the incidental use of the word 'monitoring' in various other contexts, in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan occupies the whole of 2 lines: "All action alternatives include the same monitoring strategy as identified in chapter 5 of the proposed plan" (PDEIS p. 28) in the 681 page document. Gila County further observes that the Monitoring Strategy in the Apache-Sitgreaves National Forests Land Management Plan is a brief 4 page discussion of monitoring in general terms, along with a 3 page table of planned monitoring questions, monitoring methods, units of measure, and frequency of measurements (p. 135 – 139) in a 283 page document.

- Gila County further observes that there are only 14 instances of the use of the words 'adaptive management' in the entire Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan. Specifically, only 17 lines of text are dedicated to the discussion, in very general terms, of adaptive management in the 681 page document (PDEIS p. 43-44). Gila County further observes that are only 7 instances of the use of the words 'adaptive management' in the Apache-Sitgreaves National Forests Land Management Plan itself -- a 283 page document.

- Gila County is concerned that the scarce mentions of monitoring and adaptive management in the Programmatic Draft Environmental Impact Statement and the Apache-

Sitgreaves National Forests Land Management Plan may reflect an insufficient role for monitoring and adaptive management in the current planning process. This would be in contradiction with the requirement of the 2012 National Planning Rule and its proposed implementation directives.

- Conversely, in the absence of true adaptive management, Gila County believes that specific guidelines regarding the timing, intensity, classes and duration of grazing, with consideration for the needs of other forest resources management, should be included in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, as well as a restocking plan for all vacant allotments, unless livestock grazing on such allotments can be shown to be incompatible with rangelands resources management purposes and needs.

- Gila County fully appreciates the rich socio-economic presentation provided in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan (PDEIS p. 468 – 485), the brief economic impact analysis (PDEIS p. 485 – 489), and social consequences analysis (PDEIS p. 489 – 491) also provided. However, Gila County believes that the economic impact analysis provided by the Apache-Sitgreaves National Forests Land Management Plan team is heavily biased toward demonstrating the favorable economic impact of grazing on public land allotments on the permittees' profitability.

  While focusing on the benefits provided is laudable, Gila County also believes that a more complete analysis would include a calculation of the economic costs of the constraints imposed on the permittees by the rigidity of the current rangelands resources management agency administrative processes that considerably limit the ability of the permittees to optimally manage the land and the livestock.

- Finally, Gila County is concerned that, in the Apache-Sitgreaves National Forests Land Management Plan team's own analysis, the current level of economic contribution of approximately 66 jobs and $713,000 in labor income annually is only approximately half of the estimated 120 jobs and $1.3 million in labor income annually that can be supported by the full utilization of the available animal unit months (AUMs) (PDEIS p. 491).

Requested and suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Therefore, Gila County respectfully requests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan designate the new proposed Research Natural Areas removed from suitable rangelands for the specific purpose of quantifying and improving the understanding of the rangelands resources ecosystem processes and how they relate to improved management practices.

Gila County further respectfully requests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management

Plan include up to 25,000 acres per year of grasslands restoration (primarily the Great Basin and semi-desert types) to remove encroaching woody species as identified in Alternative B.

Gila County also respectfully requests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include a specific plan under conventional management to reach full utilization of the available animal unit months and to realize the full economic impact of approximately 120 jobs and $1.3 million in labor income annually.

Gila County likewise respectfully suggests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include specific guidelines for a rangelands resources adaptive management plan that provides clear quantitative, qualitative and effectiveness monitoring requirements, and a more balanced approach between the goal of restoration and the goal of economic production, as the need for restoration in rangelands may not carry the same clear and present benefits as restoration in forestlands.

FOREST PRODUCTS RESOURCES MANAGEMENT OBJECTIVES

Gila County appreciates and supports the extensive and thorough analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team on forest products, when addressing affected environment, lands tentatively suitable for timber production, allowable sale quantity (ASQ), long term sustained yield capacity (LTSYC), wood and tree products availability, forested / overgrown lands, deforested / early development lands, climate change considerations, and cumulative environmental consequences.

Circumstantial constraints and challenges for the Gila County AND the Apache-Sitgreaves National Forests planning efforts

Gila County recognizes that the issues of forested ecosystem restoration and forest products management are fundamentally different, and are typically not discussed simultaneously in ecosystems non-departed or little departed from characteristic historical conditions. However, as the Forest Service and Gila County both generally acknowledge, current conditions in the forested ecosystems, and especially in the ponderosa pine and dry or wet mixed conifers dominated forests of eastern Arizona, are considerably departed from historical conditions and at risk of continued uncharacteristic disturbances such as landscape scale catastrophic crown fires or insect infestations.

Gila County acknowledges and appreciates the efforts endeavored by the Forest Service, and particularly the Apache-Sitgreaves National Forests, to pioneer larger scale restoration efforts such as the White Mountains Stewardship Project. Gila County has been and continues to be supportive of the White Mountain Stewardship Project and of its funding, as a practical tool to initiate larger scale treatments and to incentivize the creation of a small diameter trees utilization infrastructure. Simultaneously, Gila County acknowledges that the model of subsidized restoration treatments is not scalable at landscape scale, as is required to restore the forests of Arizona, for lack of agency funding. As proposed in the Four Forest Restoration Initiative, an initiative that Gila County was instrumental in creating, fostering and developing, landscape scale forest ecological restoration

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appears currently feasible only if it is funded by the economically viable utilization of the forested byproducts of restoration by private industry. While relatively new to the discussion of ecological restoration funding, the concept of ecosystem service monetization is actually not a novation when it comes to forest products, as timber sales have for centuries been an established form of natural resources valuation and have funded the management of the resources.

As a consequence, Gila County proposes that both the County and the Apache-Sitgreaves National Forests operate under very specific circumstantial constraints when it comes to forest products resources management, inasmuch as the forest products industry is simultaneously an economic growth and a rural employment engine desperately needed in eastern Arizona, AND the funding mechanism for landscape scale restoration in eastern Arizona -- BOTH of which are critical objectives for Gila County, as well as stated priorities for the Apache-Sitgreaves National Forests.

The inherent circumstantial challenge faced by Gila County and the Apache-Sitgreaves National Forests is that the priorities typically considered when managing forest products -- such as a sustained yield of harvest volumes on a regulated non-declining even-flow basis for the long term, uneven age structures, long term sustained yield capacity (LTSYC), non-declining allowable sale quantity (ASQ), etc. -- are augmented and complicated by the overwhelming priority to complete landscape scale restoration as rapidly as possible for fear of massively disruptive landscape scale catastrophic crown fires and/or landscape scale insect infestations.

Owing to the fact that for the foreseeable future and for the next five decades of the planning cycle, green forest products will likely be byproducts of restoration treatments, and green forest products will likely continue to be at risk of destruction by catastrophic fires if landscape scale restoration is not expeditiously implemented, Gila County suggests that forest products management actions for the upcoming planning cycle must be dictated not only by traditional silviculture science and best practices, but primarily by the absolute priority of implementing landscape scale restoration as expeditiously as possible using mechanical treatments that produce the forest products necessary to not only sustain the existing forest industry in the White Mountains, but to allow robust natural resources-based rural economic development through the creation of an entirely new infrastructure of small diameter trees utilization at industrial scale.

Gila County Forest Products Resources Objectives

The Gila County Forest Products Resources Objectives for the upcoming planning cycle should, among other things, include the following:

1) Creation in eastern Arizona of the wood supply conditions necessary for private industry investments in a new economically viable small diameter trees and residual biomass utilization infrastructure capable of funding the initial ecological restoration thinning of at least 50,000 acres of ponderosa pine and/or mixed conifer dominated forests annually for a period of 20 years, and then the maintenance of the desired future conditions in subsequent decades.

2) Sustain in the White Mountains the wood supply conditions necessary for the continued development and growth of the existing local industry, with expanded economically viable small diameter trees and residual biomass utilization facilities capable of funding the initial ecological restoration thinning of at least 15,000 acres of ponderosa pine and/or mixed

conifer dominated forests annually for the next 20 years, then the maintenance of the desired future conditions in subsequent decades.

3) Wherever possible, prioritize forest byproducts treatments (mechanical treatments) funded by economically viable utilization, over non-byproducts treatments (fire as first entry thinning treatments) in order to create and sustain the wood supply necessary for a new era of forest products industry-based economic growth and employment in eastern Arizona with multiple industrial scale new investments.

4) Subordinate for as long as required in the upcoming planning cycle the scientific silviculture priorities and traditional forest products management methods for sustained yield of harvest volumes on a regulated non-declining even-flow basis for the long term, to the overriding priority of implementing as expeditiously as possible landscape scale restoration based primarily on mechanical treatments producing forest products (see *Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives*).

Land suitability analysis

Gila County understands and appreciates the fact that the criteria for designation of suitable timberlands must incorporate ecological and economic realities that have evolved since the previous planning cycle. Specifically, Gila County supports the removal from the suitability analysis of lands that have suffered irreversible soil resource damages during high intensity fires such as the Rodeo Chediski and Wallow fires (24,000 acres); lands that have experienced inadequate restocking post high intensity fires such as the Rodeo Chediski and Wallow fires (57,000 acres); and, lands located on steep slopes (40% and more) where cable logging would be required but could not be made economically feasible owing to the limited harvestable forest products (up to 80,000 acres) (PDEIS p. 426 & 431).

Consequently, Gila County supports the reduction of the acreage deemed suitable as timberlands from 765,000 acres in the current classification (Alternative A, the no action alternative) to approximately 600,000 acres (Alternatives B and C) (PDEIS p. 431).

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Gila County Objectives, Plans and Policies

Per the above remarks, considerable overlap currently exists and will continue to exist for the upcoming planning cycle between the issues of forest products resources management and forested ecosystems restoration and catastrophic wildfire prevention in the Apache-Sitgreaves National Forests. For the purpose of adhering to the classification of issues identified in the seven sets of natural resources management objectives critical to the County, the Gila County comments will address separately these two issues, with the understanding that a holistic approach to both the County objectives and the Apache-Sitgreaves National Forests Land Management Plan needs to integrate and interweave these two, and other, issues.

Alternative D and A

Based on the above, Gila County wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

Gila County understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and Gila County acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, Gila County cannot support an alternative that would result in, among others things, the unavailability of ANY suitable timberland whatsoever in the Apache-Sitgreaves National Forests (PDEIS p. 430). This alternative is so departed from the White Mountains residents' past, current, and foreseeable future custom, culture and economic well-being needs, and from the Gila County Forest Products Resources Objectives, that it does not warrant any further discussion from the County's perspective.

Similarly, Gila County cannot support an alternative that would result in, among others things, taking a 42 year gamble on the completion of the thinning of all forested overgrown lands (PDEIS p. 444) before another catastrophic forest fire on the scale of the Rodeo Chediski or Wallow hits the White Mountains again and renders all discussion of restoration moot. Therefore, Alternative A, the no action alternative, is so departed from the White Mountains residents' past, current, and foreseeable future health, security and economic well-being needs, and from the Gila County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives, that it does not warrant any further discussion from the County's perspective.

Alternative B

Because Gila County believes that the forests of eastern Arizona are in a state of clear and present danger that must be addressed as an emergency by federal, state and local governments and their agencies, Gila County does not favor Alternative B, the preferred alternative, as relates to Forest Products, in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan.

Specifically, in the Apache-Sitgreaves National Forests' own analysis, under Alternative B it would require 34 years to thin all forested overgrown lands (PDEIS p. 444), and it would not even be possible to reduce the backlog of overgrowth to the desired level of long term sustained yield capacity (LTSYC) in the five decades of the planning cycle (PDEIS p. 440). This is clearly in contradiction with Gila County's overriding priority of implementing landscape scale restoration as expeditiously as possible.

Additionally, under Alternative B green forest products volume would be significantly reduced due to the extensive use of moderate and/or high severity fire to thin trees on forested lands during the planning period, including on some suitable timberlands (PDEIS p. 438). The maximum allowable sale quantity (ASQ) volume for Alternative B would be 122,000 CCF per year, barely exceeding the total harvest of 103,000 CCF in 2011 (PDEIS p. 438) and, therefore, clearly insufficient to support the growth of the existing small local wood industry, and blatantly insufficient to support the expected requirements of the Four Forest Restoration Initiative second analysis area associated contract(s). Admittedly, under Alternative B the first decade could provide high volumes of non-ASQ wood products from treatments of non-suitable timberlands in addition to the allowable sale quantity (ASQ) volume, but this could only happen as a function of focusing on restoring grasslands and other non-suitable timberlands (PDEIS p. 443), which may be a debatable priority.

This is clearly in contradiction with the Gila County objective of creating the wood supply conditions for private industry investments in a new economically viable small diameter trees and residual biomass utilization infrastructure capable of funding the initial ecological restoration thinning of at least 50,000 acres of ponderosa pine and/or mixed conifer dominated forests annually for the next 20 years. This is also clearly in contradiction with the Gila County objective of, wherever possible, prioritizing forest byproducts treatments (mechanical treatments) funded by economically viable utilization, over non- byproducts treatments (fire as first entry thinning treatments) in order to create and sustain the wood supply necessary for a new era of forest products industry-based economic growth and employment in eastern Arizona with multiple industrial scale new investments.

Alternative C

Gila County appreciates and supports the realism of the Apache-Sitgreaves National Forests Land Management Plan team when stating: "the alternatives were realistically designed to reflect anticipated budgets and workforce capabilities" (DEIS p. 440). Therefore, it is not a criticism of the work produced by the Apache-Sitgreaves National Forests Land Management Plan team but a simple reality for Gila County to observe that, as stated in the Apache-Sitgreaves National Forests' own analysis: "none of the alternatives would actually treat enough acres fast enough to fully reach desired conditions within the first 5 decades" (DEIS p. 440).

Alternative C clearly addresses more closely the Gila County Forest Products Resources Management Objectives. Under Alternative C it would require 'only' 23 years to thin all forested overgrown lands, as compared to 34 for Alternative B (PDEIS p. 444), and the maximum allowable sale quantity (ASQ) volume would be 268,000 CCF per year, more than twice the 122,000 CCF authorized under Alternative B (PDEIS p. 438). Under Alternative C, average annual mechanical treatments acres would rise to 24,000 acres as opposed to 20,000 acres in Alternative B, and burning as a thinning tool treatments would be reduced from 29,000 acres in Alternative B to 13,000 acres in Alternative C (PDEIS p. 430).

However, Gila County is concerned by the prospective industry annual requirements expressed at the *Bridge the Gap* meeting held in Eagar on November 17, 2012 as follows:

- Existing pellet plant in Show Low: 40,000 CCF
- Existing saw mill in Heber: 15,000 CCF
- Existing sawmill in Eagar: 25,000 CCF
- New sawmill in Eagar: 65,000 CCF
- Power plant in Snowflake: 75,000 CCF
- Other small industries: 10,000 CCF
- Total existing industries: 230,000 CCF

In addition:

- Second analysis area of 4FRI associated contract(s): 215,000 CCF

Clearly, under Alternative C the requirements of EITHER the existing and developing industry OR the expected appropriate scale industry recently contracted and to be implemented under the Four Forest Restoration Initiative (4FRI) can be met, but NOT BOTH.

Gila County fully understands and appreciates that a healthy amount of optimism is reflected in the requirements expressed by the existing and developing industry in the White Mountains, and that a healthy amount of skepticism can be logically derived from the difficulties of the 4FRI contractor to raise the capital necessary to execute their business plan. Nonetheless, consideration must be given to the steady growth of the existing industry and the possibility that the 4FRI contract may be executed by entities other than the current contractor, provided the Forest Service deems it to be in the best interest of the government to re-assign the contract at the request of the current contractor as a result of a merger or acquisition.

Gila County also fully understands and appreciates that trees cut from non-suitable lands can also provide wood and tree products for local markets. However, as identified in the Apache-Sitgreaves National Forests analysis: "Cuts from non suitable lands may be a one-time entry, such as removing encroaching trees from grassland. Subsequent cuts may not be needed if desired conditions can be maintained with fire" (PDEIS p. 441). Therefore, even though the estimated annual wood product volumes potentially available to offer in the first decade from all lands, suitable timberlands and non-suitable lands, could be as high as 730,000 CCF, including non-industrial sizes and species (PDEIS p. 442), it is unrealistic to expect long term sustained contributions from non-suitable lands to the availability of steady volumes of industrial forest products.

Gila County is, therefore, concerned that the maximum legally allowable sale quantity (ASQ) volume identified in Alternative C may/will prove inadequate if/when the 4FRI contract is executed IN ADDITION to the requirements of the existing industry. Similarly, but at a lesser degree, Gila County is also concerned that the maximum allowable sale quantity (ASQ) volume identified in Alternative C may prove a limiting factor for the continued long term growth of the existing industry, even without considering the 4FRI contract. This concern is increased by the projections that the Alternative C estimated annual ASQ volume will steadily decrease from 268,000 CCF in the first decade down to 178,000 CCF by the fifth decade of the planning cycle (PDEIS p. 439).

Gila County realizes that the Apache-Sitgreaves National Forests team always has the option to initiate an Amendment to its Forest Land Management Plan, but questions whether it would not be more strategic to include in the upcoming Programmatic Final Environmental Impact Statement the analysis and subsequent legal authority for the Responsible Official to meet multiple resources objectives including a maximum allowable sale quantity (ASQ) volume of 450,000 CCF annually.

Requested and Suggested Corrective Action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Gila County respectfully requests that the current Alternative B in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan be rejected as relates to Forest Products. Specifically, under Alternative B:

1) Not enough acres are logged annually for the implementation of ecological restoration at the required pace;
2) Valuable forest products resources are wasted owing to the unnecessary treatment with fire as a thinning tool of acres that can be treated with mechanical thinning;
3) The maximum allowable sale quantity (ASQ) volume of 122,000 CCF per year provides only approximately half the short term foreseeable requirements of the existing or currently developing industry in the White Mountains.

Therefore, Gila County respectfully requests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan at a minimum include the provisions of current Alternative C relating to Forest Products in order to:

1) Increase the number of acres logged annually which will accelerate the pace of ecological restoration;
2) Increase the amount of forest byproducts resources by prioritizing, wherever possible, mechanical thinning treatments over fire as a thinning tool treatment; and,
3) Increase the maximum allowable sale quantity (ASQ) volume to 268,000 CCF per year to meet the short term foreseeable requirements of the existing and currently developing industry in the White Mountains.

Further, Gila County respectfully suggests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include the necessary analysis, and the resulting authority for the Responsible Official, to SIMULTANEOUSLY implement a restoration program designed to support the existing and currently developing industry in the White Mountains AND the contract(s) expected to result from the second analysis of the Four Forest Restoration Initiative, including a maximum allowable sale quantity (ASQ) volume of 450,000 CCF annually.

MINERAL AND ENERGY RESOURCES MANAGEMENT OBJECTIVES

Gila County appreciates and supports the analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team on minerals and energy when addressing leasable minerals, locatable minerals, salable minerals and energy.

However, Gila County believes that in the interest of relevance and conciseness, detailed comments on the Apache-Sitgreaves National Forests mineral and energy resources management plan and the Gila County Mineral and Energy Resources Management Objectives AS RELATES TO the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, are not warranted due to the facts that:

- There are no known leases on the Apache-Sitgreaves National Forests for the following leasable mineral resources: oil, gas, oil shale, coal, or geothermal (PDEIS p. 462);
- The potential for locatable minerals on the Apache-Sitgreaves National Forests is low because of the existing geology (PDEIS p. 464);
- There are no known oil and gas resources on the Apache-Sitgreaves National Forests (PDEIS p. 465);
- Potential for geothermal development is limited as only small areas are underlain by thermal waters (PDEIS p. 465);
- Wind energy potential is low on the Apache-Sitgreaves National Forests because of sporadic winds and the terrain (PDEIS p. 466);
- The quantities of stone, sand, and gravel removed from the Apache-Sitgreaves National Forests are not expected to differ between all the alternatives (PDEIS p. 491); and,
- Owing to the fact that most of the firms that extract stone, sand, and gravel exist outside of the economic impact study area, the extraction of minerals from the Apache-Sitgreaves

National Forests is not expected to support employment and income in the local economy (PDEIS p. 491).

Gila County is satisfied that under all alternatives, decisions regarding mineral activities on the Apache-Sitgreaves National Forests would align with law, regulation, and policy and would be consistent with plan decisions for other resource areas (PDEIS p. 466).

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Gila County Objectives, Plans and Policies

Alternative D

Gila County wants to communicate unambiguously to the Apache-Sitgreaves National Forests its strenuous opposition to Alternative D.

Gila County understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and Gila County acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, Gila County cannot support an alternative that would result in, among other things, the withdrawing from mineral entry in the future of approximately 34% of the Apache-Sitgreaves National (PDEIS p. 467). This alternative is so departed from the White Mountains residents' past, current, and foreseeable future custom, culture and economic well-being needs, and from the Gila County Mineral and Energy Resources Management Objectives, that it does not warrant any further discussion from the County's perspective.

MOTORIZED TRAVEL AND RECREATION MANAGEMENT OBJECTIVES

Gila County fully understands and appreciates that an opportunity to comment on the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan is not the appropriate forum to comment on the Draft Environmental Impact Statement for Public Motorized Travel Management Plan, and that no specific management decision will be made and no specific management action will result from the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan.

Nonetheless, since the Programmatic Final Environmental Impact Statement will establish the framework for future management decisions and actions, such as the Public Motorized Travel Management Plan, it is appropriate for Gila County to communicate its motorized travel and recreation management objectives, to comment on the Alternatives listed in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan relating to motorized travel and recreation, and to request that the Responsible Official for the Apache-Sitgreaves National Forests Land Management Plan conduct the statutorily required consistency review, coordination action and conflict resolution between the Apache-Sitgreaves National Forests Land Management Plan and the Gila County Motorized Travel And Recreation Management Objectives as expressed in the County plans and policies and as contained in this document.

Importance of dispersed motorized travel and recreation for Gila County

As identified in the Apache-Sitgreaves National Forests analysis, the number of off-highway vehicles (OHVs) used in Arizona has risen dramatically. Almost 500,000 households within the State have at least one OHV, and as many as 30,000 new ATVs and motorcycles are purchased annually (Arizona State Parks, 2009). While the use of OHVs is increasing statewide, OHV recreation is disproportionally important to the economy of rural counties such as Gila County. A survey conducted in 2003 by the Arizona State Parks identified the recreation impact of OHV recreation on Gila County as follows:

- 36% of households in Gila County are OHV users, compared to the state percentage of 21%.
- 8% of all Arizona OHV trip destinations for past 12 months were to Gila County.
- 1,262,607 OHV Recreation Days occur annually in Gila County, of which:
    - 228,071 OHV Recreation Days (37%) are from Gila County residents; and,
    - 1,034,536 OHV days (63%) are from other Arizona residents traveling to Gila County.
- 60% of Gila County OHV households are satisfied with their overall OHV experience.

Additionally, the 2003 Arizona State Parks survey identified a major direct annual economic impact of motorized travel and recreation and OHV related annual expenditures in Gila County, as follows:

- OHV Trips - Fuel/Gasoline: $16.7 M
- Lodging/Campgrounds: $12 M
- Restaurants/Bars: $11.5 M
- Groceries/Liquor: $13.3 M
- Other (event fees, souvenirs, etc.): $13.6 M

The total OHV recreation trips expenditures in Gila County total $67.1 M annually, to which must be added expenditures on off-highway vehicles: $16.9 M; tow-vehicles and trailers: $9.4 M; and, OHV equipment: $27.1 M, for a total of OHV expenditures of $120.5 M and a total impact, including the multiplier effect, of $137.6 M in Gila County annually.

The economic impact of an annual OHV expenditure of $120.5 million in Gila County translates in the injection of $22.3 million in salaries and wages annually, resulting in the sustaining of 1,322 full-time and part-time jobs in Gila County. In any economy, 1,322 jobs are significant in Gila County; in the current economy, they are critical.

It must be noted that 77% of the vehicles used in the OHV trips reported in Gila County on the 2003 Arizona State Parks survey were four wheel drive pickup trucks (50%) and sport utility vehicles or Jeeps (27%). The remaining 23% of all vehicles report in the survey consisted of specialized cross-country all-terrain vehicles (ATV) or motocross motorcycles. Also notable is the fact that almost 64% of the recreational activities involved some level of dispersed access to the Apache-Sitgreaves National Forests lands, as follows:

- Sightseeing 15%
- Hunting 14%
- Driving back roads 13%
- Camping 12%
- Fishing 10%

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Circumstantial constraints and challenges for the Gila County AND the Apache-Sitgreaves National Forests planning efforts

Gila County understands and appreciates that in December 2005, the Forest Service issued a regulation at the national level known as the Travel Management Rule (TMR). TMR was developed in response to the increasing effects of OHV recreation and the potential for OHV use to adversely affect forest and grassland resources. The Apache-Sitgreaves National Forests Land Management Plan team is under direct instructions to implement a public motorized travel management plan that will designate roads, trails, and areas where motorized vehicle use can occur and eliminate most motorized cross-country travel (PDEIS p. 321).

Gila County further understands and appreciates the fact that irresponsible OHV use can indeed adversely affect forest and grassland resources, and that the popularity of this new mode of recreation may require reasonable regulations in order to maintain a well-considered balance between the enjoyment of the Apache-Sitgreaves National Forests' visitors, and the need to preserve and conserve the resources contained in the Apache-Sitgreaves National Forests for the enjoyment of future generations.

Therefore, Gila County is NOT advocating for the Apache-Sitgreaves National Forests team to disregard the Travel Management Rule or for the continuation of unregulated and ever increasing motorized cross-country travel and the continued proliferation of unauthorized user-created routes. However, Gila County IS advocating for a SENSIBLE APPROACH to implementing the Travel Management Rule requirements in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan that address the preservation and conservation needs of the resources, complies with the national Travel Management Rule, and still allows Gila County residents and visitors to recreate sensibly using motorized transportation.

Land suitability analysis

Gila County understands the difference that exists between (a) motorized cross-country travel, to which approximately 80% of the Apache-Sitgreaves National Forests lands are currently open (PDEIS p. 321) and to which most of the Apache-Sitgreaves National Forests land will be closed (aside from specially designed OHV areas) as the result of the implementation of the national Travel Management Rule (PDEIS p. 329) and (b) motorized on-trail travel, to which 60% to 80% of the Apache-Sitgreaves National Forests lands will remain suitable for future consideration under Alternative B (63%) or Alternative C (80%).

However, Gila County is concerned by the creeping trend that characterizes public land management in the West in general, in the national forests of the West in particular and specifically in the Arizona national forests, toward an ever increasing limitation of motorized access to and motorized travel in (NOT including cross-country travel) the public lands under management by federal agencies. Specifically, under Alternative B, the Preferred Alternative, only 63% of the Apache-Sitgreaves National Forests lands would remain open for future consideration of new motorized areas and trails. This is a drastic reduction from the current level and the level considered under Alternative C (80%).

Based on the merit of the action alternatives presented, and in further consideration of the monumental change that the elimination of indiscriminate cross-country travel will represent for the culture and custom of the residents of and visitors to the County, Gila County wants to register its objection to further restrictions on future consideration of new motorized areas and trails in Alternative B.

Gila County Motorized Travel and Recreation Management Objectives

The Gila County Motorized Travel and Recreation Management Objectives for the upcoming planning cycle include, among other things:

1) Authorization for dispersed and safe motorized camping consistent with the reasonable enjoyment of safety, privacy, comfort, custom and culture.
   The authorized dispersed and safe motorized camping objective allows the parking of motorized vehicles and/or trailers at the distance from the closest legally open road or trail necessary for the dispersed camping site defined as a 300 feet radius around the motorized vehicle or trailer to be safe from traffic, to not be directly exposed to dust or projections caused by traffic, and to be distant from adjacent dispersed camping site by at least 300 feet if such is the desire of the camper(s). Access to dispersed camping sites previously used and established in the local custom and culture as demonstrated by tangibles evidences of previous use such as fire pits, improvements, etc. is allowed.

2) Authorization of motorized big game retrieval for all species of game meeting the definition of 'big game' in the Arizona Game and Fish Department hunting regulations or, alternatively, for all 'big game' animals requiring a hunting tag, with the exception of turkeys.
   The authorized motorized big game retrieval objective consists of one trip each way from the downed animal to the closest legally open road or trail, regardless of distance, by the most direct route which is compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

3) Authorization of dispersed motorized collection of firewood. The authorized motorized collection of firewood objection consists of the minimum number of trips each way, as defined based on the transport capacity of the vehicle and the trailer, from the downed tree to the closest legally open road or trail, regardless of distance, in the authorized firewood collection area, by the most direct route which is compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

4) Authorization for dispersed recreational shooting.
   The authorized motorized dispersed recreational shooting objective consists of one trip each way from the natural or artificial obvious terrain feature used as a backstop, such as pit, berth or features similar in their functionality as relates to safe dispersed shooting, to the closest legally open road or trail, regardless of distance but not more than one mile, by the most direct route which is compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

5) Implementation of sensible restrictions on indiscriminate cross-country travel in order to preserve and conserve the resources contained in the Apache-Sitgreaves National Forests for the enjoyment of future generations.

   Indiscriminate cross-country travel consists of traveling cross-country in a motorized vehicle not intended to reach a specific dispersed camp site, downed animal, downed tree in an authorized firewood collection area, or terrain feature used as a shooting backstop, or not required for an emergency response to a specific justifiable circumstance such as danger to limb or life. Motorized scouting for a site is considered different from reaching a specific site and is not authorized.

6) Retention of the suitability for future consideration of new motorized areas and trails of at least 75% of the Apache-Sitgreaves National Forests.

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Gila County Objectives, Plans and Policies

Alternatives D and A

Based on the foregoing, Gila County wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

Gila County understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and Gila County acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, Gila County cannot support an alternative that would result in, among others, the closing of approximately 50% of the Apache-Sitgreaves National Forests to future consideration of new motorized areas and trails (PDEIS p. 328). This alternative is so departed from the White Mountains residents' past, current, and foreseeable future custom, culture and economic well-being needs, and from the Gila County Motorized Travel and Recreation Management Objectives, that it does not warrant any further discussion from the County's perspective.

Also, because the implementation of the national Travel Management Rule is not an option but a requirement for the Apache-Sitgreaves National Forests Responsible Official, Alternative A, the no action alternative that would continue to allow cross-country travel in most areas (PDEIS p. 334), is not really a viable alternative and does not, therefore, warrant any further discussion from the County's perspective.

Alternatives B and C

Because all of the action alternatives would prohibit motorized cross-country travel, except where authorized (PDEIS p. 334), and because the major difference between Alternative B and Alternative C is the amount of land that would remain suitable for future consideration of new motorized areas and trails, Gila County would like to focus its comments on Alternatives B and C relating to motorized travel and recreation, specifically on the issue of authorized cross-country travel and suitability for future consideration of new motorized areas and trails.

Authorized cross-country travel

Gila County believes that the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan misses an opportunity to identify the criteria to be used by the Responsible Official for the upcoming implementation of the national Travel Management Rule, and for the upcoming decision making process regarding the authorization of cross-country travel.

Based on the recent implementation of the national Travel Management Rule in neighboring national forests (Coconino National Forest and Kaibab National Forest), or on the ongoing NEPA processes for the implementation of the national Travel Management Rule (Tonto National Forest and Apache-Sitgreaves National Forests), Gila County would like to share the following concerns with the Apache-Sitgreaves National Forests Land Management Plan team regarding the lack of specificity in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan relating to motorized cross-country travel:

- *The travel management plans generally limit the species of big game allowed for motorized big game retrieval to elk, bear and deer.*
  Gila County believes that the limitation of motorized big game retrieval to only a few species is arbitrary and does not meet the intent of the motorized big game retrieval exemption mechanism. Specifically, other big game species such as, but not limited to, sheep, antelopes, mountain lions, javelina, etc., may in the present and/or in the future be hunted within the confines of the Arizona national forests and should qualify for motorized big game retrieval.

- *The travel management plans generally limit motorized big game retrieval to a one mile corridor off either side of allowable roads.*
  Gila County believes that corridor width is only one of two criteria that must be considered in order to meet the intent of the motorized big game retrieval exemption mechanism. Specifically, the intent of the exemption mechanism is not to define corridor width, but rather land coverage. Therefore, the intent can only be met and the analysis can only be completed if the density of the allowed road network is taken into consideration. For example, road networks such as the ones present in the Williams or Tusayan districts of the Kaibab National Forest allow for a one mile corridor off either side of allowable roads to cover the vast majority of the acreage of the districts and do not, therefore, unduly limit the ability of hunters to retrieve big game with motorized vehicles.

  Simply said, if roads exist every two miles, a one mile corridor on each side of each road makes a one mile corridor rule viable. If roads only exist every 10 miles, the same one mile corridor becomes unviable. Therefore, the width of the corridor off either side of allowable roads allowed for motorized big game retrieval should not be constant from one forest to the next or one district to the next, given possible variation in allowed road network density.

  Gila County, therefore, requests that an analysis of land coverage resulting from the combined values of corridor width AND road network density be performed

and that, if necessary, districts featuring a lower density of roads be managed with either no corridor or wider corridors as required in order to allow motorized big game retrieval to happen on at least 95% of the hunting areas in each district.

- *The travel management plans generally limit dispersed camping to a 300 feet corridor off either side of the edge of designated roads or trails.*
  Gila County believes that the limitation to a 300 feet corridor off either side of the edge of designated roads or trails is inadequate because it restricts access to numerous camping sites in the Arizona national forests that have become deeply ingrained in the custom and culture of the residents of and visitors to the White Mountains. It is widely recognized that the legislators' intent was for the National Environmental Policy Act (NEPA) processes to clearly integrate an assessment of the social impacts of a proposed action or project.

  Further, it is widely recognized that the Council on Environmental Quality (CEQ) has made unambiguous interpretations of the law in its implementation guidance, to the effect that Forest Service Environmental Impact Statements (EIS) must integrate the impact of proposed actions on the custom and culture of the counties. Gila County, therefore, believes that the implementation of the Travel Management Rule would fail to meet the requirements to reasonably accommodate the culture and custom of the residents of and visitors to Gila County if such historically popular motorized camping sites were artificially outlawed due to their inaccessibility in a new travel management plan.

  Additionally, Gila County believes that the 300 feet distance must be managed with flexibility so that the authorized dispersed and safe motorized camping allows the parking of motorized vehicles and/or trailers at the distance from the closest legally open road or trail necessary for the dispersed camping site defined as a 300 feet radius around the motorized vehicle or trailer to be safe from traffic, to not be directly exposed to dust or projections caused by traffic, and to be distant from adjacent dispersed camping site by at least 300 feet if such is the desire of the camper(s).

- *The travel management plans generally do not specifically address firewood gathering.*
  Firewood gathered in the Arizona national forests is an important and necessary energy resource to many residents of rural counties. Gila County, therefore, recommends that motorized access be allowed for the purpose of firewood gathering in areas specifically designated for motorized firewood gathering, or that the authorized motorized collection of firewood consist of the minimum number of trips each way, as defined based on the transport capacity of the vehicle and the trailer, from the downed tree to the closest legally open road or trail in the authorized firewood collection area, by the most direct route which is compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

- *The travel management plans generally do not specifically address dispersed shooting.*
  Yet, the Forest Service in its own analysis states: "Ceasing or limiting off-road vehicle use of the ASNFs would limit or restrict most dispersed recreational shooting to areas along roads open for public use, increasing the risk to human health and safety" (Draft Environmental Assessment Second Knoll Shooting Range p. 27). Gila County believes that not every recreational shooter will use the developed shooting facilities, such as the Second Knoll Shooting Range, especially when such facilities would necessitate more than one-half to one full hour of travel.

  Therefore, Gila County believes that for safety reasons dispersed shooting should be included in the provisions of authorized cross-country travel with the following restrictions: authorized motorized dispersed recreational shooting shall consist of one trip each way from the natural or artificial obvious terrain feature used as a backstop, such as pit, berth or terrain feature similar in their functionality relating to safe dispersed shooting, to the closest legally open road or trail, not more than one mile away by the most direct route which is compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

Suitability for future consideration of new motorized areas and trails

- *The travel management plans generally do not address the economic impact on counties of implementing the national Travel Management Rule.*
  Yet, it is widely recognized that the legislators' intent was for the National Environmental Policy Act (NEPA) processes to clearly integrate an assessment of the economic impacts of proposed actions or projects. Further, it is widely recognized that the Council on Environmental Quality (CEQ) has made unambiguous interpretations of the law in its implementation guidance to the effect that Forest Service Environmental Impact Statements must integrate the impact of proposed actions on the economic well-being needs of the counties.

  Gila County recognizes and understands the importance of protecting the national forests' natural resources while providing access and opportunities to the public, as well as to those whose livelihoods depend on the national forest lands. Simultaneously, Gila County must operate under the economic constraint of 95% of the land in the County being designated as federal land or under federal management and, therefore, exempt from local taxation.

  Historically, the Gila County economy and the Gila County residents have depended heavily on both natural resources-based industries and recreation opportunities. The ability of Gila County to maintain a robust and diverse economy has been eroded over the last forty years, in large part due to the restrictions of access to and use of the lands under federal management. Gila County is keenly aware of the detrimental effects caused by national forests rules and management plans restricting business and outdoor recreational opportunities.

  Additional roadless area designations, road closures, limitations of suitability for future consideration of new motorized areas and trails, and indiscriminate cross-

country motorized travel restrictions would further decrease the recreational opportunities that Gila County is able to offer to its residents and visitors, as well as further constraining an already difficult economic outlook.

Requested and Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Gila County respectfully requests that the current Alternative B in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan be rejected with respect to motorized travel and recreation. Specifically, under Alternative B:

1) Almost 40% of the lands in the Apache-Sitgreaves National Forests would not be suitable for future consideration of new motorized areas and trails.
2) No guidance is included for the upcoming implementation of the national Travel Management Rule or for authorized cross-country travel.

Therefore, Gila County respectfully requests that, at a minimum, the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan:

1) Include the provisions of current Alternative C relating to motorized travel and recreation in order to retain suitability of 80% of the lands of Apache-Sitgreaves National Forests for future consideration of new motorized areas and trails.
2) Include guidance for the upcoming implementation of the national Travel Management Rule and for authorized cross-country travel in order to simultaneously achieve the required preservation and conservation objectives AND allow reasonable motorized access, travel and recreation for dispersed camping, big game retrieval, firewood collection, and dispersed shooting as outlined in the above comments and the Gila County Motorized Travel and Recreation Management Objectives.

FORESTED ECOSYSTEMS RESTORATION AND CATASTROPHIC WILDFIRE PREVENTION OBJECTIVES

Gila County appreciates and supports the fact that Alternative B, the Preferred Alternative, includes a clear priority for restoration treatments (PDEIS p. 21), as does Alternative C (PDEIS p. 23), as does Alternative D (PDEIS p. 25), and as also does Alternative A, the no action alternative (PDEIS p. 19), despite the fact that restoration treatments were not emphasized in the 1987 Plan.

Circumstantial constraints and challenges for the Gila County AND the Apache-Sitgreaves National Forests planning efforts

As previously noted, Gila County recognizes that the issues of forested ecosystem restoration and forest products management are fundamentally different, and are typically not discussed simultaneously in ecosystems non-departed or little departed from characteristic historical conditions. However, as the Forest Service and Gila County both generally acknowledge, current conditions in the forested ecosystems, and especially in the ponderosa pine and dry or wet mixed conifers dominated forests of eastern Arizona, are considerably departed from historical conditions and at risk of continued uncharacteristic disturbances such as landscape scale catastrophic crown fires or insect infestations.

Also as previously noted, Gila County acknowledges and appreciates the efforts endeavored by the Forest Service, and particularly the Apache-Sitgreaves National Forests, to pioneer larger scale restoration efforts such as the White Mountains Stewardship Project. Gila County has been and continues to be supportive of the White Mountain Stewardship Project and of its funding as a practical tool to initiate larger scale treatments and to incentivize the creation of a small diameter trees utilization infrastructure.

Simultaneously, Gila County acknowledges that the model of subsidized restoration treatments is not scalable at landscape scale, as is required to restore the forests of Arizona, for lack of agency funding. As proposed in the Four Forest Restoration Initiative, an initiative that Gila County was instrumental in creating, fostering and developing, landscape scale forest ecological restoration appears currently feasible only if it is funded by the economically viable utilization of the forested byproducts of restoration by private industry.

While it is actually not a novation when it comes to forest products, as timber sales have been for centuries an established form of natural resources valuation and have funded the management of the resources, the concept of ecosystem service monetization is relatively new to the discussion of ecological restoration funding, and its full implications are still being tested.

As a consequence, Gila County proposes that both the County and the Apache-Sitgreaves National Forests operate under very specific circumstantial constraints when it comes to forest restoration, in as much as the forest products industry in Arizona is the funding mechanism for landscape scale restoration in eastern Arizona, which imposes the concept of social acceptability or 'social license' for the re-introduction of appropriate scale industry logging activities at the landscape scale on the Apache-Sitgreaves National Forests.

Gila County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives

Therefore, the Gila County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives for the upcoming planning cycle include, among other things:

1) Design and implement landscape-scale, consensus-based, industry-supported accelerated community protection and forested ecosystems restoration in the 2.4 million acre ponderosa pine and mixed conifer dominated forest of the Mogollon Rim.

2) Develop and sustain the social license required by Southwestern Regional Forester Corbin Newman as a prerequisite to the implementation of industry-supported landscape scale restoration.

3) Create in eastern Arizona the wood supply conditions for private industry investments in a new economically viable small diameter trees and residual biomass utilization infrastructure capable of funding the initial ecological restoration thinning of at least 50,000 acres of ponderosa pine and/or mixed conifer dominated forests annually for the next 20 years, then the maintenance of the desired future conditions in subsequent decades.

4) Wherever possible, prioritize forest byproducts treatments (mechanical treatments) funded by economically viable utilization, over non-byproducts treatments (fire as first entry thinning treatments) in order to create and sustain the wood supply necessary for a new era of forest products industry-based economic growth and employment in eastern Arizona with multiple industrial scale new investments.

5) Subordinate for as long as required in the upcoming planning cycle the scientific silviculture priorities and traditional forest products management methods for sustained yield of harvest volumes on a regulated non-declining even-flow basis for the long term, to the overriding priority of implementing as expeditiously as possible landscape scale restoration based primarily on mechanical treatments producing forest products.

6) Subordinate for as long as required in the upcoming planning cycle the scientific silviculture priorities and traditional forest products management methods for uneven age management to the overriding necessity of sustaining the social license required to implement landscape scale restoration expeditiously and in a non-conflictual and non-litigious manner, as relates to the protection of old growth and the retention of large trees (upcoming old growth where vegetative structural stages (VSS) 5 and 6 are deficient).

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Gila County Objectives, Plans and Policies

As also previously noted, although Gila County retains and employs many talented individuals at the peak of the knowledge curve in their respective fields, Gila County does not generally define its role in the public lands management process as a role of science provider or resources technical specialist. Rather, as a body representing the most direct and local expression of democratic government at the individual district or national forest level, Gila County more generally defines its role at the policy-making level as it relates to public lands management processes.

Further, for clarification, Gila County wants to emphasize that although it generally supports the use of Best Available Scientific Information (BASI) for management decision, the County does not support the exclusive use of technical sciences to formulate policies or to make strategic decisions. Gila County suggests instead that policies and decisions be based on an integration of technical AND social sciences.

For example, Gila County believes that while there is no science in the long debated issue of a diameter cap for restoration treatments, that question is nevertheless irrelevant as the issue of large trees retention is not a technical issue but rather a social issue that cannot be adequately addressed by an exclusively scientific approach.

Therefore, the Gila County comments relating to forested ecosystems restoration and catastrophic wildfire prevention will purposefully not address technical issues of silviculture, such as uneven aged composition, regeneration openings, sustained yield timber production, etc., but be focused instead on what the County believes to be the crux of the successful and timely implementation of the overriding priority of landscape scale scientifically AND socially acceptable – if admittedly imperfect – ecological restoration and catastrophic wildfire prevention, as follows:

- Social acceptability of proposed treatments;
- Speed of completion of landscape scale restoration; and,
- Prioritization of treatments.

As previously stated, Gila County appreciates and supports the realism of the Apache-Sitgreaves National Forests Land Management Plan team when stating: "the alternatives were realistically designed to reflect anticipated budgets and workforce capabilities" (DEIS p. 440). It is not, therefore, a criticism of the work produced by the Apache-Sitgreaves National Forests Land Management Plan team, but rather a simple reality for Gila County to observe, as stated in the Apache-Sitgreaves National Forests' own analysis, that: "none of the alternatives would actually treat enough acres fast enough to fully reach desired conditions within the first 5 decades" (DEIS p. 440).

Alternative A

Alternative A uses both mechanical and burning treatments for timber management and to reduce threats to communities from wildfire. On average, approximately 17,000 acres per year would be treated in the forested potential natural vegetation types (PNVTs), primarily in ponderosa pine (PDEIS p. 19). Alternative A would require 42 years to thin all forested overgrown lands (PDEIS p. 444), and would emphasize mechanical treatments around communities and in the Community Forest Intermix Management Area (CFIMA), a subset of the Community Wildfire Protection Plans (CWPPs), many of which have already been treated and now only require follow up maintenance thinning (PDEIS p. 445). Alternative A would use diameter caps for some projects (PDEIS p. 444).

Gila County believes that the pace and priorities of Alternative A do not meet the ecological needs of the Apache-Sitgreaves National Forests, nor the safety, health and economic well-being needs of the White Mountains residents and visitors, nor the Gila County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives.

Alternative B

Alternative B uses both mechanical and burning treatments for timber management and to reduce threats to communities from wildfire. The majority of treatments, from 5,000 to 35,000 acres per year, in the forested potential natural vegetation types (PNVTs) would occur in ponderosa pine, although there would be treatments in all forested PNVTs (PDEIS p. 21), and up to 25,000 acres per year of grasslands (primarily the Great Basin and semi-desert types) would be treated to remove encroaching woody species (PDEIS p. 21).

However, Alternative B would produce harvest volumes below the long term sustained yield capacity (LTSYC) and would, therefore, continue to result in overgrown forests that would be more susceptible to uncharacteristic disturbances such as severe wildfire or insect/disease outbreaks (DEIS p. 440). Further, Alternative B would require 34 years to thin all forested overgrown lands (PDEIS p. 444). Alternative B would not use 16-inch diameter caps (DEIS p. 443). In Alternative B, cutting would be prioritized in areas identified in community wildfire protection plans (CWPPs) and priority watersheds which include large acreages of untreated pine and dry mixed conifer forests (PDEIS p. 444).

Gila County believes that an intelligent implementation of the exception mechanisms identified in the Four Forest Restoration Initiative stakeholders-approved document *Old Growth Protection and Large Tree Retention Strategy* (OGPLTRS) would allow Alternative B to proceed without using 16-inch diameter caps.

However, Gila County believes that even though the priorities of Alternative B are adequate, the pace of restoration under Alternative B does not meet the ecological needs of the Apache-Sitgreaves National Forests, nor the safety, health and economic well-being needs of the White Mountains residents and visitors, nor the Gila County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives.

Alternative C

Alternative C primarily uses mechanical treatment methods. The majority of treatments, from 5,500 to 55,000 acres per year, in the forested potential natural vegetation types (PNVTs) would occur in ponderosa pine, although there would be treatments in all forested PNVTs (PDEIS p.23). Under Alternative C the reduction of the most amount of overgrowth backlog would take place in the first 3 decades, and it would continue to remove more backlog in decade 4 until it levels off at decade 5 (DEIS p. 440). Multiple resource objectives would be best met by balancing forest wood volume growth rates with removal of forest wood volumes.

This would reduce the risk of uncharacteristic wildfires and other extreme or long-lasting disturbances (DEIS p. 440). Alternatives C would not use 16-inch diameter caps (DEIS p. 443). Alternative C would require 23 years to thin all forested overgrown lands (PDEIS p. 444). Alternative C would emphasize treatments on suitable timberlands, the Community Forest Intermix Management Area, and other lands that can contribute wood products (PDEIS p. 444).

Gila County believes that an intelligent implementation of the exception mechanisms identified in the Four Forest Restoration Initiative stakeholders-approved document *Old Growth Protection and Large Tree Retention Strategy* (OGPLTRS) would allow Alternative C to proceed without using 16-inch diameter caps.

Despite the fact that Alternative C does not include significant grassland restoration as currently planned, Gila County believes that the priorities and pace of restoration under Alternative C provide the closest match to the ecological needs of the Apache-Sitgreaves National Forests, the safety, health and economic well-being needs of the White Mountains residents and visitors, and the Gila County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives.

Alternative D

Alternative D emphasizes natural processes, primarily burning (planned and unplanned ignitions), with limited mechanical treatments. The majority of treatments, from 7,500 to 50,000 acres per year in the forested potential natural vegetation types, would occur in ponderosa pine, although there would be emphasis to treat all forested PNVTs (PDEIS p. 25). It would produce the least wood product volumes, due to its emphasis on using fire as the primary treatment method, as well as a 16-inch diameter cap imposed on these few acres that are mechanically thinned or cut (PDEIS p. 443).

Alternative D would require 24 years to thin all forested overgrown lands (PDEIS p. 444). Alternatives D would emphasize mechanical treatments around communities and in the Community Forest Intermix Management Area (CFIMA), a subset of the community wildfire protection plans (CWPPs), many of which have already been treated and now only require follow up maintenance thinning (PDEIS p. 445), and burning treatments in the forested potential natural vegetation types (PNVTs) would occur in ponderosa pine, although there would be emphasis to treat all forested PNVTs.

Gila County believes that even though the pace of restoration under Alternative D is adequate, the priorities and types of treatment under Alternative D do not meet the ecological needs of the Apache-Sitgreaves National Forests, nor the custom, culture and economic well-being needs of the White Mountains residents and visitors, nor the Gila County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives.

Requested and suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Gila County respectfully requests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include the provisions of Alternative C relating to forested ecosystems restoration and catastrophic wildfire prevention treatment types, scale, pace and prioritization.

Gila County further respectfully requests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include the provisions of Alternative B relating to the restoration of 25,000 acres per year of grasslands (primarily the Great Basin and semi-desert types).

Gila County also respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include specific guidelines to integrate the provisions of the Four Forest Restoration Initiative stakeholders-approved document *Old Growth Protection and Large Tree Retention Strategy* (OGPLTRS) to allow treatments to proceed without using 16-inch diameter caps while retaining the social license necessary for an expeditious, non-conflictual and non-litigious implementation of landscape scale restoration.

WATERSHED RESTORATION OBJECTIVES

Gila County appreciates and supports the analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team using the Watershed Condition Framework (WCF) and assessment tool when addressing Class 1 (Functioning), Class 2 (Functioning-At-Risk) and Class 3 (Impaired) watersheds; Watershed Condition Framework (WCF) for 6th level Hydrologic Unit Code (HUC) watersheds (sub watersheds) condition; and, priority watershed treatment objectives.

While Gila County agrees with the technical definition provided by the Apache-Sitgreaves National Forests Land Management Plan team: "Watershed condition is the state of the physical and biological characteristics and processes within a watershed that affect the hydrologic and soil

functions that support aquatic ecosystems" (PDEIS p. 63), the County also believes that a critical social consequence of the physical and biological characteristics and processes should be added to the definition to read: " ... that support aquatic ecosystems AND THE PRODUCTION OF WATER FOR DOWNSTREAM CONSUMPTION."

Critical role of the Mogollon Rim watersheds for Arizona

Uncharacteristic landscape scale forest crown fires in eastern Arizona have a demonstrated negative impact on the conservation and operation of the watersheds in which they take place. In addition to the damages caused to communities and ecosystems by the fires themselves, the most common negative effects on watersheds documented after the Rodeo-Chediski Fire, some areas of the Wallow Fire, and the Schultz Fire, among others, are: uncharacteristic runoffs, catastrophic flooding, accelerated and aggravated soil erosion, streams and reservoirs sedimentation, and long term severe disturbance of the watershed functions.

The Rim Country constitutes a large portion of the watersheds that contribute significantly to the water supply of the metro Arizona and greater Phoenix area. The threat of additional uncharacteristic landscape scale forest crown fires in eastern Arizona, especially on the south slopes of the Mogollon Rim, raises serious concern about the conservation and operation of the eastern Arizona watersheds. Additionally, the specific threat to the East Clear Creek watershed poses an existential threat to the town of Payson water supply.

With the growing realization that uncharacteristic landscape scale forest crown fires affect the conservation and operation of the watersheds in which they take place, efforts to protect watersheds have been recently initiated in the Southwest. Several of these efforts focus on the monetization of the ecosystem services provided by the watersheds, and on an attempt to enroll the financial contribution of the downstream beneficiaries of the services (water consumers in this case) to the financial costs of protecting the upstream provider areas and the utility corridors delivering the services (forests, watersheds, and water collection and distribution infrastructures at risk of catastrophic fires in this case).

Such efforts were pioneered by the Denver Forest to Faucet project in Colorado, or the Santa Fe Municipal Watershed Protection project in New Mexico, among others. In Arizona, with the active contribution of Gila County, an effort to create the Arizona Watersheds Investment Fund (AWIF) is underway, and in Flagstaff, Ballot Question #405 received electors' approval in November 2012 for the issuance of a $10 million municipal bond to finance the restoration treatments of high threat areas in the Rio de Flag and Lake Mary watersheds to provide greater protection to the community from the impacts of fires and floods.

Three watershed issues are of particular concern to Gila County:

1) After years of collaborative debate, the model of industry supported restoration is recognized by most stakeholders as the only model that has the economic capability to be scaled up to landscape scale. However, the sole implementation of this model is insufficient, inasmuch as industry supported restoration is not applicable in areas where:
   - the merchantable material yield is insufficient for mechanical treatments to be economically viable;

- access by mechanical harvesting equipment is restricted, such as in steep slopes, high erosion areas, riparian areas, etc.

Mechanical treatments implemented in low productivity areas, and non-mechanical treatments such as fire as a thinning tool or hand thinning, are viable candidates for ecosystem services funding. Systematized ecosystem services monetization is required in order to participate in the overall funding of landscape scale restoration.

2) Conversely, despite the logic of its concept, the keen interest of some stakeholders weary of a potentially dominant role of the wood industry in the relationship with the Forest Service, and the momentum that the monetization of ecosystem services in general - and watershed services in particular - is expected to gain, the monetization of watershed services is unlikely to be able to bear the full cost of restoration which is estimated to be approximately $1,000 per acre in eastern Arizona, resulting in an estimated total cost of approximately $1 billion for the 1 million acres requiring thinning restoration treatments. Continued education is required to simultaneously ensure that:

   - the model of ecosystem services monetization funding is not viewed as an alternative to the model of industry supported funding;
   - the model of industry supported funding is not viewed as an alternative to the model of ecosystem services monetization funding; and,
   - both models, and possibly others, are viewed as complementary to each other.

3) Among the areas in eastern Arizona in need of restoration treatments are the forested ecosystems, ponderosa pine and mixed conifer dominated, in the watersheds of the slopes of the Mogollon Rim in general, and specifically in the East Clear Creek watershed. This area is an objective priority after the direct protection of communities and infrastructures.

Gila County Watersheds Restoration Objectives

The Gila County Watersheds Restoration Objectives for the upcoming planning cycle include, among other things:

1) Prioritize restoration and catastrophic fire prevention treatments in the watersheds, after the direct protection of communities and infrastructures, on the slopes of the Mogollon Rim in general, and specifically in the East Clear Creek watersheds, the Verde River watersheds, the Little Colorado River watersheds, the Upper Gila River watersheds and the Upper Salt River watersheds.

2) Develop the Arizona Watersheds Investment Fund (AWIF), and/or similar initiatives in order to fund restoration treatments that cannot be funded by the wood industry utilization of the forest byproducts of restoration in areas where the merchantable material yield is insufficient for mechanical treatments to be economically viable, and/or access by mechanical harvesting equipment is restricted, such as in steep slopes, high erosion areas, riparian areas, etc.

3) Develop in parallel and in a complementary manner all models of watershed restoration funding such as industry funding, ecosystem services funding, municipal bonds funding, etc.

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Gila County Objectives, Plans and Policies

Degrading factors and selection of priority watersheds

Gila County believes that a clear distinction must be made between degrading factors and the effects of degrading factors, and between natural processes and management effects. The Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan lists as common degrading factors: high road density, poor aquatic habitat conditions, poor fire regime conditions, poor aquatic biota conditions, and impaired soil conditions (PDEIS p. 65). High road density and poor fire regime conditions may contribute to watershed degradation, but impaired soil condition, non-functioning riparian or aquatic areas, and sedimentation are not degrading factors; rather, these are the effects of degrading factors. Gila County is concerned that a proper causality analysis is required to design effective restoration actions.

Gila County agrees with the prioritization methodology used to designate watersheds, but is concerned that "the selection of these watersheds is ongoing; and, once selected, will be a major consideration for implementation of projects in some alternatives" (PDEIS p. 64). Considering the fact that, according to the Watershed Condition Framework (WCF), only 32% of the Apache-Sitgreaves National Forests' 176 6th level Hydrologic Unit Code watersheds (HUCs) are currently considered to be functioning properly (Class 1), and a full 68% are functioning-at-risk (Class 2) (PDEIS p. 65), and considering the critical importance and scarcity of water resources in metro Arizona, Gila County believes it is critical that a higher priority (and potentially larger resources) be given to the preservation treatments of Class 1 watersheds and the restoration treatments of Class 2 watersheds.

Similarly, Gila County believes that it is critical to expeditiously complete the analysis of the 50 watersheds potentially affected by the recent Wallow Fire as some - but not all - watersheds were heavily affected, resulting in a probable shift to a lower class (PDEIS p. 65).

Alternative A

Based on the above, Gila County wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative A, the no action alternative, relating to watershed restoration objectives.

Gila County understands that watershed restoration was not an objective of actuality when the 1987 Plan was developed. However, Gila County cannot support an alternative that would result in, among other things, the designation of zero priority watersheds to be treated during the upcoming planning cycle in the Apache-Sitgreaves National Forests (PDEIS p. 67). This alternative is so departed from the White Mountains residents' past, current, and foreseeable future safety, health and economic well-being needs, and from the Gila County Watersheds Restoration Objectives, that it does not warrant any further discussion from the County's perspective.

Alternatives B, C and D

Alternative B, the Preferred Alternative, and Alternative D both concentrate treatments in priority watersheds and allow a better opportunity for restoring or maintaining watersheds across the forests (PDEIS p. 67). Under both Alternatives B and D, 10 watersheds are designated as priority watersheds to be treated in the 15 year planning period (PDEIS p. 67). Alternative C also has an objective to treat 10 priority watersheds in the potential natural vegetation types (PNVTs) that can contribute to economic sustainability (PDEIS p. 67).

Since it is unclear to Gila County whether the 10 priority watersheds designated under Alternatives, B, C and D have higher or lower priority levels as compared to each other, the County favors Alternative C relating to watershed restoration objectives due to the fact that, in general, Alternative C more closely meets the various Gila County Objectives.

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Gila County respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include a revised analysis differentiating more clearly between degrading factors and the effects of degrading factors on physical and biological watershed characteristics and processes that affect the hydrologic and soil functions, and between natural processes and management effects, so that a proper causality analysis can improve the design of effective restoration and management actions.

MANAGEMENT AREAS DESIGNATION OBJECTIVES

Gila County appreciates and supports the analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team for management areas designation when addressing community forest intermix, high use developed recreation areas, energy corridors, the Heber Wild Horse Territory, natural landscape, inventoried roadless areas (which are technically not management areas *per se* but an administrative designation), recommended and current wilderness areas, the Blue Range Primitive Area, recommended and current research natural areas, wildlife quiet areas, and wild and scenic rivers.

Gila County appreciates and supports the fact that certain characteristics of landscapes, viewscapes or bioscapes are unique and deserve protection, preservation and conservation; that a balanced approach to the enjoyment of all requires a spectrum of management areas extending from high use developed recreation areas to pristine wildernesses; that the enjoyment of future generations may require protection, preservation and conservation management actions that may constrain current generations; that areas of wildlife undisturbed habitats are necessary for big game and other wildlife to reside with minimal disturbance from motorized vehicle use; that preserving the natural character of the national forest landscape is important to any of these goals; that scientific research in ecosystems characteristics and functions are necessary for the continuous improvement of management decisions; and, that designations by Congress and/or Presidential Order must be implemented.

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Gila County Management Areas Designation Objectives

The Gila County Management Areas Designation Objectives for the upcoming planning cycle include, among other things:

1) Maintain a balanced approach in the designation of management areas including general forest area, community forest intermix, high use developed recreation areas, energy corridors, the Heber Wild Horse Territory, natural landscape, inventoried roadless areas (which are technically not management areas *per se* but an administrative designation), recommended and current wilderness areas, the Blue Range Primitive Area, recommended and current research natural areas, wildlife quiet areas, and wild and scenic rivers, that meets (a) the requirements of management for multiple resource objectives and (b) the safety, health, economic well-being, custom and culture needs of Gila County residents and visitors.

2) Prevent the departure from the current condition of balanced management for multiple resource objectives by the designation of inappropriately large management areas of more than 10% of the land area individually or 25% collectively, characterized by the restriction of most multiple resource objectives management or enjoyment activities such as, but not restricted to, wilderness areas or primitive areas.

Gap between the Apache-Sitgreaves National Forests Land Management Plan and the Gila County Objectives, Plans and Policies

Alternative D

Gila County wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

Gila County understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and Gila County acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, Gila County cannot support an alternative that would result in, among other things, the recommendation for the designation of 25% of the Apache-Sitgreaves National Forests as Wilderness Areas (PDEIS p. 26), in addition to the existing 10% of the Apache-Sitgreaves National Forests already managed as a Primitive Area. This alternative is so departed from the White Mountains residents' past, current, and foreseeable future custom, culture, safety and economic well-being needs, and from the Gila County Management Areas Designation Objectives, that it does not warrant any further discussion from the County's perspective.

Alternatives B

Gila County is concerned that 20% of the Apache-Sitgreaves National Forests would be designated as Natural Landscape Areas under Alternative B, the Preferred Alternative. While Gila County appreciates the need for retaining the natural landscape characteristics of the Arizona national forests, and understands that Natural Landscape Areas provide primitive and semi-primitive recreation opportunities, both non-motorized and motorized, and that management activities for

ecological restoration purposes may occur in them (PDEIS p. 608), the County is concerned that such management activities for ecological restoration purposes are limited (PDEIS p. 608), and that such Natural Landscape Areas may, therefore, remain at high risk of uncharacteristic landscape scale disturbances such as non-natural high severity crown fires or insect infestation.

Conversely, Gila County realizes that such Natural Landscape Areas may be designated in areas where management activities for ecological restoration purposes may already be limited by physical characteristics such as terrain inaccessibility and/or economic unviability of industry supported mechanical treatments. Therefore, Gila County requests further information on the potential location of the proposed 405,000 acres of Natural Landscape Areas under Alternative B.

Alternative C

It is unclear to Gila County why Alternative C includes elimination of the 322,000 acres currently designated as Inventoried Roadless Areas (which are technically not management areas *per se* but an administrative designation) but are maintained under Alternative B, the Preferred Alternative, and Alternative D (PDEIS p. 349). Considering that the 17 Inventoried Roadless Areas (IRAs) on the Apache-Sitgreaves National Forests include rough, broken terrain with steep-sided canyons and are located in low population areas (PDEIS p. 346) and are generally not easily accessible by motorized vehicles, and considering that the Inventoried Roadless Areas (IRAs) are not technically management areas but do overlay a variety of management areas, including management areas already prohibiting motorized travel, the benefits of this proposed elimination is not immediately obvious to the County.

Therefore, Gila County requests further information on the rationale supporting the proposed elimination of the existing 322,000 acres of Inventoried Roadless Areas (IRAs) under Alternative C.

Other management area designations under all action alternatives (Alternatives B, C and D)

Gila County observes the continued creeping trend toward ever increasing restrictive management area designations in the action alternatives of the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, such as increasing wilderness areas from 23,000 acres to 30,000 acres (PDEIS p. 362-363); increasing research natural areas from 2,500 acres to 8,000 acres (PDEIS p. 372); and, increasing wildlife quiet areas from 59,000 acres to 65,000 acres (PDEIS p. 254). However, the County remains satisfied that the acreage increase of these areas is essentially insignificant in relation to the 2.1 million acre total land area of the Apache-Sitgreaves National Forests.

Therefore, with the exceptions of (a) the recommendation for the designation of 25% of the Apache-Sitgreaves National Forests as Wilderness Areas under Alternative D; (b) the request for further information on the potential location of the proposed 405,000 acres of Natural Landscape Areas under Alternative B; and, (c) the request for further information on the rationale supporting the proposed elimination of the existing 322,000 acres of Inventoried Roadless Areas (IRAs) under Alternative C, Gila County supports the management area designations under all action alternatives (Alternatives B, C and D), as follows:

Community Forest Intermix:	~61,000 acres	(3%)
High Use Developed Recreation Area:	~17,000 acres	(1%)

Energy Corridor:	~2,500 acres	(<1%)
Wild Horse Territory:	~19,000 acres	(1%)
Wildlife Quiet Area:	~50,000 acres	(2%)
Research Natural Area:	~8,000 acres	(<1%)
Primitive Area:	~200,000 acres	(10%)
Existing Wilderness:	~23,000	(1%)

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Gila County respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include specific information on the potential location of the proposed 405,000 acres of Natural Landscape Areas under Alternative B.

Gila County further respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include information on the rationale supporting the proposed elimination of the existing 322,000 acres of Inventoried Roadless Areas (IRAs) under Alternative C.

PART 3 – PLANNING ISSUES

In its review of the proposed directives revising the Forest Service handbook (FSH 1909.12) and the Forest Service manual (FSM 1920) and establishing procedures and responsibilities for implementing the 2012 national forest system land management planning regulation set out at 36 CFR part 219, Gila County identified issues and shortcomings that are of a nature to affect the Programmatic Draft Environmental Impact Statement For The Apache-Sitgreaves National Forests Land Management Plan.

Gila County fully understands that the opportunity to comment on the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan is neither an opportunity to comment on the 2012 Planning Rule or its implementation directives, nor an opportunity to comment on a specific proposed management action, such as a travel management plan or a restoration project. Nonetheless, precisely because the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan will establish the parameters for all subsequent management actions in the Apache-Sitgreaves National Forests in the upcoming planning cycle, Gila County believes that it is critical for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan to specifically set forth, in order to become part of any subsequent management action, guidelines on how to conduct the monitoring, adaptive management framework, use of best available scientific information to inform the land management planning process, public participation and the role of collaboration, and the objection process.

MONITORING

Gila County observes that the entire discussion on monitoring strategy, aside from the incidental use of the word 'monitoring' in various other contexts, in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan occupies, in a 681 page document, the whole of 2 lines: "All action alternatives include the same monitoring strategy as identified in chapter 5 of the proposed plan" (PDEIS p. 28). Gila County further observes that the Monitoring Strategy referred to in the Apache-Sitgreaves National Forests Land Management Plan is only an approximately 4 page long very brief discussion of monitoring in the most general of terms, including a 3 page table of planned monitoring questions, monitoring methods, units of measure, and frequency of measurements (p. 135 ~ 139) in a 283 page document.

Gila County is concerned that the scarce mention of monitoring in the Programmatic Draft Environmental Impact Statement and the Apache-Sitgreaves National Forests Land Management Plan and the very cursory 'Monitoring Strategy' included in the Apache-Sitgreaves National Forests Land Management Plan may reflect an insufficient role for monitoring in the current planning process. This would be in contradiction with the requirement of the 2012 National Planning Rule and its proposed implementation directives.

Gila County appreciates and supports the important role given to monitoring in the proposed directives. We believe that the content of the proposed directives is adequate, although sometimes very succinct, when addressing 31.1 - Best Available Scientific Information for Monitoring; 31.2 - Public Participation for Monitoring; 32.1 - Developing the Plan Monitoring Program; 32.11 - Selecting Monitoring Questions; 32.12 - Selecting Monitoring Indicators; 32.13 - Content of the Plan Monitoring Program; 32.13a - Select Watershed Conditions; 32.13b - Ecological Conditions for Terrestrial, Riparian and Aquatic Ecosystems, and At Risk Species; 32.13c - Focal Species; 32.13d - Visitor Use, Visitor Satisfaction, and Recreation Objectives; 32.13e - Climate Change and Other Stressors; 32.13f - Desired Conditions and Objectives; 32.13g - Productivity of the Land; 32.2 - Documenting the Plan Monitoring Program; 32.3 - Transitioning to the Plan Monitoring Program; and 32.4 - Changing the Plan Monitoring Program.

Issue

However, Gila County believes that the proposed directives miss a critical opportunity to address and correct what is arguably the Achilles' heel of many, if not most, monitoring efforts endeavored by national forests staff. Specifically, however well planned, monitoring is often not implemented or superficially or partially implemented for lack of resources or funding.

Additionally, Gila County also believes that the proposed directives do not address a critical weakness in the concept of 31.2 - *Public Participation for Monitoring,* in particular the multi-party monitoring section thereof. Specifically, while Gila County applauds the Forest Service for including in the proposed directives the concept of public participation in monitoring, and specifically multi-party monitoring, we believe that the Forest Service misses a critical opportunity to build robustness in the system by failing to make the findings of multi-party monitoring boards binding on the Forest Service Responsible Official.

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Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Monitoring implementation plan

Gila County suggests that the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan be expanded to include in very specific terms the requirements for quantitative, qualitative and effectiveness monitoring processes, and the resources allocation and funding necessary to implement them -- somewhat akin to the structured quality control plans and budgets common in the business world -- to ensure that strategic monitoring plans are quantifiably and qualitatively implemented.

Gila County expressly suggests that a very specific monitoring implementation plan and budget be added to the planning and NEPA review process of all projects, be submitted to public review and comments in the Draft Environmental Impact Statements (DEIS), be included in the Records of Decisions (ROD), and be included in the Final Environmental Impact Statements (FEIS) for all projects so as to ensure that monitoring will actually be implemented and funded.

Practically, Gila County suggests a three tier monitoring plan be articulated as follows:

I. Quantitative implementation compliance monitoring.
The purpose of the quantitative implementation compliance monitoring is to answer the question "Was the job done?" While generally this assessment is made by the Forest Service contract management team when a contractor is involved, it is suggested that this step becomes the beginning of the process rather than what is often the end of it.

Specific quantitative implementation compliance monitoring measures can be defined at the planning stage and specific resources requirements can be calculated at the planning stage. The plan must include, disclose and commit the Responsible Official to provide the resources and budget required.

II. Qualitative implementation compliance monitoring.
The purpose of the qualitative implementation compliance monitoring is to answer the question "Was the job done correctly?" The need for qualitative implementation monitoring increases rapidly with the complexity of the actions undertaken. For example, complex forest restoration prescriptions implemented using designation by description (DxD) or designation by prescription (DxP) create substantial room for interpretation by the operators and may result in outcomes substantially different on the ground from those intended by the resources specialists who write the prescriptions. Verifying that implementation complies not only quantitatively but also qualitatively with the management decision is especially important when the third tier of monitoring is intended, as effectiveness can only be meaningfully analyzed if the actual treatments outcomes are aligned with the intended outcomes.

Specific qualitative implementation compliance monitoring measures can be defined at the planning stage and specific resources requirements can be calculated at the planning stage. The plan must include, disclose and commit the Responsible Official to provide the resources and budget required.

III. Effectiveness monitoring.
The purpose of the effectiveness monitoring is to answer the question "Do the outcomes of the management decision produce the intended effects?" The need for effectiveness monitoring increases rapidly with the complexity and spatial and temporal scopes of the actions undertaken, especially in projects where cumulative effects analysis assumes a speculative nature owing to the scale and duration of the management action.

For example, landscape scale forest restoration over 2 million acres in 20 years, as endeavored in the Four Forest Restoration Initiative -- an initiative that Gila County was instrumental in creating and fostering -- is largely inconceivable without the concept of adaptive management, as we know the Forest Service realizes. However, adaptive management is but an empty rhetoric, and any management action and the NEPA analysis thereof is flawed, if robust three tier monitoring as described herein is not implemented.

Specific effectiveness monitoring processes can be defined at the planning stage and specific resources requirements can be calculated at the planning stage. The plan must include, disclose and commit the Responsible Official to provide the resources and budget required.

Gila County further suggests that in addition to the requirement for three functionally different and complementary tiers, the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan specifically direct the Responsible Officials to include robust qualitative and effectiveness indicators. For example, easy to collect and process quantitative indicators, such as acres treated, tons of biomass removed or forage utilization, often yield very little meaningful information on the resulting health and resilience of a forest stand or the health and productivity of a grazing range.

Multi-party monitoring

Gila County suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan be expanded to include in very specific terms the requirements for the Responsible Officials to be bound by the findings of multi-party monitoring boards.

Anticipating a quick reminder that such dispositions would violate the Federal Advisory Committee Act (FACA) and that federal line officials are not authorized to share their decision making authority, Gila County does not herein suggest that Responsible Officials surrender their decision making authority to a multi-party monitoring board; rather, they should be required to act upon the findings of a multi-party monitoring board in a manner that appropriately addresses the issues raised by the multi-party monitoring board.

Please refer to the *Public Participation and the Role of Collaboration* section of this letter, here under, for further discussion of this substantial issue.

ADAPTIVE MANAGEMENT FRAMEWORK

Gila County observes that there are only 14 instances of the use of the words 'adaptive management' in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, and that there are a grand total of 17 lines dedicated to the discussion of adaptive management in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan (PDEIS p. 43-44), a 681 page document. Gila County further observes that are only 7 instances of the use of the words 'adaptive management' in the Apache-Sitgreaves National Forests Land Management Plan itself, a 283 page document.

Although there is an approximately 4 page long very brief discussion of monitoring which includes a 3 page table of planned monitoring questions, monitoring methods, units of measure, and frequency of measurements in the Apache-Sitgreaves National Forests Land Management Plan (p. 135 – 139), Gila County is concerned that the scarce mention of monitoring and adaptive management in the Programmatic Draft Environmental Impact Statement and the Apache-Sitgreaves National Forests Land Management Plan may reflect an insufficient role for adaptive management in the current planning process. This would be in contradiction with the requirement of the 2012 National Planning Rule and its proposed implementation directives.

Gila County appreciates and supports the important role given to the adaptive management framework in the proposed directives. We believe that the key features of adaptive management included in the proposed directives are adequate when addressing:

1. Explicitly characterizing uncertainty and assumptions
2. Testing assumptions and collecting data using appropriate temporal and spatial scales
3. Analyzing new information obtained through monitoring and project experience
4. Learning from feedback between monitoring and decisions
5. Adapting assumptions and strategies to design better plans and management direction
6. Making iterative and responsive decisions, evaluating results, and adjusting actions on the basis of what has been learned
7. Creating an open and transparent process that shares learning internally and with the public

Issue

However, Gila County believes that the proposed directives miss a critical opportunity to provide substantially clear directives to Responsible Officials in actually implementing adaptive management, by limiting recommendations to a one and a half page general description of the three phases of planning (assessment, planning, and monitoring) in Title 36, Code of Federal Regulations, part 219 (36 CFR part 219). Specifically, Gila County acknowledges that the Forest Service includes some measure of action in paragraph d of its third step (monitoring): *"d. Adapt planning and management activities based on learning from the results of the analysis. This adaptation takes the form of modifying assumptions, models, data, and understanding of the system. This knowledge is then used to inform the planning process that leads to adjustment of*

plans and projects." Nonetheless, Gila County believes that an entire fourth step of what is generally accepted by academia and the professional world as the adaptive management framework is missing from the proposed directive, namely: corrective action in the implementation of a large scale and long duration management action.

Gila County does not fault the Forest Service or the Code of Federal Regulations (36 CFR part 219) for a truncated framework, as many management actions, especially in national forests over the last quarter century, have been implemented at a scale and scope sufficiently limited such that what had been learned from the execution of a given project could be applied to other projects, considering the rapid completion of small projects. However, as large, long and extremely complex management actions such as landscape scale forest restoration are endeavored -- Four Forest Restoration Initiative includes, for example, more than 2 million acres over 20 years -- the need for adaptive and very probably corrective action within the existing project and within the existing NEPA Record of Decision is clearly emerging.
Did these changes alter the meaning?

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Gila County suggests that the three phases of planning (assessment, planning, and monitoring) in Title 36, Code of Federal Regulations, part 219 (36 CFR part 219) designed to support a framework for adaptive management that will facilitate learning and continuous improvement in plans and agency decision making, be augmented in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan with a fourth phase that outlines clearly the responsibility and authority of Responsible Officials to implement adaptive and, if necessary, corrective action during the implementation of large scale, long duration specific projects as a response to quantitative, qualitative, and effectiveness monitoring of the project.

Gila County further suggests that in order to avoid the difficulty and complexity of having to complete new and different NEPA analyses prior to implementing adaptive or corrective action during the implementation of a given project, the NEPA analysis of complex, large scale, long term projects be specifically designed from inception to formalize the inclusion of a four phase adaptive management framework, and to include the possibility for and the responsibility of the line officers to implement a range of actions as may be necessary to adapt to the emergence of data from effectiveness monitoring, and to meet the purpose and need of the proposed action and preferred alternative.

USE OF BEST AVAILABLE SCIENTIFIC INFORMATION TO INFORM THE LAND MANAGEMENT PLANNING PROCESS

Gila County appreciates and supports the important role given to the use of best available scientific information to inform the land management planning process in the proposed directives when addressing: 42.1 - Use of Best Available Scientific Information; 42.11 - Integration of the BASI in the Planning Process; 42.11a - Assessment Phase; 42.11b - Planning Phase; 42.11c – Monitoring; 42.12 - Characteristics of Quality Scientific Information; 42.13 - BASI Determination Process; 42.14 - Attributes of the BASI: Uncertainties, Risks, and Assumptions; 42.15 - Sources of Scientific

Information; 42.16 - Data Quality; 42.17 - Documentation of the BASI in the Planning Process; 42.17a - Documentation of the BASI in the Assessment Report; 42.17b - Documentation of the BASI in the Plan Decision Document; and 42.2 - Optional Science Reviews in the Land Management Planning Process.

Gila County further appreciates and supports the important role given to assessing social and economic sustainability and multiple uses in the assessment process when addressing: 13.1 - Assessing Social, Cultural, and Economic Conditions; 13.11 - Social, Cultural, and Economic Context; 13.12 - Important Social, Cultural, and Economic Influences on the Plan Area; 13.13 - How the Plan Area Influences Key Social, Cultural, and Economic Conditions; 13.14 - Sources of Relevant Existing Information for Social, Cultural, and Economic Conditions; 13.2 - Assessing Benefits People Obtain from the NFS Plan Area; 13.3 - Assessing Multiple Uses; 13.31 - Outdoor Recreation; 13.32 – Range; 13.33 – Timber; 13.34 – Watershed; 13.35 - Fish and Wildlife; 13.4 - Assessing Recreation Settings, Opportunities and Access, and Scenic Character; 13.5 - Assessing Renewable and Nonrenewable Energy and Mineral Resources; 13.6 - Assessing Infrastructure; 13.7 - Assessing Areas of Tribal Importance; 13.8 - Assessing Cultural and Historic Resources and Uses; and 13.9 - Assessing Land Status and Ownership, Use, and Access Patterns.

Issue

However, Gila County believes that the proposed directives miss a critical opportunity to provide substantially clear directives to Responsible Officials in actually integrating social and economic sustainability and multiple uses, and in integrating social and economic science into the framework of best available scientific information to inform their land management planning process and their management decision making process. Specifically, the assessment of the social, cultural and economic values becomes essentially an exercise in futility if these values are not reflected in the management decisions and do not balance other values.

Gila County clearly supports robust science and the full integration of ecological, biodiversity, restoration and conservation values in the management process, and Gila County is on record for participating and often leading efforts designed to reintroduce to the ecosystems of eastern Arizona such natural ecologically sustainable processes as a frequent surface fire regime. Nevertheless, Gila County is observing, and when necessary is committed to mitigate, a probably natural temptation by some scientists to develop and implement pure uncompromised and uncompromising science, or the currently accepted state of best science - which often proves to be a temporary state and a detriment to the enjoyment, custom, culture, health, safety and economic well-being of the people.

An example would be the forcible and inflexible implementation of rigid travel management rules in the national forests of Arizona in apparent disregard of not only the characteristics of individual forests, but also of people's long established custom, culture, and need and right to recreate, hunt or procure firewood in these forests. Such rules may make sense when protecting relatively limited acreages of national forests in states comprising mostly private land, but they create an unreasonable burden when regulating access to upward of 50% of the land in a County. Additionally, blind application of out of context science promulgated at a national level may trigger fundamentally unscientific decisions when, for example, identical travel management rules are being implemented across fundamentally different ecosystems in ponderosa pine dominated

forests, pinion juniper dominated forests, wet or dry mixed conifer forests, and across multiple national forests characterized by fundamentally different densities of road systems.

Additionally, Gila County is also observing, and when necessary is also committed to mitigate, the fact that the same temptation to develop and implement pure uncompromised and uncompromising science as discussed in the above paragraph, also often causes the weakening of the social consensus with stakeholders who would support the implementation of management decisions based on a balanced approach, but are unwilling to support the invasive implementation of a monolithic and intransigent interpretation of science.

An example would be the current reluctance of many stakeholders to support the Four Forest Restoration Initiative NEPA DEIS, owing to the science-based decision to cut some of the last remaining old growth or old and large trees in the Southwest in order to create regeneration openings in the name of scientifically driven silviculture. Such decisions may make sense in forests featuring well balanced classes of vegetative structural stages (VSS), but are difficult to accept in forests where older VSS classes (VSS 5 and 6) are in recognized drastic deficit while younger VSS classes (VSS 2, 3 and 4) are overabundant and choke the landscape, transforming it into a ticking fire bomb.

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Gila County suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan provide clear and unambiguous guidelines to Responsible Officials to integrate social and economic sustainability and social and economic science into the framework of best available scientific information to inform their land management planning process and their management decision making process.

Specifically, Gila County suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan instruct Responsible Officials to implement substantive - even though possibly scientifically imperfect - management actions that move the ecosystems significantly toward the desired future conditions when such actions are supported by social consensus, rather than spend years attempting to forcibly impose, and possibly trigger litigation of, management actions that may be deemed scientifically more perfect but that do not benefit from the support of the social consensus. In other terms, Gila County suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan emphasize executing well the less than perfect projects now, over developing scientifically perfect projects that are never implemented.

To quote a famous Arizonan: "Extremism in the defense of liberty is no vice" (Barry Goldwater), but Gila County would like to propose to the Forest Service that extremism in the pursuit of best available scientific information (BASI) may become counterproductive when it results in paralysis by analysis, or inaction by litigation.

PUBLIC PARTICIPATION AND THE ROLE OF COLLABORATION

Gila County appreciates and supports the important role given to public participation and the role of collaboration in the proposed directives. We believe that the content of the proposed directives

is adequate, although sometimes succinct, when addressing 43.02 - Principles of Public Participation; 43.1 - Guidance for Public Participation; 43.11 - Guidance for Collaboration; 43.12 - Developing a Public Participation Strategy; 43.13 - Federal Advisory Committee Act Committees; 43.14 - Engaging a Diverse Set of Stakeholders; 43.15 - Opportunities for American Indians and Alaska Natives; 43.16 - Participation and Coordination with Other Related Planning Efforts; 43.17 - Participation during Phases of Planning; 43.17a - Participation during Assessments; 43.17b - Participation during Development, Revision, or Amendment of Plan Components; 43.17c - Participation during Monitoring Program Development; 43.17d - Participation during Monitoring Evaluation Report Reviews; 43.18 - Substantive Formal Comment; and 43.19 - Participation during Pre-decisional Administrative Review.

Issue

However, Gila County believes that the proposed directives miss a critical opportunity to provide substantially clear directives to Responsible Officials on the two fundamental and overlapping aspects of public participation and the role of collaboration. Specifically, sustained and meaningful public participation and engagement require that the public's input actually influence substantially the decision making process, and sustained meaningful collaboration requires that the products of collaboration be honored by the Forest Service.

Gila County has acquired a long, ineffective, inefficient, unproductive and oftentimes frustrating experience of Responsible Officials paying lip service to public participation and to the role of collaboration, and Gila County believes that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan must refocus the concept of public participation and collaboration away from complying with a process and managing the problem, toward developing executable products and resolving the problem.

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Gila County recognizes that, under current federal statutes, Forest Service line officers are not allowed to share their decision making authority. Nonetheless, Gila County believes that a statutory monopoly of decision making authority does not necessarily imply an operational monopoly on decision content. Therefore, Gila County suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan emphasize that while the line officers retain their sole legal ability to make the decision, they are also required by law and regulation "to meet the needs of present and future generations" (Forest Service Mission Statement), as expressed through public participation and collaboration among other channels.

Gila County further suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, while directing Responsible Officials to retain their legal decision making authority, include directives that allow the public to meaningfully participate in, substantially influence and, when appropriate, alter, the content of decisions.

Gila County further suggests that a special role and a special forum be organized in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests

Land Management Plan, for local elected officials such as County Supervisors to represent the socio economic interests of local populations in the decision making process of the Forest Service Responsible Officials. As the most local and often the most directly involved elected representatives in the democratic constitutional process, local elected officials can play a tremendously significant role in representing their constituents with line officers to ensure that federal employees temporarily assigned to a national forest are given the best possible opportunity to integrate local custom, culture and economic well-being into their decision making process.

OBJECTION PROCESS

Gila County appreciates the attempt made by the Forest Service to give the public more effective involvement, support their collaborative processes and result in better decision-making (U.S. Forest Service Chief Tom Tidwell) by replacing the previous appeal process with the new pre-decisional administrative review, or objection process, to be applied under federal regulation to all projects and activities that implement land-management plans and that are documented in an environmental assessment or environmental impact statement.

Gila County acknowledges that the U.S. Forest Service announced on March 26, 2013 the final rule governing the objection process for projects and activities implementing land-management plans, and that the final rule was published in the Federal Register on March 27, 2013 after a review of public comments submitted in response to the publication of the proposed rule in 2012. Consequently, Gila County fully acknowledges that this comment letter is not an opportunity to comment on the objection process.

Issue

However, Gila County believes that specific comments on the application of the objection process as implemented in the proposed directives, and presumably in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, does provide an opportunity to address concerns about the objection process implementation, as follows:

Among other significant differences, a critical difference between the previous appeal process and the new objection process is that an objection must be filed prior to an actual decision being made and published. This creates a potentially difficult situation inasmuch as there is a possibility, and in certain cases a probability, that several objections may be filed by several different parties. The resolutions of these objections may result in a final decision significantly different from the one disclosed in the document published with the notice of a plan subject to objection.

Although the list of objections will be public, the timing of filing of potential objections within the objections filing period may result in the requirement for the public to decide to file or abstain to file an objection based on the speculation of what other parties may decide to file, and what the resolutions to such objections might be. Additionally, since a final decision may be influenced significantly by the resolution of an objection that, by definition, happens only after the comments period is closed, parties may be unwillingly put in a situation where pursuant to 51.52 - *Issues Not Based on Previously Submitted Substantive Formal Comments*, their potential objection may be ineligible.

Additionally, Gila County is concerned that Chapter 50 *Objection Process* in general, paragraph 51.66 - *Reviewing Officer Response to Objections* and paragraph 51.6 - *Resolution of Objections* in particular, and specifically paragraph 51.6 section 4: "The reviewing officer responds to the outstanding issues in the objection; The reviewing officer's response may include instructions to the responsible official as part of the disposition of the objection. The response must be sent to the objecting party(ies) by certified mail, return receipt requested, and posted online" (36 CFR 219.57(b) and sec. 51.64) are focused on the administrative process of disposing of an objection rather than on the substantial process of actually resolving it.

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Gila County suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan guide and direct the reviewing officers to exercise careful judgment in their resolution or rejection of objections, in relation to the true material importance of the objections – as opposed to their symbolic or emotional importance, and the potential effect of litigation on the implementation of the project.

In so suggesting, Gila County wants to emphasize that it does not promote indiscriminate and aberrant acceptance of any and all parties' whims or irrational demands, but suggests instead a well-considered costs and benefits analysis by Forest Service Responsible Officials, line officers and reviewing officers of public input into their decision process in view of the relative actual significance or lack thereof of such input or demands, and the overwhelming urgency to act, even if imperfectly, in some specific cases such as the protection of the Southwest forests against catastrophic landscape scale wildfires.

Thank you for your consideration.

Respectfully submitted,

Tommie C Martin 5/15/13

Tommie Cline Martin Date
Supervisor, District 1
Gila County Board of Supervisors

Ltr#0116

From:	Robert Corbell
To:	FS-ASNF Planning
Cc:	rcorbell@aznex.net
Subject:	Comments to Apache-Sitgreaves National Forests Land Management Plan
Date:	Thursday, May 16, 2013 10:39:32 PM

To: Apache-Sitgreaves National Forests - Plan Revision Team
P.O. Box 640
Springerville, AZ 85938

Electronic filing: asnf.planning@fs.fed.us

From: Supervisor Robert Corbell
Greenlee County Board of Supervisors District 3
562 Lemons Lane
Duncan, Arizona 85534
(928) 215-0118
rcorbell@aznex.net or rcorbell@co.greenlee.az.us

This is in reference to Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan. The United States Forest Service, Department of Agriculture has very limited jurisdiction in Greenlee County as proved by the following affidavit, supporting court cases and references that are included:

Jurisdiction

Affidavit Pertaining to Federal Jurisdiction Over Areas Acquired By the United States in the county of Greenlee, state of Arizona

The undersigned Affiant, Wray J. Shildneck, is of majority age and of sound mind, and has researched the laws and actions of the state of Arizona to determine if all the requirements of the law had been met by the state of Arizona to (1) give consent to the United States to acquire areas within the county of Greenlee, state of Arizona for Federal purposes; and (2) cede to the United States any exclusive legislative jurisdiction, concurrent legislative jurisdiction, or partial legislative jurisdiction over such areas. Affiant is competent to testify as to His personal knowledge and belief of the truth of all the following:

1. That Affiant has read and understands the Congressional Report generated during the Eisenhower Administration entitled *Report of the Interdepartmental Committee for the Study of Jurisdiction Over Federal Areas Within the States, Part 1 and Part 2,* April 1956 and 1957 (40 USC 255 and 50 USC 175 amended to 40 U.S.C. 3111 and 3112). This report, which is often referred to as the Eisenhower Report, outlined four basic areas of federal jurisdiction within the states: (1) exclusive legislative jurisdiction, (2) concurrent jurisdiction, (3) partial jurisdiction, and (4) proprietorial jurisdiction.

2. That the Eisenhower Report defines the four types of federal jurisdiction possible within the states as follows:

   1. Exclusive Legislative Jurisdiction: This term is applied when the Federal Government possesses, by whichever method acquired, all of the authority of the State, and in which the State concerned has not reserved to itself the right to exercise any of the authority concurrently with the United States except the right to serve civil or criminal process in the area for activities which occurred outside the area.
   2. Concurrent Legislative Jurisdiction: This term is applied in those instances wherein in granting to the United States authority which would otherwise amount to exclusive legislative jurisdiction over an area, the State concerned has reserved to itself the right to exercise, concurrently with the United States, all of the same authority.
   3. Partial Legislative Jurisdiction: This term is applied in those instances wherein the Federal Government has been granted for exercise by it over an area in a State certain of the State's authority, but where the State concerned has reserved to itself the right to exercise, by itself or concurrently with the United States, other authority constituting more than merely the right to serve civil or criminal process in the area (e.g., the right to tax private property).
   4. Proprietorial Interest Only: This term is applied to those instances wherein the Federal Government has acquired some right or title to an area in a State, but has not obtained any measure of the States authority over the area. In applying this definition, recognition should be given to the fact that the United States, by virtue of its functions and authority of the Constitution, has many powers and immunities not possessed by ordinary landholders with respect to areas in which it acquires an interest, and of the further fact that all its properties and functions are held or performed in a governmental rather than a proprietary capacity.

3. That Affiant has read and understands Article 1, Section 8, Clause 17 of the US Constitution which places limits on the exercise of exclusive jurisdiction over lands acquired by the US within the boundaries of a state. In this clause, the United States is allowed "To exercise exclusive

Legislation in all Cases whatsoever, over such District (not exceeding ten Miles square) as may, by Cession of particular States, and the Acceptance of Congress, become the Seat of the Government of the United States, and to exercise like Authority over all Places purchased by the Consent of the Legislature of the State in which the Same shall be, for the Erection ofForts, Magazines, Arsenals, dock-Yards, and other needful Buildings."

4. That Affiant has read and understands the following Arizona Revised Statutes

(ARS) that establish the requirements and authority for the state of Arizona to

give consent for the acquisition of areas within the state of Arizona for Federal purposes, and to grant exclusive legislative jurisdiction to the United States over such areas:

Title 26 - Military Affairs and Emergency Management

Chapter 1 - Emergency and Military Affairs

Article 6 - Acquisition of Lands by United States for Military Purposes

26-251. Acquisition of lands by United States for military purposes

The consent of the state may be given pursuant to section 37-620.02 in accordance with the seventeenth clause, eighth section, of the first article of the Constitution of the United States to the acquisition by the United States by purchase, lease, condemnation or otherwise of any land in the state required for the erection of forts, magazines, arsenals, dockyards and other needful buildings, or for any other military installations of the government of the United States.

26-252. Exclusive jurisdiction of United States over lands acquired for military purposes; termination of jurisdiction

Exclusive jurisdiction over any land in the state acquired for any of the purposes set forth in section 26-251, and over any public domain in the state reserved or used for military purposes is ceded to the United States, but such jurisdiction shall continue no longer than the United States owns or leases the land or continues to reserve or use such public domain for military purposes.

26-253. Power of state to serve process upon land ceded United States for military purposes

The state retains concurrent jurisdiction with the United States for serving process, civil or criminal, issuing under the authority of the state, or any courts, or judicial officers thereof, upon any person amenable thereto within the limits of any land over which exclusive jurisdiction has been ceded by the state to the United States for military purposes in like manner as if no cession had taken place.

Title 37- Public Lands

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Chapter 2 - Administration of State and Other Public Lands

Article 17- Concurrent Jurisdiction With United States Over Certain Lands and Areas

37-620.02. State consent to acquisition of land by the United States for exclusive jurisdiction

Pursuant to article I, section 8, clause 17 of the Constitution of the United States, the consent of this state may be given to the acquisition of any other privately owned real property within this state by the United States only upon the governor's signing a joint resolution adopted by the legislature to that effect. The joint resolution shall recite the legal description of the land and the purposes to which the state consents that the property may be used.

5. Affiant affirms that the state of Arizona Legislature and Governor did, via the following statute, cede concurrent criminal jurisdiction to the United States over specified areas in the state of Arizona which did not include the county of Greenlee:

Title 37- Public Lands

Chapter 2 - Administration of State and Other Public Lands

Article 17- Concurrent Jurisdiction With United States Over Certain Lands and Areas

37-620. Vesting of concurrent criminal jurisdiction in the United States over certain lands and areas

A. Concurrent criminal jurisdiction over any lands in the state heretofore reserved from public domain or acquired by the United States as identified in subsection D, and any additions made to such lands, is hereby vested in the United States upon completion of the conditions set forth in subsection B, except that the jurisdiction of the state over such lands shall continue.

B. Concurrent criminal jurisdiction shall vest as to the lands in each area identified in subsection D when the United States submits to the governor of the state a formal written request for concurrent criminal jurisdiction accompanied by a satisfactory legal description and plat of such area, and upon approval by the governor granting concurrent jurisdiction such legal description and plat shall be filed by the governor with the county recorder of each county in which the land is situated. The state may withdraw jurisdiction over any land or area three years after written notification by the governor to the secretary of the interior.

C. The concurrent criminal jurisdiction hereby vested shall continue only as long as the United States continues to own or control the lands within such areas. In the case of any lands included within the boundaries of the areas set forth in subsection D which are not owned or controlled by the United States,

the jurisdiction shall not change by operation of this section.

D. The lands subject to this section are all those lands which are owned or controlled by the United States and which are now or hereafter included within the exterior boundaries of:

1. The national park service lands consisting of: (a) Canyon de Chelly national monument.
(b) Casa Grande Ruins national monument. (c) Chiricahua national monument.
(d) Coronado national memorial.
(e) Fort Bowie national historic site.
(f) Glen Canyon national recreation area. (g) Grand Canyon national park.
(h) Hohokam Pima national monument.
(i) Hubbell Trading Post national historic site.
G) Lake Mead national recreation area.
(k) Montezuma Castle national monument. (1) Navajo national monument.
(m) Organ Pipe Cactus national monument. (n) Petrified Forest national park.
(o) Pipe Spring national monument. (p) Saguaro national monument.
(q) Sunset Crater national monument.
(r) Tonto national monument.
(s) Tumacacori national monument. (t) Tuzigoot national monument.
(u) Walnut Canyon national monument. (v) Wupatki national monument.
2. Those lands administered by the bureau of reclamation or its

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successor agency of the department of the interior, consisting of:
(a) Davis dam.
(b) Glen Canyon dam. (c) Hoover dam.
(d) Imperial dam. (e) Laguna dam. (f) Parker dam.

37-620.01 Concurrent jurisdiction over veterans administration properties; acceptance

A. If the administrator of the veterans administration of the United States desires, on behalf of the United States, to relinquish to this state any legislative jurisdiction over lands or interests in lands under the administrator's supervision or control in order to establish concurrent jurisdiction between the United States and this state pursuant to title 38, section 1004(g) or 5007, United States code, the administrator may file with the governor a written notice to that effect. The notice shall state the nature and extent of such jurisdiction to be relinquished to the state by specifying the subjects upon which the state may legislate and the lands or interests in lands affected.

B. This state may accept such jurisdiction upon the governor's signing a joint resolution adopted by the legislature. The joint resolution shall state the nature and extent of the jurisdiction to be accepted by this state by specifying the subjects upon which the state may legislate and the lands or interests in lands affected.

6. That in order to determine if all the requirements of ARS sections 37-620, 37-620.01, or 37-620.02 for transfer of any degree of legislative jurisdiction to the United States over areas acquired by the United States for Federal purposes within the state of Arizona, Affiant personally conducted a diligent search in each of the bound volumes of the Session Laws of Arizona from 1912 to 2006. The search was limited to Joint Resolutions of the Legislature that were signed by the Governor which (1) granted consent to the United States to acquire specified areas in the state of Arizona; and (2) ceded any degree of legislative jurisdiction over such areas.

Affiant conducted this search on June 13 and 14, 2007, in the state capitol of Arizona Law Library.

7. That, as a result of the diligent search of the Session Laws of the Arizona Legislature, Affiant affirms that he did not find any Joint Resolutions of the Arizona Legislature that ceded any degree of excusive, concurrent, or partial legislative jurisdiction to the United States, as shown in Table 1.

Table 1. Results of Affiant's Search for Joint Resolutions Ceding Jurisdiction to the United States in the Arizona Legislative Sessions Laws 1912 to 2006

Year	Legislature	Session	Resolutions*
1912	First	First Regular	None
1913	First	First Regular	None
1915	Second	First Regular First Special Second Special	None
1917	Third	First Regular	None
1918	Third	First Special	None
1919	Fourth	First Regular	None
1921	Fourth	First Special	None
1922	Fifth	First Regular First Special	None
1923	Sixth	First Regular	None
1925	Seventh	First Regular	None
1927	Eighth	First Regular First Special Second Special Third Special Fourth Special Fifth Special Sixth Special	None
1929	Ninth	First Regular	None
1931	Tenth	First Regular First Special	None
1933	Eleventh	First Regular First Special Second Special	None
1935	Twelfth	First Regular	None
1936	Twelfth	First Special	None.
1937	Thirteenth	First Regular First Special Second Special Third Special	None
1938	Thirteenth	Fourth Special	None
1939	Fourteenth	First Regular	None
1940	Fourteenth	First Special	None
1941	Fifteenth	First Regular	None
1942	Fifteenth	First Special	None
1943	Sixteenth	First Regular	None
1944	Sixteenth	First Special Second Special	None
1945	Seventeenth	First Regular First Special	None
1946	Seventeenth	Second Special Third Special	None
1947	Eighteenth	First Regular First Special Second Special	None
1948	Eighteenth	Third Special Fourth Special Fifth Special Sixth Special Seventh Special	None
1949	Nineteenth	First Regular	None
1950	Nineteenth	First Special Second Special	None
1951	Twentieth	First Regular First Special	None
1952	Twentieth	Second Regular Second Special	None
1953	Twenty-First	First Regular First Special	None
1954	Twenty-First	Second Regular	None
1955	Twenty-Second	First Regular	None
1956	Twenty-Second	Second Regular First Special Second Special Third Special	None
1957	Twenty-Third	First Regular	None
1958	Twenty-Third	Second Regular First Special	None
1959	Twenty-Fourth	First Regular	None
1960	Twenty-Fourth	Second Regular	None
1961	Twenty-Fifth	First Regular First Special	None
1962	Twenty-Fifth	Second Regular	None
1963	Twenty-Sixth	First Regular First Special Second Special	None
1964	Twenty-Sixth	Second Regular	None
1965	Twenty-Seventh	First Regular First Special Second Special Third Special	None
1966	Twenty-Seventh	Second Regular Fourth Special	None

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1967	Twenty-Eighth	First Regular First Special Second Special Third Special Fourth Special	None
1968	Twenty-Eighth	Second Regular	None
1969	Twenty-Ninth	First Regular	None
1970	Twenty-Ninth	Second Regular First Special	None
1971	Thirtieth	First Regular	None
1972	Thirtieth	Second Regular First Special	None
1973	Thirty-First	First Regular	None
1974	Thirty-First	Second Regular First Special Second Special	None
1975	Thirty-Second	First Regular	None
1976	Thirty-Second	Second Regular First Special	None
1977	Thirty-Third	First Regular	None
1978	Thirty-Third	Second Regular First Special Second Special	None
1979	Thirty-Fourth	First Regular First Special	None
1980	Thirty-Fourth	Second Regular Second Special Third Special Fourth Special Fifth Special	None
1981	Thirty-Fifth	First Regular First Special Second Special Third Special Fourth Special	None
1982	Thirty-Fifth	Second Regular Fifth Special Sixth Special Seventh Special	None
1983	Thirty-Sixth	First Regular	None
1984	Thirty-Sixth	Second Regular First Special Second Special Third Special	None
1985	Thirty-Seventh	First Regular	None
1986	Thirty-Seventh	Second Regular	None
1987	Thirty-Eighth	First Regular First Special Second Special Third Special	None
1988	Thirty-Eighth	Second Regular	None
1989	Thirty-Ninth	First Regular First Special Second Special	None
1990	Thirty-Ninth	Second Regular	None

		Third Special Fourth Special Fifth Special	
1991	Fortieth	First Regular First Special Second Special Third Special Fourth Special	None
1992	Fortieth	Second Regular Fifth Special Sixth Special Seventh Special Eighth Special Ninth Special	None
1993	Forty-First	First Regular First Special Second Special Third Special Fourth Special Fifth Special Sixth Special Seventh Special	None
1994	Forty-First	Second Regular Eighth Special Ninth Special	None
1995	Forty-Second	First Regular First Special Second Special Third Special Fourth Special	None
1996	Forty-Second	Second Regular Fifth Special Sixth Special Seventh Special	None
1997	Forty-Third	First Regular First Special Second Special	None
1998	Forty-Third	Second Regular Third Special Fourth Special Fifth Special Sixth Special	None
1999	Forty-Fourth	First Regular First Special Second Special	None
2000	Forty-Fourth	Second Regular Third Special Fourth Special Fifth Special Sixth Special Seventh Special	None
2001	Forty-Fifth	First Regular First Special	None
2002	Forty-Fifth	Second Regular Second Special Third Special	None

		Fourth Special Fifth Special Sixth Special	
2003	Forty-Sixth	First Regular First Special Second Special	None
2004	Forty-Sixth	Second Regular	None
2005	Forty-Seventh	First Regular	None
2006	Forty-Seventh	Second Regular	None

*Joint resolutions that cede any degree of legislative jurisdiction to the United States.

8. Affiant affirms that ARS section 37-620(B) states that any transfer of concurrent jurisdiction over Federal areas within the state of Arizona "...shall be filed by the governor with the county recorder of each county in which the land is situated." Therefore, on June 16, 2007, Affiant personally conducted a diligent search in the records located in the county of Greenlee Recorders Office for Joint Resolutions of the Arizona Legislature that ceded any concurrent legislative jurisdiction to the United States that had been recorded in the county in accordance with ARS section 37-620(B) ARS. Affiant found that since statehood, the Arizona Legislature and Governor have not ceded any level of legislative jurisdiction to the United States over any Federal areas within the county of Greenlee.

9. Affiant affirms that, to the best of Affiant's knowledge and belief, the results of these diligent searches provides evidence that the Arizona Legislature and the Governor have not ceded exclusive, concurrent, or partial legislative jurisdiction to the United States since statehood over any areas acquired by the United States in the county of Greenlee, state of Arizona, in accordance with ARS sections 26-251,26-252,26-253,37-620, 37-620.01, and 37-620.02, or in accordance with Article 1, Section 8, Clause 17 of the Constitution of the United States of America.

10. Affiant affirms that, to the best of Affiant's knowledge and belief, after searching the applicable laws, court cases, and the US Attorneys Manual, Title
9, Criminal Resource Manual, Section 664 Territorial Jurisdiction, the United States may hold or acquire property within the borders of a state without acquiring jurisdiction. The United States may acquire title to land necessary for the performance of its functions by purchase or eminent domain without the state's consent *(See Kohl v. United States,* 91 U.S. 367, 371, 372 (1976)), but it does not thereby acquire legislative jurisdiction by virtue of its proprietorship. The acquisition of jurisdiction is dependent on the consent of, or cession of, jurisdiction by the state, *(See Mason Co. v. Tax Commission,* 302 U.S. 97 (1937); *James v. Dravo Contracting Co.,* 302 U.S. at 141-42.) and acceptance by the

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United States (See *Adams v. United States,* 319 U.S. 312 (1943))

11. Affiant has read and affirms that, to the best of Affiant's knowledge and belief, the United States required, upon the statehood of Arizona, that the Constitution of Arizona include the following statement relative to the public domain lying within the boundaries of the new state:
"Article 20, Section 4, Public Lands. The people inhabiting this state do agree and declare that they forever disclaim all right and title to the unappropriated and ungranted public lands lying within the boundaries thereof, ..."

12. Affiant has read and affirms that, to the best of Affiant's knowledge and belief, the above stipulation in Article 20, Section 4 of the Constitution of Arizona did not reserve to the United States any exclusive, concurrent, or partial legislative jurisdiction over the unappropriated and ungranted public lands as is evidenced by the following cases:

In Pollard vs. Hagan, 3 How. 212 (1845) 11 Law Ed. 570 - 571, the Court held that if such stipulation *" ...had been inserted in the agreement, granting the municipal right of sovereignty and eminent domain to the United States, such stipulation would have been void and inoperative, because the United States have no constitutional capacity to exercise municipal jurisdiction, sovereignty or eminent domain, within the limits of a State or elsewhere, except in the case in which it is expressly granted. "*

" ...the United States never held any municipal sovereignty, jurisdiction or right of soil in and to the territory of which Alabama or any of the new states were formed; except for temporary purposes, and to execute the trusts created by the acts of Virginia and Georgia Legislatures, and the deeds of cession executed by them to the United States, and the trust created by the Treaty with the French Republic of the 30th of April 1803 ceding Louisiana. "

"The right of Alabama and every other new state to exercise all the powers of government, which belong to and may be exercised by the original states of the Union must be admitted, and remain unquestioned, except so far as they are temporarily deprived of control over the public lands. ... The object of all the parties to these contracts of cession was to convert the land into money for the payment of the debt, and to erect new states over the territory thus ceded, and as soon as these purposes could be accomplished, the power of the United States over these lands as property was to cease. "

13. Affiant, after reading and understanding the following cases, affirms that, to the best of Affiant's knowledge and belief, the U.S. Supreme

Court held that the reservation of the public lands by the United States upon statehood did not grant to the United States any degree of legislative jurisdiction over these lands, but that the United States only retained a proprietorial interest:

In Fort Leavenworth R. Co. v. Lowe, 114 U.S. 525, 531, 5 S.Ct. 995 (1885), the Court carefully explained federal jurisdiction within the States as follows: *"The consent of the states to the purchase of lands within them for the special purposes named, is, however, essential, under the constitution, to the transfer to the general government, with the title, of political jurisdiction and dominion. Where lands are acquired without such consent, the possession of the United States, unless political jurisdiction be ceded to them in some other way, is simply that of an ordinary proprietor. The property in that case, unless used as a means to carry out the purposes of the government, is subject to the legislative authority and control of the states equally with the property of private individuals. "*

In Pollard v. Hagan, 44 U.S. (3 How.) 212 (1845), the Court held: *"We think a proper examination of this subject will show that the United States never held any municipal sovereignty, jurisdiction, or right of soil in and to the territory, of which Alabama or any of the new States were formed,"* 44 U.S., at 221.
" ...[B]ecause, the United States have no constitutional capacity to exercise municipal jurisdiction, sovereignty, or eminent domain, within the limits of a State or elsewhere, except in the cases in which it is expressly granted," 44
U.S.,
at 223.

14. Affiant also searched the General Service Administration's Inventory Report on Jurisdictional Status of Federal Areas Within the States (Published June 30,

1962), and affirms that, to the best of Affiant's knowledge and belief, this report shows that there are no Federal areas within the county of Greenlee, state of Arizona, to which any exclusive, concurrent, or partial legislative jurisdiction has been ceded to the United States by the state of Arizona.

15. Therefore, as a result of Affiant's searches relative to the status of Federal jurisdiction over Federal areas within the county of Greenlee, state of Arizona, Affiant affirms, to the best of Affiant's knowledge and belief, that there appears to be no evidence, in accordance with the Article 1, Section 8, Clause
17 of the Constitution of the United States and the ARS sections 26-251, 26-

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252, 26-253, 37-620, 37-620.01, and 37-620.02, that the State of Arizona has ever ceded any exclusive, concurrent, or partial legislative jurisdiction to the United States over any lands acquired by the United States within the boundaries of the county of Greenlee since statehood. Also, Affiant affirms, to the best of Affiant's knowledge and belief, that the GSA Inventory Report does not list the so-called public lands of the United States as having any degree of legislative jurisdiction.

16. As a result of Affiant's research, Affiant is not in possession of any documents that lead Affiant to believe that the state of Arizona has ceded to the United States any exclusive, concurrent, or partial legislative jurisdiction over any land area within the county of Greenlee, state of Arizona, and Affiant believes that no other cession of any degree of legislative jurisdiction by the state of Arizona to the UniteStates exists.

16 U.S.C. § 480. Civil and criminal jurisdiction

The **jurisdiction, both civil and criminal, over persons within national forests shall not be affected or changed by reason of their existence,** except so far as the punishment of offenses against the United States therein is concerned; the intent and meaning of this provision being that the State wherein any such national forest is situated shall not, by reason of the establishment thereof, lose its jurisdiction, nor the inhabitants thereof their rights and privileges as citizens, or be absolved from their duties as citizens of the State.

U.S. Supreme Court

United States v. County of Fresno, 429 U.S. 452 (1977)

United States v. County of Fresno

No. 75-1262

(a) **Definitions.**— In this section—
(1) **Executive agency.**— The term "executive agency" means an executive department or independent establishment in the executive branch of the Federal Government, including a wholly owned Government corporation.
(2) **Real property of the government.**— The term "real property of the Government" excludes—
(A) public land (including minerals, vegetative, and other resources) in the United States, including —
(i) land reserved or dedicated for national forest purposes;
(ii) land the Secretary of the Interior administers or supervises in accordance with the Act of August 25, 1916 (16 U.S.C. 1, 2, 3, 4) (known as the National Park Service Organic Act);

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(iii) Indian-owned trust and restricted land; and
(iv) land the Government acquires primarily for fish and wildlife conservation purposes and the Secretary administers;
(B) land withdrawn from the public domain primarily under the jurisdiction of the Secretary; and
(C) land acquired for national forest purposes.

Robert Corbell
Greenlee County Supervisor District 3
(928)215-0118
(office) (928)865-2072 ext. 105
Office: rcorbell@co.greenlee.az.us
Personal: rcorbell@aznex.net

Ltr#0117

From: Robert Corbell
To: FS-AGNF Planning
Cc: rcorbell@aznex.net; Les Sanders
Subject: Comments for the Apache-Sitgreaves National Forests Land Management Plan
Date: Thursday, May 16, 2013 10:38:28 PM

To: Apache-Sitgreaves National Forests - Plan Revision Team
P.O. Box 640
Springerville, AZ 85938

Electronic filing: asnf.planning@fs.fed.us

From: Supervisor Robert Corbell
Greenlee County Board of Supervisors District 3
562 Lemons Lane
Duncan, Arizona 85534
(928) 215-0118
rcorbell@aznex.net or rcorbell@co.greenlee.az.us

This is in reference to Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan. The United States Forest Service, Department of Agriculture has very limited jurisdiction in Greenlee County as proved by the following affidavit, supporting court cases and references that are included:

The pre-existing rights acquired prior to 1976 are protected and are subject to State law. State law is the rules of decision as per Erie Railroad Company vs. Thompson. The United States Forest Service has no authority, police powers or jurisdiction to disturb these pre-existing rights.

Grazing and Ranching

The Doctrine of Retroactivity and Prospectivity is being violated by the DOJ in attempting to enforce the Organic Act of 1897, Taylor Grazing and FLPMA upon the pre existing right of property.
Danny

Union Pacific R. Co. v. Laramie Stock Yards Co., 231 U.S. 190 (1913)
The first rule of construction of statutes is that legislation is addressed to the future, and not to the past. This rule is one of obvious justice.
Unless its terms unequivocally import that it was the manifest intent of the legislature enacting it, a retrospective operation will not be given to a statute which interferes with a**ntecedent rights or by which human action is regulated.**

45-141. Public nature of waters of the state; beneficial use; reversion to state; actions not constituting abandonment or forfeiture

A. The waters of all sources, flowing in streams, canyons, ravines or other natural channels, or in definite underground channels, whether perennial or intermittent, flood, waste or surplus water, and of lakes, ponds and springs on the surface, belong to the public and are subject to appropriation and beneficial use as provided in this chapter.

B. Beneficial use shall be the basis, measure and limit to the use of water. An appropriator of water is entitled to beneficially use all of the water appropriated on less than all of the land to which the water right is appurtenant, and this beneficial use of the water appropriated does not result in the abandonment or forfeiture of all or any portion of the right.

C. Except as otherwise provided in this title or in title 48, when the owner of a right to the use of water ceases or fails to use the water appropriated for five successive years, the right to the use shall cease, and the water shall revert to the public and shall again be subject to appropriation. This subsection or any other statutory forfeiture by nonuse shall not apply to a water right initiated before June 12, 1919.

D. Underground water storage, pursuant to chapter 3.1 of this title, for future beneficial use of waters appropriated pursuant to this chapter does not constitute an abandonment or forfeiture.

E. The following water exchange arrangements or substitutions do not constitute an abandonment or forfeiture of all or any portion of a right to use surface water:

1. Exchanging surface water for groundwater, effluent, Colorado river water, including water delivered through the central Arizona project, or another source of surface water pursuant to chapter 4 of this title.

2. Substituting groundwater, effluent, Colorado river water, including water delivered through the central Arizona project, or another source of surface water for surface water

FLPMA reserved all these rights that were on the ground prior to 1976. 16 USC 472 Act of 1891 did not grand them authority to regulate entry, prior appropriation etc. FLPMA specifically in replacing this Act reserved these rights in Section 7 . See below.

16 USC § 472 - Laws affecting national forest lands

- USC-prelim
- US Code
- Notes
- Updates
- Authorities (CFR)

USC*Prelim* is a preliminary release and may be subject to further revision before it is released again as a final version.

Current through Pub. L. 112-283. (See Public Laws for the current Congress.)

The Secretary of the Department of Agriculture shall execute or cause to be executed all laws affecting public lands reserved under the provisions of section 471 [1] of this title, or sections supplemental to and amendatory thereof, after such lands have been so reserved, excepting such laws as affect the surveying, prospecting, locating, appropriating, entering, relinquishing, reconveying, certifying, or patenting of any of such lands.

Executive Order 12988(Civil Justice Reform http://www.epa.gov/adr/civiljustice.pdf) as pointed out in the Federal Registry at 61 page 4729. If legislation is to conform why not their mere rules and regulations.

61 Fed. Reg. 4729 (February 5, 1996),
reprinted in 28 U.S.C. § 519. The Order directs agencies to "make every reasonable effort to ensure" that proposed legislation, "as appropriate . . . specifies in clear language
" — (A) whether causes of action arising under the law are subject to statutes of limitations; (B) the preemptive effect; (C) the effect on existing Federal law; (D) a clear legal standard for affected conduct; (E) whether arbitration and other forms of dispute resolution are appropriate; (F) whether the provisions of the law
are severable if one or more is held unconstitutional; (G) the retroactive effect, if any; (H)the applicable burdens of proof; (I) whether private parties are granted a right to sue, and, if so, what relief is available and whether attorney's fees are available; (J) whether state courts have jurisdiction; (K) whether administrative remedies must be pursued prior to initiating court actions; (L) standards governing personal jurisdiction; (M) definitions of key statutory terms; (N) applicability to the Federal Government; (O) applicability to states, territories, the District of Columbia, and the Commonwealths of Puerto Rico and the Northern Mariana Islands; and (P) what remedies are available, "such as money damages, civil penalties, injunctive relief, and attorney's fees.

Section 701 of Pub. L. 94–579 provided that:

"(a) Nothing in this Act, or in any amendment made by this Act [see Short Title note above], shall be construed as terminating any valid lease, permit, patent, right-of-way, **or other land use right or authorization existing on the date of approval of this Act** [Oct. 21, 1976].
"(b) Notwithstanding any provision of this Act, in the event of conflict with or inconsistency between this Act and the Acts of August 28, 1937 (50 Stat. 874; 43 U.S.C. 1181a–1181j) and May 24, 1939 (53 Stat. 753), insofar as they relate to management of timber resources, and disposition of revenues from lands and resources, the latter Acts shall prevail.
"(c) All withdrawals, reservations, classifications, and designations in effect as of the date of approval of this Act shall remain in full force and effect until modified under the provisions of this Act or other applicable law.
"(d) Nothing in this Act, or in any amendments made by this Act, shall be construed as permitting any person to place, or allow to be placed, spent oil shale, overburden, or byproducts from the recovery of other minerals found with oil shale, on any Federal land other than Federal land which has been leased for the recovery of shale oil under the Act of February 25, 1920 (41 Stat. 437, as amended; 30 U.S.C. 181 et seq.).
"(e) Nothing in this Act shall be construed as modifying, revoking, or changing any provision of the Alaska Native Claims Settlement Act (85 Stat. 688, as amended; 43 U.S.C. 1601 et seq.).

"(f) **Nothing in this Act shall be deemed to repeal any existing law by implication**.
"(g) Nothing in this Act shall be construed as limiting or restricting the power and authority of the United States or— "(1) **as affecting in any way any law governing appropriation or use of, or Federal right to, water on public lands**; "(2) **as expanding or diminishing Federal or State jurisdiction, responsibility, interests, or rights in water resources development or control;** "(3) as displacing, superseding, limiting, or modifying any interstate compact or the jurisdiction or responsibility of any legally established joint or common agency of two or more States or of two or more States and the Federal Government; "(4) **as superseding, modifying, or repealing, except as specifically set forth in this Act, existing laws applicable to the various Federal agencies which are authorized to develop or participate in the development of water resources or to exercise licensing or regulatory functions in relation thereto**; "(5) as modifying the terms of any interstate compact; "(6) **as a limitation upon any State criminal statute or upon the police power of the respective States, or as derogating the authority of a local police officer in the performance of his duties, or as depriving any State or political subdivision thereof of any right it may have to exercise civil and criminal jurisdiction on the national resource lands; or as amending, limiting, or infringing the existing laws providing grants of lands to the States.**
"(h) **All actions by the Secretary concerned under this Act shall be subject to valid existing rights**.
"(i) The adequacy of reports required by this Act to be submitted to the Congress or its committees shall not be subject to judicial review.
"(j) Nothing in this Act shall be construed as affecting the distribution of livestock grazing revenues to local governments under the Granger-Thye Act (64 Stat. 85, 16 U.S.C. 580h), under the Act of May 23, 1908 (35 Stat. 260, as amended; 16 U.S.C. 500), under the Act of March 4, 1913 (37 Stat. 843, as amended; 16 U.S.C. 501), and under the Act of June 20, 1910 (36 Stat. 557)." [emphasis added]

37-708. Water rights appurtenant to lands: lien: foreclosure and redemption

A. The water rights shall attach and become appurtenant to the land when the title passes from the United States to the state. Any person furnishing water for any tract of land so acquired shall be entitled to receive directly, when due under the water contracts, all payments upon the land, and shall have a first lien on the water rights, which shall be prior to other liens created or attempted to be created by the owner or possessor of the land. The lien shall remain in force and effect until the last deferred payment for the water rights is fully paid and settled according to the terms of the contract under which the water rights were acquired. The contract for the water rights upon which the lien is founded shall be recorded in the office of the county recorder.

B. Upon default of any deferred payment secured by lien, the lien holder may foreclose the lien as mortgages are foreclosed, and the settler may within one year from the date of foreclosure redeem by paying the deferred payments, with interest at not to exceed ten per cent per annum, accrued interest and cost of maintenance.

C. The contractor shall have a like lien on and against the separate legal subdivisions of land reclaimed upon the interest therein of the settler for the actual cost and necessary expenses of reclamation, and interest thereon at the rate of six per cent per annum, from the date of reclamation.

: RANGE USE RIGHTS ON FEDERAL LAND FOR LIVESTOCK GRAZING

This is an interesting case because Arizona recognizes the use of the surface estate for livestock grazing . The Organic Act of 1897 that created the Forest reserves recognized these right as it says

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that the reservation did not include lands more valuable for mineral or agriculture and also recognized these pre existing unperfected claims.

Lake Mead Land and Water Co. v. Phoenix Title and Trust Co., 533 P.2d 711, 23 Ariz. App. 403 (Ariz.App.Div.1 04/10/1975)

[1] Arizona Court of Appeals

[2] No. 1 CA-CIV 2227

[3] 533 P.2d 711, 23 Ariz. App. 403, 1975.AZ.40504 <http://www.versuslaw.com>

[4] April 10, 1975

[5] **LAKE MEAD LAND AND WATER COMPANY, AN ARIZONA CORPORATION, MARVIN LUSTIGER AND THELMA LUSTIGER, HIS WIFE, APPELLANTS,**
v.
PHOENIX TITLE AND TRUST COMPANY, A CORPORATION, AND TRANSAMERICA TITLE INSURANCE COMPANY, A CALIFORNIA CORPORATION, APPELLEES

[6] Dushoff & Sacks by Jay Dushoff, Phoenix, for appellants.

[7] Powers, Boutell, Fannin & Kurn, P. A. by James P. Powers, Phoenix, for appellees.

[8] Donofrio, Judge. Ogg, P. J., and Stevens, J., concur.

[9] Donofrio

[23 ArizApp Page 404]

[10] OPINION

[11] This is an appeal from an order and judgment entered in favor of the appellees (hereinafter referred to as the Title Co.) on a motion for summary judgment in the trial court. The issues involved in the present action and related issues arising from the same factual background have been the subject of litigation for several years. Appellants (hereinafter referred to as Lustiger) were the purchasers of some land in northwestern Arizona, and the Title Co. was involved in the transaction as escrow

agent, title insurer, and mortgage collection trustee. Lustiger is now suing the Title Co. for breach of fiduciary duty, breach of contract, and certain theories of fraud arising out of its relationship with Lustiger. The issue before this Court is whether there were genuine issues as to any material facts; i. e., whether the trial court erred in awarding summary judgment to the Title Co.

[12] The underlying facts in this case are the same as those involved in the case of Phoenix Title and Trust Company et al. v. Smith, 101 Ariz. 101, 416 P.2d 425 (1966). We will abbreviate the facts as they apply in the case at bar. Lustiger was the sixth or seventh purchaser in the chain of title of a portion of the land that is the basis of this action and of the Phoenix Title case, supra. In all of the transactions involving the subject land that are material to this case the Title Co. was involved in some way. Usually the Title Co. was the title insurer, escrow agent, and sometimes acted as a subdivision trustee for the buyer and seller. When the Smith family (see Phoenix Title case, supra) originally sold a certain interest in the subject land they reserved unto themselves, their heirs and assigns "all range use rights" to the land. It seems that the original sale had as its purpose the conveying of only the right to exchange the subject land (under the Taylor Grazing Act, 43 U.S.C. § 315 et seq.) for other federally owned land in Arizona. The original escrow instructions and their amendments in the original sale stated that the Smiths reserved the range use rights "forever", and that the conveyance was only of the "exchange rights" to the land. The Title Co. acted as escrow agent and title insurer in that transaction. Somehow the above restrictions were never properly recorded, and the reservation of "all range use rights" (omitting the word "forever") was the terminology picked up in subsequent deeds to the property. Eventually some of the property was sold in a subdivision trust and the Title Co. acted as the trustee. In a series of transactions in 1960 and 1961 Lustiger and his wife bought 13,940 acres of the subject land through the Lake Mead Land and Water Co. which Lustiger and his wife controlled. At about that same time Lustiger and others sued the Smiths in a quiet title action to determine the effect of the reservation of range use rights held by the Smiths. That suit was the Phoenix Title v. Smith case, supra. The outcome of the suit was that the reservation of "all range use rights" meant that all purchasers in the chain of title to the original Smith sale were charged with

[23 ArizApp Page 405]

notice that the reservation meant that Smith retained the surface use of the lands for cattle grazing forever. Thus, the lands could not be subdivided and developed, nor could they be fenced, nor anything done to interfere with the surface rights of the Smiths. However, prior to this final decision by the Arizona Supreme Court, Lustiger had subdivided portions of his property and sold various lots. After this decision he had to pay substantial sums of money to the Smiths to purchase the range use rights on the land he had already sold, as well as to purchase the range use rights on his other property so that he could continue with his lot sales program. This amounted to approximately $270,000 paid to the Smiths. Following the Supreme Court's decision Lustiger cross-claimed against the Title Co. for its alleged part in causing the loss which he sustained.

[13] In his action against the Title Co. Lustiger alleged that the Title Co. was involved throughout all the transactions concerning the subject property and had certain

information in its possession that it was under a duty to disclose to Lustiger; also that the Title Co., through its employees, made certain representations to Lustiger and his attorney, on which he relied, all to his subsequent loss. He alleges that if he had known of the original purpose of the Smith sale to the first purchaser (exchange rights only), and had known of the omitted word "forever", as well as other information known to the Title Co., he would not have entered into the agreement to purchase the land. The Title Co. alleges that it owed no duty to Lustiger that was not fulfilled, and that in any event the decision in the Phoenix Title Co. v. Smith case, supra, would act to bar Lustiger's claim against it.

[14] Before we discuss the reasons why we think the trial court was in error in finding the existence of no material factual issues, we think that the effect of the decision in the Phoenix Title case, supra, as it relates to this action, deserves our attention. As we noted earlier, that case did hold that subsequent purchasers were charged with notice of the intent and purpose of the reservation, and that the vendors were entitled to exclusive use of the land for cattle grazing which right could not be interfered with by subsequent purchasers. But the instant case is between Lustiger and the Title Co., whereas they were on the same side in the other action. Here Lustiger is suing the Title Co. for breach of contract and breach of duties owed to him, and is alleging that were it not for representations made to him by the employees of the Title Co., and their failure to inform him and his attorney of vital facts involved, he would never have been a purchaser of the land and would never have found himself in the position of having to abide by the Supreme Court's decision in the Phoenix Title v. Smith case, supra. Therefore we hold that the decision in the case of Phoenix Title and Trust Company v. Smith, supra, in no way precludes Lustiger from pursuing this action against the Title Co.

[15] We next address the issue of the propriety of the summary judgment award in the trial court. It is our opinion that there were many material factual issues involved in this case that should have been resolved by the trier of fact, and that the award of summary judgment in favor of the Title Co. under Rule 56, Arizona Rules of Civil Procedure, 16 A.R.S., was error. We do not mean to rule on the merits of this case, but only to hold that there exists a genuine issue as to material facts which precludes the granting of summary judgment.

[16] In reviewing an award of summary judgment we are guided by the principle that the evidence must be viewed in the light most favorable to the losing party, and that he is to receive the benefit of all favorable inferences that may reasonably be drawn there from. Livingston v. Citizen's Utility, Inc., 107 Ariz. 62, 481 P.2d 855 (1971).

[17] The complicated issues of fact in the instant case need to be more fully developed

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before a decision is made on the merits of the case. Involved here were seventeen letters, eight escrow instructions, ten trust agreements, eleven depositions, and various other documents. No oral testimony was taken, but the intent of both Lustiger

and the Title Co. in engaging in this transaction was at issue. Lustiger has alleged that Phoenix Title was negligent in its representations (or misrepresentations) to him as to the meaning and effect of the range use reservation; that it negligently or fraudulently omitted the word "forever" from certain recorded instruments, as well as reference to the fact that the transactions were for federal exchange purposes only. The Title Co. alleges, among other things, that it was not acting as a subdivision trustee for Lustiger, but he alleges that it was so acting. The parties also disagree as to whether the Title Co. agreed to deed out "sub dividable and marketable" land from the trust of the Lustiger land purchase. Another material factual issue is whether Lustiger in fact did rely on any representations made to him by the Title Co., if such representations were made. We think that these are all material factual issues which should be determined by the trier of fact.

[18] The Title Co. agrees in its brief that had Lustiger and his attorney known of the omitted word "forever" he would have acted differently toward the purchase of the land. We think that Lustiger should be given the opportunity to present his factual issues to the trier of fact to determine his charges of negligence, fraud, and breach of contract against the Title Co. By our holding in this case we express no opinion concerning the breach of any duty by the Title Co. that might be owed to Lustiger, but simply hold that this was a highly complex case involving many material factual issues and that the award by summary judgment was error.

[19] Reversed and remanded.

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U.S. Supreme Court

Wilcox v. Jackson, 38 U.S. 13 Pet. 498 498 (1839)

Whensoever's a tract of land shall have once been legally appropriated to any purpose, from that moment the land thus appropriated becomes severed from the mass of public lands, and no subsequent law or proclamation or sale would be construed to embrace it or to operate upon it, although no other reservation were made of it.

The right of preemption was a **bounty extended to settlers and occupants of the public domain**. This bounty it cannot be supposed was designed to be extended to the sacrifice of public establishments or of great public interests.

Nothing passes a perfect title to public lands, with the exception of a few cases, but a patent. The exceptions are where Congress grants lands in words of present grant. The general rule applies as well to preemptions as to other purchases of public lands.

This is why all acts of Congress and sales are subject to pre existing rights. Organic Act, Taylor Grazing, FLPMA the Roosevelt Withdrawal Executive Order 6910 have this exceptions.

"(j) Nothing in this Act shall be construed as affecting the distribution of livestock grazing revenues to local governments under the Granger-Thye Act (64 Stat. 85, 16 U.S.C. 580h), under the Act of May 23, 1908 (35 Stat. 260, as amended; 16 U.S.C. 500), under the Act of March 4, 1913 (37 Stat. 843, as amended; 16 U.S.C. 501), and under the Act of June 20, 1910 (36 Stat. 557)." [emphasis added]

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Robert Corbell
Greenlee County Supervisor District 3
(928)215-0118
(office) (928)865-2072 ext. 105
Office: rcorbell@co.greenlee.az.us
Personal: rcorbell@aznex.net

Ltr#0118

From:	Robert Corbell
To:	FS-ASNF Planning
Cc:	rcorbell@aznex.net; Les Sanders
Subject:	Comments for the Apache-Sitgreaves National Forests Land Management Plan
Date:	Thursday, May 16, 2013 10:38:26 PM

To: Apache-Sitgreaves National Forests - Plan Revision Team
P.O. Box 640
Springerville, AZ 85938

Electronic filing: asnf.planning@fs.fed.us

From: Supervisor Robert Corbell
Greenlee County Board of Supervisors District 3
562 Lemons Lane
Duncan, Arizona 85534
(928) 215-0118
rcorbell@aznex.net or rcorbell@co.greenlee.az.us

This is in reference to Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan. The United States Forest Service, Department of Agriculture has very limited jurisdiction in Greenlee County as proved by the following affidavit, supporting court cases and references that are included:

The United States Forest Service, Department of Agriculture or any Federal Agency has no delegation of authority, jurisdiction or police powers in relation to Rights of Way or RS2477 roads in Greenlee County, Arizona.

As per Federal law and State law the rules of decision are Arizona State Law pertaining to right of ways and RS 2477 roads in Greenlee County, Arizona.

Rights of Way and RS2477 roads

16 USC § 534 - Termination and cancellation of easements; notice; hearing

- USC-prelim
- US Code
- Notes
- Updates
- Authorities (CFR)

USC*Prelim* is a preliminary release and may be subject to further revision before it is released again as a final version.

Current through Pub. L. 112-143, except 112-141. (See Public Laws for the current Congress.)

An easement granted under sections 532 to 538 of this title may be terminated by consent of the owner of the easement, by condemnation, or after a five-year period of nonuse the Secretary may,

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if he finds the owner has abandoned the easement, make a determination to cancel it. Before the Secretary may cancel an easement for nonuse the owner of such easement must be notified of the determination to cancel and be given, upon his request made within sixty days after receipt of the notice, a hearing in accordance with such rules and regulations as may be issued by the Secretary

Subject: STATE LAW DETERMINES THE EXTENT OF A RS 2477 RIGHT OF WAY NOT THE BLM OR THE FS

The issue of the roads within the county are to be determined by the State and the County has jurisdiction over them. The Federal Government waived its jurisdiction over them as a grant that recognized these rights of way under the July 26, 1866 (14Stat. 253) Act.

Congress and the agencies have historically recognized the authority of the State "police powers" in determining what constitutes an acceptance of the federal offer to grant the right of way. **Whether a right of way has been established is held to be a question of state law.** (Standard Ventures, Inc. v. Arizona; Fisher v. Golden Valley Elec. Ass'n., Inc. 658 P.2d, Alaska;1983 - citing United States v. Oklahoma Gas & Elec. Co. 328 U.S.; 1943.)

Several cases have affirmed the State's proprietary jurisdiction over rights-of-way: In Colorado v. Toll, 268 U.S. 278, 1925 - The Park Service tried to assert exclusive control over the roads within the Park. The Supreme Court held that the creation of Rocky Mountain National Park did not take jurisdiction away from the State of Colorado over existing roads within the Park. In Wilkinson v. Department of the Interior, 634 F. Supp. 1265, D. Colo, 1986, the case involved a road that entered and then exited the Colorado National Monument. The Court held that the Park Service could not charge an entrance fee for those using the road through the Monument because this was an invalid restriction on the right-of-way. An attempt to prohibit all commercial traffic was also determined to be contrary to the right-of-way. In U.S. v. Jenks, 804 F. Supp. 232 - D.N.M., 1992 - **The court again found that the issue of whether an R.S. 2477 right-of-way has been established is a question of State law.**

In addition, **the grant of a right of way is self-executing. An RS 2477 right of way comes into existence automatically when a public highway is established across public lands in accordance with the law of the State**. (Standard Ventures, Inc. v. Arizona, 499 F.2d , 9th Cir. 1974; Sierra Club v. Hodel, 848 F.2d, 10th Cir.; 1988.)

In California, State law recognizes both informal creation and customary use by the public and formal action by public authority as sufficient to constitute the dedication of a "public highway." In Ball v. Stephens, 158 P. 2d 207 (Cal. Ct. App. 1945) citing Pol. Code Section 2618 as reenacted in 1883 and in force until 1935) established "Acceptance of the offer of the government could be manifested and dedication could be effected by selection of a route and its establishment as a highway by public authority. Dedication could also be effected without action by the state or county, by the laying out of a road and its use by the public sufficient in law to constitute acceptance by the public of an offer of dedication. In order that a road should become a public highway, it must be established in accordance with the law of the state in which it is located."

(SEE also: McRose v. Bottyer, 22 P. 393, Cal. 1989; Bequette v. Patterson, 37 P.917, Cal. 1894; Schwerdtle v. Placer County, 41 P.448, Cal. 1895 - citing St. 1870, p.457; Sutton v. Nicholaisen, 44 P. 805, Cal. 1896 - citing Pol. Code Section 2619, enacted 1873, amended by Act of March 30, 1874, repealed 1883; Town of Red Bluff v. Walbridge, 116 P. 77, Cal. Ct. App. 1911; People v. Quong Sing, 127 P. 1052, Cal. Ct. App. 1912 - citing Pol. Code Section

2619; Central Pacific Ry. Co. v. Alameda, 299 P. 77, Cal. 1931; Ball v. Stephens, 158 P.2d 207, Cal. Ct. App. 1945 - citing Pol. Code Section 2618 as reenacted in 1883 and in force until 1935.)]

Public prescriptive easements involve the public use, not possession of the land (Jesse Dukeminier & James Krier, Property 850 2d ed. 1988; See also Dillingham for a discussion of the distinction between use and posession.) To assert a public easement by prescription, **the public need only act as if it were claiming a permanent right to the easement** (Swift v. Kniffen, 706 P.2d 296, Alaska 1985.)

In the mid-1980s, while the US Fish and Wildlife Service and National Park Service under the Department of Interior (DOI) were preparing land plans, the State of Alaska began to identify historic access routes across federally administered lands and identified them under state law. These included seasonal trails, footpaths and traditional roads and trails used by wheeled and tracked vehicles.

Subsequently, the DOI policy (1988) was that the construction must have occurred while the lands were in public domain and involve the physical act of readying the highway for intended method of transportation. The intended use could be by foot, horse, pack animal or vehicle. The construction could consist of removal of vegetation, rocks, road maintenance over several years or the mere passage of vehicles.

The DOI, later, took the stance that establishment of a "public highway" required preparation of a durable, observable modification of the land for vehicle passage. It would not consider foot paths, horse trails, wagon or vehicle ruts, or vegetation removal and removal of rocks. Further, the highway must connect from one legitimate public destination to another. Claims of an RS 2477 were to be formally filed within a certain period of time and designation of Wilderness Areas or Wilderness Study Areas would automatically extinguish all claims not already filed.

The Courts have historically ruled that the **standard for conditions that establish a right of way include trails that have been frequented by public users for such a period of time and under such conditions as to prove that a public right of way has come into existence.** (Hamerly; Dillingham 705 P.2d; Alaska Land Title 667 P.2d; Girves 536 P.2d.)

Continuous use is not a requirement. "Infrequent and sporadic" use is insufficient. "Regular" and "common" use by the public is necessary. (McGill v. Wahl, 839 P.2d, Alaska 1992; Hamerly; Kirk v. Schultz, 110 P.2d, Idaho 1941.) In addition, **the purpose of travel is irrelevant to RS 2477** (Ball; Dillingham.)

The Court in Ball v. Stephens, 258 P.2d, Cal. 1945, stated that the **Courts must look to the circumstances as they existed at the time of establishment for a determination of whether the public has made "substantial use" of the claimed easement.** The court noted that travel over a claimed RS 2477 right of way was irregular, but that was the nature of the country and only a limited number of people had occasion to go that way.

In addition, the Courts have also recognized that new routes may evolve, but that **there is no requirement that the historic route and its current location coincide exactly. Where parts of an historic road or trail are obliterated by another more modern highway, or are destroyed by natural forces, the right of way is not obliterated or destroyed**. (Ball v. Stephens.)

The Act was repealed with FLPMA on October 21 1976, but under 43 U.S.C. s 1769, all rights of way existing on the date of repeal were expressly preserved. This means that highways established between 1866 and October 21, 1976 on public lands not withdrawn from public disposal were grandfathered, or protected, as valid existing rights-of-way.

Subject: STATE LAW AS RULES OF DECISION-Preemption of state law

I have searched title 43 and title 16 to see if I could find any authority of "Preemption" of state law and could not find any such preemption. So under 18 USC 1652 the rule of decision is going to be state law and not federal law (or their plethora of regulations) .
http://www.law.cornell.edu/uscode/text/28/1652
The laws of the several states, except where the Constitution or treaties of the United States or Acts of Congress otherwise require or provide, shall be regarded as rules of decision in civil actions in the courts of the United States, in cases where they apply.
We know that state law under the range laws and water laws allow us the rights to avail of these pre-existing rights that vested under the "Customs, Court decisions and Laws" at the time of appropriation for livestock raising.
See CR 18-CR 19 of Congressional Report Service 97-589
http://assets.opencrs.com/rpts/97-589_20080831.pdf
Departure from Common Law or Established Interpretation
There is a presumption favoring continuation of judge-made law. "The normal rule of statutory construction is that if Congress intends for legislation to change the interpretation of a judicially created concept, it makes that intent specific."90 In another case the Court declared that "[w]e will not read the Bankruptcy Code to erode past bankruptcy practice absent a clear indication that Congress intended such a departure."91 This principle is thus closely akin to the principle noted above that, when Congress employs legal terms of art, it normally adopts the meanings associated with those terms.
Displacing State Law, Impinging on State Operations
The Supremacy Clause of the Constitution, Article VI, cl. 2, provides that valid federal law supersedes inconsistent state law. Courts encounter difficulty in applying this simple principle, however, especially when federal law is silent as to preemptive effect. The Court usually begins preemption analysis "with the assumption that the historic police powers of the States were not to be superseded by [a federal law] unless that was the clear and manifest purpose of Congress."92 If the statute in question contains an explicit statement of preemptive scope, therefore, either preempting state law or disclaiming intent to do so, that is usually the end of the matter.93 The Court also, however, recognizes several categories of implied CRS-19 an out-of-state source." Id. at 484.
94 Gregory v. Ashcroft, 501 U.S. 452 (1991).
95 Id. at 461. See also Nixon v. Missouri Municipal League, 541 U.S. 125 (2004) (indicating that the plain statement rule is also appropriate for laws "interposing federal authority between a State and its municipal subdivisions").
96 Hoffman v. Connecticut Income Maint. Dep't, 492 U.S. 96, 101 (1989) (quoting Atascadero State Hosp. v. Scanlon, 473 U.S. 234, 242 (1985)).
97 517 U.S. 44, 73 (1996).
98 See, e.g., the Assimilative Crimes Statute, 18 U.S.C. § 13, governing crimes within the special maritime and territorial jurisdiction of the United States.
99 Jerome v. United States, 318 U.S. 101, 104 (1943). Arguably, the Jerome Court actually overstated the case, citing United States v. Pelzer, 312 U.S. 399, 402 (1941), for the

proposition that "the application of federal legislation is nationwide." Pelzer was far less sweeping, holding only that "in light of their general purpose to establish a nationwide scheme of taxation uniform in its application," provisions of the revenue laws "should not preemption of state law, various formulations of which are that state law must give way to federal law if there is a direct conflict between them, if implementation of state law would "frustrate congressional purpose," or if federal law has "occupied the field" of regulation. These latter two categories lack precision, and, almost always, the surer course of legislative drafting is to spell out intended preemptive effect. In the same vein, the Court will not lightly infer that Congress has enacted legislation that restricts how states may constitute their own governments. In ruling that state judges are not "employees" for purposes of the Age Discrimination in Employment Act, the Court required a plain statement rule applicable to laws limiting the authority of the States to determine the qualifications of their most important government officials — an authority protected by the Tenth Amendment and by the Guarantee Clause.94 "This plain statement rule is nothing more than an acknowledgment that the States retain substantial sovereign powers under our constitutional scheme, powers with which Congress does not readily interfere."95 Gregory v. Ashcroft, 501 U.S. 452 (1991).

The Doctrine of Retroactivity and Prospectivity is being violated by the DOJ in attempting to enforce the Organic Act of 1897, Taylor Grazing and FLPMA upon the pre existing right of property.

Union Pacific R. Co. v. Laramie Stock Yards Co., 231 U.S. 190 (1913)

The first rule of construction of statutes is that legislation is addressed to the future, and not to the past. This rule is one of obvious justice.

Unless its terms unequivocally import that it was the manifest intent of the legislature enacting it, a retrospective operation will not be given to a statute which interferes with a**ntecedent rights or by which human action is regulated.**

FLPMA reserved all these rights that were on the ground prior to 1976. 16 USC 472 Act of 1891 did not grand them authority to regulate entry, prior appropriation etc. FLPMA specifically in replacing this Act reserved these rights in Section 7 . See below.

> "(h) **All actions by the Secretary concerned under this Act shall be subject to valid existing rights.**
> "(i) The adequacy of reports required by this Act to be submitted to the Congress or its committees shall not be subject to judicial review.
> "(j) Nothing in this Act shall be construed as affecting the distribution of livestock grazing revenues to local governments under the Granger-Thye Act (64 Stat. 85, 16 U.S.C. 580h), under the Act of May 23, 1908 (35 Stat. 260, as amended; 16 U.S.C. 500), under the Act of March 4, 1913 (37 Stat. 843, as amended; 16 U.S.C. 501), and under the Act of June 20, 1910 (36 Stat. 557)." [emphasis added]

: RIGHTS OF WAY, PRINCIPLES AND PROCEDURES: RIGHTS OF WAY UNDER THE FLPMA AND THE MINERAL LEASING ACT

Here is what the Secretaries final ruling was in regards to these rights of way that had vested prior to 1976. Page 20979 of the Report 3rd column "We added new paragraph (b)(6) to clarify that the right of way regulations do not apply to existing rights for private reservoirs, ditches, and canals established prior to FLPMA under the Mining Act of July 26, 1866 We think this clarification will be helpful in eliminating any confusion associated with the previous regulatory language found in former section 2801.4."

In the 1866 Act, Congress granted Federal protection for vested state law, based water rights and rights of way for ditches, canals and other structures necessary for the use of water. (Sounds like range improvements to me) Under the Act, a private party could acquire a right of way across Federal lands without any action by the government---no application or filing with the government was necessary, and no governmental approval was required. (Sounds like a permit or filing of application was not required) The right of way vested once a ditch or canal was constructed and a water right acquired. (Under Nevada Law livestock grazing did not require an artificial diversion. See Amended Amicus Brief in USA v Hage) Once the right of way was created, it existed in perpetuity and included the right to operate and maintain the ditch, canal or conduit within the right of way. See *Utah Power & Light v. United States,* 243 U.S. 389, 405 (1917).....

Other statutes enacted after the 1866 Act also allowed private parties to acquire rights of way across Federal lands. Unlike 1866 Act rights of way however, these other statutes required government action before rights of way vested. For example the Act of March 3, 1891 required an applicant to file and get government approval of a map before the right of way vested. The 1891 Act differed from the 1866 Act in several ways, too. Unlike the 1866 Act, the 1891 Act defined the physical extent of the right of way. In addition, the 1891 Act allowed for establishment of rights of way for irrigation purposes on reserved lands; the 1866 Act did not apply to reserved lands. (This is very important to understand, if not it is fatal to the case. It is imperative that the chain of title go back before the establishment of the forest reservations or the creation of grazing districts. Without this fact it creates a strong presumption that those rights are regulateable under their rules and regulations)(See Amended Amicus brief in regards to Utah Power and Light)

Page 20980 First Column

This final rule therefore reflects long-standing law and BLM's historical practice of clarifying that 1866 Act rights of way are not subject to regulation so long as a right of way is being operated and maintained in accordance with the scope of the original rights granted. Because rights of way under the 1866 Act are perpetual and do not require renewal, no authorization under FLPMA exists or is required in the future. Therefore, unless a right of way holder undertakes activities that will result in a substantial deviation in the location of the ditch or canal or a substantial deviation in the authorized use, no opportunity exists for BLM to step in and regulate a right of way by imposing terms and conditions on the right of way's operation and maintenance. Simply stated, there is no current BLM authorization to which such terms and conditions could be attached. Therefore, Title V of FLPMA and BLM's right of way regulations do not apply to these rights of way.

It further goes on to state that if the use is not consistent with the grant then and only then could they impose their regulatory authority. What the agencies are attempting to do is to entice you into a conversion of your 1866 vested rights into a Title V regulateable right of way. Keep in mind that all range improvements are tied to the 1866 vested rights to water and the water's beneficial use.
I did not see anywhere where it estimated the amount of these rights of way. This may be difficult to estimate due to the nature of these vested rights that did not require recording or application.

Arizona Revised Statue

13-2906. Obstructing a highway or other public thoroughfare; classification

A. A person commits obstructing a highway or other public thoroughfare if, having no legal privilege to do so, such person, alone or with other persons, recklessly interferes with the passage of any highway or public thoroughfare by creating an unreasonable inconvenience or hazard.

B. Obstructing a highway or other public thoroughfare is a class 3 misdemeanor.

- prev
- next

40 USC § 1314 - Easements

- USC-prelim
- US Code
- Notes
- Updates
- Authorities (CFR)

USC*Prelim* is a preliminary release and may be subject to further revision before it is released again as a final version.
Current through Pub. L. 112-238. (See Public Laws for the current Congress.)
(a) **Definitions.—** In this section—
(1) **Executive agency.—** The term "executive agency" means an executive department or independent establishment in the executive branch of the Federal Government, including a wholly owned Government corporation.
(2) **Real property of the government.—** The term "real property of the Government" excludes—
(A) public land (including minerals, vegetative, and other resources) in the United States, including—
(i) land reserved or dedicated for national forest purposes;
(ii) land the Secretary of the Interior administers or supervises in accordance with the Act of August 25, 1916 (16 U.S.C. 1, 2, 3, 4) (known as the National Park Service Organic Act);
(iii) Indian-owned trust and restricted land; and
(iv) land the Government acquires primarily for fish and wildlife conservation purposes and the Secretary administers;
(B) land withdrawn from the public domain primarily under the jurisdiction of the Secretary; and
(C) land acquired for national forest purposes.

U.S. Supreme Court

Wilcox v. Jackson, 38 U.S. 13 Pet. 498 498 (1839)
Whensoever's a tract of land shall have once been legally appropriated to any purpose, from that moment the land thus appropriated becomes severed from the mass of public lands, and no subsequent law or proclamation or sale would be construed to embrace it or to operate upon it, although no other reservation were made of it.
The right of preemption was a **bounty extended to settlers and occupants of the public domain**. This bounty it cannot be supposed was designed to be extended to the sacrifice of public establishments or of great public interests.
Nothing passes a perfect title to public lands, with the exception of a few cases, but a patent. The exceptions are where Congress grants lands in words of present grant. The general rule applies as well to preemptions as to other purchases of public lands.

Ltr#0118

This is why all acts of Congress and sales are subject to pre existing rights. Organic Act, Taylor Grazing, FLPMA the Roosevelt Withdrawal Executive Order 6910 have this exceptions.
This memorandum out of the Government Office of Accounting basically what it says is that it is state law that determines what is a RS 2477 right of way and that Congress has barred the Agencies from any authority to determine the status of these roads.
http://www.gao.gov/decisions/other/300912.htm

Robert Corbell
Greenlee County Supervisor District 3
(928)215-0118
(office) (928)865-2072 ext. 105
Office: rcorbell@co.greenlee.az.us
Personal: rcorbell@aznex.net

Ltr#0119

From:	Robert Corbell
To:	PS-ASNF Planning
Cc:	rcorbell@aznex.net; Les Sanders
Subject:	Comments for the Apache-Sitgreaves National Forests Land Management Plan
Date:	Thursday, May 16, 2013 10:36:25 PM

To: Apache-Sitgreaves National Forests - Plan Revision Team
P.O. Box 640
Springerville, AZ 85938

Electronic filing: asnf.planning@fs.fed.us

From: Supervisor Robert Corbell
Greenlee County Board of Supervisors District 3
562 Lemons Lane
Duncan, Arizona 85534
(928) 215-0118
rcorbell@aznex.net or rcorbell@co.greenlee.az.us

This is in reference to Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan. The United States Forest Service, Department of Agriculture has very limited jurisdiction in Greenlee County as proved by the following affidavit, supporting court cases and references that are included:

Police Powers

My comment is the as per the 10th amendment of the Constitution of the United States of America. All police powers are reserved to the state or to the people. Please provide me the cites and authorities if you disagree with me.

U.S. Constitution - Amendment 10

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.
FLPMA's savings clause at Section 701 (Codified at 43 USC 1701 notes) makes clear that police powers are reserved to the states (as well as civil and criminal jurisdiction) Here is what the Supreme Court has said in *Wilkerson v. U.S.* 140 U.S. 545 (Found in Ramona's 122 questions # 88-91)

The power of the state to impose restraints and burdens upon persons and property in conservation and promotion of the public health, good order, and prosperity is a power originally and always belonging to the states, not surrendered to them by the general government, nor directly restrained by the Constitution of the United States, and essentially exclusive.

And this Court has uniformly recognized state legislation, legitimately for police purposes, as not, in the sense of the Constitution, necessarily infringing upon any right which has been confided expressly or by implication to the national government.

Ltr#0119

In short, it is not to be doubted that the power to make the ordinary regulations of police remains with the individual states, and cannot be assumed by the national government, and that in this respect it is not interfered with by the Fourteenth Amendment. *Barbier v. Connolly*, 113 U. S. 27, 113 U. S. 31.

Mugler v. Kansas, 123 U. S. 623, and cases cited. "These cases," in the language of the opinion in *Mugler v. Kansas* (page 123 U. S. 659,)

"rest upon the acknowledged right of the states of the union to control their purely internal affairs, and, in so doing, to protect the health, morals, and safety of their people by regulations that do not interfere with the execution of the powers of the general government or violate rights secured by the Constitution of the United States. The power to establish such regulations, as was said in @ 22 U. S. 203, reaches everything within the territory of a state not surrendered to the national government."

Robert Corbell
Greenlee County Supervisor District 3
(928)215-0118
(office) (928)865-2072 ext. 105
Office: rcorbell@co.greenlee.az.us
Personal: rcorbell@aznex.net

Ltr#0161

From:	Hunter Moore
To:	FS-ASNF Planning
Cc:	Hunter Moore; Pascal Bertoux - Eastern Arizona Counties; Martin, Tommie (tmartin@glacountyaz.gov); James Jayne; Melissa Buckley; David Tenney; Sylvia Allen; Cathina Roe
Subject:	Navajo County Comments on the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan
Date:	Saturday, May 18, 2013 12:18:24 AM
Attachments:	image001.png NAVAJO COUNTY COMMENT A-S Land Management Plan 5-17-13.pdf NAVAJO COUNTY COMMENT A-S Land Management Plan 5-17-13.docx

To the Responsible Official:

Please see the attached comment from Navajo County for the Apache-Sitgreaves National Forest Land Management Plan.

Respectfully submitted,

Hunter Moore | Navajo County
Governmental Affairs Director
P.O. Box 668
Holbrook, AZ 86025
Cell: (480) 254-2387 | Office: (928) 524-4044 | Fax: (928) 524-4239
hunter.moore@navajocountyaz.gov | www.navajocountyaz.gov

facebook.com/NavajoCounty

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NAVAJO COUNTY

Board of Supervisors

Jonathan M. Nez • Jesse Thompson • Sylvia Allen • David Tenney • Dawnafe Whitesinger

"Proudly Serving, Continuously Improving"

May 15, 2013

Apache-Sitgreaves National Forests - Plan Revision Team
P.O. Box 640
Springerville, AZ 85938

Electronic filing: asnf.planning@fs.fed.us

File Code: Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Re: Navajo County comments on the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Dear Responsible Official:

Navajo County would like to offer comments on the above referenced proposed project.

PART 1 - NAVAJO COUNTY OBJECTIVES AS EXPRESSED IN ITS PLANS AND POLICIES

NAVAJO COUNTY

Navajo County is located in eastern Arizona along the Mogollon Rim that marks the southern edge of the Colorado plateau. Seven characteristics of Navajo County are particularly relevant to the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan:

1) The large number of national forest acreage located in the County and its neighboring Arizona counties: Coconino National Forest, Apache National Forest, Sitgreaves National Forest, Tonto National Forest, Prescott National Forest and Coronado National Forest.

2) The proportion of the land area of Navajo County being designated as national forests, federal, state or tribal land, and/or under federal or state management. In Navajo County the U.S. Forest Service controls 9% of the land; the Tribal Authorities and the Bureau of Indian Affairs 67%; the State of Arizona 6%. Individual or corporate ownership is only 18%.

3) The disproportionately large impact that landscape scale catastrophic wildfires in the national forests of the Southwest have had on the ecological, social and economic life of Navajo County and our neighboring eastern Arizona counties. Four of the five largest wildfires in Arizona, including two of the largest wildfires in the nation, have occurred within the five counties of the Eastern Arizona Counties Organization (Apache, Greenlee, Graham, Gila and Navajo) in the last decade: the Rodeo Chediski Fire of 2002 that consumed 460,000 acres; the Willow Fire of 2004 that burned 120,000 acre; the Cave Creek Complex Fire of 2005 that blazed through 244,000 acres and the Wallow Fire of 2011 that charred 538,000 acres.

4) The disproportionately large impact that outdoor recreational activities conducted on national forest lands, such as, but not limited to, dispersed camping, cross-country motorized travel, big game hunting, dispersed shooting, dispersed fishing or hiking, etc., by local residents of, and visitors to, Navajo County recreating from metro-Arizona to the Rim Country, have on the economic well-being and the economic development of Navajo County.

5) The steady reliance of Navajo County residents on firewood cutting and gathering permits, and dispersed firewood access in the local national forests for meeting their energy needs.

6) The outstanding and continued requirement for and commitment by Navajo County to proactively participate in and assume leadership roles in forest and watershed restoration and wildfire prevention and mitigation efforts at local and landscape scales, such as the White Mountain Stewardship Project and the Four Forest Restoration Initiative that Navajo County has been instrumental in creating and fostering.

As such, Navajo County has a special interest in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan.

While Navajo County recognizes that it is only one of the many constituents of the U.S. Forest Service, and does not seek special consideration in the current comments and review process, we urge the Responsible Official to pay careful attention and give due consideration to the following comments in view of the uncommonly large effect that U.S. Forest Service land management decisions regularly have directly, or may occasionally have indirectly, on Navajo County residents or visitors enjoyment, custom, culture, health, safety and economic well-being.

Navajo County is actively involved in and assumes a leadership role in several forest restoration efforts directly involving the Apache-Sitgreaves National Forests, and has gained considerable experience working with the U.S. Forest Service. Navajo County, therefore, understands particularly well the issues at hand, the management processes engaged, the desired future conditions, and the difficulties and challenges involved. Navajo County appreciates fully the Apache-Sitgreaves National Forests' intent to ensure an adaptive land management planning

process that is inclusive, efficient, collaborative and science-based to promote healthy, resilient, diverse and productive national forests and grasslands; to support natural resources-based rural economic development and employment; and, to insure the enjoyment of the Apache-Sitgreaves National Forests by the current and future generations in a balanced approach of preservation, conservation and sustainable exploitation of the natural resources.

In a spirit of continuous improvement, and based on the direct practitioner knowledge and experience gained through a uniquely long, diverse, often productive and sometimes difficult participation in the U.S. Forest Service planning and implementation processes, Navajo County would like to share its comments, its appreciation for the obvious work put into the Apache-Sitgreaves National Forests Land Management Plan and its Programmatic Draft Environmental Impact Statement, and its concerns and suggestions as follows.

PRELIMINARY COMMENT

Navajo County would like to preface any subsequent comment by the observation that the quality and thoroughness of the work exhibited in both the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, and the Proposed Land Management Plan for the Apache-Sitgreaves National Forests is outstanding. Navajo County is fully conscious of the fact that an enormous commitment was made and delivered upon by the Apache-Sitgreaves National Forests Land Management Plan team, and that a legitimate pride of ownership must rest with the authors of the above mentioned documents as well as the Specialist Reports and other documents not published with the Programmatic Draft Environmental Impact Statement or the Land Management Plan but nonetheless part of the project record.

Navajo County urges the Apache-Sitgreaves National Forests Land Management Plan team to consider the Navajo County comments NOT as a critic of their work, but as a goodwill effort toward continuous improvement of both the Programmatic Draft Environmental Impact Statement and the Land Management Plan, and a proactive effort by the County to disclose its objectives, plans and policies and the rationales that support them, and to facilitate the statutorily required consistency review, coordination action and conflict reduction regarding potential discrepancies between the Apache-Sitgreaves National Forests Land Management Plan and the objectives of Navajo County as expressed in its plans and policies and as discussed in this document.

ASSESSMENT & LAND MANAGEMENT PLAN
ROLE OF NAVAJO COUNTY

Navajo County recognizes that the Assessment and Land Management Plan development are U.S. Forest Service-driven technical processes, and Navajo County generally supports the analysis mechanisms deployed by the Apache-Sitgreaves National Forests to complete the assessment and the technical part of the management planning.

Although Navajo County retains and employs many talented individuals at the peak of the knowledge curve in their respective fields, Navajo County does not generally define its role in the public lands management process as a role of science provider or resources technical specialist. Rather, as a body representing the most direct and local expression of democratic government at the individual district or national forest level, Navajo County more generally defines its role at the policy-making level as it relates to public lands management processes.

Therefore, although several of the following comments organized under the following headers do apply to the assessment and land management plan development processes, they purposefully do not address specific technical mechanisms thereof, and Navajo County is generally satisfied that the USFS methodology is generally satisfactory, and that the studies that the Apache-Sitgreaves National Forests, in their expertise, deem reliable, are adequate to support the Apache-Sitgreaves National Forests technical conclusions (Lands Council v. McNair 537 F.3d 981 - 9th Cir. 2008).

Navajo County will, therefore, focus its engagement in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan process, and its comments and suggestions, at the policy-making level and on whether the proposed Apache-Sitgreaves National Forests Land Management Plan serves Navajo County residents or visitor's enjoyment, custom, culture, health, safety and economic well-being. Navajo County will further focus its engagement on whether the proposed Apache-Sitgreaves National Forests Land Management Plan contributes to the objectives of Navajo County as expressed in its plans and policies; on how the proposed Apache-Sitgreaves National Forests Land Management Plan impacts related planning efforts by Navajo County; and on the compatibility with and interrelated impacts of the Apache-Sitgreaves National Forests Land Management Plan and Navajo County plans and policies.

COORDINATION BETWEEN THE APACHE-SITGREAVES NATIONAL FORESTS LAND MANAGEMENT PLAN AND THE NAVAJO COUNTY OBJECTIVES, PLANS AND POLICIES

Per the requirements contained in the 2012 Planning Rule, Title 36 — *Parks, Forests, And Public Property*, Part 219 — *Planning*, Subpart A — *National Forest System Land Management Planning*, Section 4 - *Requirements for public participation*, sub section (b) *Coordination with other public planning efforts*, Navajo County expects that: "The responsible official shall coordinate land management planning with the equivalent and related planning efforts of federally recognized Indian Tribes, Alaska Native Corporations, other Federal agencies, and State and local governments" (36 CFR 219.4 (b)(1)).

Navajo County further expects that: "The results of this review shall be displayed in the environmental impact statement (EIS) for the plan", and that "this review shall include consideration of: (i) The objectives of federally recognized Indian Tribes, Alaska Native Corporations, other Federal agencies, and State and local governments, as expressed in their plans and policies; (ii) The compatibility and interrelated impacts of these plans and policies; (iii) Opportunities for the plan to address the impacts identified or to contribute to joint objectives;

and (iv) Opportunities to resolve or reduce conflicts, within the context of developing the plan's desired conditions or objectives" (36 CFR 219.4 (b)(2)).

Navajo County posits that these statutory requirements are meant by the U.S. Congress to imply more than a perfunctory review process resulting in a check mark in a 'coordination box' and imply a sincere and proactive resolution effort to reduce and resolve potential conflicts between aspects of the Apache-Sitgreaves National Forests Land Management Plan and objectives expressed in the Navajo County plans and policies; such as, but not limited to, those relevant to motorized big game retrieval, dispersed motorized camping and the reasonable allowance of motorized travel in and motorized access to the Apache-Sitgreaves National Forests, or those relevant to the unique rural economic development and employment role resting on natural resources such timber, grazing or mineral resources located within the Apache-Sitgreaves National Forests.

NAVAJO COUNTY REQUEST FOR COOPERATING AGENCY STATUS

Navajo County is committed to resolve or reduce potential conflicts between the Apache-Sitgreaves National Forests Land Management Plan and the Navajo County plans and policies, and understands that such resolution must take place within the context of developing the Apache-Sitgreaves National Forests Land Management Plan's desired conditions or objectives.

To this effect, it is the intent of Navajo County to avail itself of the opportunity contained in the 2012 Planning Rule that specifies that: "Where appropriate, the responsible official shall encourage States, counties, and other local governments to seek cooperating agency status in the NEPA process for development, amendment, or revision of a plan" (36 CFR 219.4 (a)(1)(iv)).

NAVAJO COUNTY OBJECTIVES AS EXPRESSED IN ITS PLANS AND POLICIES

NAVAJO COUNTY PLAN

Navajo County policy making decisions and management actions are guided by the Navajo County long term plan. This plan guides the actions of the Navajo County Board of Supervisors and the Navajo County Management staff toward meeting the present and future enjoyment, custom, culture, health, safety and economic well-being needs of Navajo County residents or visitors. The Navajo County planning effort integrates the principles of:

1) Monitoring the effects and impacts of the implementation of Navajo County policies, as well as the direct, indirect, individual and cumulative effects and impacts on Navajo County and its residents and visitors of the policy decisions and management actions taken by state and federal agency partners;
2) Monitoring all relevant demographic, social, economic, cultural, etc. internal and external variables relevant to Navajo County policy making decisions and management actions; and
3) Dynamic and generally informal adaptive management.

As such, the Navajo County plan is an ever evolving dynamic plan that constantly adapts, often informally, in response to the evolving ecological, economic, social and cultural environment, and it is formulated as much through the regular deliberations of the Navajo County Board of Supervisors and the resulting resolutions of the Board, as it is in the formal planning documents.

For the purpose of compliance with the statutory requirements of coordination between the Apache-Sitgreaves National Forests land management plan and Navajo County's objectives as expressed in its plans and policies (36 CFR 219.4 (b)), the Navajo County plan defined as the accumulation of the formal Navajo County planning documents AND the Navajo County public record of Board of Supervisors deliberations and decisions, is hereby entered into the Apache-Sitgreaves National Forests Land Management Plan NEPA record.

NAVAJO COUNTY OBJECTIVES AS RELATES TO THE APACHE-SITGREAVES NATIONAL FORESTS LAND MANAGEMENT PLAN

Navajo County appreciates and supports the extensive and thorough analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team for this Programmatic Draft Environmental Impact Statement, and the discussion of the effects of the no action alternative and the three action alternatives on the following resources: air; soil; watershed; water resources; riparian; fisheries; vegetation; forest health; fire; wildlife and rare plants; nonnative species; recreation; infrastructure; wild and scenic rivers; inventoried roadless areas; wilderness resources; research natural areas; scenic resources; lands and special uses; cultural resources; Indian rights and interests; forest products; livestock grazing; minerals and energy and socioeconomic resources.

In the interest of conciseness, and considering that multiple resources analyzed individually by the Apache-Sitgreaves National Forests Land Management Plan team in the Programmatic Draft Environmental Impact Statement are regrouped in a smaller number of overarching natural resources management policy objectives for Navajo County, the County analysis and comments will be focused on seven sets of natural resources management objectives critical to Navajo County and relevant to these comments.

In no particular order, these seven sets of natural resources management objectives relevant to these comments are:

1) Rangelands Resources Management Objectives
   Rangelands Resources Management Objectives address issues such as, but not limited to, grazing availability, suitability, sustainability; ecological, economic and social carrying capacity; access; contribution to rural economic development; contribution to local Western custom and culture; etc.

2) Forest Products Resources Management Objectives
   Forest Products Management Resources Objectives address issues such as, but not limited to, logging availability, suitability, sustainability, productivity, access;

contribution to rural economic development; contribution to rural Western custom and culture; etc.

3) Mineral and Energy Resources Management Objectives
   Mineral And Energy Resources Management Objectives address issues such as, but not limited to, the availability, suitability, sustainability, productivity, access, contribution to rural economic development of solid, liquid or gaseous mineral resources; as well as solar, wind, hydropower, geothermal and other natural renewable energy resources; etc.

4) Motorized Travel and Recreation Management Objectives
   Motorized Travel And Recreation Management Objectives address issues such as, but not limited to, motorized access; motorized travel; motorized big game retrieval; motorized dispersed camping; motorized gathering of firewood; motorized access to dispersed fishing; motorized recreation opportunities; inventoried roadless areas; wilderness area designation; motorized access to grazing and logging opportunities; contribution of motorized access, recreation and travel to rural economic development; contribution to local Western custom and culture; etc.

5) Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives
   Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives address issues such as, but not limited to, protection of County residents and visitors; protections of collective and individual real properties; protection of transportation, energy and water collection and distribution infrastructures; ecological restoration of forested ecosystems; local scale restoration projects; landscape scale restoration projects; social license required for the non-conflictual and non-litigious implementation of restoration efforts (such as the one requested in public statements by former USFS Southwestern Regional Forester Corbin Newman for the Four Forest Restoration Initiative); industry development required to implement and fund restoration efforts through economically viable utilization of the wood products; long term guarantees of wood supply necessary to attract private investments in a small diameter utilization infrastructure in northeastern Arizona; etc.

6) Watersheds Restoration Objectives
   Watershed Restoration Objectives address issues such as, but not limited to, ecological restoration of watersheds; protection and development of water collection and distribution infrastructures; monetization of watershed ecosystem services; downstream consumption contribution to upstream production investments and maintenance; interactions between watershed functions and multiple use functions; etc.

7) Management Areas Designation Objectives
   Management Areas Designation Objectives address issues such as, but not limited to, nomination, designation, management, effect on socioeconomic resources, impacts on the other County objectives, etc. of inventoried roadless areas (which are technically not management areas per se but an administrative designation), wilderness areas, primitive areas, research natural areas, wildlife quiet areas, wild and scenic rivers, etc.

These seven sets of natural resources management objectives critical to Navajo County and relevant to these comments overlap considerably with the five "issues that served as the basis for alternative development strategy" (PDEIS, page 11) in the Apache-Sitgreaves National Forests Land Management Plan:

1)	Strategy for Restoring Vegetation	>>>> Forests & watersheds restoration
2)	Amount of Wildlife Quiet Areas designation &	>>>>} Management areas
3)	Amount of Wilderness	>>>>} multiple objectives
4)	Type and Amount of Recreation Opportunities travel	>>>> Motorized recreation and
5)	Availability of Wood Products minerals	>>>> Forest products / rangelands /
	(PDEIS, page 11)	(County objectives)

Navajo County will, therefore, format comments articulated around the seven sets of natural resources management objectives critical to the County and relevant to these comments, with the understanding that the seven sets of objectives match closely the five issues that served for the development of alternatives in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan.

For the purpose of compliance with the statutory requirements of coordination between the Apache-Sitgreaves National Forests land management plan and the Navajo County objectives as expressed in its plans and policies (36 CFR 219.4 (b)), this document: *Navajo County Comments On The Programmatic Draft Environmental Impact Statement For The Apache-Sitgreaves National Forests Land Management Plan* is hereby incorporated in the County expressed plans and policies.

Navajo County, therefore, expects that: i) the Responsible Official shall coordinate land management planning with Navajo County's equivalent and related planning efforts (36 CFR 219.4 (b)(1)); ii) the consistency review and coordination action shall include consideration of the objectives of Navajo County as expressed in its plans and policies (including the formal Navajo County planning documents, the Navajo County public record of Board of Supervisors deliberations and decisions, and the Navajo County Comments on the Programmatic Draft Environmental Impact Statement For The Apache-Sitgreaves National Forests Land Management Plan); and, iii) the Responsible Official shall consider opportunities to resolve or reduce conflicts, should some arise between the Apache-Sitgreaves National Forests Land Management Plan and the Navajo County plans (36 CFR 219.4 (b)(2)).

REQUEST FOR DISCLOSURE OF CONSISTENCY REVIEW AND COORDINATION ACTIONS

Per the requirements of 36 CFR 219.4 (b)(2), 40 CFR 1502.16(c) and 40 CFR 1506.2 Navajo County hereby requests that the results of the consistency review and coordination actions between the Apache-Sitgreaves National Forests Land Management Plan and the Navajo County objectives as expressed in its plans and policies shall be displayed in the Programmatic

Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan.

PART 2 – GAP ANALYSIS AND SUGGESTED CORRECTIVE ACTIONS FOR THE PROGRAMMATIC FINAL ENVIRONMENTAL IMPACT STATEMENT

As previously noted, although Navajo County retains and employs many talented individuals at the peak of the knowledge curve in their respective fields, Navajo County does not generally define its role in the public lands management process as a role of science provider or resources technical specialist. Rather, as a body representing the most direct and local expression of democratic government at the individual district or national forest level, Navajo County more generally defines its role at the policy-making level as it relates to public lands management processes. Navajo County certainly intends to produce very action-specific comments when NEPA analyses of specific management actions implementing the Apache-Sitgreaves National Forests Land Management Plan are subsequently offered for public comments, but in its current comments on the Programmatic Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, Navajo County believes that it is appropriate to comment at the programmatic level, from a U.S. Forest Service perspective, and at the objectives level, from a Navajo County policy perspective.

RANGELANDS RESOURCES MANAGEMENT OBJECTIVES

Navajo County understands that the 1982 and 2012 Planning Rules require that the capability and suitability for producing forage for grazing animals on national forests lands be determined, and that the capability for producing forage for grazing animals is defined as the potential of an area of land to produce forage depending upon current conditions and site conditions such as climate, slope, landform, soil chemistry, physics and biology, geology, disturbances such as natural fire, etc. as well as the application of management practices. Navajo County therefore understands and appreciates that the fundamental capability of the lands on the Apache-Sitgreaves National Forests to produce forage for grazing animals, as determined in the 1980s during the first round of forest planning, has not changed significantly since this first evaluation.

Land suitability analysis

In light of the above, Navajo County understands why: "the criteria for suitability for livestock grazing would be the same in all action alternatives," why such criteria are "very similar to the existing direction (alternative A) under the 1987 plan," and why "the acres suitable for livestock grazing in the action alternatives would be very similar" (PDEIS, page 451).

Simultaneously, Navajo County believes that rangelands resources in the West in general, in the Southwest in particular, and in the national forests of Arizona specifically, are under unprecedented stress as a function of landscape scale uncharacteristic disturbances such as catastrophic wildfires, the cumulated effects of decades of management practices on lands classified as rangelands, forestlands and timberlands, other stressors, etc., and a possible climate

warming trend, whether it be caused by human activities or cyclical natural variations as occurred naturally and repeatedly in the historical, pre-historical and geological record for millenniums predating the industrial age and even the existence of the human species. Navajo County therefore supports the designation of appropriate size Recommended Research Natural Areas, considered not suitable for grazing, in order to improve rangelands resources management science and practice.

Consequently, Navajo County supports the minimal reduction of the acreage deemed suitable as rangelands from 1.93 million acres in the current classification (Alternative A – the no action alternative) to 1.9 million acres in all action alternatives (Alternatives B, C and D) (PDEIS p. 451), provided that the research conducted on the Research Natural Areas removed from suitable grazing lands is designed to quantify and improve the understanding of the ecosystem processes unfolding on these rangelands and how they relate to improved management practices.

Navajo County Rangelands Resources Management Objectives

The Navajo County Rangelands Resources Objectives for the upcoming planning cycle include, among others:

1) Restore encroached grasslands, including the most departed semi-desert, Great Basin, and montane subalpine grasslands that have been invaded by trees (subalpine grasslands) and shrubs (semi desert and Great Basin grasslands) by removing trees and shrubs where economically feasible, promoting a mixture of native perennial grass species, implementing the periodic prescriptive use of mixed classes of livestock matching animal feeding habits with specific plant material, and reintroducing a regime of cool surface fires in order to reduce trees and shrubs colonization and erosion hazards, and to increase livestock forage production.

2) Adopt management practices that discourage the establishment of nonnative species and eradicate invasive weed species of little to no forage value, recognizing the fact that the ecological or economic consequences of different exotic species are not all the same, and that the persistence of some nonnative species that are not necessarily undesirable or controllable such as Kentucky bluegrass or Bermuda grass, may be beneficial from a socioeconomic perspective and a balanced management for multiple resource objectives.

3) Allocate grass reserves on an allotment by allotment basis through proper range management, rather than on a district by district basis, which requires additional financial considerations for improvement maintenance.

4) Shift the grassland management process from the concept of balancing livestock grazing with available forage (PDEIS p. 451) – which only addresses stocking rate, toward the concept of managing the intensity, frequency, seasonality, duration and classes of livestock grazing to accomplish the rangelands resources management objectives.

5) Emphasize adaptive management of the rangelands using a three tier rangelands resources management monitoring approach of quantitative monitoring using standard

measurements such as stocking rate, ground cover, etc.; qualitative monitoring using measurements such as species composition, age, nutritional value, etc.; and effectiveness monitoring using outcome measurements such as range health, soil water holding capacity, soil organic content, livestock weight gain, presence of wildlife indicator species, etc., in order to measure whether the management actions produce the site specific and cumulative direct and indirect effects expected.

6) Integrate the scientific research and implement the science-based recommendations developed by rangelands resources management peer-reviewed expert scientists such as Dr. Lamar Smith, Associate Professor Emeritus at the University of Arizona.

7) Support the efforts and the agenda of the Arizona Grazing Lands Conservation Association as follows:
   - Promoting voluntary approaches for the management of grazing lands;
   - Promoting respect of private property rights;
   - Strengthening partnerships between grazing lands managers and others who support the purposes of the Association;
   - Increasing economic, environmental, and social stability on grazing lands;
   - Increasing the information base from which to make sound policy and management decisions on grazing lands;
   - Closing the gap between availability of knowledge and application of said knowledge on grazing lands;
   - Enhancing the rancher's ability to achieve greater profitability on an ecologically sound and sustainable basis; and
   - Educating the public through the dissemination of scientific knowledge on the conservation and management of grazing lands in Arizona.

8) Preserve the contributions of the rangelands resources to the rural economic development of the Arizona counties at a minimum at the current level of approximately 66 jobs and $713,000 in labor income annually, and double this contribution to the approximately 120 jobs and $1.3 million in labor income annually that can be supported by the full utilization of the available animal unit months (AUMs).

Gap between the Apache-Sitgreaves National Forests land management plan and the Navajo County objectives, plans and policies

All Alternatives – rangelands restoration

Because very few grassland areas would be treated in Alternative A, the no action alternative, and in Alternative C, averaging around 500 acres per year (PDEIS p. 19 & 23), and, conversely, up to 25,000 acres per year of grasslands (primarily the Great Basin and semi-desert types) would be treated in Alternative B, the Preferred Alternative, and Alternative D, to remove encroaching woody species (PDEIS p. 21 & 25), Navajo County is supportive of Alternative B as relates to rangelands restoration.

All Alternatives - rangelands resources management

However, because in essence all the alternatives (Alternative A – no action, and all the action alternatives – Alternatives B, C and D) are substantially the same as relates to rangelands resources management, Navajo County believes that there is no real benefit in comparing the alternatives in detailed comments.

Rather, Navajo County believes that it may be more productive to address what are, in Navajo County's analysis, shortcomings in all three action alternatives (Alternatives B, C and D) as relates to rangelands resource management, as follows:

- Navajo County is substantially more concerned with the underpinning of the rangelands management guiding principles than with the technical specifics of individual management actions. As expressed in the writing of Dr. Smith (2010) on behalf of the Arizona Grazing Lands Conservation Association, the "vegetation, soils, wildlife and other factors that existed at the time of Anglo American settlement were the result of is history (climate, fire frequency, etc.), including the influences of native Americans, up to that time. This has all been altered and the vegetation, soils and wildlife have responded to the changes that have occurred, not only in the management applied to it by Anglo Americans but by changes in climate, soil erosion, introductions of new species, and extinction of some original species. In some cases the changes have been marked (e.g. in conversion of some grasslands to shrublands) and in some cases they have been fairly minor (e.g. mountain grasslands or chaparral). All the action alternatives share a common goal of 'restoration' of 'historical' conditions, which are considered the only condition which is 'sustainable,' and an approach which considers any economic production from the forest as incidental to that goal. We believe that this goal is based on questionable scientific assumptions and, in any case, does not provide due consideration for sustainable multiple uses and economic benefits from the forest."

- Navajo County believes that the concepts of ecological maintenance guiding Alternative A, and ecological restoration guiding Alternatives B, C and D, as relates to rangelands resources management, are not specific enough for establishing scientific principles of rangelands resources management in a Programmatic Environmental Impact Statement, even though some specifics may be considered in the Range Specialist Report. Navajo County believes that the rangelands resources management process needs to be modified to include:
  I. Maximum management flexibility in terms of seasonal use, any use at all, numbers of livestock, classes of livestock, mixed combination of classes of livestock, intensity of grazing, duration of grazing, use of livestock as a prescription management tool through herding, attracting, temporary fencing, etc., matching livestock classes with desired outcome, etc.;
  II. Real time three tier rangelands resources management quantitative monitoring using standard measurements such as stocking rate, ground cover, etc.; qualitative monitoring using measurements such as species composition, age, nutritional value, etc.; and effectiveness monitoring using outcome measurements such as range health, soil water holding capacity, soil organic content, livestock weight gain, presence of wildlife indicator species, etc.;

  III. Dynamic real time adaptive management allowing the permittees to make required management adjustments on their own initiative in response to short-term variables such as various combination of seasonable precipitations, temperature, etc. or unexpected events.

- Navajo County observes that the entire discussion on monitoring strategy, aside from the incidental use of the word 'monitoring' in various other contexts, in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan occupies the whole of 2 lines: "All action alternatives include the same monitoring strategy as identified in chapter 5 of the proposed plan" (PDEIS p. 28) in the 681 page document. Navajo County further observes that the referred Monitoring Strategy in the Apache-Sitgreaves National Forests Land Management Plan is only an approximately 4 page long very brief discussion of monitoring in general terms including a 3 page table of planned monitoring questions, monitoring methods, units of measure, and frequency of measurements (p. 135 – 139) in a 283 page document.

- Navajo County further observes that there are only 14 instances of the use of the words 'adaptive management' in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, and that there are a grand total of 17 lines dedicated to the discussion in very general terms of adaptive management in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan (PDEIS p. 43-44) in the 681 page document. Navajo County further observes that are only 7 instances of the use of the words 'adaptive management' in the Apache-Sitgreaves National Forests Land Management Plan itself, in a 283 page document.

- While sheer volume does not guarantee adequate attention to a given topic, Navajo County is concerned that the scarce mentions of monitoring and adaptive management in the Programmatic Draft Environmental Impact Statement and the Apache-Sitgreaves National Forests Land Management Plan may reflect an insufficient role for monitoring and adaptive management in the current planning process. This would be in contradiction with the requirement of the 2012 national Planning Rule and its proposed implementation directives.

- Conversely, in the absence of true adaptive management, Navajo County believes that specific guidelines regarding the timing, intensity, classes and duration of grazing, with consideration for the needs of other forest resources management, should be included in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, as well as a restocking plan for all vacant allotments, unless livestock grazing on such allotments can be shown to be incompatible with rangelands resources management purposes and needs.

- Navajo County fully appreciates the rich socio-economic presentation provided in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan (PDEIS p. 468 – 485) and the brief economic impact analysis (PDEIS p. 485 – 489) and social consequences analysis (PDEIS p. 489 – 491)

also provided. However, Navajo County believes that the economic impact analysis provided by the Apache-Sitgreaves National Forests Land Management Plan team is heavily biased toward demonstrating the favorable economic impact of grazing on public land allotments on the permittees' profitability. While focusing on the benefits provided is laudable, Navajo County also believes that a more complete analysis needs to include a calculation of the economic costs of the constraints imposed on the permittees by the current rangelands resources management agency processes that limits considerably the ability of the permittees to manage optimally the land and the livestock due to the rigidity of the administrative processes.

- Finally, Navajo County is concerned that, in the Apache-Sitgreaves National Forests Land Management Plan team's own analysis, the current level of economic contribution of approximately 66 jobs and $713,000 in labor income annually is only approximately half of the approximately 120 jobs and $1.3 million in labor income annually that can be supported by the full utilization of the available animal unit months (AUMs) (PDEIS p. 491).

Requested and suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Navajo County therefore respectfully requests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan designate the new proposed Research Natural Areas removed from suitable rangelands for the specific purpose of quantifying and improving the understanding of the rangelands resources ecosystem processes and how they relate to improved management practices.

Navajo County further requests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include up to 25,000 acres per year of grasslands restoration (primarily the Great Basin and semi-desert types) to remove encroaching woody species as identified in Alternative B.

Navajo County also requests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include a specific plan under conventional management to reach full utilization of the available animal unit months and to result in the full economic impact of approximately 120 jobs and $1.3 million in labor income annually.

Navajo County suggests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include specific guidelines for a rangelands resources adaptive management plan that provides clear quantitative, qualitative and effectiveness monitoring requirements, and a more balanced approach between the goal of restoration and the goal of economic production, as the need for restoration in rangelands may not carry the same clear and present benefits as restoration in forestlands.

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FOREST PRODUCTS RESOURCES MANAGEMENT OBJECTIVES

Navajo County appreciates and supports the extensive and thorough analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team on forest products, when addressing affected environment, lands tentatively suitable for timber production, allowable sale quantity (ASQ), long term sustained yield capacity (LTSYC), wood and tree products availability, forested / overgrown lands, deforested / early development lands, climate change considerations, and cumulative environmental consequences.

Circumstantial constraints and challenges for the Navajo County AND the Apache-Sitgreaves National Forests planning efforts

Navajo County recognizes that the issues of forested ecosystem restoration and forest products management are fundamentally different, and are typically not discussed simultaneously in ecosystems non-departed or little departed from characteristic historical conditions. However, as the U.S. Forest Service and Navajo County both generally acknowledge, current conditions in the forested ecosystems and especially in the ponderosa pine and dry or wet mixed conifers dominated forests of eastern Arizona, are considerably departed from historical conditions and at risk of continued uncharacteristic disturbances such as landscape scale catastrophic crown fires or insect infestations.

Navajo County acknowledges and appreciates the efforts endeavored by the U.S. Forest Service and particularly the Apache-Sitgreaves National Forests to pioneer larger scale restoration efforts such as the White Mountains Stewardship Project. Navajo County has been and continues to be supportive of the White Mountain Stewardship Project and of its funding, as a practical tool to initiate larger scale treatments and to incentivize the creation of a small diameter trees utilization infrastructure. Simultaneously, Navajo County acknowledges that the model of subsidized restoration treatments is not scalable at landscape scale, as is required to restore the forests of Arizona, for lack of agency funding. As proposed in the Four Forest Restoration Initiative, an initiative that Navajo County was instrumental in creating, fostering and developing, landscape scale forest ecological restoration appears currently feasible only if it is funded by the economically viable utilization of the forested byproducts of restoration by private industry. While relatively new to the discussion of ecological restoration funding, the concept of ecosystem service monetization is actually not a novation when it comes to forest products, as timber sales have been for centuries an established form of natural resources valuation and have funded the management of the resources.

As a consequence, Navajo County proposes that both the County and the Apache-Sitgreaves National Forests operate under very specific circumstantial constraints when it comes to forest products resources management, in as much as the forest products industry in Arizona is simultaneously an economic growth and a rural employment engine desperately needed in eastern Arizona, AND the funding mechanism for landscape scale restoration in eastern Arizona, BOTH of which are critical objectives for Navajo County, and are stated priorities for the Apache-Sitgreaves National Forests.

The inherent circumstantial challenge therefore faced by Navajo County and the Apache-Sitgreaves National Forests is that the priorities typically considered when managing forest products, such as a sustained yield of harvest volumes on a regulated non declining even-flow basis for the long term, uneven age structures, long term sustained yield capacity (LTSYC), non declining allowable sale quantity (ASQ), etc. are augmented and complicated by the overwhelming priority to complete landscape scale restoration as rapidly as possible for fear of massively disruptive landscape scale catastrophic crown fires and/or landscape scale insect infestations.

Owing to the fact that for the foreseeable future and for the next five decades of the planning cycle, green forest products will likely be byproducts of restoration treatments, and green forest products will likely continue to be at risk of destruction by catastrophic fires if landscape scale restoration is not expeditiously implemented, Navajo County suggests that forest products management actions for the upcoming planning cycle must be dictated not only by traditional silviculture science and best practices, but primarily by the absolute priority of implementing landscape scale restoration as expeditiously as possible using mechanical treatments that produce the forest products necessary to not only sustain the existing forest industry in the White Mountains, but to allow robust natural resources-based rural economic development through the creation of an entirely new infrastructure of small diameter trees utilization at industrial scale.

Navajo County Forest Products Resources Objectives

The Navajo County Forest Products Resources Objectives for the upcoming planning cycle therefore include, among others:

1) Create in eastern Arizona the wood supply conditions necessary for private industry investments in a new economically viable small diameter trees and residual biomass utilization infrastructure capable of funding the initial ecological restoration thinning of at least 50,000 acres of ponderosa pine and/or mixed conifer dominated forests annually for the next 20 years, then the maintenance of the desired future conditions in subsequent decades.

2) Sustain in the White Mountains the wood supply conditions necessary for the continued development and growth of the existing local industry, with expanded economically viable small diameter trees and residual biomass utilization facilities capable of funding the initial ecological restoration thinning of at least 15,000 acres of ponderosa pine and/or mixed conifer dominated forests annually for the next 20 years, then the maintenance of the desired future conditions in subsequent decades.

3) Wherever possible, prioritize forest byproducts treatments (mechanical treatments) funded by economically viable utilization, over non byproducts treatments (fire as first entry thinning treatments) in order to create and sustain the wood supply necessary for a new era of forest products industry-based economic growth and employment in eastern Arizona with multiple industrial scale new investments.

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4) Subordinate for as long as required in the upcoming planning cycle the scientific silviculture priorities and traditional forest products management methods for sustained yield of harvest volumes on a regulated non declining even-flow basis for the long term, to the overriding priority of implementing as expeditiously as possible landscape scale restoration based primarily on mechanical treatments producing forest products (see *Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives*).

Land suitability analysis

Navajo County understands and appreciates the fact that the criteria for designation of suitable timberlands must incorporate ecological and economic realities that have evolved since the previous planning cycle. Specifically, Navajo County supports the removal from the suitability analysis of lands that have suffered irreversible soil resource damages during high intensity fires such as the Rodeo Chediski and Wallow fires (24,000 acres); lands that have experienced inadequate restocking post high intensity fires such as the Rodeo Chediski and Wallow fires (57,000 acres); and lands located on steep slopes (40% and more) where cable logging would be required but could not be made economically feasible owing to the limited harvestable forest products (up to 80,000 acres) (PDEIS p. 426 & 431).

Consequently, Navajo County supports the reduction of the acreage deemed suitable as timberlands from 765,000 acres in the current classification (Alternative A, the no action alternative) to approximately 600,000 acres (Alternatives B and C) (PDEIS p. 431).

Gap between the Apache-Sitgreaves National Forests land management plan and the Navajo County objectives, plans and policies

Per the above remarks, considerable overlap currently exists and will continue to exist for the upcoming planning cycle between the issues of forest products resources management and forested ecosystems restoration and catastrophic wildfire prevention in the Apache-Sitgreaves National Forests. For the purpose of adhering to the classification of issues identified in the seven sets of natural resources management objectives critical to the County, the Navajo County comments will address separately these two issues, with the understanding that a holistic approach to both the County objectives and the Apache-Sitgreaves National Forests land management plan needs to integrate and interwove these two, and other, issues.

Alternative D and A

Based on the above, Navajo County wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

Navajo County understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and Navajo County acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, Navajo County cannot support an alternative that would result, among others, in the unavailability of ANY suitable timberland whatsoever in the Apache-Sitgreaves National Forests (PDEIS p. 430). This alternative is so departed from the White Mountains residents' past,

current, and foreseeable future custom, culture and economic well-being needs, and from the Navajo County Forest Products Resources Objectives, that it does not warrant any further discussion from the County's perspective.

Similarly, Navajo County cannot support an alternative that would result, among others, in taking a 42 year gamble on the completion of the thinning of all forested overgrown lands (PDEIS p. 444), before another catastrophic forest fire on the scale of the Rodeo Chediski Fire or Wallow Fire hit the White Mountains again and render all talks of restoration moot. Alternative A, the no action alternative, is therefore so departed from the White Mountains residents' past, current, and foreseeable future health, security and economic well-being needs, and from the Navajo County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives, that it does not warrant any further discussion from the County's perspective.

Alternative B

Because Navajo County believes that the forests of eastern Arizona are in a state of clear and present danger that must be addressed as an emergency by federal, state and local governments and their agencies, Navajo County does not favor Alternative B, the preferred alternative, as relates to Forest Products, in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan.

Specifically, in the Apache-Sitgreaves National Forests' own analysis, under Alternative B it would require 34 years to thin all forested overgrown lands (PDEIS p. 444), and it would not even be possible to reduce the backlog of overgrowth to the desired level of long term sustained yield capacity (LTSYC) in the five decades of the planning cycle (PDEIS p. 440). This is clearly in contradiction with Navajo County overriding priority of implementing as expeditiously as possible landscape scale restoration.

Additionally, under Alternative B green forest products volume would be significantly reduced due to the extensive use of moderate and/or high severity fire to thin trees on forested lands during the planning period, including on some suitable timberlands (PDEIS p. 438). The maximum allowable sale quantity (ASQ) volume for alternative B would be 122,000 CCF per year, barely exceeding the total harvest of 103,000 CCF in 2011 (PDEIS p. 438), and therefore clearly insufficient to support the growth of the existing small local wood industry, and blatantly insufficient to support the expected requirements of the Four Forest Restoration Initiative second analysis area associated contract(s). Admittedly, under Alternative B the first decade could provide high volumes of non-ASQ wood products from treatments of non-suitable timberlands in addition to the allowable sale quantity (ASQ) volume, but this could only happen as a function of focusing on restoring grasslands and other non-suitable timberlands (PDEIS p. 443), which may be a debatable priority.

This is clearly in contradiction with the Navajo County objective of creating the wood supply conditions for private industry investments in a new economically viable small diameter trees and residual biomass utilization infrastructure capable of funding the initial ecological restoration thinning of at least 50,000 acres of ponderosa pine and/or mixed conifer dominated forests annually for the next 20 years. This is also clearly in contradiction with the Navajo

County objective of wherever possible, prioritizing forest byproducts treatments (mechanical treatments) funded by economically viable utilization, over non byproducts treatments (fire as first entry thinning treatments) in order to create and sustain the wood supply necessary for a new era of forest products industry-based economic growth and employment in eastern Arizona with multiple industrial scale new investments.

Alternative C

Navajo County appreciates and supports the realism of the Apache-Sitgreaves National Forests Land Management Plan team when stating: "the alternatives were realistically designed to reflect anticipated budgets and workforce capabilities" (DEIS p. 440). It is therefore not a criticism of the work produced by the Apache-Sitgreaves National Forests Land Management Plan team but a simple reality for Navajo County to observe that, as stated in the Apache-Sitgreaves National Forests' own analysis: "none of the alternatives would actually treat enough acres fast enough to fully reach desired conditions within the first 5 decades" (DEIS p. 440).

Alternative C clearly addresses more closely the Navajo County Forest Products Resources Management Objectives. Under Alternative C it would require 'only' 23 years to thin all forested overgrown lands, as compared to 34 for Alternative B (PDEIS p. 444), and the maximum allowable sale quantity (ASQ) volume would be 268,000 CCF per year, more than twice the 122,000 CCF authorized under Alternative B (PDEIS p. 438). Under Alternative C, average annual mechanical treatments acres would rise to 24,000 acres as opposed to 20,000 acres in Alternative B, and burning as a thinning tool treatments would be reduced from 29,000 acres in Alternative B to 13,000 acres in Alternative C (PDEIS p. 430).

However, Navajo County is concerned by the prospective industry annual requirements expressed at the *Bridge the Gap* meeting held in Eagar on November 17, 2012 as follows:

- Existing pellet plant in Show Low: 40,000 CCF
- Existing saw mill in Heber: 15,000 CCF
- Existing sawmill in Eagar: 25,000 CCF
- New sawmill in Eagar: 65,000 CCF
- Power plant in Snowflake: 75,000 CCF
- Other small industries: 10,000 CCF
- Total existing industries: 230,000 CCF

In addition:

- Second analysis area of 4FRI associated contract(s): 215,000 CCF

Clearly, under Alternative C the requirements of EITHER the existing and developing industry OR the expected appropriate scale industry recently contracted and to be implemented under the Four Forest Restoration Initiative (4FRI) can be met, but NOT BOTH.

Navajo County fully understands and appreciates that a healthy amount of optimism is reflected in the requirements expressed by the existing and developing industry in the White Mountains, and that a healthy amount of skepticism can be logically derived from the difficulties of the 4FRI contractor to raise the capital necessary to execute their business plan. Nonetheless,

consideration must be given to the steady growth of the existing industry and the possibility that the 4FRI contract may be executed by other entities than the current contractor, provided the Forest Service deems in the best interest of the government to re-assign the contract at the request of the current contractor as the result of a merger or acquisition.

Navajo County also fully understands and appreciates that trees cut from non suitable lands can also provide wood and tree products for local markets. However, as identified in the Apache-Sitgreaves National Forests analysis: "Cuts from non suitable lands may be a one-time entry, such as removing encroaching trees from grassland. Subsequent cuts may not be needed if desired conditions can be maintained with fire" (PDEIS p. 441). Therefore, even though the estimated annual wood product volumes potentially available to offer in the first decade from all lands, suitable timberlands and non-suitable lands, could be as high as 730,000 CCF, including non-industrial sizes and species (PDEIS p. 442), it is unrealistic to expect long term sustained contributions from non suitable lands to the availability of steady volumes of industrial forest products.

Navajo County is therefore concerned that the maximum legally allowable sale quantity (ASQ) volume identified in Alternative C may/will prove inadequate if/when the 4FRI contract is executed IN ADDITION to the requirements of the existing industry. Similarly, but at a lesser level, Navajo County is also concerned that the maximum allowable sale quantity (ASQ) volume identified in Alternative C may prove a limiting factor for the continued long term growth of the existing industry, even without considering the 4FRI contract. This concern is increased by the projections that the Alternative C estimated annual ASQ volume will steadily decrease from 268,000 CCF in the first decade down to 178,000 CCF by the fifth decade of the planning cycle (PDEIS p. 439).

Navajo County realizes that the Apache-Sitgreaves National Forests team always has the possibility to initiate an Amendment to its Forest Land Management Plan, but questions whether it would not be more strategic to include in the upcoming Programmatic Final Environmental Impact Statement the analysis and subsequent legal authority for the Responsible Official to meet multiple resources objectives including a maximum allowable sale quantity (ASQ) volume of 450,000 CCF annually.

Requested and Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Navajo County respectfully requests that the current Alternative B in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan be rejected as relates to Forest Products. Specifically, under Alternative B:

1) Not enough acres are logged annually for the implementation of ecological restoration at the required pace;
2) Valuable forest products resources are wasted owing to the unnecessary treatment with fire as a thinning tool of acres that can be treated with mechanical thinning;
3) The maximum allowable sale quantity (ASQ) volume of 122,000 CCF per year provides only approximately half the short term foreseeable requirements of the existing or currently developing industry in the White Mountains.

Navajo County therefore respectfully requests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan at a minimum include the provisions of current Alternative C as relates to Forest Products in order to:

1) Increase the number of acres logged annually in order to accelerate the pace of ecological restoration;
2) Increase the amount of forest byproducts resources by prioritizing wherever possible mechanical thinning treatments over fire as a thinning tool treatments;
3) Increase the maximum allowable sale quantity (ASQ) volume to 268,000 CCF per year to meet the short term foreseeable requirements of the existing and currently developing industry in the White Mountains.

Further, Navajo County respectfully suggests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include the necessary analysis, and the resulting authority for the Responsible Official to SIMULTANEOUSLY implement a restoration program designed to support the existing and currently developing industry in the White Mountains AND the contract(s) expected to result from the second analysis of the Four Forest Restoration Initiative, including a maximum allowable sale quantity (ASQ) volume of 450,000 CCF annually.

MINERAL AND ENERGY RESOURCES MANAGEMENT OBJECTIVES

Navajo County appreciates and supports the analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team on minerals and energy when addressing leasable minerals, locatable minerals, salable minerals and energy.

However, Navajo County believes that in the interest of relevance and conciseness, detailed comments on the Apache-Sitgreaves National Forests mineral and energy resources management plan and the Navajo County Mineral and Energy Resources Management Objectives AS RELATES TO the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, are not warranted due to the facts that:

- There are no known leases on the Apache-Sitgreaves National Forests for the following leasable mineral resources: oil, gas, oil shale, coal, or geothermal (PDEIS p. 462);
- The potential for locatable minerals on the Apache-Sitgreaves National Forests is low because of the existing geology (PDEIS p. 464);
- There are no known oil and gas resources on the Apache-Sitgreaves National Forests (PDEIS p. 465);
- Potential for geothermal development is limited as only small areas are underlain by thermal waters (PDEIS p. 465);
- Wind energy potential is low on the Apache-Sitgreaves National Forests because of sporadic winds and the terrain (PDEIS p. 466);
- The quantities of stone, sand, and gravel removed from the Apache-Sitgreaves National Forests are not expected to differ between all the alternatives (PDEIS p. 491);
- Owing to the fact that most of the firms that extract stone, sand, and gravel exist outside of the economic impact study area, the extraction of minerals from the Apache-Sitgreaves

National Forests is not expected to support employment and income in the local economy (PDEIS p. 491).

Navajo County is satisfied that under all alternatives, decisions regarding mineral activities on the Apache-Sitgreaves National Forests would align with law, regulation, and policy and would be consistent with plan decisions for other resource areas (PDEIS p. 466).

Gap between the Apache-Sitgreaves National Forests land management plan and the Navajo County objectives, plans and policies

Alternative D

Navajo County wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

Navajo County understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and Navajo County acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, Navajo County cannot support an alternative that would result, among others, in the withdrawing from mineral entry in the future of approximately 34% of the Apache-Sitgreaves National (PDEIS p. 467). This alternative is so departed from the White Mountains residents' past, current, and foreseeable future custom, culture and economic well-being needs, and from the Navajo County Mineral and Energy Resources Management Objectives, that it does not warrant any further discussion from the County's perspective.

MOTORIZED TRAVEL AND RECREATION MANAGEMENT OBJECTIVES

Navajo County fully understands and appreciates that an opportunity to comment on the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan is not the appropriate forum to comments on the Draft Environmental Impact Statement for Public Motorized Travel Management Plan, and that no specific management decision will be made and no specific management action will result from the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan. Nonetheless, since the Programmatic Final Environmental Impact Statement will establish the framework for future management decisions and actions such as the Public Motorized Travel Management Plan, it is appropriate for Navajo County to communicate its motorized travel and recreation management objectives, to comments on the Alternatives listed in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan as relates to motorized travel and recreation, and to request that the Responsible Official for the Apache-Sitgreaves National Forests Land Management Plan conduct the statutorily required consistency review, coordination action and conflict resolution between the Apache-Sitgreaves National Forests Land Management Plan and the Navajo County Motorized Travel And Recreation Management Objectives as expressed in the County plans and policies and as contained in this document.

Importance of dispersed motorized travel and recreation for Navajo County

As identified in the Apache-Sitgreaves National Forests analysis, the number of off-highway vehicles (OHVs) used in Arizona has risen dramatically. Almost 500,000 households within the State have at least one OHV, and as many as 30,000 new ATVs and motorcycles are purchased annually (Arizona State Parks, 2009). While the use of OHVs is increasing statewide, OHV recreation is disproportionally important to the economy of rural counties such as Navajo County. A survey conducted in 2003 by the Arizona State Parks identified the recreation impact of OHV recreation on Navajo County as follows:

- 36% of households in Navajo County are OHV users, compared to the state percentage of 21%.
- 7% of all Arizona OHV trip destinations for past 12 months were to Navajo County.
- 744,630 OHV Recreation Days occur annually in Navajo County, of which:
  - 438,831 OHV Recreation Days (59%) are from Navajo County residents;
  - 305,798 OHV days (41%) are from other Arizona residents traveling to Navajo County.
- 73% of Navajo County OHV households are satisfied with their overall OHV experience.

Additionally, the 2003 Arizona State Parks survey identified a major direct annual economic impact of motorized travel and recreation and OHV related annual expenditures in Navajo County as follows:

- OHV Trips - Fuel/Gasoline: $15.3 M
- Lodging/Campgrounds: $4.9 M
- Restaurants/Bars: $8.9 M
- Groceries/Liquor: $11.5 M
- Other (event fees, souvenirs, etc.): $8.1 M

The total OHV recreation trips expenditures in Navajo County total $48.7 M annually, to which must be added expenditures on off-highway vehicles: $25.9 M, tow-vehicles and trailers: $7.4 M, OHV equipment: $32.9 M, for a total OHV expenditures of $114.9 million in Navajo County annually, for a total impact, including the multiplier effect of 128.5 million annually in Navajo County.

The economic impact of an annual OHV expenditure of $114.9 million in Navajo County translates in the injection of $20.1 million in salaries and wages annually, resulting in the sustaining of 1,099 full-time and part-time jobs in Navajo County. In any economy, 1,099 jobs are significant in Navajo County, and in the current economy they are critical.

It must be noted that 76% of the vehicles used in the OHV trips reported in Navajo County on the 2003 Arizona State Parks survey are four wheel drive pickup truck (49%) and sport utility vehicle or Jeep (27%), besides specialized cross-country all-terrain vehicles (ATV) or motocross motorcycles, and that almost 80% of the recreational activities involved some level of dispersed access to the Apache-Sitgreaves National Forests lands:

- Camping: 22%
- Trail riding: 12%

- Hunting: 12%
- Driving back roads: 11%
- Sightseeing: 9%
- Fishing: 8%
- Picnicking: 5%

Circumstantial constraints and challenges for the Navajo County AND the Apache-Sitgreaves National Forests planning efforts

Navajo County understands and appreciates that in December 2005, the Forest Service issued a regulation at the national level, known as the Travel Management Rule (TMR), developed in response to the increasing effects of OHV recreation and the potential for OHV use to adversely affect forest and grassland resources, and that the Apache-Sitgreaves National Forests Land Management Plan team is under direct instructions to implement a public motorized travel management plan that will designate roads, trails, and areas where motorized vehicle use can occur and eliminate most motorized cross-country travel (PDEIS p. 321).

Navajo County further understands and appreciates the fact that irresponsible OHV use can indeed adversely affect forest and grassland resources, and that the popularity of this new mode of recreation may require reasonable regulations in order to maintain a well-considered balance between the enjoyment of the Apache-Sitgreaves National Forests visitors, and the need to preserve and conserve the resources contained in the Apache-Sitgreaves National Forests for the enjoyment of future generations.

Navajo County is therefore NOT advocating for the Apache-Sitgreaves National Forests team to disregard the Travel Management Rule or for the continuation of unregulated and ever increasing motorized cross-country travel and the continued proliferation of unauthorized user-created routes. However, Navajo County is advocating for a SENSIBLE APPROACH to implementing the Travel Management Rule requirements in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, that address the preservation and conservation needs of the resources, comply with the national Travel Management Rule and still allow the Navajo County residents and visitors to recreate sensibly using motorized transportation.

Land suitability analysis

Navajo County understands the difference that exists between motorized cross-country travel, to which approximately 80% of the Apache-Sitgreaves National Forests lands are currently open (PDEIS p. 321) and to which most of the Apache-Sitgreaves National Forests land will be closed (aside from specially designed OHV areas) as the result of the implementation of the national Travel Management Rule (PDEIS p. 329), and motorized on-trail travel, to which 60% to 80% of the Apache-Sitgreaves National Forests lands will remain suitable for future consideration under Alternative B (63%) or Alternative C (80%).

However, Navajo County is concerned by the creeping trend that characterizes public land management in the West in general, in the national forests of the West in particular and

specifically in the Arizona national forests toward an ever increasing limitation of motorized access to and motorized travel in (NOT including cross-country travel) the public lands under management by federal agencies. Specifically, under Alternative B, the Preferred Alternative, only 63% of the Apache-Sitgreaves National Forests lands would remain open for future consideration of new motorized areas and trails. This is a drastic reduction from the current level and the level considered under Alternative C (80%).

Based on the merit of the action alternatives presented, and in further consideration of the monumental change that the elimination of indiscriminate cross-country travel will represent for the culture and custom of the residents of and visitors to the County, Navajo County wants to register its objection to further restrictions on future consideration of new motorized areas and trails in Alternative B.

Navajo County Motorized Travel and Recreation Management Objectives

The Navajo County Motorized Travel and Recreation Management Objectives for the upcoming planning cycle therefore include, among others:

1) Authorize dispersed and safe motorized camping consistent with the reasonable enjoyment of safety, privacy, comfort, custom and culture.
   The authorized dispersed and safe motorized camping allows the parking of motorized vehicles and/or trailers at the distance from the closest legally open road or trail necessary for the dispersed camping site defined as a 300 feet radius around the motorized vehicle or trailer to be safe from traffic, to not be directly exposed to dust or projections caused by traffic and to be distant from adjacent dispersed camping site by at least 300 feet if such is the desire of the camper(s). Access to dispersed camping sites previously used and established in the local custom and culture as demonstrated by tangibles evidences of previous use such as fire pits, improvements, etc. is allowed.

2) Authorize motorized big game retrieval for all species of game meeting the definition of 'big game' in the Arizona Game and Fish Department hunting regulations, or alternatively for all 'big game' animals requiring a hunting tag, with the exception of turkeys.
   The authorized motorized big game retrieval consists of one trip each way from the downed animal to the closest legally open road or trail, regardless of distance, by the most direct route compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

3) Authorize dispersed motorized collection of firewood. The authorized motorized collection of firewood consists of the minimum number of trips each way, as defined based on the transport capacity of the vehicle and the trailer, from the downed tree to the closest legally open road or trail, regardless of distance, in the authorized firewood collection area, by the most direct route compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

4) Authorize dispersed recreational shooting.

The authorized motorized dispersed recreational shooting consists of one trip each way from the natural or artificial obvious terrain feature used as a backstop, such as pit, berth or features similar in their functionality as relates to safe dispersed shooting, to the closest legally open road or trail, regardless of distance but not more than one mile, by the most direct route compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

5) Implement sensible restrictions on indiscriminate cross-country travel in order to preserve and conserve the resources contained in the Apache-Sitgreaves National Forests for the enjoyment of future generations.
Indiscriminate cross-country travel consists of traveling cross-country in a motorized vehicle not intended to reach a specific dispersed camp site, downed animal, downed tree in an authorized firewood collection area, or terrain feature used as a shooting backstop, or not required for an emergency response to a specific justifiable circumstance such as danger to limb or life. Motorized scouting for a site is considered different from reaching a specific site and is not authorized.

6) Retain the suitability for future consideration of new motorized areas and trails of at least 75% of the Apache-Sitgreaves National Forests.

Gap between the Apache-Sitgreaves National Forests land management plan and the Navajo County objectives, plans and policies

Alternative D and A

Based on the above, Navajo County wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

Navajo County understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and Navajo County acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, Navajo County cannot support an alternative that would result, among others, in the closing of approximately 50% of the Apache-Sitgreaves National Forests to future consideration of new motorized areas and trails (PDEIS p. 328). This alternative is so departed from the White Mountains residents' past, current, and foreseeable future custom, culture and economic well-being needs, and from the Navajo County Motorized Travel and Recreation Management Objectives, that it does not warrant any further discussion from the County's perspective.

Also, because the implementation of the national Travel Management Rule is not an option but a requirement for the Apache-Sitgreaves National Forests Responsible Official, Alternative A, the no action alternative that would continue to allow cross-country travel in most area (PDEIS p. 334) is not really a viable alternative. It therefore does not warrant any further discussion from the County's perspective.

Alternative B and C

Because all of the action alternatives would prohibit motorized cross-country travel, except where authorized (PDEIS p. 334), and because the major difference between Alternative B and Alternative C is the amount of land that would remain suitable for future consideration of new motorized areas and trails, Navajo County would like to focus its comments on Alternatives B and C as relates to motorized travel and recreation, on the issue of authorized cross-country travel and suitability for future consideration of new motorized areas and trails.

Authorized cross-country travel

Navajo County believes that the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan misses an opportunity to identify the criteria to be used by the Responsible Official for the upcoming implementation of the national Travel Management Rule, and for the upcoming decision making process regarding the authorization of cross-country travel.

Based on the recent implementation of the national Travel Management Rule in neighboring national forests (Coconino National Forest, Kaibab National Forest), or on the ongoing NEPA processes for the implementation of the national Travel Management Rule (Tonto National Forest, Apache-Sitgreaves National Forests), Navajo County would like to share the following concerns with the Apache-Sitgreaves National Forests Land Management Plan team regarding the lack of specificity in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan as relates to motorized cross-country travel:

- *The travel management plans generally limit the species of big game allowed for motorized big game retrieval to elk, bear and deer only.*
Navajo County believes that the limitation of motorized big game retrieval to only a few species is arbitrary and does not meet the intent of the motorized big game retrieval exemption mechanism. Specifically, other big game species such as, but not limited to, sheep, antelopes, mountain lions, javelina, etc. may in the present and/or in the future be hunted within the confine of the Arizona national forests and should qualify for motorized big game retrieval.

- *The travel management plans generally limit motorized big game retrieval to a one mile corridor off either side of allowable roads.*
Navajo County believes that corridor width is only one of two criteria that must be considered in order to meet the intent of the motorized big game retrieval exemption mechanism. Specifically, the intent of the exemption mechanism is not to define corridor width, but land coverage, therefore the intent can only be met and the analysis can only be completed if the density of the allowed road network is taken into consideration. For example, road networks such as the ones present in the Williams or Tusayan districts of the Kaibab National Forest allow for a one mile corridor off either side of allowable roads to cover the vast majority of the acreage of the districts and therefore do not in effect limit unduly the ability of hunters to retrieve big game with motorized vehicles. Simply said, if roads exist every two miles, a one mile corridor on each side of each road makes a one mile

corridor rule viable. If roads only exist every 10 miles, the same one mile corridor becomes unviable. Therefore, the width of the corridor off either side of allowable roads allowed for motorized big game retrieval should not be constant from one forest to the next or one district to the next, given possible variation in allowed road network density. Navajo County therefore requests that an analysis of land coverage resulting from the combined values of corridor width AND road network density be performed, and that if necessary districts featuring a lower density of roads be managed with either no corridor, or wider corridors as required in order to allow motorized big game retrieval to happen on at least 95% of the hunting areas in each districts.

- *The travel management plans generally limit dispersed camping to a 300 feet corridor off either side of the edge of designated roads or trails.*
  Navajo County believes that the limitation to a 300 feet corridor off either side of the edge of designated roads or trails is inadequate because it restricts access to numerous camping sites in the Arizona national forests that have become deeply ingrained in the custom and culture of the residents of and visitors to the White Mountains. It is widely recognized that the legislators' intent was for the National Environmental Policy Act (NEPA) processes to clearly integrate an assessment of the social impacts of a proposed action or project. Further, it is widely recognized that the Council on Environmental Quality (CEQ) has made unambiguous interpretations of the law in its implementation guidance, to the effect that Forest Service Environmental Impact Statements (EIS) must integrate the impact of proposed actions on the custom and culture of the counties. Navajo County therefore believes that the implementation of the Travel Management Rule would fail to meet the requirements to reasonably accommodate the culture and custom of the residents of and visitors to Navajo County if such historically popular motorized camping sites were artificially outlawed due to their inaccessibility in a new travel management plan. Additionally, Navajo County believes that the 300 feet distance must be managed with flexibility so that the authorized dispersed and safe motorized camping allows the parking of motorized vehicles and/or trailers at the distance from the closest legally open road or trail necessary for the dispersed camping site defined as a 300 feet radius around the motorized vehicle or trailer to be safe from traffic, to not be directly exposed to dust or projections caused by traffic and to be distant from adjacent dispersed camping site by at least 300 feet if such is the desire of the camper(s).

- *The travel management plans generally do not address specifically firewood gathering.*
  Firewood gathered in the Arizona national forests is an important and necessary energy resource to many residents of rural counties. Navajo County therefore recommends that motorized access be allowed for the purpose of firewood gathering in areas specifically designated for motorized firewood gathering, or that the authorized motorized collection of firewood consist of the minimum number of trips each way, as defined based on the transport capacity of the vehicle and the trailer, from the downed tree to the closest legally open road or

trail in the authorized firewood collection area, by the most direct route compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

- *The travel management plans generally do not address specifically dispersed shooting.*
  Yet, the Forest Service in its own analysis states: "Ceasing or limiting off-road vehicle use of the ASNFs would limit or restrict most dispersed recreational shooting to areas along roads open for public use, increasing the risk to human health and safety" (Draft Environmental Assessment Second Knoll Shooting Range p. 27). Navajo County believes that not every recreational shooter will use the developed shooting facilities such as the Second Knoll Shooting Range, especially when such facilities are located more than half an hour to an hour or more travelling distance. Therefore, Navajo County believes that for safety reasons dispersed shooting should be included in the provisions of authorized cross-country travel with the following restrictions: the authorized motorized dispersed recreational shooting consists of one trip each way from the natural or artificial obvious terrain feature used as a backstop, such as pit, berth or terrain feature similar in their functionality as relates to safe dispersed shooting, to the closest legally open road or trail, not more than one mile away, by the most direct route compatible with safety and the preservation of other values such as riparian areas, archeological sites, etc.

<u>Suitability for future consideration of new motorized areas and trails</u>

- *The travel management plans generally do not address the economic impact of implementing the national Travel Management Rule on rural counties.*
  Yet, it is widely recognized that the legislators' intent was for the National Environmental Policy Act (NEPA) processes to clearly integrate an assessment of the economic impacts of a proposed actions or projects. Further, it is widely recognized that the Council on Environmental Quality (CEQ) has made unambiguous interpretations of the law in its implementation guidance to the effect that Forest Service Environmental Impact Statements must integrate the impact of proposed actions on the economic well-being needs of the counties. Navajo County recognizes and understands the importance of protecting the national forests natural resources while providing access and opportunities to the public as well as to those whose livelihoods depend on the national forest lands. Historically, the Navajo County economy and the Navajo County residents have depended heavily on both natural resources-based industries and recreation opportunities. The ability of Navajo County to maintain a robust and diverse economy has been eroded over the last forty years, in large part due to the restrictions of access to and use of the lands under federal management. Navajo County is keenly aware of the detrimental effects caused by national forests rules and management plans restricting business and outdoors recreational opportunities. Additional roadless areas designations and/or roads closure and/or limitation of suitability for future consideration of new motorized areas and trails

and/or indiscriminate cross-country motorized travel restrictions would further decrease the recreational opportunities that Navajo County is able to offer to its residents and visitors, further constraining an already difficult economic outlook.

Requested and Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Navajo County respectfully requests that the current Alternative B in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan be rejected as relates to motorized travel and recreation. Specifically, under Alternative B:

1) Almost 40% of the lands in the Apache-Sitgreaves National Forests would not be suitable for future consideration of new motorized areas and trails.
2) No guidance is included for the upcoming implementation of the national Travel Management Rule and for authorized cross-country travel.

Navajo County therefore respectfully requests that the Selected Alternative for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan at a minimum:

1) Include the provisions of current Alternative C as relates to motorized travel and recreation in order to retain suitability of 80% of the lands of Apache-Sitgreaves National Forests for future consideration of new motorized areas and trails.
2) Include guidance for the upcoming implementation of the national Travel Management Rule and for authorized cross-country travel, in order to simultaneously achieve the required preservation and conservation objectives AND allow reasonable motorized access, travel and recreation for dispersed camping, big game retrieval, firewood collection, dispersed shooting as outlined in the above comments and the Navajo County Motorized Travel and Recreation Management Objectives.

FORESTED ECOSYSTEMS RESTORATION AND CATASTROPHIC WILDFIRE PREVENTION OBJECTIVES

Navajo County appreciates and supports the fact that Alternative B, the Preferred Alternative, includes a clear priority for restoration treatments (PDEIS p. 21), as does Alternative C (PDEIS p. 23), as does Alternative D (PDEIS p. 25), and as also does Alternative A, the no action alternative (PDEIS p. 19), despite the fact that restoration treatments were not emphasized in the 1987 Plan.

Circumstantial constraints and challenges for the Navajo County AND the Apache-Sitgreaves National Forests planning efforts

As previously noted, Navajo County recognizes that the issues of forested ecosystem restoration and forest products management are fundamentally different, and are typically not discussed simultaneously in ecosystems non-departed or little departed from characteristic historical conditions. However, as the Forest Service and Navajo County both generally acknowledge, current conditions in the forested ecosystems and especially in the ponderosa pine and dry or wet

mixed conifers dominated forests of eastern Arizona, are considerably departed from historical conditions and at risk of continued uncharacteristic disturbances such as landscape scale catastrophic crown fires or insect infestations.

Also as previously noted, Navajo County acknowledges and appreciates the efforts endeavored by the Forest Service and particularly the Apache-Sitgreaves National Forests to pioneer larger scale restoration efforts such as the White Mountains Stewardship Project. Navajo County has been and continues to be supportive of the White Mountain Stewardship Project and of its funding, as a practical tool to initiate larger scale treatments and to incentivize the creation of a small diameter trees utilization infrastructure. Simultaneously, Navajo County acknowledges that the model of subsidized restoration treatments is not scalable at landscape scale, as is required to restore the forests of Arizona, for lack of agency funding. As proposed in the Four Forest Restoration Initiative, an initiative that Navajo County was instrumental in creating, fostering and developing, landscape scale forest ecological restoration appears currently feasible only if it is funded by the economically viable utilization of the forested byproducts of restoration by private industry. While it is actually not a novation when it comes to forest products as timber sales have been for centuries an established form of natural resources valuation and have funded the management of the resources, the concept of ecosystem service monetization is relatively new to the discussion of ecological restoration funding, and its full implications are still being tested.

As a consequence, Navajo County proposes that both the County and the Apache-Sitgreaves National Forests operate under very specific circumstantial constraints when it comes to forest restoration, in as much as the forest products industry in Arizona is the funding mechanism for landscape scale restoration in eastern Arizona, which imposes the concept of social acceptability or 'social license' for the re-introduction of appropriate scale industry logging activities at the landscape scale on the Apache-Sitgreaves National Forests.

Navajo County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives

The Navajo County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives for the upcoming planning cycle therefore include, among others:

1) Design and implement landscape-scale, consensus-based, industry-supported, accelerated community protection and forested ecosystems restoration in the 2.4 million acre ponderosa pine and mixed conifer dominated forest of the Mogollon Rim.

2) Develop and sustain the social license required by Southwestern Regional Forester Corbin Newman as a prerequisite to the implementation of industry-supported landscape scale restoration.

3) Create in eastern Arizona the wood supply conditions for private industry investments in a new economically viable small diameter trees and residual biomass utilization infrastructure capable of funding the initial ecological restoration thinning of at least 50,000 acres of ponderosa pine and/or mixed conifer dominated forests annually for the

next 20 years, then the maintenance of the desired future conditions in subsequent decades.

4) Wherever possible, prioritize forest byproducts treatments (mechanical treatments) funded by economically viable utilization, over non byproducts treatments (fire as first entry thinning treatments) in order to create and sustain the wood supply necessary for a new era of forest products industry-based economic growth and employment in eastern Arizona with multiple industrial scale new investments.

5) Subordinate for as long as required in the upcoming planning cycle the scientific silviculture priorities and traditional forest products management methods for sustained yield of harvest volumes on a regulated non declining even-flow basis for the long term, to the overriding priority of implementing as expeditiously as possible landscape scale restoration based primarily on mechanical treatments producing forest products.

6) Subordinate for as long as required in the upcoming planning cycle the scientific silviculture priorities and traditional forest products management methods for uneven age management to the overriding necessity of sustaining the social license required to implement landscape scale restoration expeditiously and in a non conflictual and non-litigious manner, as relates to the protection of old growth and the retention of large trees (upcoming old growth where vegetative structural stages (VSS) 5 and 6 are deficient).

Gap between the Apache-Sitgreaves National Forests land management plan and the Navajo County objectives, plans and policies

As also previously noted, although Navajo County retains and employs many talented individuals at the peak of the knowledge curve in their respective fields, Navajo County does not generally define its role in the public lands management process as a role of science provider or resources technical specialist. Rather, as a body representing the most direct and local expression of democratic government at the individual district or national forest level, Navajo County more generally defines its role at the policy-making level as it relates to public lands management processes.

Further, for clarification, Navajo County wants to emphasize that although it generally supports the use of Best Available Scientific Information (BASI) for management decision, the County does not support the exclusive use of technical sciences to formulate policies or to make strategic decisions that have an important impact on, and therefore must integrate, social sciences in the decision making process. For example, Navajo County believes that while there is no science in the long debated issue of a diameter cap for restoration treatments, that question is nevertheless irrelevant as the issue of large trees retention is not a technical issue but a social issue that cannot be adequately addressed by an exclusively scientific approach.
Therefore, the Navajo County comments as relates to forested ecosystems restoration and catastrophic wildfire prevention will purposefully not address technical issues of silviculture, such as uneven aged composition, regeneration openings, sustained yield timber production, etc. but be focused on what the County believes to be the crux of the successful and timely implementation of the overriding priority of landscape scale scientifically AND socially

acceptable – if admittedly imperfect – ecological restoration and catastrophic wildfire prevention, as follows:

- Social acceptability of proposed treatments;
- Speed of completion of landscape scale restoration;
- Prioritization of treatments.

As previously stated, Navajo County appreciates and supports the realism of the Apache-Sitgreaves National Forests Land Management Plan team when stating: "the alternatives were realistically designed to reflect anticipated budgets and workforce capabilities" (DEIS p. 440). It is therefore not a criticism of the work produced by the Apache-Sitgreaves National Forests Land Management Plan team but a simple reality for Navajo County to observe that, as stated in the Apache-Sitgreaves National Forests' own analysis that: "none of the alternatives would actually treat enough acres fast enough to fully reach desired conditions within the first 5 decades" (DEIS p. 440).

Alternative A

Alternative A uses both mechanical and burning treatments for timber management and to reduce threats to communities from wildfire. On average, approximately 17,000 acres per year would be treated in the forested potential natural vegetation types (PNVTs), primarily in ponderosa pine (PDEIS p. 19). Alternative A would require 42 years to thin all forested overgrown lands (PDEIS p. 444), and would emphasize mechanical treatments around communities and in the Community Forest Intermix Management Area (CFIMA), a subset of the Community Wildfire Protection Plans (CWPPs), many of which have already been treated and now only require follow up maintenance thinning (PDEIS p. 445). Alternative A would use diameter caps for some projects (PDEIS p. 444).

Navajo County believes that the pace and priorities of Alternative A do not meet the ecological needs of the Apache-Sitgreaves National Forests, nor the safety, health and economic well-being needs of the White Mountains residents and visitors, nor the Navajo County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives.

Alternative B

Alternative B uses both mechanical and burning treatments for timber management and to reduce threats to communities from wildfire. The majority of treatments, from 5,000 to 35,000 acres per year, in the forested potential natural vegetation types (PNVTs) would occur in ponderosa pine, although there would be treatments in all forested PNVTs (PDEIS p. 21), and up to 25,000 acres per year of grasslands (primarily the Great Basin and semi-desert types) would be treated to remove encroaching woody species (PDEIS p. 21). However, Alternative B would produce harvest volumes below the long term sustained yield capacity (LTSYC) and would therefore continue to result in overgrown forests that would be more susceptible to uncharacteristic disturbances such as severe wildfire or insect/disease outbreaks (DEIS p. 440), and Alternative B would require 34 years to thin all forested overgrown lands (PDEIS p. 444). Alternative B would not use 16-inch diameter caps (DEIS p. 443). In alternative B cutting would be prioritized in

areas identified in community wildfire protection plans (CWPPs) and priority watersheds which include large acreages of untreated pine and dry mixed conifer forests (PDEIS p. 444).

Navajo County believes that an intelligent implementation of the exception mechanisms identified in the Four Forest Restoration Initiative stakeholders-approved document *Old Growth Protection and Large Tree Retention Strategy* (OGPLTRS) can allow Alternative B to proceed without using 16-inch diameter caps.

However, Navajo County believes that even though the priorities of Alternative B are adequate, the pace of restoration under Alternative B does not meet the ecological needs of the Apache-Sitgreaves National Forests, nor the safety, health and economic well-being needs of the White Mountains residents and visitors, nor the Navajo County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives.

Alternative C

Alternative C primarily uses mechanical treatment methods. The majority of treatments, from 5,500 to 55,000 acres per year, in the forested potential natural vegetation types (PNVTs) would occur in ponderosa pine, although there would be treatments in all forested PNVTs (PDEIS p.23). Under Alternative C the reduction of the most amount of overgrowth backlog would take place in the first 3 decades, and it would continue to remove more backlog in decade 4 until it levels off at decade 5 (DEIS p. 440). Multiple resource objectives would be best met by balancing forest wood volume growth rates with removal of forest wood volumes. This would reduce the risk of uncharacteristic wildfires and other extreme or long-lasting disturbances (DEIS p. 440). Alternatives C would not use 16-inch diameter caps (DEIS p. 443). Alternative C would require 23 years to thin all forested overgrown lands (PDEIS p. 444). Alternative C would emphasize treatments on suitable timberlands, the Community Forest Intermix Management Area, and other lands that can contribute wood products (PDEIS p. 444).

Navajo County believes that an intelligent implementation of the exception mechanisms identified in the Four Forest Restoration Initiative stakeholders-approved document Old Growth Protection and Large Tree Retention Strategy (OGPLTRS) can allow Alternative C to proceed without using 16-inch diameter caps.

Despite the fact that Alternative C does not include significant grassland restoration as currently planned, Navajo County believes that the priorities and pace of restoration under Alternative C provide the closest match to the ecological needs of the Apache-Sitgreaves National Forests, the safety, health and economic well-being needs of the White Mountains residents and visitors, and the Navajo County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives.

Alternative D

Alternative D emphasizes natural processes, primarily burning (planned and unplanned ignitions), with limited mechanical treatments. The majority of treatments, from 7,500 to 50,000 acres per year, in the forested potential natural vegetation types (PNVTs) would occur in ponderosa pine, although there would be emphasis to treat all forested PNVTs (PDEIS p. 25). It

would produce the least wood product volumes, due to its emphasis on using fire as the primary treatment method, as well as a 16-inch diameter cap imposed on these few acres that are mechanically thinned or cut (PDEIS p. 443). Alternative D would require 24 years to thin all forested overgrown lands (PDEIS p. 444). Alternatives D would emphasize mechanical treatments around communities and in the Community Forest Intermix Management Area (CFIMA), a subset of the community wildfire protection plans (CWPPs), many of which have already been treated and now only require follow up maintenance thinning (PDEIS p. 445), and burning treatments in the forested potential natural vegetation types (PNVTs) would occur in ponderosa pine, although there would be emphasis to treat all forested PNVTs.

Navajo County believes that even though the pace of restoration under Alternative D is adequate, the priorities and types of treatment under Alternative D do not meet the ecological needs of the Apache-Sitgreaves National Forests, nor the custom, culture and economic well-being needs of the White Mountains residents and visitors, nor the Navajo County Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives.

Requested and suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Navajo County respectfully requests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include the provisions of Alternative C as relates to forested ecosystems restoration and catastrophic wildfire prevention treatment types, scale, pace and prioritization.

Navajo County further respectfully requests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include the provisions of Alternative B as relates to the restoration of 25,000 acres per year of grasslands (primarily the Great Basin and semi-desert types).

Navajo County also respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include specific guidelines to integrate the provisions of the Four Forest Restoration Initiative stakeholders-approved document Old Growth Protection and Large Tree Retention Strategy (OGPLTRS) to allow treatments to proceed without using 16-inch diameter caps while retaining the social license necessary for an expeditious, non conflictual and non-litigious implementation of landscape scale restoration.

WATERSHEDS RESTORATION OBJECTIVES

Navajo County appreciates and supports the analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team using the Watershed Condition Framework (WCF) and assessment tool when addressing Class 1 (Functioning), Class 2 (Functioning-At-Risk) and Class 3 (Impaired) watersheds, Watershed Condition Framework (WCF) for 6th level Hydrologic Unit Code (HUC) watersheds (sub watersheds) condition, and priority watershed treatment objectives.

While Navajo County agrees with the technical definition provided by the Apache-Sitgreaves National Forests Land Management Plan team: "Watershed condition is the state of the physical and biological characteristics and processes within a watershed that affect the hydrologic and soil functions that support aquatic ecosystems" (PDEIS p. 63), the County also believes that a critical social consequence of the physical and biological characteristics and processes should be added to the definition to read: " … that support aquatic ecosystems AND THE PRODUCTION OF WATER FOR DOWNSTREAM CONSUMPTION."

Critical role of the Mogollon Rim watersheds for Arizona

Uncharacteristic landscape scale forest crown fires in eastern Arizona have a demonstrated negative impact on the conservation and operation of the watersheds in which they take place. In addition to the damages caused to communities and ecosystems by the fires themselves, the most common negative effects on watersheds documented after the Rodeo-Chediski Fire, some areas of the Wallow Fire, and the Schultz Fire, among others, are: uncharacteristic runoffs, catastrophic flooding, accelerated and aggravated soil erosion, streams and reservoirs sedimentation, and long term severe disturbance of the watershed functions.

The Rim Country constitutes a large portion of the watersheds that contribute significantly to the water supply of the metro Arizona and greater Phoenix area. The threat of additional uncharacteristic landscape scale forest crown fires in eastern Arizona, especially on the south slopes of the Mogollon Rim raises serious concern about the conservation and operation of the eastern Arizona watersheds. Additionally, the specific threat to the East Clear Creek watershed poses an existential threat to the town of Payson water supply.

With the growing realization that uncharacteristic landscape scale forest crown fires affect the conservation and operation of the watersheds in which they take place, efforts to protect watersheds have been recently initiated in the Southwest. Several of these efforts focus on the monetization of the ecosystem services provided by the watersheds, and on an attempt to enroll the financial contribution of the downstream beneficiaries of the services (water consumers in this case) to the financial costs of protecting the upstream provider areas and the utility corridors delivering the services (forests, watersheds and water collection and distribution infrastructures at risks of catastrophic fires in this case). Such efforts were pioneered by the Denver Forest to Faucet project in Colorado, or the Santa Fe Municipal Watershed Protection project in New Mexico, among others. In Arizona, with the active contribution of Navajo County, an effort to create the Arizona Watersheds Investment Fund (AWIF) is underway, and in Flagstaff, Ballot Question #405 received electors' approval in November 2012 for the issuance of a $10 million municipal bond to finance the restoration treatments of high threat areas in the Rio de Flag and Lake Mary watersheds to provide greater protection to the community from the impacts of fires and floods.

Three watershed issues are of particular concern to Navajo County:

1) After years of collaborative debate, the model of industry supported restoration is recognized by most stakeholders as the only model that has the economic capability to be

scaled up to landscape scale. However, the sole implementation of this model is insufficient, in as much as industry supported restoration is not applicable in areas where:
   - the merchantable material yield is insufficient for mechanical treatments to be economically viable;
   - access by mechanical harvesting equipment is restricted, such as in steep slopes, high erosion areas, riparian areas, etc.

   Mechanical treatments implemented in low productivity areas, and non-mechanical treatments such as fire as a thinning tool, or hand thinning, are therefore candidates for ecosystem services funding, and systematized ecosystem services monetization is required in order to participate to the overall funding of landscape scale restoration.

2) Conversely, despite the logic of its concept, the keen interest of some stakeholders weary of a potentially dominant role of the wood industry in the relationship with the Forest Service, and the momentum that the monetization of ecosystem services in general - and watershed services in particular - is expected to gain, the monetization of watershed services is unlikely to be able to bear the full cost of restoration estimated to be approximately $1,000 per acre in eastern Arizona, resulting in an estimated total cost of approximately $1 billion for the 1 million acres requiring thinning restoration treatments. Continued education is therefore required to insure simultaneously that:
   - the model of ecosystem services monetization funding is not viewed as an alternative to the model of industry supported funding;
   - the model of industry supported funding is not viewed as an alternative to the model of ecosystem services monetization funding;
   - both models, and possibly others, are viewed as complementary to each other.

3) The restoration of forested ecosystems, ponderosa pine and mixed conifer dominated, in the watersheds of the slopes of the Mogollon Rim in general, and specifically in the East Clear Creek watershed, is an objective priority, after the direct protection of communities and infrastructures, among other areas in eastern Arizona also in need of restoration treatments.

Navajo County Watersheds Restoration Objectives

The Navajo County Watersheds Restoration Objectives for the upcoming planning cycle therefore include, among others:

1) Prioritize restoration and catastrophic fire prevention treatments in the watersheds, after the direct protection of communities and infrastructures, on the slopes of the Mogollon Rim in general, and specifically in the East Clear Creek watersheds, the Verde River watersheds, the Little Colorado River watersheds, the Upper Gila River watersheds and the Upper Salt River watersheds.

2) Develop the Arizona Watersheds Investment Fund (AWIF), and/or similar initiatives in order to fund restoration treatments that cannot be funded by the wood industry utilization of the forest byproducts of restoration in areas where the merchantable material yield is insufficient for mechanical treatments to be economically viable, and/or

access by mechanical harvesting equipment is restricted, such as in steep slopes, high erosion areas, riparian areas, etc.

3) Develop in parallel and a complementary manner all models of watersheds restoration funding such as industry funding, ecosystem services funding, municipal bonds funding, etc.

Gap between the Apache-Sitgreaves National Forests land management plan and the Navajo County objectives, plans and policies

Degrading factors and selection of priority watersheds

Navajo County believes that a clear distinction must be made between degrading factors and the effects of degrading factors, and between natural processes and management effects. The Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan lists as common degrading factors: high road density, poor aquatic habitat conditions, poor fire regime conditions, poor aquatic biota conditions, impaired soil conditions (PDEIS p. 65). High road density and poor fire regime conditions may contribute to watersheds degradation, but impaired soil condition, non-functioning riparian or aquatic areas and sedimentation are not degrading factors but the effects of degrading factors. Navajo County is concerned that a proper causality analysis is required to design effective restoration actions.

Navajo County agrees with the prioritization methodology used to designate watersheds, but is concerned that "the selection of these watersheds is ongoing; and, once selected, will be a major consideration for implementation of projects in some alternatives" (PDEIS p. 64). Considering the fact that according to the Watershed Condition Framework (WCF) only 32% of the Apache-Sitgreaves National Forests 176 6th level Hydrologic Unit Code watersheds (HUCs) are currently considered to be functioning properly (Class 1), and a full 68% are functioning-at-risk (Class 2) (PDEIS p. 65), and considering the critical importance and scarcity of water resources in metro Arizona, Navajo County believes that the watershed treatments prioritization effort must be given a higher priority and potentially larger resources so that the preservation treatments of Class 1 watersheds and the restoration treatments of Class 2 watersheds can be appropriately prioritized. Similarly, Navajo County believes that it is critical to complete expeditiously the analysis of the 50 watersheds potentially affected by the recent Wallow Fire as some - but not all - watersheds were heavily affected, resulting in a probable shift to a lower class (PDEIS p. 65).

Alternative A

Based on the above, Navajo County wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative A, the no action alternative, as relates to watersheds restoration objectives.

Navajo County understands that watersheds restoration was not an objective of actuality when the 1987 Plan was developed. However, Navajo County cannot support an alternative that would result, among others, in the designation of zero priority watersheds to be treated during the

upcoming planning cycle in the Apache-Sitgreaves National Forests (PDEIS p. 67). This alternative is so departed from the White Mountains residents' past, current, and foreseeable future safety, health and economic well-being needs, and from the Navajo County Watersheds Restoration Objectives, that it does not warrant any further discussion from the County's perspective.

Alternative B, C and D

Alternatives B, the Preferred Alternative, and Alternative D concentrate treatments in priority watersheds and allow a better opportunity for restoring or maintaining watersheds across the forests (PDEIS p. 67). Under both Alternatives B and D, 10 watersheds are designated as priority watersheds to be treated in the 15 year planning period (PDEIS p. 67). Alternative C also has an objective to treat 10 priority watersheds, in the potential natural vegetation types (PNVTs) that can contribute to economic sustainability (PDEIS p. 67).

Since it is unclear to Navajo County whether the 10 priority watersheds designated under Alternatives, B, C and D have higher or lower priority levels as compared to each other, the County favors Alternative C as relates to watersheds restoration objectives due to the fact that generally Alternative C meets more closely the various Navajo County Objectives.

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Navajo County respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include a revised analysis differentiating more clearly between degrading factors and the effects of degrading factors on watersheds physical and biological characteristics and processes that affect the hydrologic and soil functions, and between natural processes and management effects, so that a proper causality analysis can improve the design of effective restoration and management actions.

MANAGEMENT AREAS DESIGNATION OBJECTIVES

Navajo County appreciates and supports the analysis performed by the Apache-Sitgreaves National Forests Land Management Plan team for management areas designation when addressing community forest intermix, high use developed recreation areas, energy corridors, the Heber Wild Horse Territory, natural landscape, inventoried roadless areas (which are technically not management areas per se but an administrative designation), recommended and current wilderness areas, the Blue Range Primitive Area, recommended and current research natural areas, wildlife quiet areas and wild and scenic rivers.

Navajo County appreciates and supports the fact that certain characteristics of landscapes, viewscapes or bioscapes are unique and deserve protection, preservation and conservation; that a balanced approach to the enjoyment of all requires a spectrum of management areas extending from high use developed recreation areas to pristine wildernesses; that the enjoyment of future

generations may require protection, preservation and conservation management actions that may constrain current generations; that areas of wildlife undisturbed habitats are necessary for big game and other wildlife to reside with minimal disturbance from motorized vehicle use; that preserving the natural character of the national forest landscape is important to any of these goals; that scientific research in ecosystems characteristics and functions are necessary for the continuous improvement of management decisions; and that designations by Congress and/or Presidential Orders must be implemented.

Navajo County Management Areas Designation Objectives

The Navajo County Management Areas Designation Objectives for the upcoming planning cycle therefore include, among others:

1) Maintain a balanced approach in the designation of management areas including general forest area, community forest intermix, high use developed recreation areas, energy corridors, the Heber Wild Horse Territory, natural landscape, inventoried roadless areas (which are technically not management areas per se but an administrative designation), recommended and current wilderness areas, the Blue Range Primitive Area, recommended and current research natural areas, wildlife quiet areas and wild and scenic rivers, that meets the requirements of management for multiple resource objectives and that meets the safety, health, economic well-being, custom and culture needs of the Navajo County residents and visitors.

2) Prevent the departure from the current condition of balanced management for multiple resource objectives by the designation of inappropriately large management areas of more than 10% of the land area individually or 25% collectively, characterized by the restriction of most multiple resource objectives management or enjoyment activities, such as but not restricted to wilderness areas or primitive areas.

Gap between the Apache-Sitgreaves National Forests land management plan and the Navajo County objectives, plans and policies

Alternative D

Navajo County wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

Navajo County understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and Navajo County acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, Navajo County cannot support an alternative that would result, among others, in the recommendation for the designation of 25% of the Apache-Sitgreaves National Forests as Wilderness Areas (PDEIS p. 26), in addition to the existing 10% of the Apache-Sitgreaves National Forests already managed as a Primitive Area. This alternative is so departed from the White Mountains residents' past, current, and foreseeable future custom, culture, safety and

economic well-being needs, and from the Navajo County Management Areas Designation Objectives, that it does not warrant any further discussion from the County's perspective.

Alternatives B

Navajo County is concerned that 20% of the Apache-Sitgreaves National Forests would be designated as Natural Landscape Areas under Alternative B, the Preferred Alternative. While Navajo County appreciates the need for retaining the natural landscape characteristics of the Arizona national forests, and understands that Natural Landscape Areas provide primitive and semi-primitive recreation opportunities, both non-motorized and motorized, and that management activities for ecological restoration purposes may occur in them (PDEIS p. 608), the County is concerned that such management activities for ecological restoration purposes are limited (PDEIS p. 608), and that such Natural Landscape Areas may therefore remain at high risk of uncharacteristic landscape scale disturbances such as non-natural high severity crown fires or insect infestation.

Conversely, Navajo County realizes that such Natural Landscape Areas may be designated in areas where management activities for ecological restoration purposes may already be limited by physical characteristics such as terrain inaccessibility and/or economic unviability of industry supported mechanical treatments. Navajo County therefore requests further information on the potential location of the proposed 405,000 acres of Natural Landscape Areas under Alternative B.

Alternative C

It is unclear to Navajo County why the 322,000 acres currently designated as Inventoried Roadless Areas (IRAs), which are technically not management areas per se but an administrative designation (Alternative A, the no action alternative), and maintained under Alternative B, the Preferred Alternative, and Alternative D, would be eliminated under Alternative C (PDEIS p. 349). Considering that the 17 Inventoried Roadless Areas (IRAs) on the Apache-Sitgreaves National Forests include rough, broken terrain with steep-sided canyons and are located in low population areas (PDEIS p. 346) and are generally difficultly accessible by motorized vehicles, and considering that the Inventoried Roadless Areas (IRAs) are not management areas but overlay a variety of management areas, including management areas already prohibiting motorized travel, the benefits of this proposed elimination is not immediately obvious to the County.

Navajo County therefore requests further information on the rationale supporting the proposed elimination of the existing 322,000 acres of Inventoried Roadless Areas (IRAs) under Alternative C.

Other management area designations under all action alternatives (Alternatives B, C and D)

Navajo County observes the continued creeping trend toward ever increasing restrictive management area designations in the action alternatives of the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management

Plan, such as increasing wilderness areas from 23,000 acres to 30,000 acres (PDEIS p. 362-363); increasing research natural areas from 2,500 acres to 8,000 acres (PDEIS p. 372); increasing wildlife quiet areas from 59,000 acres to 65,000 acres (PDEIS p. 254); but the County remains satisfied that the acreage increase of these areas is essentially insignificant in relation to the 2.1 million acre total land area of the Apache-Sitgreaves National Forests.

Therefore with the exception of the recommendation for the designation of 25% of the Apache-Sitgreaves National Forests as Wilderness Areas under Alternative D; the request for further information on the potential location of the proposed 405,000 acres of Natural Landscape Areas under Alternative B; and the request for further information on the rationale supporting the proposed elimination of the existing 322,000 acres of Inventoried Roadless Areas (IRAs) under Alternative C; Navajo County supports the management area designations under all action alternatives (Alternatives B, C and D) as follows: Community Forest Intermix: ~61,000 acres (3%); High Use Developed Recreation Area: ~17,000 acres (1%); Energy Corridor: ~2,500 acres (<1%); Wild Horse Territory: ~19,000 acres (1%); Wildlife Quiet Area: ~50,000 acres (2%); Research Natural Area: ~8,000 acres (<1%); Primitive Area: ~200,000 acres (10%); and existing Wilderness: ~23,000 (1%).

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Navajo County respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include specific information on the potential location of the proposed 405,000 acres of Natural Landscape Areas under Alternative B.

Navajo County further respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include information on the rationale supporting the proposed elimination of the existing 322,000 acres of Inventoried Roadless Areas (IRAs) under Alternative C.

PART 3 – PLANNING ISSUES

In its review of the proposed directives revising the forest service handbook (FSH 1909.12) and the forest service manual (FSM 1920) and establishing procedures and responsibilities for implementing the 2012 national forest system land management planning regulation set out at 36 CFR part 219, Navajo County identified issues and shortcomings that are of a nature to affect the Programmatic Draft Environmental Impact Statement For The Apache-Sitgreaves National Forests Land Management Plan.

Navajo County fully understands that the opportunity to comment on the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan is neither an opportunity to comment on the 2012 Planning Rule or its implementation directives, nor an opportunity to comment on a specific proposed management action, such as a travel management plan or a restoration project. Nonetheless, precisely because the

Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan will establish the parameters for all subsequent management actions in the Apache-Sitgreaves National Forests in the upcoming planning cycle, Navajo County believes that it is critical for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan to specifically list, and therefore make part of any subsequent management action, guidelines on how to conduct the monitoring, adaptive management framework, use of best available scientific information to inform the land management planning process, public participation and the role of collaboration, and the objection process.

MONITORING

Navajo County observes that the entire discussion on monitoring strategy, aside from the incidental use of the word 'monitoring' in various other contexts, in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan occupies the whole of 2 lines: "All action alternatives include the same monitoring strategy as identified in chapter 5 of the proposed plan" (PDEIS p. 28) in the 681 page document. Navajo County further observes that the referred Monitoring Strategy in the Apache-Sitgreaves National Forests Land Management Plan is only an approximately 4 page long very brief discussion of monitoring in general terms including a 3 page table of planned monitoring questions, monitoring methods, units of measure, and frequency of measurements (p. 135 – 139) in a 283 page document.

Navajo County is concerned that the scarce mentions of monitoring in the Programmatic Draft Environmental Impact Statement and the Apache-Sitgreaves National Forests Land Management Plan and the very cursory 'Monitoring Strategy' included in the Apache-Sitgreaves National Forests Land Management Plan may reflect an insufficient role for monitoring in the current planning process. This would be in contradiction with the requirement of the 2012 national Planning Rule and its proposed implementation directives.

Navajo County appreciates and supports the important role given to monitoring in the proposed directives. We believe that the content of the proposed directives is adequate, although sometimes very succinct, when addressing 31.1 - Best Available Scientific Information for Monitoring; 31.2 - Public Participation for Monitoring; 32.1 - Developing the Plan Monitoring Program; 32.11 - Selecting Monitoring Questions; 32.12 - Selecting Monitoring Indicators; 32.13 - Content of the Plan Monitoring Program; 32.13a - Select Watershed Conditions; 32.13b - Ecological Conditions for Terrestrial, Riparian and Aquatic Ecosystems, and At Risk Species; 32.13c - Focal Species; 32.13d - Visitor Use, Visitor Satisfaction, and Recreation Objectives; 32.13e - Climate Change and Other Stressors; 32.13f - Desired Conditions and Objectives; 32.13g - Productivity of the Land; 32.2 - Documenting the Plan Monitoring Program; 32.3 - Transitioning to the Plan Monitoring Program; and 32.4 - Changing the Plan Monitoring Program.

Issue

However, Navajo County believes that the proposed directives miss a critical opportunity to address and correct what is arguably the Achilles' heel of many if not most monitoring efforts endeavored by national forests staff. Specifically, however well planned, monitoring is often not implemented or superficially or partially implemented for lack of resources or funding.

Additionally, Navajo County also believes that the proposed directives do not address a critical weakness in the concept of 31.2 - *Public Participation for Monitoring* and specifically in the multi-party monitoring section thereof. Specifically, while Navajo County applauds the Forest Service for including in the proposed directives the concept of public participation in monitoring, and specifically multi-party monitoring, we believe that the Forest Service misses a critical opportunity to build robustness in the system by failing to make the findings of multi-party monitoring boards binding on the Forest Service responsible official.

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Monitoring implementation plan

Navajo County suggests that the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan be expanded to include in very specific terms the requirements for quantitative, qualitative and effectiveness monitoring processes, and the resources allocation and funding necessary to implement them, somewhat akin to the structured quality control plans and budgets common in the business world, to insure that strategic monitoring plans are quantifiably and qualitatively implemented.

Specifically, Navajo County suggests that a very specific monitoring implementation plan and budget be added to the planning and NEPA review process of all projects, be submitted to public review and comments in the Draft Environmental Impact Statements (DEIS), be included in the Records of Decisions (ROD) and be included in the Final Environmental Impact Statements (FEIS) for all projects, so as to insure that monitoring will actually be implemented and funded.

Practically, Navajo County suggests a three tier monitoring plan articulated as follows:

I. Quantitative implementation compliance monitoring.
The purpose of the quantitative implementation compliance monitoring is to answer the question "was the job done?" While generally this assessment is made by the Forest Service contract management team when a contractor is involved, it is suggested that this step becomes the beginning of the process rather than often the end of it.

Specific quantitative implementation compliance monitoring measures can be defined at the planning stage and specific resources requirements can be calculated at the planning stage. The plan must include, disclose and commit the responsible official to provide the resources and budget required.

II. Qualitative implementation compliance monitoring.

The purpose of the qualitative implementation compliance monitoring is to answer the question "was the job done correctly?" The need for qualitative implementation monitoring increases rapidly with the complexity of the actions undertaken. For example, complex forest restoration prescriptions implemented using designation by description (DxD) or designation by prescription (DxP) create substantial room for interpretation by the operators and may result in outcomes substantially different on the ground from those intended by the resources specialists who write the prescriptions. Verifying that implementation complies not only quantitatively but qualitatively with the management decision is especially important when the third tier of monitoring is intended, as effectiveness can only be meaningfully analyzed if the actual treatments outcomes are aligned with the intended outcomes.

Specific qualitative implementation compliance monitoring measures can be defined at the planning stage and specific resources requirements can be calculated at the planning stage. The plan must include, disclose and commit the responsible official to provide the resources and budget required.

III. Effectiveness monitoring.
The purpose of the effectiveness monitoring is to answer the question "do the outcomes of the management decision produce the intended effects?" The need for effectiveness monitoring increases rapidly with the complexity and spatial and temporal scopes of the actions undertaken, especially in projects where cumulative effects analysis assumes a speculative nature owing to the scale and duration of the management action. For example, landscape scale forest restoration over 2 million acres in 20 years, as endeavored in the Four Forest Restoration Initiative, an initiative that Navajo County was instrumental in creating and fostering, is largely unconceivable without the concept of adaptive management, as we know the Forest Service realizes. However, adaptive management is but an empty rhetoric, and any management action and the NEPA analysis thereof is flawed, if robust three tier monitoring as described here above is not implement.

Specific effectiveness monitoring processes can be defined at the planning stage and specific resources requirements can be calculated at the planning stage. The plan must include, disclose and commit the responsible official to provide the resources and budget required.

Navajo County further suggests that in addition to the requirement for three functionally different and complementary tiers, the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan specifically direct the responsible officials to include robust qualitative and effectiveness indicators since easy to collect and process quantitative indicators, such as acres treated, tons of biomass removed or forage utilization, often yield very little meaningful information on the resulting health and resilience of a forest stand/or the health and productivity of a grazing range for example.

Multi-party monitoring

Navajo County suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan be expanded to include in very specific terms the requirements for the responsible officials to be bound by the findings of multi-party monitoring boards.

Navajo County fully appreciates and understands, and has been on the receiving end on numerous occasions of the classic retort that such dispositions would violate the Federal Advisory Committee Act (FACA), or that federal line officials are not authorized to share their decision making authority. However, it is not suggested here that responsible officials surrender their decision making authority to a multi-party monitoring board, but be required to act upon the findings of a multi-party monitoring board in a manner that appropriately addresses the issues raised by the multi-party monitoring board.

Please refer to the *Public Participation and the Role of Collaboration* section of this letter, here under, for further discussion of this substantial issue.

ADAPTIVE MANAGEMENT FRAMEWORK

Navajo County observes that there are only 14 instances of the use of the words 'adaptive management' in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, and that there are a grand total of 17 lines dedicated to the discussion of adaptive management in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan (PDEIS p. 43-44) in the 681 page document. Navajo County further observes that are only 7 instances of the use of the words 'adaptive management' in the Apache-Sitgreaves National Forests Land Management Plan itself, in a 283 page document.

Although there is an approximately 4 page long very brief discussion of monitoring including a 3 page table of planned monitoring questions, monitoring methods, units of measure, and frequency of measurements in the Apache-Sitgreaves National Forests Land Management Plan (p. 135 – 139), Navajo County is concerned that the scarce mentions of monitoring and adaptive management in the Programmatic Draft Environmental Impact Statement and the Apache-Sitgreaves National Forests Land Management Plan may reflect an insufficient role for adaptive management in the current planning process. This would be in contradiction with the requirement of the 2012 national Planning Rule and its proposed implementation directives.

Navajo County appreciates and supports the important role given to the adaptive management framework in the proposed directives. We believe that the key features of adaptive management included in the proposed directives are adequate when addressing: 1. Characterizing explicitly uncertainty and assumptions; 2. Testing assumptions and collecting data using appropriate temporal and spatial scales; 3. Analyzing new information obtained through monitoring and project experience; 4. Learning from feedback between monitoring and decisions; 5. Adapting assumptions and strategies to design better plans and management direction; 6. Making iterative and responsive decisions, evaluating results, and adjusting actions on the basis of what has been

learned; and 7. Creating an open and transparent process that shares learning internally and with the public.

Issue

However, Navajo County believes that the proposed directives miss a critical opportunity to provide substantially clear directives to responsible officials in actually implementing adaptive management, by limiting recommendations to a one and a half page general description of the three phases of planning (assessment, planning, and monitoring) in Title 36, Code of Federal Regulations, part 219 (36 CFR part 219). Specifically, Navajo County acknowledges that the Forest Service includes some measure of action in paragraph d of its third step (monitoring): "*d. Adapt planning and management activities based on learning from the results of the analysis. This adaptation takes the form of modifying assumptions, models, data, and understanding of the system. This knowledge is then used to inform the planning process that leads to adjustment of plans and projects.*" Nonetheless, Navajo County believes that an entire fourth step of what is generally accepted by academia and the professional world as the adaptive management framework is missing from the proposed directive, namely: corrective action in the implementation of a large scale long duration management action.

Navajo County does not fault the Forest Service or the Code of Federal Regulations (36 CFR part 219) for a truncated framework, as many management actions, especially in national forests over the last quarter century have been implemented at a scale and scope sufficiently limited that learning from the execution of a given project could only be applied to other projects, considering the rapid completion of small projects. However, as large, long and extremely complex management actions such as landscape scale forest restoration are endeavored, the likes of the Four Forest Restoration Initiative include more than 2 million acres over 20 years, the need for adaptive and very probably corrective action within the existing project and within the existing NEPA Record of Decision is clearly emerging.

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Navajo County suggests that the three phases of planning (assessment, planning, and monitoring) in Title 36, Code of Federal Regulations, part 219 (36 CFR part 219) designed to support a framework for adaptive management that will facilitate learning and continuous improvement in plans and agency decision making, be augmented in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan with a fourth phase that outlines clearly the responsibility and authority of responsible officials to implement adaptive and if necessary corrective action during the implementation of large scale long duration specific projects as a response to quantitative, qualitative, and effectiveness monitoring of the project.

Navajo County further suggests that in order to avoid the difficulty and complexity of having to complete new and different NEPA analyses prior to implementing adaptive or corrective action during the implementation of a given project, the NEPA analysis of complex, large scale, long term projects be specifically designed from inception to formalize the inclusion of a four phase

adaptive management framework, and to include the possibility for and the responsibility of the line officers to implement a range of actions as necessary to adapt to the emergence of data from effectiveness monitoring, and to meet the purpose and need of the proposed action and preferred alternative.

USE OF BEST AVAILABLE SCIENTIFIC INFORMATION TO INFORM THE LAND MANAGEMENT PLANNING PROCESS

Navajo County appreciates and supports the important role given to the use of best available scientific information to inform the land management planning process in the proposed directives when addressing: 42.1 - Use of Best Available Scientific Information; 42.11 - Integration of the BASI in the Planning Process; 42.11a - Assessment Phase; 42.11b - Planning Phase; 42.11c – Monitoring; 42.12 - Characteristics of Quality Scientific Information; 42.13 - BASI Determination Process; 42.14 - Attributes of the BASI: Uncertainties, Risks, and Assumptions; 42.15 - Sources of Scientific Information; 42.16 - Data Quality; 42.17 - Documentation of the BASI in the Planning Process; 42.17a - Documentation of the BASI in the Assessment Report; 42.17b - Documentation of the BASI in the Plan Decision Document; and 42.2 - Optional Science Reviews in the Land Management Planning Process.

Navajo County further appreciates and supports the important role given to assessing social and economic sustainability and multiple uses in the assessment process when addressing: 13.1 - Assessing Social, Cultural, and Economic Conditions; 13.11 - Social, Cultural, and Economic Context; 13.12 - Important Social, Cultural, and Economic Influences on the Plan Area; 13.13 - How the Plan Area Influences Key Social, Cultural, and Economic Conditions; 13.14 - Sources of Relevant Existing Information for Social, Cultural, and Economic Conditions; 13.2 - Assessing Benefits People Obtain from the NFS Plan Area; 13.3 - Assessing Multiple Uses; 13.31 - Outdoor Recreation; 13.32 – Range; 13.33 – Timber; 13.34 – Watershed; 13.35 - Fish and Wildlife; 13.4 - Assessing Recreation Settings, Opportunities and Access, and Scenic Character; 13.5 - Assessing Renewable and Nonrenewable Energy and Mineral Resources; 13.6 - Assessing Infrastructure; 13.7 - Assessing Areas of Tribal Importance; 13.8 - Assessing Cultural and Historic Resources and Uses; and 13.9 - Assessing Land Status and Ownership, Use, and Access Patterns.

Issue

However, Navajo County believes that the proposed directives miss a critical opportunity to provide substantially clear directives to responsible officials in actually integrating social and economic sustainability and multiple uses, and in integrating social and economic science to the framework of best available scientific information to inform their land management planning process and their management decision making process. Specifically, the assessment of the social, cultural and economic values becomes essentially an exercise in futility if these values are not reflected in the management decisions and do not balance other values.

Navajo County clearly supports robust science and the full integration of ecological, bio diversity, restoration and conservation values in the management process, and Navajo County is

on record for participating and often leading efforts designed to re-introduce to the ecosystems of eastern Arizona natural ecologically sustainable processes such as a frequent surface fire regime. Nevertheless, Navajo County is observing, and when necessary is committed to mitigate, a probably natural temptation by some scientists to develop and implement pure uncompromised and uncompromising science, or the currently accepted state of best science - which often proves to be a temporary state, to the detriment of the enjoyment, custom, culture, health, safety and economic well-being of the people. An example coming to mind to illustrate the above would be the forcible and inflexible implementation of rigid travel management rules in the national forests of Arizona in apparent disregard of not only the characteristics of individual forests, but people's long established custom, culture, need and right to recreate, hunt or procure firewood in these forests. Such rules may make sense when protecting relatively limited acreages of national forests in states comprising mostly private land, but they may create an unreasonable burden when regulating access to upward of 50% of the land in a County. Additionally, blind application of out of context science promulgated at national level may trigger fundamentally unscientific decisions when for example identical travel management rules are being implemented across fundamentally different ecosystems in ponderosa pine dominated forests, pinion juniper dominated forests and wet or dry mixed conifer forests, and across multiple national forests characterized by fundamentally different densities of road systems.

Additionally, Navajo County is also observing, and when necessary is also committed to mitigate, the fact that the same temptation to develop and implement pure uncompromised and uncompromising science as discussed in the above paragraph, also often causes the weakening of the social consensus with stakeholders who would support the implementation of management decisions based on a balanced approach, but are unwilling to support the invasive implementation of a monolithic and intransigent interpretation of science. An example coming to mind to illustrate the above would be the current reluctance of many stakeholders to support the Four Forest Restoration Initiative NEPA DEIS, owing to the science-based decision to cut some of the last remaining old growth or old and large trees in the Southwest in order to create regeneration openings in the name of scientifically driven silviculture. Such decisions may make sense in forests featuring well balanced classes of vegetative structural stages (VSS), but are difficult to accept in forests where older VSS classes (VSS 5 and 6) are in recognized drastic deficit while younger VSS classes (VSS 2, 3 and 4) are overabundant, choke the landscape, and transform it into a ticking fire bomb.

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Navajo County suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan provide clear and unambiguous guidelines to responsible officials to integrate social and economic sustainability and social and economic science into the framework of best available scientific information to inform their land management planning process and their management decision making process.

Specifically, Navajo County suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan instruct responsible officials to implement substantive - even though possibly scientifically imperfect -

management actions that move the ecosystems significantly toward the desired future conditions, when such actions are supported by social consensus, rather than spend years attempting to forcibly impose, and possibly trigger litigation of management actions that may be deemed scientifically more perfect but that do not benefit from the support of the social consensus. In other terms, Navajo County suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan emphasize executing well less than perfect projects now, over developing scientifically perfect projects that are never implemented.

To quote a famous Arizonan: "Extremism in the defense of liberty is no vice" (Barry Goldwater), but Navajo County would like to propose to the Forest Service that extremism in the pursuit of best available scientific information (BASI) may become counterproductive when it results in paralysis by analysis, or inaction by litigation.

PUBLIC PARTICIPATION AND THE ROLE OF COLLABORATION

Navajo County appreciates and supports the important role given to public participation and the role of collaboration in the proposed directives. We believe that the content of the proposed directives is adequate, although sometimes succinct, when addressing 43.02 - Principles of Public Participation; 43.1 - Guidance for Public Participation; 43.11 - Guidance for Collaboration; 43.12 - Developing a Public Participation Strategy; 43.13 - Federal Advisory Committee Act Committees; 43.14 - Engaging a Diverse Set of Stakeholders; 43.15 - Opportunities for American Indians and Alaska Natives; 43.16 - Participation and Coordination with Other Related Planning Efforts; 43.17 - Participation during Phases of Planning; 43.17a - Participation during Assessments; 43.17b - Participation during Development, Revision, or Amendment of Plan Components; 43.17c - Participation during Monitoring Program Development; 43.17d - Participation during Monitoring Evaluation Report Reviews; 43.18 - Substantive Formal Comment; and 43.19 - Participation during Pre-decisional Administrative Review.

Issue

However, Navajo County believes that the proposed directives miss a critical opportunity to provide substantially clear directives to responsible officials on two fundamental and overlapping aspects of public participation and the role of collaboration. Specifically, sustained and meaningful public participation and engagement require that the public's inputs actually influence substantially the decision making process; and sustained meaningful collaboration requires that the products of collaboration be honored by the Forest Service.

Navajo County has acquired a long, ineffective, inefficient, unproductive and oftentimes frustrating experience of responsible officials paying lip service to public participation and to the role of collaboration, and Navajo County believes that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan must refocus the concept of public participation and collaboration away from complying with a

process and managing the problem, toward developing executable products and resolving the problem.

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Navajo County recognizes that under current federal statutes Forest Service line officers are not allowed to share their decision making authority. Nonetheless, Navajo County believes that a statutory monopoly of decision making authority does not necessarily imply an operational monopoly on decision content. Therefore, Navajo County suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan emphasize that while the line officers retain their sole legal ability to make the decision, they are also required by law and regulation "to meet the needs of present and future generations" (Forest Service Mission Statement), as expressed through public participation and collaboration among other channels.

Navajo County further suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan explain how and direct responsible officials to retain their legal decision making authority while allowing the public to participate meaningfully in, influence substantially, and when appropriate alter the content of their decision.

Navajo County further suggests that a special role and a special forum be organized in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, for local elected officials such as County Supervisors to represent the socio economic interests of local populations in the decision making process of the Forest Service responsible officials. As the most local and often the most directly involved elected representatives in the democratic constitutional process, local elected officials can play a tremendously significant role in representing their constituents with line officers and insure that federal employees temporarily assigned to a national forest are given the best possible opportunity to integrate local custom, culture and economic well-being into their decision making process.

OBJECTION PROCESS

Navajo County appreciates the attempt made by the Forest Service to give the public more effective involvement, support their collaborative processes and result in better decision-making (U.S. Forest Service Chief Tom Tidwell) by replacing the previous appeal process with the new pre-decisional administrative review, or objection process, to be applied under federal regulation to all projects and activities that implement land-management plans and that are documented in an environmental assessment or environmental impact statement.

Navajo County realizes that the U.S. Forest Service announced on March 26, 2013 the final rule governing the objection process for projects and activities implementing land-management plans, and that the final rule was published in the Federal Register on March 27, 2013 after a review of

public comments submitted in response to the publication of the proposed rule in 2012. Consequently, Navajo County fully realizes that this comments letter is not an opportunity to comment on the objection process.

Issue

However, Navajo County believes that specific comments on the application of the objection process as implemented in the proposed directives and presumably in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan does provide an opportunity to address concerns about the objection process implementation as follows:

Among other significant differences, a critical difference between the previous appeal process and the new objection process is that an objection must be filed prior to an actual decision being made and published. This creates a potentially difficult situation in as much as there is a possibility, and in certain cases a probability, that several objections may be filed by several different parties, and that the resolutions of these objections may result in a final decision significantly different from the one disclosed in the document published with the notice of a plan subject to objection. Although the list of objections will be public, the timing of filing of potential objections within the objections filing period may result in the requirement for the public to decide to file or abstain to file an objection based on the speculation of what other parties may decide to file, and what the resolutions to such objections might be. Additionally, since a final decision may be influenced significantly by the resolution of an objection that by definition happens only after the comments period is closed, parties may be unwillingly put in a situation where per 51.52 - *Issues Not Based on Previously Submitted Substantive Formal Comments*, their potential objection may be ineligible.

Additionally, Navajo County is concerned that Chapter 50 *Objection Process* in general, paragraph 51.66 - *Reviewing Officer Response to Objections* and paragraph 51.6 - *Resolution of Objections* in particular, and specifically paragraph 51.6 section 4: "The reviewing officer responds to the outstanding issues in the objection; The reviewing officer's response may include instructions to the responsible official as part of the disposition of the objection. The response must be sent to the objecting party(ies) by certified mail, return receipt requested, and posted online" (36 CFR 219.57(b) and sec. 51.64) are focused on the administrative process of disposing of an objection rather than on the substantial process of actually resolving it.

Suggested corrective action for the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan

Navajo County suggests that the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan guide and direct the reviewing officers to exercise careful judgment in their resolution or rejection of objections, in relation to the true material importance of the objections – as opposed to their symbolic or emotional importance, and the potential effect of litigation on the implementation of the project.

In so suggesting, Navajo County wants to emphasize that it does not promote indiscriminate and aberrant acceptance of any and all parties' whims or irrational demands, but a well-considered costs and benefits analysis by Forest Service responsible officials, line officers and reviewing officers of public inputs in their decision process in view of the relative actual significance or lack thereof of such inputs or demands, and the overwhelming urgency to act, even if imperfectly, in some specific cases such as the protection of the Southwest forests against catastrophic landscape scale wildfires.

SUMMARY

Alternative D

Navajo County wants to communicate unambiguously to the Apache-Sitgreaves National Forests its opposition to Alternative D.

Navajo County understands the NEPA requirement for the Apache-Sitgreaves National Forests to analyze several significantly different alternatives, and Navajo County acknowledges and appreciates the existence of constituencies favoring alternatives such as Alternative D. However, Navajo County cannot support an alternative that would result, among others, in:

I. The withdrawing from mineral entry in the future of approximately 34% of the Apache-Sitgreaves National (PDEIS p. 467);
II. The unavailability of any suitable timberland whatsoever in the Apache-Sitgreaves National Forests (PDEIS p. 430);
III. The closing of approximately 50% of the Apache-Sitgreaves National Forests to future consideration of new motorized areas and trails (PDEIS p. 328);
IV. The recommendation for the designation of 25% of the Apache-Sitgreaves National Forests as Wilderness Areas (PDEIS p. 26).

Alternative D is so departed from the White Mountains residents and visitors past, current, and foreseeable future custom, culture and economic well-being needs, and from the Navajo County Mineral and Energy Resources Management Objectives, that it does not warrant any further discussion from the County's perspective.

Selected Alternative

Navajo County believes that neither Alternative B, the Preferred Alternative nor Alternative C, as discussed in the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, are fully satisfactory as they stand.

Navajo County respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include elements from both Alternative B and Alternative C as follows:

- Include the provisions of Alternative B as relates to the restoration treatment of up to 25,000 acres per year of grasslands (primarily the Great Basin and semi-desert types) to remove encroaching woody species.
- Include the provisions of Alternative C as relates to Forest Products in order to:
  - Increase the number of acres logged annually in order to accelerate the pace of ecological restoration;
  - Increase the amount of forest byproducts resources by prioritizing wherever possible mechanical thinning treatments over fire as a thinning tool treatments;
  - Increase the maximum allowable sale quantity (ASQ) volume to 268,000 CCF per year to meet the foreseeable requirements of the existing and currently developing industry in the White Mountains.
- Include the provisions of current Alternative C as relates to motorized travel and recreation in order to retain the suitability of 80% of the lands of the Apache-Sitgreaves National Forests for future consideration of new motorized areas and trails.
- Include the provisions of Alternative C as relates to forested ecosystems restoration and catastrophic wildfire prevention treatment types, scale, pace and prioritization.
- Include the provisions of Alternative C as relates to watersheds restoration objectives.
- Include the provisions of Alternatives B and C as relates to the designation of management areas as follows: Community Forest Intermix: ~61,000 acres (3%); High Use Developed Recreation Area: ~17,000 acres (1%); Energy Corridor: ~2,500 acres (<1%); Wild Horse Territory: ~19,000 acres (1%); Wildlife Quiet Area: ~50,000 acres (2%); Research Natural Area: ~8,000 acres (<1%); Primitive Area: ~200,000 acres (10%); and existing Wilderness: ~23,000 (1%).

In addition, Navajo County respectfully suggests that the Selected Alternative in the Programmatic Final Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan include the following:

- Designate the new proposed Research Natural Areas removed from suitable rangelands for the specific purpose of quantifying and improving the understanding of the rangelands resources ecosystem processes and how they relate to improved management practices.
- Include specific guidelines for a rangelands resources adaptive management plan that provides clear quantitative, qualitative and effectiveness monitoring requirements, and a more balanced approach between the goal of restoration and the goal of economic production, as the need for restoration in rangelands may not carry the same clear and present benefits as restoration in forestlands.
- Alternatively include a specific plan under conventional management to reach full utilization of the available animal unit months and to result in the full economic impact of approximately 120 jobs and $1.3 million in labor income annually.
- Include the necessary analysis, and the resulting authority for the Responsible Official to simultaneously implement a restoration program designed to support the existing and currently developing industry in the White Mountains, and the contract(s) expected to result from the second analysis of the Four Forest Restoration Initiative, including a maximum allowable sale quantity (ASQ) volume of 450,000 CCF annually.
- Include guidance for the upcoming implementation of the national Travel Management Rule and for authorized cross-country travel, in order to simultaneously achieve the required preservation and conservation objectives and allow reasonable motorized access,

travel and recreation for dispersed camping, big game retrieval, firewood collection and dispersed shooting as outlined in the above comments and the Navajo County Motorized Travel and Recreation Management Objectives.

- Include specific guidelines to integrate the provisions of the Four Forest Restoration Initiative stakeholders-approved document *Old Growth Protection and Large Tree Retention Strategy* (OGPLTRS) to allow mechanical treatments to proceed without using 16-inch diameter caps, while retaining the social license necessary for an expeditious, non conflictual and non-litigious implementation of landscape scale restoration.
- Include a comparative analysis of prioritization of the 10 priority watersheds designated under Alternatives, B, C and D, if they are different and have higher or lower priority levels as compared to each other.
- Include a revised analysis differentiating more clearly between degrading factors and the effects of degrading factors on watersheds physical and biological characteristics and processes that affect the hydrologic and soil functions, and between natural processes and management effects, so that a proper causality analysis can improve the design of effective restoration and management actions.
- Include specific information on the potential location of the proposed 405,000 acres of Natural Landscape Areas under Alternative B.
- Include specific information on the rationale supporting the proposed elimination of the existing 322,000 acres of Inventoried Roadless Areas (IRAs) under Alternative C.
- Include in very specific terms the requirements for a quantitative, qualitative and effectiveness monitoring strategy, a very specific monitoring implementation plan, and a specific monitoring budget, required resources allocation and funding, to the planning and NEPA review process of all management projects, to be submitted to public review and comments in the Draft Environmental Impact Statements (DEIS), to be included in the Records of Decisions (ROD) and to be included in the Final Environmental Impact Statements (FEIS) of all management projects, in order to insure that monitoring will actually be implemented and funded.
- Include in very specific terms the requirements for the responsible officials to be bound by the findings of multi-party monitoring boards and to act upon the findings of a multi-party monitoring boards in a manner that appropriately addresses the issues raised by the multi-party monitoring boards.
- Include in very specific terms a fourth phase that outlines clearly the responsibility and authority of responsible officials to implement adaptive and if necessary corrective management action during the implementation of large scale long duration specific projects as a response to the quantitative, qualitative, and effectiveness monitoring of the project, in addition to the three phases of planning (assessment, planning, and monitoring) identified in Title 36, Code of Federal Regulations, part 219 (36 CFR part 219) and designed to support a framework for adaptive management.
- Include clear and unambiguous guidelines to responsible officials to integrate social and economic sustainability and social and economic science into the framework of best available scientific information to inform their land management planning process and their management decision making process.
- Include clear and unambiguous guidelines to responsible officials to implement substantive - even though possibly scientifically imperfect - management actions that move the ecosystems significantly toward the desired future conditions, when such

actions are supported by social consensus, rather than spend years attempting to forcibly impose, and possibly trigger litigation of management actions that may be deemed scientifically more perfect but that do not benefit from the support of the social consensus.

- Include an emphasis on executing well less than perfect projects now, over developing scientifically perfect projects that are never implemented.
- Include an emphasis on allowing the public to participate meaningfully in, influence substantially, and when appropriate alter the content of the decision of responsible officials while they retain their statutory decision making authority.
- Include a special forum for local government elected officials such as County Supervisors to represent the socio economic interests of the local residents in the decision making process of the Forest Service responsible officials.
- Include clear and unambiguous guidelines to reviewing officers to exercise careful judgment in their resolution or rejection of objections, in relation to the true material importance of the objections – as opposed to their symbolic or emotional importance, and the potential effect of litigation on the implementation of the project.

Finally, Navajo County respectfully requests that the Responsible Official conduct:

1) An extensive and exhaustive consistency review between the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan and the County seven sets of natural resources management objectives relevant to these comments, as follows:
   - I. Rangelands Resources Management Objectives
   - II. Forest Products Resources Management Objectives
   - III. Mineral and Energy Resources Management Objectives
   - IV. Motorized Travel and Recreation Management Objectives
   - V. Forested Ecosystems Restoration and Catastrophic Wildfire Prevention Objectives
   - VI. Watersheds Restoration Objectives
   - VII. Management Areas Designation Objectives

2) A comprehensive coordination action between the Apache-Sitgreaves National Forests Land Management Plan and the Navajo County objectives, plans and policies as expressed in the County planning documents, the County Board of Supervisors public record of deliberations and decisions, and the County comments on the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan as expressed in this document.

3) An effective conflict resolution and conflict reduction process aimed NOT AT MANAGING potential discrepancies but at RESOLVING potential discrepancies between the Apache-Sitgreaves National Forests Land Management Plan and the Navajo County objectives, plans and policies, their compatibility and their interrelated impacts, and emphasizing their joint objectives.

Navajo County further requests to be kept informed as the Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan project progresses. Navajo County hereby reserves its right to provide further comments as the process unfolds, and requests that the Forest Service commit to receiving and integrating further comments from Navajo County as provided.

Thank you for your consideration.

Respectfully submitted,

Jonathan M. Nez
Chairman of the Board
Navajo County Board of Supervisors

May 17, 2013
Date

ATTEST

Melissa W. Buckley
Clerk of the Board
Navajo County Board of Supervisors

May 17, 2013
Date

Ltr#0081

From: Shawn Nau
To: FS-ASNF Planning
Cc: BRUCE HAMBLIN
Subject: Comments on Proposed Land Management Plan
Date: Wednesday, May 15, 2013 8:45:42 PM
Attachments: Eagar Comment Letter.pdf

Dear Plan Revision Team:

Please accept the attached comment letter on behalf of our Mayor, Vice Mayor, and Town Council. Please feel free to contact us if you have any questions or concerns.

Thank you,

Shawn Nau, Town Manager | Eagar, Arizona
P.O. Box 1300 | 22 West 2nd Street | Eagar, AZ 85925
Phone: 928.333-4128 x226 | Fax: 333-2875
E-mail: s.nau@eagaraz.gov

Ltr#0081

May 15, 2013

Apache-Sitgreaves National Forests
Plan Revision Team
PO Box 640
30 S. Chiricahua Drive
Springerville, AZ 85938

Subject: Proposed Land Management Plan Comments

Dear Plan Revision Team:

Please accept this correspondence as the Town of Eagar's comments regarding the U.S Department of Agriculture's Proposed Land Management Plan for the Apache-Sitgreaves National Forests and its corresponding Programmatic Draft Environmental Impact Statement. The Town of Eagar is the largest municipality in Apache County, Arizona, and directly borders the Apache-Sitgreaves National Forests. Our most fundamental concern is a simple one: Rather than striking a fair balance between competing land uses, the Proposed Land Management Plan appears to be an attempt to implement a preservation philosophy of land management across as much of the Forest as possible, thereby depriving both local residents and visitors of recreational use. This represents a significant change from the current management of the Forest. We request that the Forest Service amend the Proposed Plan in a manner that returns to a more traditional, balanced approach regarding managed, recreational use of the Forest.

While the Town of Eagar is not opposed to a limited amount of land being set aside as part of the National Wilderness Preservation System as provided for in the Wilderness Act, it does not agree with the current attempt to restrict human activities on vast areas of the Apache-Sitgreaves National Forest. The idea that our National Forests must be protected from human disturbance is nothing more than an unfounded myth. The Forest Service's own documents indicate that some level of physical disturbance to vegetation -- whether it is human caused or natural -- plays an important role in ecosystem health. Depending on their nature, scale, intensity and distribution, some disturbances threaten ecosystem function, whereas others are actually required to sustain ecosystem health.[1] The implementation of various categories of land use restrictions are simply an attempt to keep the people from enjoying publically owned National Forest lands and appear to be an attempt to hide from the public the underlying preservation philosophy weaved into almost every segment of the Proposed Plan. It appears the Apache-Sitgreaves National Forest is attempting to force "wilderness" management on a major portion of the Forest without designating the newly set aside areas as "Wilderness". These restrictive land use categories appear to simply be a way to avoid the intent of Congress when they withheld the authority to create "Wilderness" from the agencies.

I. Proposed Plan Wilderness Management Specific Comments

The following are comments directed to statements made in the Wilderness Specialist Report and DEIS. Since the same exact language is found in the Wilderness Specialist Report and Wilderness analysis section of the DEIS the statements referenced below should be considered to be found in both documents unless it is stated otherwise. Since comments have been solicited for the DEIS, the referenced statements will be identified by where they are found in the DEIS.

[1] http://www.fs.fed.us/rm/grassland-shrubland-desert/research/focal-areas/disturbance/

Comment 1
Statement of Concern (1st paragraph, page 1, Wilderness Specialist Report only):

This report evaluates and discloses the potential environmental consequences to wilderness resources that may result with the adoption of a revised land management plan.

Concern: The Wilderness Specialist Report needs to address the effects on the quality of the human environment, not the effects to the wilderness resources. The National Environmental Policy Act of 1969, Sec. 102 (C) clearly provides that the report must "include in every recommendation or report on proposals for legislation and other Federal actions significantly affecting the quality of the human environment." (Emphasis added.)

Requested Action: Eagar requests that the Forest Service address the effects of designating new areas of "Wilderness" (and the other areas which restrict human activities) on the human environment. This should include how the restriction of human activities due to land use designations will impact functioning ecosystems and the quality of life that will be experienced by future generations.

Comment 2
Statement of Concern (2nd paragraph, page 10, Wilderness Specialist Report only):

In May and June of 2011, the Wallow Fire burned over 438,000 acres on the Apache NF and adjoining ownerships. Fire is considered a natural ecological process. The Wallow Fire affected all or portions of the following wilderness resources….

Concern: This statement clearly recognizes the Wallow Fire impacted many of the existing and potential "wilderness" areas and the Blue Range Primitive Area. However, this tremendous impact on the ecosystems and other resources and values of these areas should not be used as a reason for applying "wilderness" designation to them.

Requested Action: Eagar requests that the Forest Service reconsider evaluating areas within the Wallow fire that were burned with moderate and high intensity as potential "wilderness". These areas should be managed to stop further degradation caused by erosion and be re-vegetated as quickly as possible to prevent the loss of their potential to produce PNVTs that will be beneficial to future generations.

Comment 3
Statement of Concern (1st paragraph, page 11, Wilderness Specialist Report only):

The land management plan provides a programmatic framework that guides site-specific actions but does not authorize, fund, or carryout any project or activity. Because the land management plan does not authorize or mandate any site-specific projects or activities (including ground-disturbing actions) there can be no direct effects.

Concern: Our concern with the above statement is that it fails to recognize that the proposed "wilderness" and other restrictive land use designations, which will limit or restrict many land use activities and associated treatments, will force the use of alternative treatment methods such as fire. The restriction of management options on a large area of the Forest will have a direct effect on many resources that make up the Apache-Sitgreaves National Forest. This will be especially critical on the areas of the Forest where the Wallow Fire burned with a moderate to high intensity. Restricting ecosystem restoration efforts due to "wilderness" or other special land use designations will have a direct effect on the human environment.

Requested Action: Eagar requests that the Forest Service amend this language so as not to mislead the public by giving the impression that the proposed "wilderness" and other restrictive land use designations

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will have no direct effects on the management of the Forest. The Forest Service should clearly disclose the effect that the "wilderness" or other restrictive land use designations can have on their daily lives as well as the environment.

Comment 4
Statement of Concern (1st paragraph, page 13, Wilderness Specialist Report only):

No lands are recommended for wilderness in Alternative A. It does not contribute to meeting the regional need for additional wilderness near population centers or the addition of underrepresented landforms and ecosystem types in wilderness in the Southwestern Region. (Emphasis added.)

Concern: We are concerned with the idea there is a need for additional "wilderness" near population centers. The Wilderness Act does not require that "wilderness" areas are created as a special type of recreation area to be used by the people who live in population centers. Also, there is a concern with the idea that "wilderness should be created to preserve or protect underrepresented land forms and ecosystem types." Nowhere in the Wilderness Act does it direct National Forests to go out and create "wilderness" areas in order to have all land forms and ecosystems in the Region represented in a "Wilderness" area.

Requested Action: Eagar requests that the Forest Service remove the "wilderness" designation for areas where the designation was solely based upon the desire to provide recreation opportunities for a select segment of the population that enjoys hiking in "designated 'wilderness'".

Comment 5
Statement of Concern (3rd paragraph, page 14, Wilderness Specialist Report only):

Most of the areas identified as potential wilderness, but not recommended for wilderness, would be managed under Natural Landscape MA direction, which would help maintain wilderness characteristics. Areas not in the Natural Landscape MA and within IRAs would be managed consistent with the 2001 Roadless Area Conservation Rule (Roadless Rule), which would help maintain roadless characteristics.

Concern: We are concerned that the Forest Service is proposing to develop "pseudo" wilderness areas by managing lands not recommended for "wilderness" designation as though they were designated as such. By not calling these lands "wilderness" but mandating many restrictions on human activities, the preservation concept that is found throughout the Proposed Plan is effectively being implemented before the public realizes what has occurred.

Also by managing Inventoried Roadless Areas (IRAs) under the 2001 Roadless Rule, these areas will not be open for the public to use and enjoy with motorized vehicles. Management under the Roadless Rule, while not as restrictive of human activities as designated "wilderness," will keep many areas from ever being developed and will preserve them for future attempts to designate "wilderness". By placing large areas under restrictive land use designations the issue of "wilderness" designation will never be resolved. It is becoming evident that the Forest Service is leaving the door open for future attempts to designate land as "wilderness" through each of these restrictive land use designations.

Requested Action: Eagar requests that the Forest Service not consider areas for special land use designations as a means of keeping the door open for future designations as "wilderness". The Forest Service should manage the lands that make up the majority of the Forest for the greatest benefit to the public and not give in to the demands of a select few who believe in a highly restrictive preservation oriented philosophy.

Comment 6
Statement of Concern (2nd paragraph, page 352, DEIS):

Wildfire is considered a natural ecological process. Designated wilderness, the Blue Range Primitive Area and presidential additions, and potential wilderness that burned in the 2011 Wallow Fire retain their wilderness character.

Concern: See Comment #2

Requested Action: See Comment #2

Comment 7
Statement of Concern (1st paragraph, page 363, DEIS):

Recommending these additional acres would maintain manageability of the BRPA and would add eight underrepresented ecosystems to wilderness in the Southwestern Region.

Concern: We are concerned that areas are being added to the Blue River Primitive Area to ensure that certain underrepresented ecosystems are contained in one of the areas designated as "wilderness". This is not the intent of the "wilderness" designation. Rather, it is one characteristic that **may** make up the characteristics of a "wilderness". *("...may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.")* [Wilderness Act, Sec. 2, (c), (4)]

Requested Action: Eagar requests that the Forest Service not analyze and consider areas for "wilderness" designation based upon the desire to make sure all ecosystems are represented in an area designated as "wilderness".

Comment 8
Statement of Concern (1st paragraph, page 364, DEIS):

Alternative B would address public desire for more wilderness by recommending 7,074 acres for inclusion in the National Wilderness Preservation System.

Concern: This statement indicates that the public desires more "wilderness". There is no basis for this statement. While there may be a segment of the public that want more lands designated as "wilderness", there is no evidence that the majority desires it. Indeed, it would appear that most of the public simply does not care whether lands are designated "wilderness" or not because they live in an urban setting and have limited use of federal public lands. Also there is a growing segment of the public who do not want more of their federal lands locked up and rendered inaccessible to the average visitor, as is demonstrated by the opposition to the Forest Service's efforts to implement its "Travel Management" initiative. This also has been recently demonstrated in many local town hall meetings.

Requested Action: Eagar requests that the Forest Service simply delete this statement.

Comment 9
Statement of Concern (last paragraph, page 366, DEIS):

Recommended wilderness would provide greater protection for wildlife and wildlife habitats.

Concern: This statement is not true. Designation as "recommended wilderness," while creating the area as pseudo wilderness, will not automatically provide wildlife and wildlife habitat greater protection. A "wilderness" or even a pseudo wilderness area is just as prone to natural occurring events such as fire,

Ltr#0081

disease, weather events and harm from humans as any other area of the Forest. This statement is based upon the idea that a pseudo wilderness designation will limit human activity within the designated area and the idea that any presence or activity of man has negative impacts on wildlife and wildlife habitat. This statement overlooks all of the positive measures taken by humans to create, enhance and preserve wildlife and wildlife habitat, which will be prohibited from occurring on the "recommended wilderness" areas.

Requested Action: Eagar requests that the Forest Service refrain from basing the future management of the Forest on faulty ideas such as the idea that all human activity automatically creates negative impacts on wildlife and wildlife habitat.

Comment 11
Statement of Concern (1st paragraph, page 367, DEIS):

There would be no effects to water availability and use under all alternatives. (Emphasis added.)

Concern: This statement is also not true. **All alternatives that designate areas as "wilderness" or create** restricted land use areas will run the risk of preventing management that could greatly influence the production of clean useable water. **Any designation of "wilderness,"** coupled with any restriction of human access or activities, will most likely reduce the ability to manage the vegetation that occupies the land. The makeup of vegetative communities has a direct effect on the yield of water from an area. (After conversion to grassland in these watersheds, stream discharge increased by an average of 60%. However, in pre and post treatment condition, there was a high correlation between runoff and total precipitation. There was also a season affect that should be considered. March was the critical month in the runoff process. During the rainy period leading up to March, the increase of water yield in the converted watersheds was definite.)[2]

Requested Action: Eagar requests that the Forest Service stop basing future management of the Forest on faulty ideas such as the idea that management of forest by humans has the same effect on water yield as no human management or activity.

Comment 12
Statement of Concern (3rd paragraph, page 367, DEIS):

Recommended wilderness would affect the ability to mechanically treat vegetation to restore ecosystems and reduce fuel loading. The ability to use fire as a vegetation treatment would not be restricted under all alternatives. (Emphasis added.)

Concern: This statement is again not true. **The use of "light-on-the-land" fire fighting tactics due to "wilderness" designation will limit the construction of fire lines and will limit camping and providing for** fighters near the area where the use of fire will occur. All of these restrictions on fire fighting tactics will limit the ability to use fire as a vegetation treatment under certain alternatives.

Requested Action: Eagar requests that the Forest Service amend this language to acknowledge that "wilderness" designation will affect the use of fire as a vegetation treatment tool. Burning within **designated "wilderness" areas carries** with it many more restriction than burning outside of "wilderness". Area access, smoke concerns, camp and helicopter landing areas, use of fire lines to contain and stop the spread of fire are all items that will be impacted by **a "wilderness" designation** and could prevent the treatment of vegetation within a "wilderness" area.

[2] http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=6844

Watershed – Proposed Land Management Plan

II. General Comments

The Plan addresses "wilderness" management in multiple places throughout the draft plan. Since there are numerous references to "wilderness" management, which are often repeated, comments for each reference to "wilderness" management will not be provided. When reading the Proposed Plan it is clear that "wilderness" management and other restrictive land use management targeting human activities are given high priority in the plan.

While it is difficult to add Congressional designated areas to the current National Wilderness Preservation System, the Forest Service is attempting to include as many acres as possible into one of the many special management designations (Wildlife Quite Areas, Natural Landscapes, Research Natural Areas, Recommended Research Natural Areas, Primitive Areas, and Recommended Wilderness) contained in the Proposed Plan to "in effect" create pseudo wilderness. Restricting human activities and protecting the land and forest resources from the public appears to be the one management objective that takes precedence over all other management objectives in this proposed plan. Throughout the Proposed Plan there is an underlying objective to keep as many people as possible from entering and being present on the Forest. This is especially evident for the lands the Forest has identified as not impacted by past human activities.

While there is some mention of the recent Wallow Fire in the Wilderness Specialist Report, the impacts of this very destructive wildfire and its long lasting changes to the ecosystems and "wilderness' characteristics of thousands of acres on the Forest are not mention in the Proposed Plan. The Proposed Plan, while providing a detailed description of the desired conditions for each of the various "wilderness" and related land use designations, fails to mention anything concerning the current condition. When reading the Proposed Plan, the public has no baseline (current conditions) to compare the desired conditions to. The desired conditions all appear to be the panacea of no human presence on the land. This disdain for human activities on National Forest lands has over run the reality of on-the-ground resource management and manifests itself in "Wilderness" Management.

III. Proposed Plan Wilderness Management Specific Comments

The following comments address specific language found in the Proposed Plan that concerns the Town of Eagar. The following comments are provided with the intention of being constructive in nature and are being offered to make the Plan a more accurate document.

Comment 1
Statement of Concern (last paragraph, page 112, Proposed Plan):

Wildlife quiet areas (WQAs) were first identified in the 1980s by the Apache-Sitgreaves NFs in cooperation with the AZGFD to provide relatively undisturbed habitat where big game and other wildlife could reside without disturbance from motorized vehicle use. Other reasons they were set aside include the need to address road-related erosion, provide for more effective use of the habitat, and provide the non-motorized hunter a high quality hunt experience without motorized impacts. These areas are recognized as key wildlife habitats. WQAs may also provide relatively undisturbed habitat and wildlife populations for research purposes.

Concern: Our concern with this statement is it gives the impression that the Forest Service is trying to implement "Travel Management" regulations by disguising their actions as a means to protect wildlife from disturbance caused by motorized vehicle use. The additional need for wildlife quite areas to address road-related erosion is an indication that the purpose of this questionable land use designation is to

implement vehicle use restrictions. As is common with most controversial use restrictions, the emotional response connected with saving poor wildlife is used as a ploy to win over the public for an action that is based more on emotion and policy than actual science.

Requested Action: Eagar requests that the Forest Service use actual data concerning wildlife populations on the Forest and their interaction with motorized vehicles as the basis for restricting motor vehicle use.

Comment 2
Statement of Concern (4th paragraph, page 114, Proposed Plan):

These are generally undeveloped areas that are natural appearing and provide primitive and semiprimitive recreation experiences. Management activities are allowed but are primarily focused on ecosystem restoration. This management area includes most of the inventoried roadless areas (IRAs) that were identified in the 2001 Roadless Area Conservation Rule. IRAs are managed to protect and conserve their roadless character.

Concern: Our concern with this statement is that it gives the impression the Forest Service is trying to implement pseudo wilderness status to large blocks of land on the Forest through the "Natural Landscape" land use designation. Since the land involved *"includes most of the inventoried roadless areas (IRAs) that were identified in the 2001 Roadless Area Conservation Rule"*, it is obvious the agency is attempting to manage these lands as "wilderness" by calling them "Natural Landscapes". Even though the effort to make these roadless areas "wilderness" failed some years ago, this language suggests that Forest Service is attempting to side step the law *("…no Federal lands shall be designated as "wilderness" except as provided for in this Act or by a subsequence Act")* [Wilderness Act, Sec.2, last sentence] and implement "wilderness" management for these lands in the updated Plan.

Requested Action: Eagar requests that the Forest Service not attempt to add "wilderness" areas to the National Wilderness Preservation System or implement "wilderness" management disguised under some other name. The National Forests were created for many purposes including the benefit of the people, not simply to become an ecosystem and wildlife preserve where humans are not welcome.

Comment 3
Statement of Concern (last two paragraph, page 117, Proposed Plan):

The recommended Corduroy RNA is approximately 3,350 acres. It provides a representation of high elevation vegetation types including aspen. This area may help researchers and foresters learn more about the multiple causes of sudden aspen decline (SAD), which is widespread across the Apache-Sitgreaves NFs and other Arizona national forests. SAD results in the death of aspen root systems, thus causing total loss of aspen clones from affected sites.

The recommended Corduroy RNA is approximately 3,350 acres. This area provides a representation of montane willow riparian PNVT, fens, and wetlands unique to the Apache-Sitgreaves NFs; it also provides habitat for several rare aquatic species: California floater, Three Forks springsnail, loach minnow, and Chiricahua leopard frog. This area provides research opportunities and serves as a reference for studying effects of fire, climate change, and other management activities. It may also serve as a research area for control of invasive species while maintaining native species.

Concern: Eagar is concerned that these two proposed Research Natural Areas (RNA's) seem to be very large and represent a broad range of ecosystems. Again due to their rather large size it appears the Forest Service is not only proposing to create areas that will be protected and preserved for research and educational purposes, but is also establishing more acres of pseudo "wilderness" in order to protect these areas from the public. RNA's are not intended to serve as pseudo "wilderness" areas and should only encompass the lands necessary to serve as "baseline reference areas."

RNAs that are representative of common ecosystems in natural condition ***serve as baseline or reference areas****. To help answer resource management questions, the baseline areas of RNAs can be compared with similar ecosystems undergoing silvicultural or other land management prescriptions. In this way, RNAs make an important contribution to ecosystem management.*

Our other concern dealing with these proposed RNA's is the lack of information provided concerning the current condition of these and the other areas being proposed as RNA's. How much of the area being proposed as RNA's in the Proposed Plan was damaged in the Wallow Fire? Were any of the lands being proposed as RNA's severely impacted by high intensity fire or the erosion and flooding that was a result of the Wallow Fire? These and other questions should be answered in a current condition description in the Proposed Plan.

Requested Action: Eagar requests that the Forest Service not attempt to implement "wilderness" management under some other name.

Comment 4
Statement of Concern (3rd and 5th paragraphs, page 123, Proposed Plan):

All wilderness standards and guidelines apply to the entire Blue Range Primitive Area and presidential recommended additions until congressional action has been taken.

The Apache-Sitgreaves NFs continue to manage the Blue Range Primitive Area and the presidential recommended additions as a primitive area until Congress acts on the 1971 wilderness recommendation. Should Congress not designate any portion of this management area as wilderness and release lands from primitive area status, the released lands would be managed as a part of the Natural Landscape Management Area.

Concern: Forty-two years of no action by the Congress should be an indication that perhaps Congress does not feel the Blue Range Primitive Area is worthy of "wilderness" designation, or that "wilderness" is not the best use of the land.

Again the Forest Service has been attempting to manage this area as pseudo "wilderness" in violation of the Wilderness Act for many years. *("…no Federal lands shall be designated as "wilderness areas" except as provided for in this Act or by a subsequent Act.")* [Wilderness Act, Sec. 2, (a)].

Requested Action: Eagar requests that the Forest Service stop attempting to add "wilderness" areas to the National Wilderness Preservation System or implement "wilderness" management disguised under some other name. The situation concerning the Blue Range Primitive Area has occurred for too long and the Forest Service should withdraw its recommendation to designate this area as "wilderness" and move forward managing the lands for the various resources values they contain.

IV. Conclusion

On behalf of the Eagar Town Council, I respectfully requests that the Forest Service meaningfully consider the above comments and recommendations. If you have any questions or concerns regarding the content of this letter, we request that you contact our Manager, Shawn Nau, via e-mail at s.nau@eagaraz.gov.

Sincerely,

Bryce Hamblin
Mayor

Cc: Town Council Members
Eva Wilson, Town Clerk

Ltr#0112

From:	Burge, Vanessa
To:	Doran, Katlyn
Cc:	FS-ASNF Planning; Davalos, Michelle W.-FS; Vanessa Sanchez; Patricia Port; Gurleen Singh; Denise Baker
Subject:	Re: ER 13/0090 No Comment Letter
Date:	Thursday, May 16, 2013 2:29:46 PM
Attachments:	054529 Memo v3.docx 054529 Signed Memo.pdf

Patricia,

The FWS had comments on this ER notice, I sent you the comments this morning and they are attached now.

Vanessa M. Burge (formerly Sanchez)
NEPA/ER/Sikes Act Coordinator
U.S. Fish and Wildlife Service, Region 2
500 Gold SW, Room 6018
Albuquerque, NM 87102
505/248-6420 (p); 505/248-6922 (f)

On Thu, May 16, 2013 at 12:10 PM, Doran, Katlyn <katlyn_doran@ios.doi.gov> wrote:

> Hi All,
>
> Please find attached the No Comment Letter for ER 13/0090- Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests Land Management Plan, Apache, Coconino, Greenlee, and Navajo Counties, AZ.
>
> Thank you,
>
> --
> Katlyn Doran
> Regional Environmental Intern, Region IX
> United States Department of the Interior
> Office of Environmental Policy & Compliance
> 333 Bush Street, Suite 515
> San Francisco, CA 94104
>
> Please consider the environment before printing this email.

Ltr#0112

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Post Office Box 1306
Albuquerque, New Mexico 87103

In Reply Refer To:
FWS/R2/ES-HC/054529

MAY 15 2013

Memorandum

To: Regional Environmental Officer, Office of Environmental Policy and Compliance, San Francisco, California

From: Acting Regional Director, Southwest Region Amy E Nicholopoulos

Subject: Draft Proposed Land Management Plan Implementation, Draft Environmental Impact Statement for the Apache-Sitgreaves National Forests and Navajo, Apache, Greenlee, and Coconino Counties, Arizona (ER 13/90)
(Response Due: May 16, 2013)

By memorandum dated February 15, 2013, Team Leader, Natural Resources Management, Office of Environmental Policy and Compliance, instructed the U.S. Fish and Wildlife Service (Service) to provide comments to your office on the Draft Environmental Impact Statement and Apache-Sitegreaves National Forest Land Management Plan for inclusion in the U.S. Department of the Interior (Department) comments.

Attached are comments from the Service. The Bureau of Land Management provided a no comment email. No other Department agencies provided a response. If you have any questions, or require further assistance, please contact Michelle Shaughnessy, Assistant Regional Director, Ecological Services, Albuquerque, New Mexico, at 505-248-6671.

Attachment

cc: Director, Assistant Fisheries and Habitat Conservation-Branch of Conservation Planning Assistance, Arlington, VA (Attention: Stephanie Nash)
Field Supervisor, Arizona Ecological Services Field Office, Phoenix, AZ

Ltr#0112

Apache-Sitgreaves National Forests
Plan Revision Team
P.O. Box 640
30 South Chiricahua Drive
Springerville, Arizona 85938

Dear Sir:

The Department of the Interior (Department) is providing comments on the U.S. Forest Service's (USFS) Proposed Land Management Plan (Plan) and Programmatic Draft Environmental Impact Statement (DEIS) for the Apache-Sitgreaves National Forests (A-S NFs) in Apache, Coconino, Greenlee, and Navajo Counties, Arizona. We provide both general and specific comments on the Plan as well as general and specific comments on the DEIS.

General Comments on the Plan

For parties not familiar with these types of Land Management Plans, we recommend a discussion of standards or guidelines addressed under forest or range management practices that are used to provide consistency in meeting desired conditions or objectives. For example, the Plan could describe livestock grazing standards that move toward meeting a vegetation type's desired conditions.

Specific Comments on the Plan

Page 22, Water Resources, second paragraph:
The Plan states "Many riparian areas are not in proper functioning condition." We recommend providing the reader with a framework for evaluating proper functioning condition or a threshold that Forest riparian areas must meet. There is no goal or standard in the Plan that mentions proper functioning condition as any sort of threshold or objective.

Page 22-23, Watershed Scale Desired Conditions; Hydrologic Unit Codes:
For clarification, we suggest explaining that 4th, 5th, or 6th level HUCs are equivalent to 8 (Subbasin), 10 (watershed), or 12 digit (Subwatershed) HUC codes, respectively.

Page 23, 6th Level HUC Watershed Scale Desired Conditions:
Please provide the rationale for separating different desired conditions in the 4th and 5th level HUC desired conditions from those in 6th level HUCs. For example, please describe why functioning flood plains are only a desired condition at the 6th level and not at the 5th level. If available, the Plan should identify water-resource objectives to describe measurable planned results to make progress toward or to maintain desired conditions.

Page 23, fifth bullet:
To clarify the statement "Flooding does not disrupt normal stream characteristics (e.g., water transport, sediment, woody material) or alter stream dimensions (e.g., bankfull width, depth, slope, sinuosity)" we recommend stating, "Stream condition is sufficient to withstand large floods of high magnitude without flooding causing disruption of normal stream characteristics

(e.g., water transport, sediment, woody material) or altering stream dimensions (e.g., bankfull width, depth, slope, sinuosity)."

Page 33, Second paragraph reads: "All of the riparian potential natural vegetation types (PNVT), except for the cottonwood-willow riparian forested PNVT are considered departed from reference conditions. Most of this departure has occurred in response to past grazing and water diversions for agriculture. Changes in watershed conditions have resulted in altered canopy cover, including a loss of mature trees and saplings; a change in vegetation species composition, including a shift toward increasing conifer dominance; and a reduction in the amount and composition of herbaceous vegetation. In addition, riparian tree species are not successfully reproducing in many areas. During drought conditions, riparian areas are more susceptible to damage from wildfire than under normal conditions. The montane willow fire regime is severely departed from reference condition. The wetland/cienega and cottonwood-willow fire regimes are moderately departed..."

Comment: Please clarify this paragraph since the first part of the paragraph regarding cottonwood-willow riparian forest fire regimes appears to contradict the last part of the paragraph.

Beginning on page 33, under Desired Conditions for Riparian Areas:
The Plan appears to contain several desired future conditions that might not be attainable, given stream channel evolution and vegetation succession in riparian communities. We discuss these desired future conditions in the following statements:

Page 34, Mid-Scaled Desired Conditions, eighth bullet reads: "Willows (e.g., Bebb, Geyer, Arizona) are reproducing with all age classes present."

Comment: The desired condition of willow species exhibiting reproduction and all age classes being present may not be attainable in all PNVTs. For example, herbaceous riparian systems would not meet this desired condition within the wetland-cienega. Natural stream channel evolution and vegetation succession in some riparian areas can transition woody communities into riparian herbaceous communities. Riparian areas that currently exhibit mature, non-reproducing willows can be replaced by stable sedge-rush dominated communities (Manning and Padgett 1995). As written these communities may not meet desired conditions.

Page 34, Fine-Scaled Desired Conditions, second bullet reads: "Floodplains and wet meadows provide sufficient herbaceous cover (55 percent or greater) and height (9 inches or longer) to trap sediment, mitigate flood energy, and provide wildlife habitat. (This statement is also mentioned as a Guideline on Page 35.)"

Comment: To address this point, we recommend the document clarify that vegetation in these desired conditions should contain native riparian or wetland species. As currently written, a 55-percent herbaceous cover of a non-native upland species, such as Kentucky bluegrass, would meet the desired condition and meet a riparian area guideline. Also, not all riparian areas, specifically those in narrow canyons and/or with steep water surface gradients, have the potential to support the 55 percent or greater threshold of herbaceous cover because the stream flow

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energy is too high (Biggs 1996, O'Hare *et al.* 2010, Riis and Biggs 2010). A stable, narrow stream with a moderate water surface gradient that supports dense alder or willow that does not provide space or conditions for herbaceous vegetation might not meet this desired condition or guideline (Manning and Padgett 1995, Winward 2000).

Third Bullet:
We recommend defining "geologic control feature." Does this include the presence of a functioning flood plain for stream channel stability? Not all riparian areas that are not geologically-confined require coarse or large woody debris to dissipate hydraulic energy. The presence of adequate channel characteristics such as flood plain, channel sinuosity, width and depth ratio, and hydraulic roughness to dissipate flow energy should be emphasized here, rather than emphasizing that woody debris is present to provide riparian-dependent species habitat.

Fourth Bullet:
Not all streams with sand or gravel bottoms require coarse woody debris to dissipate hydraulic energy. Sedge-rush dominated riparian areas (wetland-cienega PNVT) with fine sediment bed substrates dissipate energy through low gradient and high sinuosity, and maintain bank stability by supporting plant species with large root masses. Therefore, this PNVT may not meet the desired conditions because woody riparian plant species that provide coarse and/or large wood are not the potential natural vegetation in these areas.

Page 35:
The section describes Objectives and Guidelines for Riparian Areas. We recommend adding a discussion of Standards for Riparian Areas in this section.

Page 35, Guidelines for Riparian Areas, first bullet:
A fine-scaled desired condition for riparian areas (page 34, second bullet) includes herbaceous cover heights of nine inches or longer. The first guideline calls for herbaceous heights ranging between six to nine inches. As written, this guideline would not necessarily maintain this desired condition as stated on page 34.

Pages 39 through 46, Desired Conditions for Ponderosa Pine, Dry-Mixed Conifer, and Wet-Mixed Conifer:
The PNVTs describe specific desired conditions for several species including Northern goshawk, Abert's squirrel, or Merriam's shrew. However, none of the desired conditions, whether at landscape, mid-, or fine-scale specifically address Mexican spotted owl habitat needs, and it is unclear how the desired conditions for these three PNVTs would provide for Mexican spotted owl nesting/roosting habitat. We recommend discussing the desired conditions, standards, and guidelines favorable for Mexican spotted owl as specifically identified in the DEIS on page 269 in the Plan.

The Plan acknowledges management of Mexican spotted owl habitat in ponderosa pine (pine-oak) and mixed conifer forests, as referenced in the 2012 Mexican Spotted Owl Recovery Plan-First Revision-(Recovery Plan) (Service 2012). However, we recommend including more specific guidelines for management and protection of Mexican spotted owls and other listed species on the Apache-Sitgreaves NF, under the "Guidelines for Forest: All Forested PNVTs"

and "Guidelines for Wildlife and Rare Plants", in order to incorporate section 7(a)(1) recovery responsibilities. The U.S. Fish and Wildlife Service (Service) will continue to work with the A-S NFs on the management approach to both ponderosa pine (pine-oak) and mixed conifer forest to more specifically identify objectives for the Mexican spotted owl within the proposed Plan and to meet recovery objectives for this species on the A-S NFs.

Page 40, Landscape Scale Desired Conditions (10,000 acres or greater), second and third bullets:
The Mexican spotted owl Recovery Plan (Service 2012) does not discuss specific amounts or densities of snags, coarse woody debris, or logs needed as important habitat components; but rather recommends retaining as many as possible without affecting human-safety, forest restoration, and/or owl habitat-enhancement goals. We recommend reviewing the desired conditions for snags, coarse woody debris, and downed log availability to match those in the Mexican spotted owl Recovery Plan, where practicable (see 2012 Mexican Spotted Owl Recovery Plan Table C.2).

Page 41, Guidelines for Forest: Ponderosa Pine:
The Mexican spotted owl Recovery Plan recognizes the importance of high canopy cover for nesting and roosting habitat. We recommend including guidelines for canopy cover and openings that provide habitat conditions for Mexican spotted owls under this bullet.

Page 60 and 61, Guidelines for Wildlife and Rare Plants:
The DEIS acknowledges management of Mexican spotted owl habitat in pine-oak and mixed conifer forests as described in the Recovery Plan. We recommend including more specific direction within the Plan for the Forest Service to continue to work with the FWS toward Mexican spotted owl recovery, including opportunities to incorporate conservation measures pursuant to 7(a)(1)of the Endangered Species Act. Therefore, within the Plan, we recommend including such language under the "Standards and Guidelines" for Wildlife as well as within desired condition objectives.

Page 94, Standards for Forest Products:
We recommend adding additional information to include conditions on forest product harvest permits that ensure the needs of aquatic and riparian resources, watershed protection, and listed-species habitat needs.

Page 96, Objectives for Livestock Grazing:
The Plan proposes "as opportunities arise, the Forest Service, [shall] establish at least one forage reserve on each ranger district." With exception to NF lands not currently within a grazing allotment and the Black River Conservation Area, please provide some examples of lands that are suitable for grazing but not currently available and could be used as a forage reserve. It is unclear if forage reserves would be limited only to vacant allotments or pastures or if areas currently excluded from livestock for protection of riparian and/or listed species habitat would be considered as a potential forage reserve.

A forage reserve is defined as an area not normally allocated for livestock grazing but that may be used when an authorized pasture or allotment is unavailable (page 147). Lands not currently within a grazing allotment are not considered suitable for grazing according to Table 5 on page

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127. Please review to ensure the definition and information in Table 5 and on page 147 do not contradict each other.

Page 96, Standards for Livestock Grazing:
If available, we recommend including livestock grazing standards that identify how desired conditions for grasslands and other PNVTs would be met. For example, on page 56, Landscape-Scale Desired conditions, the Plan describes that ground cover is 35 percent or greater and herbaceous vegetation height ranges from 10 to 31 inches, and on page 57, Fine-Scaled Desired Conditions, the Plan describes that adequate hiding cover (10 to 18 inches) be developed for antelope fawns. In contrast, there are no specific standards under Livestock Grazing that relate to meeting these identified desired conditions.

Page 96, Guidelines for Livestock Grazing, eighth bullet reads: "Efforts (e.g., temporary fencing, increased herding, herding dogs) should be made to prevent transfer of disease from domestic sheep and goats to bighorn sheep wherever bighorn sheep occur. Permit conversions to domestic sheep or goats should not be allowed in areas inhabited by bighorn sheep."

Comment: We recommend the Plan adopt the recommendation that 9- to 14-mile wide buffer zones be established between bighorn sheep habitat and domestic sheep grazing (Western Association of Fish and Wildlife Agencies 2010). Therefore, there would be no need to include temporary fencing, herding or herding dogs to prevent domestic sheep from interacting with bighorn sheep.

Page 96, Guidelines for Livestock Grazing, ninth bullet reads: "To minimize potential resource impacts from livestock, salt or nutritional supplements should not be placed within a quarter of a mile of any riparian area or water source. Salt or nutritional supplements should also be located to minimize herbivory impacts to aspen clones."

Comment: We recommend placing salt or supplement blocks near water sources such as troughs to coach livestock to use the troughs instead of nearby riparian areas or wetlands.

Page 101, Guidelines for Special Uses, 11th bullet this page reads: "Large group and recreation event special uses should not be authorized within wilderness, recommended wilderness, primitive area, wildlife quiet areas, eligible "wild" river corridors, Phelps Cabin Botanical Area, Phelps Cabin Research Natural Area, or recommended research natural areas to protect the unique character of these areas."

Comment: We recommend excluding or limiting riparian and wetlands areas as sites authorized for large group and recreational special use events, where practicable.

Page 136, Table 11. Land Management Plan Monitoring Questions
The Plan states, "Are riparian areas attaining and/or moving toward proper functioning condition?"

Comment: Please review the role of the PFC assessment as a standard or a guideline under Riparian Areas (pages 34 to 35). Since the PFC assessment method is not intended to be used as

a monitoring tool, please clarify how information on changes in ground cover, species composition, bank stability, and water quality will be used.

General Comments on the DEIS
We note the page numbers on the .pdf version of the DEIS do not match the page numbers provided in the copy mailed to the public. This letter refers to page numbers as defined in the hard copy mailed to the public.

Specific Comments on the DEIS

Page 76, Mechanical Treatments:
The adverse effects to water quality described in paragraphs two and three would be expected to be mitigated for by Best Management Practices (BMPs) mentioned in paragraph one, as stated in the first complete sentence on this page. We recommend adding language regarding the use of BMPs to paragraphs two and three.

Pages 76 and 77, Burning Treatments:
We would expect any prescribed fires performed by the A-S NFs would not result in high-severity burns given the description of its effects to soils and vegetation provided in paragraph three (page 77). If prescribed fires are managed to meet specific prescriptions, high burn severity should not occur.

Page 82, Riparian Subheading:
The DEIS states Proper Functioning Condition (PFC) has been used to determine the condition of riparian areas. However, the draft Plan does not state that PFC is used to assess riparian condition. We recommend clarifying the management standard for riparian area assessments and condition in the Plan and the DEIS.

Page 83, last paragraph:
The DEIS states the desired condition of riparian areas and wetlands is to be in proper functioning condition. Many of the important attributes and processes needed by a riparian area to function properly are generally discussed in the desired conditions but not specifically stated in the Proposed Plan. We recommend reviewing for consistency between the DEIS and Plan in discussing desired conditions of riparian areas and wetlands.

Page 84, Riparian Areas along Streams:
The previous page states the Wallow Fire effects to the riparian areas within its borders varied from little change to severe degradation. Table 15 presents data from a 2008 Forest Service report, pre-Wallow Fire, and states that 24 percent and 68 percent of the riparian areas are in proper functioning condition or functioning-at-risk, respectively. The previous page states that the Forest staff is still evaluating the effects of the Wallow Fire on riparian areas. Please clarify whether the information in Table 15 is current or is only to be used as a guideline.

Page 84, Second paragraph:
The DEIS discusses the resiliency of riparian systems; however, on page 95 (under Fisheries) the DEIS states most streams and riparian areas have experienced considerable degradation and their

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ability to recover and improve has been affected, by ongoing and new impacts. This issue was not discussed under any standards or guidelines for management activities in the Proposed Plan.

Whether and when "riparian areas can regain their equilibrium within a few years" as stated in the DEIS, depends upon many factors including the quality of the area prior to the initiation of recovery. Deeply incised streams, which have resulted from the Wallow Fire, will not reach equilibrium within a few years. This statement in the DEIS is contradicted later in the same paragraph where it states that it may take decades for systems to function properly if large wood is not available. We recommend review of this language, and the DEIS identify the concept of regaining equilibrium; whether it involves the area regaining stability or proper functioning condition.

Page 86, Environmental Consequences of the Alternatives:
The best management practices, streamside management zones, and wildlife mitigation that would be implemented under timber harvesting and forest restoration could also be included for livestock grazing.

Page 86, Forest Restoration Activities:
Planned burning treatments in riparian areas are discussed under alternatives B and D. Guidelines for Riparian Areas, on page 35 of the proposed Plan, state that planned ignitions which may degrade riparian areas should be avoided. We recommend reviewing these two statements to ensure there is no contradiction.

Page 87, Mechanical, first paragraph:
On page 87, it reads: "Since all alternatives would have timber harvest and restoration treatment activities, there is the potential to adversely affect riparian habitats. Haul routes, skid trails, log landings, and stream crossings used to remove trees may impact riparian vegetation, soils, and stream function. In addition to erosion and sedimentation within the riparian area, these impacts can cause an effective extension of the channel network through the roads and skid trails connecting upstream disturbances to streams and can often overload the sediment filtering and storage ability of riparian areas."

Comment: This appears to contradict the description on page 86 which reads: "In all alternatives, environmental consequences within the foreseeable future to riparian areas and wetland ecosystems resulting from management activities (timber harvesting/forest restoration) are expected to be minor." We recommend reviewing the discussion of timber harvest and restoration treatment. These effects appear to be more severe than the minor consequences as described on page 86.

Page 87, Burning:
The DEIS described the adverse effects of wildfire to watersheds and riparian areas in the section on burning, and the Guidelines for Riparian Areas on page 35 of the Proposed Forest Plan state that planned ignitions in riparian areas should be avoided. In contrast, the last paragraph on this page discusses the beneficial effects of prescribed fire in riparian areas. We recommend reviewing this paragraph to ensure there is no discrepancy.

Page 88, Motorized Routes
We recommend adding additional detail on the effects of motorized routes in this section. For example, the Forest could include information on how many road crossings on perennial streams are bridged, culverted, or are low-water crossings. Each of these could be discussed in the DEIS.

Page 89, second paragraph.
The DEIS states riparian areas produce very large amounts of forage, and provide water and cooler temperatures. We recommend explaining how forest restoration that opens canopies will be expected to produce additional forage to a degree that would decrease livestock use in riparian areas.

Page 90, first paragraph:
The DEIS states properly functioning wetlands are imperative in extreme drought. Therefore, could requiring riparian areas to be managed for proper functioning condition be a standard in the Forest Plan to ensure the Plan is consistent with the DEIS?

Page 94, Native Fish Population, Distribution, and Habitat
All of the status information presented in this section is dated prior to the Wallow Fire. We recommend ensuring that these values are updated, or a statement be added clarifying the information was collected prior to the 2011 Wallow Fire.

Page 102, Gila trout
Please provide any updated information regarding Raspberry Creek and its watershed. In particular, information on watershed conditions after the Wallow Fire would be useful.

Page 104, Loach Minnow, third paragraph
Although loach minnow have not been detected recently in Eagle Creek or the Three Forks area, the Service concluded these populations likely persist, albeit at low numbers. We also recommend adding the following language: "Loach minnow were translocated in Hot Springs and Redfield canyons (Cochise and Graham counties) and Fossil Creek (Gila County) in 2007; and Bonita Creek (Graham County) in 2008. Insufficient time has elapsed to determine whether these restoration projects will be successful."

Page 106, Spikedace, third paragraph
We recommend re-writing this paragraph to read as follows: "The spikedace is native to the Gila River drainage, including the San Francisco drainage, except in the extreme headwaters. The spikedace currently persists only in the upper Verde River, Eagle Creek, and Aravaipa Creek in Arizona and portions of the Gila River in New Mexico. However, spikedace have not been collected in the Verde River or Eagle Creek in recent years. In New Mexico, the species is generally absent from the Gila River from the confluence of the West and East Forks downstream to the mouth of Turkey Creek, and occurs irregularly downstream from the mouth of the Middle Box of the Gila River to the Arizona-New Mexico state line. In addition, spikedace were translocated in Hot Springs and Redfield canyons (Cochise and Graham counties), Fossil Creek (Gila County) in 2007, Bonita Creek (Graham County) and the San

Francisco River (Catron County) in 2008. Insufficient time has elapsed to determine whether these restoration projects will be successful."

Page 227, Table 66, PNVT Coarse and Fine Filters
On page 109, the DEIS states that coarse filter plan decisions would provide viability for low risk species and that fine filter plan decisions are for species at some viability risk. However, it does not appear that Mexican spotted owls are considered species with viability risk in any of the four forest PNVTs. We recommend including fine filter habitat elements to reduce viability risk for Mexican spotted owls.

Page 228, Table 66 (continued), Riparian PNVTs
We recommend including Mexican spotted owl as Associated Forest Planning Species for riparian forests. The Mexican spotted owl Recovery Plan recognizes riparian forests located outside of established protected activity centers as Recovery Habitat (Service 2012). These riparian habitats are used by owls for foraging, roosting, daily movements, dispersal, and potentially for nesting. Riparian Recovery Habitat is considered key habitat for owl recovery. Other riparian habitats may not be regularly used by owls but serve as important linkages between Recovery Habitats or as non-breeding-season habitats.

Page 232, Habitat Ecological Indicators (EI), Riparian EI
The wetland/cienega riparian area PNVT is not included as a riparian EI. Since numerous Forest Planning Species with some viability risk are associated with this PNVT (Table 66), we recommend including the wetland/cienega PNVT as a Riparian EI not only for its value to the species listed in Table 66, but for its importance in providing stable aquatic habitats.

Page 240, Mexican spotted owl: Threatened with Critical Habitat
The DEIS mentions three forested riparian and the Madrean pine-oak woodland PNVTs (Table 72) provide habitat for Mexican spotted owls. However, Table 66 does not include the Mexican spotted owl as Forest Planning Species in either of these two PNVTs. For consistency, we recommend including Mexican spotted owls in these additional PNVTs in Table 66; or provide the rationale for omitting them.

Page 247, Table 74 Indicator habitat for PNVTs for MSO
The third column refers to remaining currently suitable northern goshawk habitat. This should be MSO habitat.

Since 33 percent of the indicator habitats (dry and wet mixed conifer) experienced total canopy loss, we would recommend the other PNVTs identified as Mexican spotted owl habitat be included MSO Habitat Indicator PNVTs.

Page 299, Table 103 Management effect compared by alternative for each of the [Management Indicator Species] MIS indicator habitats.
Please review the table-rating description which does not match with the values in the table. The table uses letters for ratings, and the description below the table uses numbers.

We appreciate the opportunity to review the Plan and DEIS. Our Arizona Ecological Services Field Office is available to discuss these comments with the Apache-Sitgreaves NFs and to develop means to incorporate further guidance from species recovery plans, conservation agreements, and other strategies into the Proposed Land Management Plan. If you have any questions or need additional information, please contact Steve Spangle, Supervisor, Arizona Ecological Services Field Office, Phoenix, Arizona, at 602-242-0210.

Sincerely,

Patricia Sanderson Port
Regional Environmental Officer

Ltr#0112

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Biggs, B.J.F. 1996. Hydraulic habitat of plants in streams. Regulated Rivers; Research and Management 12:131-144.

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February 14, 2013

Mr. James E. Zornes
Apache-Sitgreaves National Forest
Plan Revision Team
P.O. Box 640
30 S. Chiricahua Dr.
Springerville, AZ 85938

Dear James:

We have reviewed the USDA "Proposed Land Management Plan for the Apache-Sitgreaves National Forest" and the "Programmatic Draft Environmental Impact Statement for the Apache-Sitgreaves National Forest Land Management Plan."

Please note that on page 402 of the PDEIS for the A-S NFLMP in Table 137 you list Protohistoric (Apache) occupation. This should include Yavapai as well. The Yavapai should also be considered in prehistoric.

Sincerely,

Linda Ogo
Culture Research Director

LO:nlh:0312

530 E. MERRITT PRESCOTT, AZ 86301-2038 Phone 928-445-8790 FAX 928-778-9445

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MR. JAMES E. ZORNES
APACHE-SITGREAVES NATIONAL FOREST
PLAN REVISION TEAM
P.O. BOX 640
30 S. CHIRICAHUA DR.
SPRINGERVILLE, AZ 85938

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Appendix I. Crosswalk between Apache-Sitgreaves 1987 Forest Plan (as amended) and the Revised Forest Plan

The intent of this appendix is to provide greater transparency on how existing plan direction (e.g., standards and guidelines) was incorporated into the revised plan. The following table is not an exhaustive account of all plan direction, but rather highlights those issues that drove the plan revision process (e.g., priority needs for change) and or were critical to Appendix A (response to comments). The revised plan is strategic in nature, so many of the standards and guidelines in the current plan were reframed as desired conditions or guidelines in the revised plan. In other instances, existing plan guidance was modified or removed because it reiterated other law, regulation, or policy.

Acronyms and Abbreviations Used in this Appendix

ADOT	Arizona Department of Transportation
ADWR	Arizona Department of Water Resources
AQRV	Air Quality Related Values
ASNF	Apache-Sitgreaves National Forests
ASQ	Allowable Sale Quantity
AZGFD	Arizona Game and Fish Department
BA	Basal Area
BF	Board Feet
BMP	Best Management Practice
CCF	Hundred Cubic Feet
CFR	Code of Federal Regulations
CWD	Coarse Woody Debris
DBH	Diameter at Breast Height
DC	Desired Conditions
DEIS	Draft Environmental Impact Statement
DMC	Dry Mixed Conifer
DRC	Diameter at Root Collar
EIS	Environmental Impact Statement
EMA	Ecosystem Management Area
EO	Executive Order
ESA	Endangered Species Act
FSH	Forest Service Handbook

FSM	Forest Service Manual
FWS	Fish and Wildlife Service
GD	Guideline
GSL	Growing Stock Level
HUC	Hydrologic Unit Code
IRM	Integrated Resource Management
LMP	Land Management Plan
LTSYC	Long-Term Sustained Yield Capacity
MA	Management Area
MBF	Thousand Board Feet
MBTA	Migratory Bird Treaty Act
MCF	Thousand Cubic Feet
MIS	Management Indicator Species
MMBF	Million Board Feet
MOU	Memorandum of Understanding
MPO	Madrean Pine-Oak
MRNG	Management Recommendations for Northern Goshawk (RM GTR-217)
MSO	Mexican Spotted Owl
MSO RP	Mexican Spotted Owl Recovery Plan
NF	National Forest
NFMA	National Forest Management Act
NFS	National Forest System
NOGO	Northern Goshawk
NRHP	National Register of Historic Places
O&M	Operation and Maintenance
OBJ	Objective
OHV	Off-Highway Vehicle
ORV	Off-Road Vehicle
PAC	Protected Activity Center
PFA	Post-fledgling Family Area
PJ	Piñon-Juniper
PL	Public Law
PNVT	Potential Natural Vegetation Type
PP	Ponderosa Pine

PSD	Prevention of Significant Deterioration
RATM	Resource Access/Travel Management
RNA	Research Natural Area
ROS	Recreation Opportunity Spectrum
RU	Recovery Unit
SCS	Soil Conservation Service (Now Natural Resources Conservation Service)
SDWA	Safe Drinking Water Act
SF	Spruce-Fir
ST	Standard
T&E	Threatened and Endangered [species]
TCP	Traditional Cultural Property
TES	Threatened, Endangered, and Sensitive Species, Terrestrial Ecosystem Survey
TESH, TE Handbook, TES Handbook	Terrestrial Ecosystem Survey Handbook (USDA-FS 1986)
USC	United States Code
VSS	Vegetative Structural Stages
WMC	Wet Mixed Conifer
WQA	Wildlife Quiet Area
WUI	Wildland-Urban Interface
WURR	Water Uses, Requirements, and Rights

Air, Soil, Water, and Riparian

Resource	1987 Plan Content (as amended) Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
Air, Soil, Water, & Riparian	Goals (P 16): Maintain, or where needed, enhance soil productivity and watershed condition. Put all areas in a satisfactory watershed condition by 2020. Maintain a high quality sustained water yield for Forest users and others. Identify and protect wetlands and floodplains."	**DC Overall Ecosystem Health** - Ecological components (e.g., soil, vegetation, water) are resilient to disturbances including human activities, and natural ecological disturbances (e.g., climate variability, fire, drought, wind, insects, disease, pathogens). **OBJ Overall Ecosystem Health**- During the planning period, improve the condition class on at least 10 priority 6th level HUC watersheds by removing or mitigating degrading factors [1]. **DC Soil -** Soil condition rating is satisfactory [2]. **DC Soil -** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soil -** Soil loss rates do not exceed tolerance soil loss rates [3]. **GD Soil -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD Soil** Coarse woody debris retention and/or creation should be used as needed to help retain long term soil productivity. **OBJ Soil** Annually, enhance or restore an average of 350 acres within priority 6th level HUC watersheds, including treating the causes of State and federally designated impaired or threatened waters to improve watershed condition and water quality. **DC Water Resources -** Water quality, stream channel stability, and aquatic habitats retain their inherent resilience to natural and other disturbances. **DC Water Resources -** Water resources maintain the capability to respond and adjust to disturbances without long term adverse changes. **DC Water Resources -** Vegetation and soil conditions above the floodplain protect downstream water quality, quantity, and aquatic habitat. **DC Water Resources -** Streamflows provide connectivity among fish populations and provide unobstructed routes critical for fulfilling needs	A new national protocol, the Watershed Condition Framework, is now in place setting objectives for watershed condition on all lands. Multiple objectives, desired conditions and guidelines support 87 Plan Goal. Included here are most relevant to original goal. FSM 2520, 2530, 2540, 2550

Resource	1987 Plan Content (as amended) Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
		of aquatic, riparian dependent, and many upland species of plants and animals. **DC Water Resources -** Water quantity meets the needs for forest administration and authorized activities (e.g., livestock grazing, recreation, firefighting, domestic use, road maintenance). **DC Water Resources -** Water quality meets or exceeds Arizona State standards or Environmental Protection Agency water quality standards for designated uses. **DC Water Resources -** Water quality meets the needs of desirable aquatic species such as the California floater, northern and Chiricahua leopard frog, and invertebrates that support fish populations. **ST Water Resources -** Consistent with existing water rights, water diversions or obstructions shall at all times allow sufficient water to pass downstream to preserve minimum levels of water flow that maintain aquatic life and other purposes of national forest establishment. **GD Water Resources -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to water resources. Where disturbance cannot be avoided, project specific soil and water conservation practices and BMPs should be developed. **GD Water Resources -** Streams, streambanks, shorelines, lakes, wetlands, seeps, springs and other bodies of water should be protected from detrimental changes [4] in water temperature and sediment to protect aquatic species and riparian habitat. **GD Water Resources -** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species. **GD Water Resources -** To protect water quality and aquatic species, heavy equipment and vehicles driven into a water body to accomplish work should be completely clean of petroleum residue. Water levels should be below the gear boxes of the equipment in use. Lubricants and fuels should be sealed such that inundation by water should not result in leaks. **DC All PNVTs -** Vegetative ground cover (herbaceous vegetation and litter cover) is optimized [5] to protect and enrich soils and promote	

Resource	1987 Plan Content (as amended) Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
		water infiltration. There is a diverse mix of cool and warm season grasses and desirable forbs species. **DC Riparian Areas -** The spatial extent of wetlands is maintained [6]. **DC Riparian Areas -** Riparian obligate species within wet meadows, around springs and seeps, along streambanks, and active floodplains provide sufficient [5] vegetative ground cover (herbaceous vegetation, litter, and woody riparian species) to protect and enrich soils, trap sediment, mitigate flood energy, stabilize streambanks, and provide for wildlife and plant needs. **OBJ Riparian Areas -** Annually, move 200 to 500 acres toward desired composition, structure, and function of streams, floodplains, and riparian vegetation. **OBJ Water Uses -** Annually, prepare at least one instream flow water rights application until water acquisition needs are complete to sustain riparian areas, fish, wildlife, and water-based recreation. **ST Water Uses -** Streams on NFS lands with high aquatic values and at risk from new water diversions shall be preserved and protected with instream flow water rights.	
Air, Soil, Water, & Riparian	Goals (P 15): Improve vegetation condition in riparian areas. This is an emphasis for entire plan. Improvements will be accomplished by reducing, or in some cases, eliminating adverse impacts from grazing, vehicles and over-use by man.	**OBJ Overall Ecosystem Health -** During the planning period, improve the condition class on at least 10 priority 6th level HUC watersheds by removing or mitigating degrading factors [1]. **OBJ Aquatic Habitat and Species -** Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species. **OBJ Aquatic Habitat and Species -** During the planning period, complete at least five projects (e.g., remove barriers, restore dewatered stream segments, or connect fragmented habitat) to provide for aquatic and riparian associated species and migratory species. **OBJ Riparian Areas -** Annually, move 200 to 500 acres toward desired composition, structure, and function of streams, floodplains, and riparian vegetation. **OBJ Riparian Areas -** Within the planning period, relocate, repair, improve, or decommission a minimum of 4 miles of National Forest	Retained through numerous Objectives, Desired conditions, standards and guidelines within soil, water, aquatic species and riparian sections.

Resource	1987 Plan Content (as amended) Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
		System roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas -** Annually, remove an average of 2 miles of unauthorized roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas -** Within the planning period, enhance or restore 5 to 25 wet meadows, springs, seeps or cienegas to proper hydrologic function and native plant and animal species composition. **OBJ Riparian Areas -** Annually, work with partners to reduce animal damage to native willows and other riparian species on an average of 5 miles of riparian habitat. **DC Water Resources -** Instream flows provide for channel and floodplain maintenance, recharge of riparian aquifers, water quality, and minimal temperature fluctuations. **DC Water Resources -** Streamflows provide connectivity among fish populations and provide unobstructed routes critical for fulfilling needs of aquatic, riparian dependent, and many upland species of plants and animals. **DC Aquatic Habitat and Species** - Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **DC Aquatic Habitat and Species** - Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **ST All PNVTs -** Within each PNVT, vegetation management activities shall be designed to maintain or move plant composition towards a moderate to high plant community similarity as compared to site potential. **DC Riparian Areas -** Riparian-wetland conditions maintain water-related processes (e.g., hydrologic, hydraulic, geomorphic). They also maintain the physical and biological community characteristics, functions, and processes. **DC Riparian Areas -** Soil compaction from forest activities (e.g., vehicle use, recreation, livestock grazing) does not negatively impact	

Resource	1987 Plan Content (as amended) Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
		riparian areas. **DC Riparian Areas -** The ecological function of riparian areas is resilient to animal and human use. **DC Riparian Areas -** Riparian soil productivity is optimized as described by the specific TES map unit [5] as indicated by the vigor of the herbaceous vegetation community. Based on species composition, ungrazed plant heights [7] range from 10 inches to 36 inches. **GD Riparian Areas -** Ground-disturbing projects (including prescribed fire) which may degrade long term riparian conditions should be avoided. **GD Riparian Areas -** Wet meadows, springs, seeps and cienegas should not be used for concentrated activities (e.g., equipment storage, forest product or mineral stockpiling, livestock handling facilities, special uses) that cause damage to soil and vegetation. **GD Riparian Areas -** Active grazing allotments should be managed to maintain or improve to desired riparian conditions. **GD Livestock Grazing -** New livestock troughs, tanks, and holding facilities should be located out of riparian areas to reduce concentration of livestock in these areas. Existing facilities in riparian areas should be modified, relocated, or removed where their presence is determined to inhibit movement toward desired riparian or aquatic conditions. **GD Livestock Grazing -** To prevent resource damage (e.g., streambanks) and disturbance to federally listed and sensitive wildlife species, trailing of livestock should not occur along riparian areas. Where no alternative route is available, approval may be granted where effective mitigation measures are implemented (e.g., timing of trailing, number of livestock trailed at one time). **GD Minerals and Geology -** Streambed and floodplain alteration or removal of material should not occur if it prevents attainment of riparian, channel morphology, or streambank desired conditions.	

Resource	1987 Plan Content (as amended) Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
Air, Soil, Water, & Riparian	ST & GD (portions pertaining to soil and water) (p 34, 35) Existing as well as additional OHV closures are implemented when one or more of the following situations or areas exist, and ORV use is likely to occur that would result in significant adverse effects: Soil groups having a high sensitivity rating: slope, erosion hazards, and run-off potential Soils with surface textures of clay, clay loam and heavy silt loam, or soils where such textures are within 6 to 8 inches of the surface Effects of water quality such as increased sediment and turbidity. Also bacteriological and chemical problems due to heavy concentrations of users. Municipal watersheds Watershed restoration projects.	**GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **DC Water Resources -** Vegetation and soil conditions above the floodplain protect downstream water quality, quantity, and aquatic habitat. **GD Water Resources -** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species. **DC Riparian Areas -** Soil compaction from forest activities (e.g., vehicle use, recreation, livestock grazing) does not negatively impact riparian areas. **OBJ Riparian Areas -** Within the planning period, relocate, repair, improve, or decommission a minimum of 4 miles of National Forest System roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas -** Annually, remove an average of 2 miles of unauthorized roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **GD Riparian Areas -** Wet meadows, springs, seeps and cienegas should not be used for concentrated activities (e.g., equipment storage, forest product or mineral stockpiling, livestock handling facilities, special uses) that cause damage to soil and vegetation.	Retained through numerous objectives, desired conditions and guidelines within riparian, aquatic species
Air, Soil, Water, & Riparian	Forest wide GD for MSO and NOGO Habitat (p 52, 54) Emphasize maintenance and restoration of healthy riparian ecosystems through conformance with forest plan riparian standards and guidelines. Management strategies should restore degraded riparian areas to good condition as soon as possible. Damage to riparian vegetation, stream banks, and channels should be prevented	**DC Water Resources -** Water quality, stream channel stability, and aquatic habitats retain their inherent resilience to natural and other disturbances. **DC Water Resources -** Vegetation and soil conditions above the floodplain protect downstream water quality, quantity, and aquatic habitat. **GD Water Resources -** Streams, streambanks, shorelines, lakes, wetlands, seeps, springs and other bodies of water should be	Retained through numerous objectives, desired conditions, standards and guidelines within soil, water, aquatic species, riparian and grazing sections.

Resource	1987 Plan Content (as amended) Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
		protected from detrimental changes [4] in water temperature and sediment to protect aquatic species and riparian habitat. **GD Water Resources -** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species. **DC Aquatic Habitat and Species -** Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **DC Aquatic Habitat and Species -** Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **OBJ Aquatic Habitat and Species -** Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species. **DC Riparian Areas -** Natural ecological disturbances (e.g., flooding, scouring) promote a diverse plant structure consisting of herbaceous, shrub, and tree species of all ages and size classes necessary for the recruitment of riparian-dependent species. **DC Riparian Areas -** Riparian-wetland conditions maintain water-related processes (e.g., hydrologic, hydraulic, geomorphic). They also maintain the physical and biological community characteristics, functions, and processes. **DC Riparian Areas -** Stream (lotic) riparian-wetland areas have vegetation, landform, and/or large coarse woody debris to dissipate stream energy associated with high water flow. **DC Riparian Areas -** Streams and their adjacent floodplains are capable of filtering, processing, and storing sediment; aiding floodplain development; improving floodwater retention; and increasing groundwater recharge. **DC Riparian Areas -** Vegetation and root masses stabilize streambanks, islands, and shoreline features against the cutting action of water. **DC Riparian Areas -** Willows (e.g., Bebb, Geyer, Arizona, Goodding's) are reproducing with all age classes present, where the	

Resource	1987 Plan Content (as amended) Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
		potential exists. **DC Riparian Areas -** Diversity and density of riparian forest vegetation provides for breeding, escape, hiding, and resting cover for wildlife and provides travelways between other habitat areas and seasonal ranges. **DC Riparian Areas -** The ecological function of riparian areas is resilient to animal and human use. **DC Riparian Areas -** Riparian obligate species within wet meadows, around springs and seeps, along streambanks, and active floodplains provide sufficient [5] vegetative ground cover (herbaceous vegetation, litter, and woody riparian species) to protect and enrich soils, trap sediment, mitigate flood energy, stabilize streambanks, and provide for wildlife and plant needs. **DC Riparian Areas -** Riparian soil productivity is optimized as described by the specific TES map unit[5] as indicated by the vigor of the herbaceous vegetation community. Based on species composition, ungrazed plant heights [7] range from 10 inches to 36 inches. **DC Riparian Areas -** Large coarse woody debris provides stability to riparian areas and stream bottoms lacking geologic control (e.g., bedrock) or geomorphic features (e.g., functioning floodplains, stream sinuosity, width/depth ratio). **OBJ Riparian Areas -** Annually, move 200 to 500 acres toward desired composition, structure, and function of streams, floodplains, and riparian vegetation. **OBJ Riparian Areas -** Within the planning period, relocate, repair, improve, or decommission a minimum of 4 miles of National Forest System roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas -** Annually, remove an average of 2 miles of unauthorized roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas -** Within the planning period, enhance or restore 5 to 25 wet meadows, springs, seeps or cienegas to proper hydrologic function and native plant and animal species composition. **OBJ Riparian Areas -** Annually, work with partners to reduce animal	

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		damage to native willows and other riparian species on an average of 5 miles of riparian habitat. **GD Riparian Areas -** Ground-disturbing projects (including prescribed fire) which may degrade long term riparian conditions should be avoided. **GD Riparian Areas -** Wet meadows, springs, seeps and cienegas should not be used for concentrated activities (e.g., equipment storage, forest product or mineral stockpiling, livestock handling facilities, special uses) that cause damage to soil and vegetation. **GD Riparian Areas -** Active grazing allotments should be managed to maintain or improve to desired riparian conditions.	
Air, Soil, Water, & Riparian	Forest wide ST for NOGO Habitat (p 54) Manage the ground surface layer to maintain satisfactory soil conditions i.e. to minimize soil compaction; and to maintain hydrologic and nutrient cycles.	**DC Soils -** Ecological and hydrologic functions are not impaired by soil compaction. **DC Soils -** Soil condition rating is satisfactory [2]. **DC Soils -** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soils -** Soil loss rates do not exceed tolerance soil loss rates [3]. **DC Soils -** Vegetation and litter is sufficient to maintain and improve water infiltration, nutrient cycling, and soil stability. **GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD Soils -** Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted.	Carried forward through modified DCs, GDs and management approach.
Air, Soil, Water, & Riparian	Forest wide GDs for Ground Surface Layer (p 59). Piling of debris should be limited. When necessary, hand or grapple piling should be used to minimize soil compaction within piles and to minimize forest floor and herbaceous layer displacement and destruction.	**DC Soils -** Ecological and hydrologic functions are not impaired by soil compaction. **DC Soils -** Soil condition rating is satisfactory [2]. **DC Soils -** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soils -** Soil loss rates do not exceed tolerance soil loss rates [3]. **DC Soils -** Vegetation and litter is sufficient to maintain and improve	Carried forward through modified DCs, GDs and management approach.

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		water infiltration, nutrient cycling, and soil stability. **GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD Soils -** Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted.	
Air, Soil, Water, & Riparian	SG (p 64) Salt is not placed within ¼ mile of any riparian area or water.	**DC Riparian Area -** Soil compaction from forest activities (e.g., vehicle use, recreation, livestock grazing) does not negatively impact riparian areas **GD Riparian Area -** Ground-disturbing projects (including prescribed fire) which may degrade long term riparian conditions should be avoided. **GD Riparian Area -** Wet meadows, springs, seeps and cienegas should not be used for concentrated activities (e.g., equipment storage, forest product or mineral stockpiling, livestock handling facilities, special uses) that cause damage to soil and vegetation. **GD Riparian Area -** Active grazing allotments should be managed to maintain or improve to desired riparian conditions. **GD Livestock Grazing -** New livestock troughs, tanks, and holding facilities should be located out of riparian areas to reduce concentration of livestock in these areas. Existing facilities in riparian areas should be modified, relocated, or removed where their presence is determined to inhibit movement toward desired riparian or aquatic conditions. **GD Livestock Grazing -** To minimize potential resource impacts from livestock, salt or nutritional supplements should not be placed within a quarter of a mile of any riparian area or water source. Salt or nutritional supplements should also be located to minimize herbivory impacts to aspen clones.	Retained through numerous objectives, desired conditions and guidelines within riparian, aquatic species
Air, Soil, Water, & Riparian	SG (p 66) Watershed condition will be updated and periodically mapped. Amend the forest plan, as appropriate, to reflect changes as new data becomes available. Determine forest watershed conditions using R-3 Hydrology	**OBJ Overall Ecosystem Health -** During the planning period, improve the condition class on at least 10 priority 6th level HUC watersheds by removing or mitigating degrading factors [1]. **Management Approach Overall Ecosystem Health -** There is a concerted effort to restore priority 6th level HUC watersheds by	Watershed Condition was evaluated forest wide using Watershed Condition and Tracking Protocol in 2010 and

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	Note No. 20 (water resources inventory).	reducing degrading factors. Priority 6th level watersheds are identified on an ongoing basis using the Watershed Condition Framework process. The 6-step "Watershed Condition Framework" for improving watershed condition class includes (1) rating watersheds for current condition, (2) prioritizing watersheds for treatment, (3) developing watershed action plans for the entire watershed (including non-NFS lands) that identify specific project level activities needed to change condition classes, (4) implementing integrated suites of projects within priority watersheds, (5) tracking restoration accomplishments, and (6) monitoring the effectiveness of change in condition.	updated in 2012 following Wallow Fire.
Air, Soil, Water, & Riparian	SG (p 66) Utilize the Forests' Geographic Information System and Terrestrial Ecosystem Survey information as one tool to evaluate grazing capability based upon watershed condition, vegetation and other appropriate factors by March 1990.	**Livestock Grazing Suitability Section** - Capability is the potential of an area of land to produce resources and supply goods and services. Capability depends upon current conditions and site conditions such as climate variability, slope, landform, soils, and geology. Capability was determined in the 1980s during the first round of forest planning by compiling data from the most recent individual grazing allotment analyses. Landscape scale conditions have not changed significantly since this evaluation.	Was completed in 1990. Capability continues to be determined at the project NEPA level.
Air, Soil, Water, & Riparian	SG (p 67) Survey proposed earthen stock tank sites for location accuracy, soil suitability, and legal requirements. Design structures built in drainages to meet appropriate flood occurrence intervals. Assure that on new stock tanks appropriate documents for construction and water rights applications are filed in a timely manner and according to State law.	**DC Water Uses -** Apache-Sitgreaves NFs water rights are secure and contribute to livestock, recreation, wildlife, and administrative uses. **DC Water Uses -** Dams, diversions, or other water control structures are designed, maintained, and operated to conserve water resources. **ST Water Uses -** Forest Service water rights must be put to beneficial use and that use documented and consistent with ADWR regulations.	Specific portions of this direction were not carried forward because they duplicate State of Arizona State Revised Statutes Title 45 - Waters FSM 2527, EO 11514, EO 11988, EO 11990 FSM 2540
Air, Soil, Water, & Riparian	SG (p 68) Conduct Terrestrial Ecosystem Survey to standards, policies, and guidelines as defined in 2550 TES Handbook and National Cooperative Soil Survey. This is accomplished by the Arizona TES Crew.	**OBJ Soils -** During the planning period, update the Terrestrial Ecosystem Survey to reflect current conditions and concepts.	TES for ASNF completed and Published in 1987
Air, Soil, Water, & Riparian	SG (p 68) Ensure compliance with Public Law 92-500 "Federal Water Pollution Control Act" and amendments including Clear Water Act of	**OBJ Overall Ecosystem Health -** During the planning period, improve the condition class on at least 10 priority 6th level HUC watersheds by removing or mitigating degrading factors [1].	Generally do not repeat Law, Regulation, Policy in Revised plan,

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	1977. Implement best management practices to prevent water quality degradation. Implement improvement action where water quality degradation does occur, except for special cases where temporary or short term degradation is occurring from road crossing construction or similar situations.	**OBJ Soils -** Annually, enhance or restore an average of 350 acres within priority 6th level HUC watersheds, including treating the causes of State and federally designated impaired or threatened waters to improve watershed condition and water quality. **GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **DC Water Resources -** Vegetation and soil conditions above the floodplain protect downstream water quality, quantity, and aquatic habitat **DC Water Resources -** Water quality meets or exceeds Arizona State standards or Environmental Protection Agency water quality standards for designated uses. **GD Water Resources -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to water resources. Where disturbance cannot be avoided, project specific soil and water conservation practices and BMPs should be developed. **GD Water Resources -** Streams, stream banks, shorelines, lakes, wetlands, seeps, springs and other bodies of water should be protected from detrimental changes [4] in water temperature and sediment to protect aquatic species and riparian habitat. **GD Water Resources -** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species. **GD Water Resources -** Short term impacts in watersheds containing Outstanding Arizona Waters may be allowed when long term benefits to water quality, riparian areas, and aquatic resources would occur. **GD Water Resources -** To protect water quality and aquatic species, heavy equipment and vehicles driven into a water body to accomplish work should be completely clean of petroleum residue. Water levels should be below the gear boxes of the equipment in use. Lubricants and fuels should be sealed such that inundation by water should not result in leaks.	however, there are DC, ST and GD that were carried forward. FSM 2532

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Air, Soil, Water, & Riparian	SG (p 69) Provide adequate drainage to prevent concentrated flow and sediment laden runoff from entering water courses.	**GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **DC Water Resources -** Water quality meets or exceeds Arizona State standards or Environmental Protection Agency water quality standards for designated uses. **GD Water Resources -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to water resources. Where disturbance cannot be avoided, project specific soil and water conservation practices and BMPs should be developed. **GD Water Resources -** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species.	Carried forward in DCs, GDs and management approaches
Air, Soil, Water, & Riparian	SG (p 69) Designate stream courses to receive protection during projects (e.g., timber sales, road work). Those streams shown on 7.5 minute quads as a stream course should be considered for designated stream courses.	**GD Water Resources -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to water resources. Where disturbance cannot be avoided, project specific soil and water conservation practices and BMPs should be developed. **GD Water Resources -** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species.	Carried forward through modified DCs, GDs and management approach.
Air, Soil, Water, & Riparian	SG (p 69) Roads will be located away from stream bottoms to minimize sediment delivery to the stream course whenever possible. Sediment Production from roads may be minimized by methods such as: a. Outsloping of road. b. Lead-out ditches. c. Energy dissipaters on culverts. d. Grass seeding e. Rock riprap.	**GD Water Resources -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to water resources. Where disturbance cannot be avoided, project specific soil and water conservation practices and BMPs should be developed. **GD Water Resources -** Streams, streambanks, shorelines, lakes, wetlands, seeps, springs and other bodies of water should be protected from detrimental changes [4] in water temperature and sediment to protect aquatic species and riparian habitat. **GD Water Resources -** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species.	Carried forward through modified GDs and management approaches.

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Air, Soil, Water, & Riparian	SG (p 69) Evaluate projects to determine if detailed soil survey (order 2) and hydrologic survey is needed.	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in FSM 2520, FSM 2550
Air, Soil, Water, & Riparian	SG (p 69) Conserve soil and water resources; avoid permanent impairment of site productivity and ensure conservation of soil and water resources. The minimum soil and resource management requirement is to control surface water runoff and erosion at not less than tolerance conditions. 36 CFR 218.23 and 27.	**GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **DC Water Resources -** Vegetation and soil conditions above the floodplain protect downstream water quality, quantity, and aquatic habitat **DC Water Resources -** Water quality meets or exceeds Arizona State standards or Environmental Protection Agency water quality standards for designated uses. **GD Water Resources -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to water resources. Where disturbance cannot be avoided, project specific soil and water conservation practices and BMPs should be developed. **GD Water Resources -** Streams, streambanks, shorelines, lakes, wetlands, seeps, springs and other bodies of water should be protected from detrimental changes [4] in water temperature and sediment to protect aquatic species and riparian habitat. **GD Water Resources -** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species. **GD Water Resources -** Short term impacts in watersheds containing Outstanding Arizona Waters may be allowed when long term benefits to water quality, riparian areas, and aquatic resources would occur.	Carried forward through modified DCs, GDs and management approach.
Air, Soil, Water, & Riparian	SG (p 69) Soil disturbing activities, being planned on cinder cones and datil soils requires input from the forest soil scientist.	**DC Soils -** Ecological and hydrologic functions are not impaired by soil compaction. **DC Soils -** Soil condition rating is satisfactory [2]. **DC Soils -** Soils are stable within their natural capability. Vegetation	Carried forward through modified DCs, GDs and management approach.

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		and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soils -** Soil loss rates do not exceed tolerance soil loss rates [3]. **DC Soils -** Vegetation and litter is sufficient to maintain and improve water infiltration, nutrient cycling, and soil stability. **GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD Soils -** Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted.	
Air, Soil, Water, & Riparian	SG (p 69 and 113) Skidding and hauling should be restricted to soil moisture conditions which do not cause excessive soil compaction, displacement or puddling. These soils are included within TES units – 181, 182, 183, 191, 192, 193, 194, 201, 202, 532, 561, 562, 595, 942, 943, and 944. When possible limit logging activities (skidding, machine piling, etc.) on those soils to dry or frozen conditions.	**DC Soils -** Ecological and hydrologic functions are not impaired by soil compaction. **DC Soils -** Soil condition rating is satisfactory [2]. **DC Soils -** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soils -** Soil loss rates do not exceed tolerance soil loss rates [3]. **DC Soils -** Vegetation and litter is sufficient to maintain and improve water infiltration, nutrient cycling, and soil stability. **GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD Soils -** Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted.	Carried forward through modified DCs, GDs and management approaches.
Air, Soil, Water, & Riparian	SG (p 69) Plan/accomplish erosion reduction projects on areas disturbed by project activities where the site is not expected to stabilize within 2 years or when water quality degradation will occur.	**DC Soils -** Ecological and hydrologic functions are not impaired by soil compaction. **DC Soils -** Soil condition rating is satisfactory [2]. **DC Soils -** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soils -** Soil loss rates do not exceed tolerance soil loss rates [3]. **DC Soils -** Vegetation and litter is sufficient to maintain and improve	Carried forward through modified DCs, GDs and management approaches.

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		water infiltration, nutrient cycling, and soil stability. **GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD Soils -** Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted.	
Air, Soil, Water, & Riparian	SG (p 69) Plan/carry out fire rehabilitation where necessary to protect water and soil resources or to prevent unacceptable downstream damage.	**ST Landscape Scale Disturbance -** Threats to human safety and property shall be promptly addressed following landscape scale disturbance and mitigated through measures such as signing, temporary closures, or treatment. **GD Landscape Scale Disturbance -** Erosion control mitigation features should be implemented to protect significant resource values and infrastructure such as stream channels, roads, structures, threatened and endangered species, and cultural resources. **GD Landscape Scale Disturbance -** Projects and activities (e.g., revegetation, mulching, lop and scatter) should be designed to stabilize soils and restore nutrient cycling, if needed, and establish movement toward the desired conditions for the affected PNVT(s).	Direction is found in FSM 2523 BAER, additional ST GD in landscape Scale Disturbance Events section.
Air, Soil, Water, & Riparian	SG (p 70) Conserve and encourage efficient use (conservation) of water through project design and recommendations. Ensure compliance with executive order 11990 “Protection of Wetlands”, executive order 11988 “Floodplain Management”.	**DC Water Uses -** Apache-Sitgreaves NFs water rights are secure and contribute to livestock, recreation, wildlife, and administrative uses. **DC Water Uses -** Dams, diversions, or other water control structures are designed, maintained, and operated to conserve water resources. **ST Water Uses -** Forest Service water rights must be put to beneficial use and that use documented and consistent with ADWR regulations.	Specific portions of this direction were not carried forward because they duplicate law, regulation, or policy found in State of Arizona State Revised Statutes Title 45 -Waters FSM 2527, EO 11514, EO 11988, EO 11990 FSM 2540
Air, Soil, Water, & Riparian	SG (p 70) Design structures to be built/reconstructed in drainages to meet appropriate flood recurrence intervals.	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in FSM 2527, EO 11514, EO 11988, EO

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			11990 FSM 2540
Air, Soil, Water, & Riparian	SG (p 70) Design facilities to avoid situations that entrap users during flood events. Provide identified escape routes from high hazard floodplains.	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in FSM 2527, EO 11514, EO 11988, EO 11990 FSM 2540ef
Air, Soil, Water, & Riparian	SG (p 70) Limit use of herbicides, insecticides, rodenticides, or other chemical agents as part of management activities to times and places where possible transport to or by surface or groundwater has a low probability of occurrence.	**GD Invasive Species -** Pesticide use should minimize impacts on nontarget plants and animals.	Carried forward through modified GDs and management approaches.
Air, Soil, Water, & Riparian	SG (p 70) Limit the use of certain facilities in floodplains to non-flood seasons or daylight hours only.	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in FSM 2527, EO 11514, EO 11988, EO 11990 FSM 2540
Air, Soil, Water, & Riparian	SG (p 70) Accomplish flood hazard analysis and wetland evaluation on all proposed land exchanges.	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in FSM 2527, EO 11514, EO 11988, EO 11990 FSM 2540
Air, Soil, Water, & Riparian	SG (p 70) Maintain suitable filter/buffer strips between stream courses and disturbed areas and/or road locations to: a. Maintain Suitable Stream Temperature b. Maintain Water Quality Standards	**GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to water resources. Where disturbance cannot be avoided, project specific soil and water conservation practices and BMPs should be developed. **GD Water Resources -** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic	Carried forward through modified GDs and management approaches.

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		species.	
Air, Soil, Water, & Riparian	SG (p 70) Protect surface resource conditions to maintain water quality of domestic water supplies.	**GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to water resources. Where disturbance cannot be avoided, project specific soil and water conservation practices and BMPs should be developed. **GD Water Resources -** Streams, streambanks, shorelines, lakes, wetlands, seeps, springs and other bodies of water should be protected from detrimental changes [4] in water temperature and sediment to protect aquatic species and riparian habitat. **GD Water Resources -** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species.	Carried forward through modified GDs and management approaches.
Air, Soil, Water, & Riparian	SG (p 70 and 114) Evaluate soils information to predict areas where vegetation type conversion is likely to occur as a result of management activity. Determine the reforestation/revegetation potential prior to project initiation. (Ref. TE Handbook).	**DC All PNVTs -** Natural processes and human and natural disturbances (e.g., wildland fire, mechanical vegetation treatments) provide desired overall tree density, structure, species composition, coarse woody debris, and nutrient cycling. Natural fire regimes are restored. Uncharacteristic fire behavior is minimal or absent on the landscape. **DC All PNVTs -** Vegetation conditions allow for transition zones or ecotones between riparian areas, forests, woodlands, shrublands, and grasslands. Transition zones may shift in time and space due to changing site conditions from disturbances (e.g., fire, climate variability). **ST All PNVTs -** Within each PNVT, vegetation management activities shall be designed to maintain or move plant composition towards a moderate to high plant community similarity as compared to site potential. **ST All Forested PNVTs -** On lands suitable for timber production, timber harvest activities shall only be used when there is reasonable assurance of restocking within 5 years after final regeneration harvest. This also applies where wildland fire is used to create openings for tree regeneration purposes on suitable timber lands. Restocking level is prescribed in a site specific silvicultural prescription for a project treatment unit and is determined to be adequate depending on the objectives and desired conditions for the plan area. In some instances,	Carried forward through modified DC, ST, GDs and management approaches.

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		such as when lands are harvested or prescribed burned to create openings for firebreaks and vistas or to prevent encroaching trees, it is appropriate not to restock.	
Air, Soil, Water, & Riparian	SG (p 71) Maintain and enhance riparian vegetation along streams to maintain suitable water temperature and other conditions for stream flow.	**DC Water Resources -** Water quality, stream channel stability, and aquatic habitats retain their inherent resilience to natural and other disturbances. **DC Water Resources -** Vegetation and soil conditions above the floodplain protect downstream water quality, quantity, and aquatic habitat. **GD Water Resources -** Streams, streambanks, shorelines, lakes, wetlands, seeps, springs and other bodies of water should be protected from detrimental changes [4] in water temperature and sediment to protect aquatic species and riparian habitat. **GD Water Resources -** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species. **DC Aquatic Habitat and Species -** Streams and aquatic habitats support native fish and/or other aquatic species providing the quantity and quality of aquatic habitat within reference conditions [8]. **DC Aquatic Habitat and Species -** Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **DC Aquatic Habitat and Species -** Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **OBJ Aquatic Habitat and Species -** Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species. **DC Riparian Areas -** Natural ecological disturbances (e.g., flooding, scouring) promote a diverse plant structure consisting of herbaceous, shrub, and tree species of all ages and size classes necessary for the recruitment of riparian-dependent species.	Retained through numerous objectives, desired conditions, standards and guidelines within soil, water, aquatic species, riparian and grazing sections.

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		DC Riparian Areas - Riparian-wetland conditions maintain water-related processes (e.g., hydrologic, hydraulic, geomorphic). They also maintain the physical and biological community characteristics, functions, and processes. **DC Riparian Areas -** Stream (lotic) riparian-wetland areas have vegetation, landform, and/or large coarse woody debris to dissipate stream energy associated with high water flow. **DC Riparian Areas -** Streams and their adjacent floodplains are capable of filtering, processing, and storing sediment; aiding floodplain development; improving floodwater retention; and increasing groundwater recharge. **DC Riparian Areas -** Vegetation and root masses stabilize streambanks, islands, and shoreline features against the cutting action of water. **DC Riparian Areas -** Ponding and channel characteristics provide habitat, water depth, water duration, and the temperatures necessary for maintaining populations of riparian-dependent species and for their dispersal. **DC Riparian Areas -** Beavers occupy capable stream reaches and help promote the function and stability of riparian areas. **DC Riparian Areas -** Lentic riparian areas (e.g., wet meadows, fens, bogs) have vegetation and landform present to dissipate wind action, wave action, and overland flow from uplands. **DC Riparian Areas -** Wetland riparian areas are capable of filtering sediment and aiding floodplain development that contribute to water retention and groundwater recharge. **DC Riparian Areas -** Willows (e.g., Bebb, Geyer, Arizona, Goodding's) are reproducing with all age classes present, where the potential exists. **DC Riparian Areas -** The spatial extent of wetlands is maintained [6]. **DC Riparian Areas -** Diversity and density of riparian forest vegetation provides for breeding, escape, hiding, and resting cover for wildlife and provides travelways between other habitat areas and seasonal ranges. **DC Riparian Areas -** The ecological function of riparian areas is resilient to animal and human use.	

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		DC Riparian Areas - Riparian obligate species within wet meadows, around springs and seeps, along streambanks, and active floodplains provide sufficient [5] vegetative ground cover (herbaceous vegetation, litter, and woody riparian species) to protect and enrich soils, trap sediment, mitigate flood energy, stabilize streambanks, and provide for wildlife and plant needs. **DC Riparian Areas -** Riparian soil productivity is optimized as described by the specific TES map unit [5] as indicated by the vigor of the herbaceous vegetation community. Based on species composition, ungrazed plant heights [7] range from 10 inches to 36 inches. **DC Riparian Areas -** Large coarse woody debris provides stability to riparian areas and stream bottoms lacking geologic control (e.g., bedrock) or geomorphic features (e.g., functioning floodplains, stream sinuosity, width/depth ratio). **OBJ Riparian Areas -** Annually, move 200 to 500 acres toward desired composition, structure, and function of streams, floodplains, and riparian vegetation. **OBJ Riparian Areas -** Within the planning period, relocate, repair, improve, or decommission a minimum of 4 miles of National Forest System roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas -** Annually, remove an average of 2 miles of unauthorized roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas -** Within the planning period, enhance or restore 5 to 25 wet meadows, springs, seeps or cienegas to proper hydrologic function and native plant and animal species composition. **OBJ Riparian Areas -** Annually, work with partners to reduce animal damage to native willows and other riparian species on an average of 5 miles of riparian habitat. **GD Riparian Areas -** Ground-disturbing projects (including prescribed fire) which may degrade long term riparian conditions should be avoided. **GD Riparian Areas -** Wet meadows, springs, seeps and cienegas	

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		should not be used for concentrated activities (e.g., equipment storage, forest product or mineral stockpiling, livestock handling facilities, special uses) that cause damage to soil and vegetation. **GD Riparian Areas -** Active grazing allotments should be managed to maintain or improve to desired riparian conditions.	
Air, Soil, Water, & Riparian	SG (p 71) Effectively close or obliterate roads causing intolerable resource damage (relocate roads as needed).	**GD Motorized Opportunities -** As projects occur in riparian or wet meadow areas, unneeded roads or motorized trails should be closed or relocated, drainage restored, and native vegetation reestablished to move these areas toward their desired condition. **GD Motorized Opportunities -** As projects occur, redundant roads or motorized trails should be removed to reduce degradation of natural resources. **GD Motorized Opportunities -** Roads and motorized trails removed from the transportation network should be treated in order to avoid future risk to hydrologic function and aquatic habitat. **GD Motorized Opportunities -** As projects occur, existing meadow crossings should be relocated or redesigned, as needed, to maintain or restore hydrologic function using appropriate tools such as French drains and elevated culverts. **GD Motorized Opportunities -** After management activities occur in areas with high potential for cross-country motorized vehicle use, methods (e.g., barriers, signing) should be used to control unauthorized motorized use.	Carried forward through modified GDs and management approaches.
Air, Soil, Water, & Riparian	SG (p 71) Soil resource improvement will be accomplished on an opportunity basis. Accomplish/maintain soil resource improvement projects to prevent loss of soil productivity.	**OBJ Overall Ecosystem Health -** During the planning period, improve the condition class on at least 10 priority 6th level HUC watersheds by removing or mitigating degrading factors [1]. **OBJ Soils -** Annually, enhance or restore an average of 350 acres within priority 6th level HUC watersheds, including treating the causes of State and federally designated impaired or threatened waters to improve watershed condition and water quality.	Carried forward through new objectives and management approaches.

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Air, Soil, Water, & Riparian	SG (p 71) Develop/carry out water resource improvement plan per A/S NF's watershed improvement needs inventory within the first 2 periods.	**OBJ Overall Ecosystem Health -** During the planning period, improve the condition class on at least 10 priority 6th level HUC watersheds by removing or mitigating degrading factors [1]. **OBJ Soils -** Annually, enhance or restore an average of 350 acres within priority 6th level HUC watersheds, including treating the causes of State and federally designated impaired or threatened waters to improve watershed condition and water quality.	Existing plan was completed in 1990. No new inventory was developed. New direction through Watershed Condition Framework.
Air, Soil, Water, & Riparian	SG (p 71) Utilize sale area improvement plans as an opportunity to accomplish resource improvements within the timber sale area.	**Management Approach All Forested PNVTs -** Forest treatments occur predominantly in ponderosa pine and dry and wet mixed conifer. There is an emphasis on restoring natural fire regimes, providing wildlife species habitat needs, obtaining sustainable forest products, and/or achieving ecosystem health within priority 6th level HUC watersheds. Treatment methods (see appendix B) may include wildland fire, fencing, mechanized and hand thinning, planting, chemical treatments, and other silvicultural treatments.	Generally carried forward in management approaches
Air Quality	SG (p 71) In the Class 1 air quality area (Mt. Baldy) maintain high quality visual conditions. The form, line, texture, and color characteristic landscape will be clearly distinguishable when viewed as middle ground.	**DC Air** - Air quality related values, including high quality visual conditions, are maintained within the Class I airshed over Mount Baldy Wilderness.	Direction also found in FSM 2580
Air, Soil, Water, & Riparian	SG (p 71) Review Prevention of Significant Deterioration (PSD) Permit applications to determine the potential effect increased emissions from major stationary sources will have on air quality related values in the Mt. Baldy Class 1 area. Predict the impacts of air pollution generating activities with current modeling techniques.	**Management Approach Air -** The Apache-Sitgreaves NFs participate with the State of Arizona in the air quality regulatory process. Specialists review air permit applications for new and modified industrial facilities to ensure that their air emissions do not adversely impact the air quality related values (e.g., visibility) of federally protected Class I wilderness areas.	Discussed in Management approach, PSD process covered in Arizona State Regulatory Process and FSM 2580
Air, Soil, Water, & Riparian	SG (p 71) Ensure compliance with State of Arizona Water Law "Arizona revised statutes sections 45-101 through 46". "Reserved Water Rights" may not fall under jurisdiction of State Statutes.	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in State of Arizona State Revised Statutes Title 45 Waters

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			FSM 2540
Air, Soil, Water, & Riparian	SG (p 71) Participate in State adjudications on forest watersheds. Protest other uses in conflict with forest uses. Participate in State Water Right hearings to protect forest uses.	**Management Approach Water Uses -** The forests participate in water rights adjudications, maintain a water rights and water uses database, and honor the water rights of others. Forest personnel work with legal water right holders to help conserve water through terms and conditions of permits or easements to capture and transmit water on or across public lands. The forests work with the State and other agencies to deal with groundwater issues and maintain instream flows. The forests work with affected members of the public to gain their support for instream flows.	Carried forward in management approaches.
Air, Soil, Water, & Riparian	SG (p 71) File permits to appropriate water for range, recreation, wildlife, and administration developments.	**DC Water Resources -** Instream flows provide for channel and floodplain maintenance, recharge of riparian aquifers, water quality, and minimal temperature fluctuations. **DC Water Resources -** Streamflows provide connectivity among fish populations and provide unobstructed routes critical for fulfilling needs of aquatic, riparian dependent, and many upland species of plants and animals. **DC Water Resources -** Water quantity meets the needs for forest administration and authorized activities (e.g., livestock grazing, recreation, firefighting, domestic use, road maintenance). **GD Water Resources -** As State of Arizona water rights permits (e.g., water impoundments, diversions) are issued, the base level of instream flow should be retained by the Apache-Sitgreaves NFs. **GD Water Resources -** Constraints (e.g., maximum limit to which water level can be drawn down or minimum distance from a connected river, stream, wetland, or groundwater-dependent ecosystem) should be established for new groundwater pumping sites permitted on NFS lands in order to protect the character and function of water resources. **GD Aquatic Habitat and Species -** Sufficient water should be left in streams to provide for aquatic species and riparian vegetation. **DC Water Uses -** Water developments contribute to fish, wildlife, and riparian habitat as well as scenic and aesthetic values. **DC Water Uses -** Apache-Sitgreaves NFs water rights are secure and contribute to livestock, recreation, wildlife, and administrative uses. **DC Water Uses -** Surface water is not diminished by groundwater	Further direction found in State of Arizona State Revised Statutes Title 45 Waters; FSM 2540

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		pumping. **DC Water Uses -** Dams, diversions, or other water control structures are designed, maintained, and operated to conserve water resources. **OBJ Water Uses -** Annually, prepare at least one instream flow water rights application until water acquisition needs are complete to sustain riparian areas, fish, wildlife, and water-based recreation. **ST Water Uses -** Streams on NFS lands with high aquatic values and at risk from new water diversions shall be preserved and protected with instream flow water rights.	
Air, Soil, Water, & Riparian	SG (p 71) Secure water rights through purchase for additional water sources when needed.	**OBJ Water Uses -** Annually, prepare at least one instream flow water rights application until water acquisition needs are complete to sustain riparian areas, fish, wildlife, and water-based recreation.	Further direction found in State of Arizona State Revised Statutes Title 45 Waters; FSM 2540
Air, Soil, Water, & Riparian	SG (p 72) Insure new special use permittees utilizing water from the A/S have acquired a right to appropriate from the State.	**GD Special Uses -** Water use associated with special use authorizations should be in accordance with Arizona State Statutes and should have a decreed water right or a valid claim.	Further direction found in State of Arizona State Revised Statutes Title 45 Waters; FSM 2540
Air, Soil, Water, & Riparian	SG (p 72) Maintain/update files for national water use inventory (WURR).	**Management Approach Water Uses -** Project level analysis (e.g., compliance with the National Environmental Policy Act of 1970 (Public Law 91-190)) for new water developments or reissuances includes an assessment of Forest Service water needs with an inventory of existing water rights and water uses within the sub-watershed (6th level HUC) of the subject water development.	Carried forward in management approaches. Further direction found in FSM 2540
Air, Soil, Water, & Riparian	SG (p 72) Recognize valid water users and solicit their cooperation in lake management.	**Management Approach Water Uses -** The forests participate in water rights adjudications, maintain a water rights and water uses database, and honor the water rights of others. Forest personnel work with legal water right holders to help conserve water through terms and conditions of permits or easements to capture and transmit water on or across public lands. The forests work with the State and other agencies to deal with groundwater issues and maintain instream flows. The forests work with affected members of the public to gain their support for instream flows.	Carried forward in management approaches; Further direction found in FSM 2540

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Air, Soil, Water, & Riparian	SG (p 72) Maintain water resource improvement projects where improvement and downstream values will be jeopardized if work is not accomplished currently."	**GL Livestock Grazing -** Constructed features should be maintained to standard or removed when no longer needed.	Carried forward in GL and management approaches..
Air, Soil, Water, & Riparian	SG (p 72) Monitor water quality and quantity in compliance with P.L. 95-200, Section 208.	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in MOU FS R3-ADEQ; FSM 2530; FSM 7420
Air, Soil, Water, & Riparian	SG (p 72) Monitor potable water systems in accordance with the Safe Drinking Water Act.	**DC Water Resources -** Water quality meets or exceeds Arizona State standards or Environmental Protection Agency water quality standards for designated uses.	Further direction found in FSM 2530; FSM 7420
Air, Soil, Water, & Riparian	SG (p 72) Conduct water quality monitoring of primary contact recreation sites to standards of FSM 2540 (sic.) and Arizona Water Quality Standards for full body contact waters (swimming and wading).	**DC Water Resources -** Water quality meets or exceeds Arizona State standards or Environmental Protection Agency water quality standards for designated uses.	Further direction found in FSM 2030; FSM 7420
Air, Soil, Water, & Riparian	SG (p 72) Monitor specific air pollutant and meteorological parameters necessary for the determination of air quality in the Mt. Baldy Class 1 area.	**DC Air -** Air quality related values, including high quality visual conditions, are maintained within the Class I airshed over Mount Baldy Wilderness. **DC Air -** Class II airsheds meet State of Arizona air quality standards including those for visibility and public health. **Monitoring Plan Monitoring Question 4 -** Review interagency monitoring of protected visual environments' (IMPROVE) data.	Management Approach and Monitoring Plan (Draft)
Air, Soil, Water, & Riparian	SG (p 72) Cooperate with the SCS on winter snow course monitoring and weather station activities.	**Management Approach Water Uses -** Management emphasis is to provide adequate water supplies to support the mission of the Agency in addition to helping maintain continuous water supplies to downstream users on and off the forests including small communities located adjacent to the Apache-Sitgreaves NFs.	Carried forward in management approaches.
Air, Soil, Water, & Riparian	SG (p 72) Monitor those activities that are a management concern or a public issue: (such as "Little Colorado Unique Water" or	**Monitoring Plan Monitoring Question 2 -** Review a sample of soil-disturbing activities for compliance with BMPs by project; allotment operating instruction implementation; Section 18 reviews of allotment	Carried forward within monitoring plan.

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	controversial timber sales).	National Environmental Policy Act (NEPA); burn area emergency response (BAER) assessments; and Arizona Department of Environmental Quality water quality data. **Monitoring Plan Monitoring Question 3 -** Review a sample of ground-disturbing activities for compliance with BMPs by project; allotment operating instruction implementation; prescribed fire burn plan implementation; proper functioning data or other approved Forest Service methodologies; and Section 18 reviews of allotment NEPA. Monitor riparian habitats for changes in ground cover, species composition, bank stability, and water quality.	
Air, Soil, Water, & Riparian	SG (p 75) No streambed alteration or removal of material is allowed if it significantly effects on riparian dependent resources, channel morphology, or streambank stability.	**GL Water Resources -** To protect water quality and aquatic species, heavy equipment and vehicles driven into a water body to accomplish work should be completely clean of petroleum residue. Water levels should be below the gear boxes of the equipment in use. Lubricants and fuels should be sealed such that inundation by water should not result in leaks. **GL Minerals and Geology -** Streambed and floodplain alteration or removal of material should not occur if it prevents attainment of riparian, channel morphology, or streambank desired conditions.	Carried forward through modified GDs and management approaches.
Air, Soil, Water, & Riparian	SG (p 77) Comply with State and Federal air quality standards. (See FSM 2120).	Direction not carried forward into revised plan.	Now FSM 2580
Air, Soil, Water, & Riparian	SG (p 105) Restrict regeneration cuts to areas where soils have reforestation potential of low-moderate or higher.	**ST All Forested PNVTs** - On lands suitable for timber production, timber harvest activities shall only be used when there is reasonable assurance of restocking within 5 years after final regeneration harvest. This also applies where wildland fire is used to create openings for tree regeneration purposes on suitable timber lands. Restocking level is prescribed in a site specific silvicultural prescription for a project treatment unit and is determined to be adequate depending on the objectives and desired conditions for the plan area. In some instances, such as when lands are harvested or prescribed burned to create openings for firebreaks and vistas or to prevent encroaching trees, it is appropriate not to restock.	Carried forward through modified ST and management approaches.

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Air, Soil, Water, & Riparian	SG (p 111) Restrict logging to areas where soil movement is expected to return to tolerance levels within 2 years.	**DC Soils -** Ecological and hydrologic functions are not impaired by soil compaction. **DC Soils -** Soil condition rating is satisfactory [2]. **DC Soils -** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soils -** Soil loss rates do not exceed tolerance soil loss rates [3]. **DC Soils -** Vegetation and litter is sufficient to maintain and improve water infiltration, nutrient cycling, and soil stability. **GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD Soils -** Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted.	Carried forward through modified DC, GDs and management approaches.
Air, Soil, Water, & Riparian	SG (p 111) Drain and seed all roads, landings, and skid trails that are no longer needed for immediate use.	**DC Soils -** Ecological and hydrologic functions are not impaired by soil compaction. **DC Soils -** Soil condition rating is satisfactory [2]. **DC Soils -** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soils -** Soil loss rates do not exceed tolerance soil loss rates [3]. **DC Soils -** Vegetation and litter is sufficient to maintain and improve water infiltration, nutrient cycling, and soil stability. **GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD Soils -** Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted.	Carried forward through modified DC, GDs and management approaches.

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Air, Soil, Water, & Riparian	SG (p 113) Log landings should be the smallest size and fewest numbers necessary to facilitate the safe loading of logs (to minimize compaction/loss of soil productivity).	**DC Soils -** Ecological and hydrologic functions are not impaired by soil compaction. **DC Soils -** Soil condition rating is satisfactory [2]. **DC Soils -** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soils -** Soil loss rates do not exceed tolerance soil loss rates [3]. **DC Soils -** Vegetation and litter is sufficient to maintain and improve water infiltration, nutrient cycling, and soil stability. **GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD Soils -** Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted.	Carried forward through modified DC, GDs and management approaches.
Air, Soil, Water, & Riparian	SG (p 114) Locate/Design landings on slopes less than 15% (5-10% preferred, ensure proper drainage on all landings).	**DC Soils -** Ecological and hydrologic functions are not impaired by soil compaction. **DC Soils -** Soil condition rating is satisfactory [2]. **DC Soils -** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soils -** Soil loss rates do not exceed tolerance soil loss rates [3]. **DC Soils -** Vegetation and litter is sufficient to maintain and improve water infiltration, nutrient cycling, and soil stability. **GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD Soils -** Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted.	Carried forward through modified DC, GDs and management approaches.

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Air, Soil, Water, & Riparian	SG (p 118) Small site conversions to a lower successional state occur only where the rating of soil potential for revegetation and the erosion potential (TESH, January 7, 1985) are determined to be suitable and where the forage production rating is moderate or high.	**DC All PNVTs -** Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth forests. **ST All PNVTs -** Within each PNVT, vegetation management activities shall be designed to maintain or move plant composition towards a moderate to high plant community similarity as compared to site potential.	Identification of grassland PNVTs eliminated need for this guidance. Now these kinds of projects fall within scope of desired conditions.
Air, Soil, Water, & Riparian	SG (p 122) Forage utilization standards for riparian areas will be determined for each allotment at levels permitting timely achievement of fisheries and T&E objectives. The following general utilization guidelines will guide revisions for allotment management plans. Areas in unsatisfactory riparian condition 0 – 45% Areas in satisfactory riparian condition 0 – 55% The above utilization guidelines are a starting point for development of allotment management strategies. Variations in soil productivity, species composition, and sophistication of management will be considered when actual utilization standards are set for each individual allotment during the allotment management plan revision process.	**DC All PNVTs -** Herbivory is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). **DC All PNVTs -** Stand densities and species compositions are such that vegetation conditions are resilient under a variety of potential future climates. **DC All PNVTs -** Vegetative ground cover (herbaceous vegetation and litter cover) is optimized [5] to protect and enrich soils and promote water infiltration. There is a diverse mix of cool and warm season grasses and desirable forbs species. **ST All PNVTs -** Within each PNVT, vegetation management activities shall be designed to maintain or move plant composition towards a moderate to high plant community similarity as compared to site potential. **DC Riparian Areas -** The ecological function of riparian areas is resilient to animal and human use. **DC Riparian Areas -** Riparian obligate species within wet meadows, around springs and seeps, along streambanks, and active floodplains provide sufficient [5] vegetative ground cover (herbaceous vegetation, litter, and woody riparian species) to protect and enrich soils, trap sediment, mitigate flood energy, stabilize streambanks, and provide for wildlife and plant needs. **DC Riparian Areas -** Riparian soil productivity is optimized as described by the specific TES map unit[5] as indicated by the vigor of the herbaceous vegetation community. Based on species composition,	Carried forward through modified DC, ST, GDs and management approaches.

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		ungrazed plant heights [7] range from 10 inches to 36 inches. **GD Riparian Areas -** Wet meadows, springs, seeps and cienegas should not be used for concentrated activities (e.g., equipment storage, forest product or mineral stockpiling, livestock handling facilities, special uses) that cause damage to soil and vegetation. **GD Riparian Areas -** Active grazing allotments should be managed to maintain or improve to desired riparian conditions. **DC Livestock Grazing -** Livestock grazing and associated activities contribute to healthy, diverse plant communities, satisfactory condition soils, and wildlife habitat. **DC Livestock Grazing -** Livestock grazing is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). **GD Livestock Grazing -** Critical areas should be managed to address the inherent or unique site factors, conditions, values, or potential conflicts associated with them. **GD Livestock Grazing -** Grazing use on seasonal allotments should be timed to the appropriate plant growth stage and soil moisture.	
Air, Soil, Water, & Riparian	SG (p 123) Acquire riparian areas when funding becomes available or through exchange authorities.	**GD Lands -** Land acquisitions and exchanges should evaluate, and possibly include, associated beneficial encumbrances (e.g., water rights, mineral rights, easements, instream flow). **Management Approach Lands -** Lands desirable for acquisition generally meet one or more of the following criteria: (1) lands that contain vital species habitat or vital wildlife habitat (e.g., calving areas, critical winter range); (2) lands needed for developed or dispersed recreation; (3) wetlands, riparian areas, and other water oriented lands; (4) lands that contain unique natural or cultural values; (5) lands that improve public land management, meet specified administrative needs, or benefit other NFS programs; (6) lands that provide needed access, protect public lands from fire or trespass, or prevent damage to public land resources; (7) lands that are needed to consolidate public landownership or meet research needs; (8) lands that are needed to meet programs prescribed or endorsed by acts or reports of Congress or the Department of Agriculture; (9) inholdings that contain needed access; or (10) undeveloped inholdings.	Carried forward through modified DC, ST, GDs and management approaches. Also found in FSM 2540

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Air, Soil, Water, & Riparian	SG (p 124) Recreation use, including off-road vehicle use, will be prohibited or restricted and sites rehabilitated in areas in unsatisfactory condition, when recreation was a significant causative factor affecting condition.	**DC Soils -** Ecological and hydrologic functions are not impaired by soil compaction. **DC Soils -** Soil condition rating is satisfactory [2]. **DC Soils -** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soils -** Soil loss rates do not exceed tolerance soil loss rates [3]. **DC Soils -** Vegetation and litter is sufficient to maintain and improve water infiltration, nutrient cycling, and soil stability. **GD Soils -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD Soils -** Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted.	Carried forward through modified DC, ST, GDs and management approaches.
Air, Soil, Water, & Riparian	SG (p 125) Maintain riparian and meadow communities by providing waters for wildlife and livestock away from sensitive riparian areas.	**GD Riparian Areas -** Wet meadows, springs, seeps and cienegas should not be used for concentrated activities (e.g., equipment storage, forest product or mineral stockpiling, livestock handling facilities, special uses) that cause damage to soil and vegetation.	Carried forward through modified GDs and management approaches.
Air, Soil, Water, & Riparian	SG (p 125) Establish exclosures to determine riparian vegetation potential on representative streams.	**Monitoring Plan Monitoring Question 8 -** Conduct aspen/riparian monitoring in accordance with species' specific protocols in both treated and untreated areas and in burned (within large wildfire burns) and unburned areas. Interdisciplinary team reviews the annual aspen/riparian ecological indicator species monitoring reports to determine trend.	Dropped exclosure establishment and maintenance. Establishing new riparian veg monitoring protocol.
Air, Soil, Water, & Riparian	SG (p 126) Limit moving of livestock from pasture to pasture or between allotments along the length of riparian areas except on approved routes as specified in annual permittee instructions. Approval will be granted only where it is determined that there is no alternative route and that riparian areas will not be damaged.	**GL Livestock Grazing -** To prevent resource damage (e.g., streambanks) and disturbance to federally listed and sensitive wildlife species, trailing of livestock should not occur along riparian areas. Where no alternative route is available, approval may be granted where effective mitigation measures are implemented (e.g., timing of trailing, number of livestock trailed at one time).	Carried forward through modified GDs and management approaches.

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Air, Soil, Water, & Riparian	SG (p 137) Conduct water quality monitoring of primary contact recreation sites to standards of FSM 2540 and Arizona Water Quality Standards for full body contact waters (swimming and wading). (developed rec sites)	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in FSM 2530 and 7420
Air, Soil, Water, & Riparian	SG (p 161) Coordinate with other resource functions to pursue instream flow rights to protect aquatic ecosystems, fish, and wildlife. MA 11. SG (p 161) Review existing and potential water impoundments and water impoundment sites, and obtain water rights for developing and maintaining fishing and/or wetland conditions in lakes and streams. MA 11. SG (p 161) Improvements such as wildlife spring developments, fish barriers, erosion control structures, trails, etc., can be authorized as long as they do not conflict with the management emphasis. MA 14.	**DC Water Resources –** Instream flows provide for channel and floodplain maintenance, recharge of riparian aquifers, water quality, and minimal temperature fluctuations. **DC Water Resources –** Streamflows provide connectivity among fish populations and provide unobstructed routes critical for fulfilling needs of aquatic, riparian dependent, and many upland species of plants and animals. **DC Water Resources –** Water quantity meets the needs for forest administration and authorized activities (e.g., livestock grazing, recreation, firefighting, domestic use, road maintenance). **GD Water Resources –** As State of Arizona water rights permits (e.g., water impoundments, diversions) are issued, the base level of instream flow should be retained by the Apache-Sitgreaves NFs. **GD Water Resources –** Constraints (e.g., maximum limit to which water level can be drawn down or minimum distance from a connected river, stream, wetland, or groundwater-dependent ecosystem) should be established for new groundwater pumping sites permitted on NFS lands in order to protect the character and function of water resources. **GD Aquatic Habitat and Species -** Sufficient water should be left in streams to provide for aquatic species and riparian vegetation. **DC Water Uses -** Water developments contribute to fish, wildlife, and riparian habitat as well as scenic and aesthetic values. **DC Water Uses -** Apache-Sitgreaves NFs water rights are secure and contribute to livestock, recreation, wildlife, and administrative uses. **DC Water Uses -** Surface water is not diminished by groundwater pumping. **DC Water Uses -** Dams, diversions, or other water control structures are designed, maintained, and operated to conserve water resources. **OBJ Water Uses -** Annually, prepare at least one instream flow water	Carried forward through modified OBJ, DC, ST, GDs and management approaches.

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		rights application until water acquisition needs are complete to sustain riparian areas, fish, wildlife, and water-based recreation. **ST Water Uses -** Streams on NFS lands with high aquatic values and at risk from new water diversions shall be preserved and protected with instream flow water rights.	
Air, Soil, Water, & Riparian	SG (p 173) Except where permitted by outstanding rights; dams, diversions, or other water resource developments are prohibited. Gauging stations will be allowed if a suitable location does not exist elsewhere on the river and if there is not significant adverse effect on the natural character of the area. MA 15	**DC Eligible and Suitable Wild and Scenic Rivers -** Eligible and suitable wild river segments display unaltered landscapes where generally only ecological changes occur (very high scenic integrity) and provide primitive and/or semi-primitive nonmotorized recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers -** Eligible and suitable scenic river segments display landscapes which vary from slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity) and provide semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers -** Eligible and suitable recreational river segments display landscapes which vary from moderately altered where human activities are evident (low scenic integrity) to slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) and provide primitive, semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **ST Eligible and Suitable Wild and Scenic Rivers -** Each eligible river's free-flowing condition, outstandingly remarkable values, and classification shall be sustained until further study is conducted. **ST Eligible and Suitable Wild and Scenic Rivers -** Each suitable river's free-flowing condition, outstandingly remarkable values, and classification shall be maintained until congressional action is completed.	Carried forward through modified DC, ST and management approaches.
Air, Soil, Water, & Riparian	SG (p 175 and 178) Improvements such as wildlife spring developments, fish barriers, erosion control structures, trails, etc., can be authorized as long as they do not conflict with the management emphasis.	**DC Eligible and Suitable Wild and Scenic Rivers -** Eligible and suitable wild river segments display unaltered landscapes where generally only ecological changes occur (very high scenic integrity) and provide primitive and/or semi-primitive nonmotorized recreation opportunities.	Carried forward through modified DC, ST and management approaches.

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	Gauging stations will be allowed if a suitable location does not exist elsewhere on the river and if there is no significant adverse effect on the natural character of the area. MA 16, 17	**DC Eligible and Suitable Wild and Scenic Rivers -** Eligible and suitable scenic river segments display landscapes which vary from slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity) and provide semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers -** Eligible and suitable recreational river segments display landscapes which vary from moderately altered where human activities are evident (low scenic integrity) to slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) and provide primitive, semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **ST Eligible and Suitable Wild and Scenic Rivers -** Each eligible river's free-flowing condition, outstandingly remarkable values, and classification shall be sustained until further study is conducted. **ST Eligible and Suitable Wild and Scenic Rivers -** Each suitable river's free-flowing condition, outstandingly remarkable values, and classification shall be maintained until congressional action is completed.	
Air, Soil, Water, & Riparian	SG (p 181) Defer from grazing until critical watershed and riparian areas are satisfactorily restored. (Sandrock)	Direction not carried forward into revised plan.	Not carried forward however established proposed RNA within allotment to potentially monitor semi-desert grassland ecosystem recovery.

Aquatics and Fish

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Aquatics/Fish	**Goals (p 14):** By the end of Decade 5, the Forest is attempting to achieve a management situation that can respond to local and national demands for wood products, livestock production, water yield, and a wide mix of recreation opportunities, including hunting and fishing, that range from the primitive to the urban. The goal is to produce these outputs and opportunities on a sustained basis while maintaining air, soil, and water resources at or above minimum applicable standards. Levels of outputs and uses are adjusted to be within long-term supply potentials, and to ensure the harmonious and coordinated management of all resources, each with the other, without impairing the productivity of the land. Non-renewable resources are adequately protected to ensure their future availability.	**DC Overall Ecosystem Health** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC Overall Ecosystem Health** Healthy ecosystems provide a wide range of ecosystem services. **DC Aquatic Habitat and Species** Streams and aquatic habitats support native fish and/or other aquatic species providing the quantity and quality of aquatic habitat within reference conditions. **DC Aquatic Habitat and Species** Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **DC Aquatic Habitat and Species** Desirable nonnative fish species provide recreational fishing in waters where those opportunities are not in conflict with the recovery of native species. **DC Overall Recreation Opportunities** Recreation activities occur within the ability of the land to support them and with minimal user conflicts. **DC Overall Recreation Opportunities** Recreation enhances the quality of life for local residents (e.g., social interaction, physical activity, connection with nature), provides tourist destinations, and contributes monetarily to local economies. **DC Overall Recreation Opportunities** Recreation use does not negatively affect wildlife habitat and populations. Negative interactions between people and wildlife are minimized. **DC Dispersed Recreation** Water-based settings are available and the associated recreation opportunities (e.g., canoeing, fishing, waterfowl hunting) do not degrade aquatic resources. Developed recreation sites provide opportunities for people to camp, obtain information, and participate in day-use activities (e.g., picnic areas, fishing piers, scenic overlooks, wildlife viewing sites).	Retained as DCs in Overall Ecosystem Health, Aquatic Habitat and Species, Overall Recreation Opportunities, and Dispersed Recreation sections of the revised plan. Language specific to aquatics/fish opportunities and sustainability carried forward in 9 DCs. Also covered by Directives (FSM 2603, 2620.2, 2630.3, 2634, 2634.2, and 2640.3)

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Aquatics/Fish	**Goal (p 15):** Maintain habitat to maintain viable populations of wildlife and fish species and improve habitat for selected species. This is accomplished "directly" through habitat management and "indirectly" through coordination of habitat management in conjunction with other resource activities.	**DC Overall Ecosystem Health** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Water Resources** Water quality meets the needs of aquatic species such as the California floater, northern and Chiricahua leopard frog, and invertebrates that support fish populations. **GD Water Resources** Streams, streambanks, shorelines, lakes, wetlands, seeps, springs and other bodies of water should be protected from detrimental changes in water temperature and sediment to protect aquatic species and riparian habitat. **GD Water Resources** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species. **DC Aquatic Habitat and Species** Streams and aquatic habitats support native fish and/or other aquatic species providing the quantity and quality of aquatic habitat within reference conditions. **DC Aquatic Habitat and Species** Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **DC Aquatic Habitat and Species** Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **DC Aquatic Habitat and Species** Aquatic species habitat conditions provide the resiliency and redundancy necessary to maintain species diversity and metapopulations. **OBJ Aquatic Habitat and Species** Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species. **OBJ Aquatic Habitat and Species** During the planning period, complete	Retained and modified as OBJs, DCs, STs, and GDs in the Overall Ecosystem Health, Water Resources, Aquatic Habitat and Species, Dispersed Recreation, Motorized Opportunities, Nonmotorized Opportunities, Livestock Grazing, and Minerals and Geology sections of the revised plan. Language specific to viability and habitat management for aquatics/fish was brought forward in 2 OBJs, 8 DCs, 1 ST, and 11 GDs. Also covered by Directives (FSM 2601.2, 2602, 2604.11, 2620.1, 2622.01, 2670.12, 2672.1, and 2672.32)

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		at least five projects (e.g., remove barriers, restore dewatered stream segments, or connect fragmented habitat) to provide for aquatic and riparian associated species and migratory species. **GD Aquatic Habitat and Species** Management and activities should not contribute to a trend toward the Federal listing of a species. **DC Dispersed Recreation** Water-based settings are available, and the associated recreation opportunities (e.g., canoeing, fishing, waterfowl hunting) do not degrade aquatic resources. **ST Water Uses** Special uses for water diversions shall maintain fish, wildlife, and aesthetic values and otherwise protect the environment. **GD Motorized Opportunities** New roads, motorized trails, or designated motorized areas should be located to avoid meadows, wetlands, seeps, springs, riparian areas, stream bottoms, sacred sites, and areas with high concentrations of significant archaeological sites. The number of stream crossings should be minimized or mitigated to reduce impacts to aquatic species. **GD Motorized Opportunities** Roads and motorized trails removed from the transportation network should be treated in order to avoid future risk to hydrologic function and aquatic habitat. **GD Motorized Opportunities** Roads and motorized trails should be designed and located so as to not impede terrestrial and aquatic species movement and connectivity. **GD Nonmotorized Opportunities** New nonmotorized routes should avoid meadows, wetlands, seeps, springs, riparian areas, stream bottoms, sacred sites, and areas with high concentrations of significant archaeological sites. The number of stream crossings should be minimized or mitigated to reduce impacts to aquatic habitat. **GD Nonmotorized Opportunities** New trails and trail relocations should be designed and located so as to not impede terrestrial and aquatic species movement and connectivity. **GD Livestock Grazing** New livestock troughs, tanks, and holding facilities should be located out of riparian areas to reduce concentration of livestock in these areas. Existing facilities in riparian areas should be modified, relocated, or removed where their presence is determined to inhibit movement toward desired riparian or aquatic conditions.	

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		GD Livestock Grazing To prevent resource damage (e.g., streambanks) and disturbance to federally listed and sensitive wildlife species, trailing of livestock should not occur along riparian areas. Where no alternative route is available, approval may be granted where effective mitigation measures are implemented (e.g., timing of trailing, number of livestock trailed at one time). **GD Minerals and Geology** Streambed and floodplain alteration or removal of material should not occur if it prevents attainment of riparian, channel morphology, or streambank desired conditions.	
Aquatics/Fish	**Goal (p 15):** Cooperate with the Arizona Game and Fish Department to achieve management goals and objectives specified in the Arizona Wildlife and Fisheries Comprehensive Plan, and on proposals for reintroduction of extirpated species into suitable habitat. Support the Arizona Game and Fish Department in meeting its objectives for the State. No unapproved species are introduced.	**Management Approaches for Aquatic Habitat and Species** The Apache-Sitgreaves NFs assists Arizona Game and Fish Department (AZGFD) with efforts to protect and reintroduce native aquatic species where appropriate and control or eradicate nonnative species.	Document is outdated and language is covered in Directives (FSM 2603, 2610.2, 2610.3, 2611, 2620.2, 2630.3, 2640.42, 2670.45, 2671.1, 2672.24b). Retained as Management Approach for Aquatic Habitat and Species.
Aquatics/Fish	**Goal (p 15):** Cooperate with the Arizona Game & Fish Department to achieve management goals and objectives in the Arizona Cold Water Fisheries Strategic Plan.	**Management Approaches for Aquatic Habitat and Species -** The Apache-Sitgreaves NFs assists Arizona Game and Fish Department (AZGFD) with efforts to protect and reintroduce native aquatic species where appropriate and control or eradicate nonnative species.	Document is outdated and language is covered in Directives (FSM 2603, 2610.2, 2610.3, 2611, 2620.2, 2630.3, 2640.42, 2670.45, 2671.1, 2672.24b). Retained as Management Approach for Aquatic Habitat and Species.
Aquatics/Fish	**Goal (p 15)**: Improve habitat for listed threatened, endangered, or sensitive species of plants and animals and other species as they become threatened or	**DC Overall Ecosystem Health** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the	Retained and modified as OBJs, DCs, and GDs within the Overall

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	endangered. Work toward recovery and declassification species.	life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Aquatic Habitat and Species** Streams and aquatic habitats support native fish and/or other aquatic species providing the quantity and quality of aquatic habitat within reference conditions. **DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. **DC Aquatic Habitat and Species** Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **DC Aquatic Habitat and Species** Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **DC Aquatic Habitat and Species** Aquatic species habitat conditions provide the resiliency and redundancy necessary to maintain species diversity and metapopulations. **OBJ Aquatic Habitat and Species** Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species. **OBJ Aquatic Habitat and Species** During the planning period, complete at least five projects (e.g., remove barriers, restore dewatered stream segments, or connect fragmented habitat) to provide for aquatic and riparian associated species and migratory species. **GD Aquatic Habitat and Species** Management and activities should not contribute to a trend toward the Federal listing of a species. **GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans.	Ecosystem Health and Aquatic Habitat and Species sections of the revised plan. Also covered by Directives (FSM 2601.2, 2602, 2604.2, 2620.3, 2622.01, 2670.11, 2670.12, 2670.21, 2670.22, 2670.31, 2670.32, 2670.45, 2670.46, 2672.1, and 2672.21) and ESA. Language updated in revised plan with 2 OBJs, 7 DCs, and 2 GDs.
Aquatics/Fish	**Goal (p 15):** Identify and protect areas that contain threatened, endangered, and sensitive species of plants and animals.	**DC Overall Ecosystem Health** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well	Retained and modified as OBJs, DCs, and GDs within

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		distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Aquatic Habitat and Species** Streams and aquatic habitats support native fish and/or other aquatic species providing the quantity and quality of aquatic habitat within reference conditions. **DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **DC Aquatic Habitat and Species** Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **DC Aquatic Habitat and Species** Aquatic species habitat conditions provide the resiliency and redundancy necessary to maintain species diversity and metapopulations. **OBJ Aquatic Habitat and Species** Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species. **OBJ Aquatic Habitat and Species** During the planning period, complete at least five projects (e.g., remove barriers, restore dewatered stream segments, or connect fragmented habitat) to provide for aquatic and riparian associated species and migratory species. **GD Aquatic Habitat and Species** Management and activities should not contribute to a trend toward the Federal listing of a species. **GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans.	the Overall Ecosystem Health and Aquatic Habitat and Species sections of the revised plan. Also covered by Directives (FSM 2601.2, 2604.21, 2622.01, 2670.11, 2670.12, 2670.21, 2670.22, 2670.31, 2670.32, 2670.44, 2670.45, 2670.46, 2672.1, 2672.11, and 2672.23) and ESA. Language updated in revised plan with 2 OBJs, 6 DCs, and 2 GDs.

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Aquatics/Fish	**Goal (p 15):** Increase opportunities for wildlife and fish oriented recreation opportunities.	**DC Overall Recreation Opportunities** Recreation enhances the quality of life for local residents (e.g., social interaction, physical activity, connection with nature), provides tourist destinations, and contributes monetarily to local economies. **DC Dispersed Recreation** Dispersed recreation opportunities (e.g., hunting, fishing, hiking, camping) are available and dispersed recreation sites (e.g., campsites, trailheads, vistas, parking areas) occur in a variety of ROS classes throughout the forests. **DC Developed Recreation** Developed recreation sites provide opportunities for people to camp, obtain information, and participate in day-use activities (e.g., picnic areas, fishing piers, scenic overlooks, wildlife viewing sites).	Language retained and modified as three DCs in the revised plan within the Overall Recreation Opportunities, Dispersed Recreation and Developed Recreation sections.
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Recreation Management, p 30):** All plans must be consistent with Arizona Game and Fish Department's Cold Water Strategic Plan (1995-1990) and the Arizona Trout Recovery Plan, and coordinated with the Arizona Game and Fish Department.	**DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. **GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans. **Management Approaches for Aquatic Habitat and Species** The Apache-Sitgreaves NFs assists Arizona Game and Fish Department (AZGFD) with efforts to protect and reintroduce native aquatic species where appropriate and control or eradicate nonnative species. **DC Dispersed Recreation** Water-based settings are available, and the associated recreation opportunities (e.g., canoeing, fishing, waterfowl hunting) do not degrade aquatic resources.	Language retained and modified as two DCs, one GD, and a Management Approach in the revised plan within the Aquatic Habitat and Species and Dispersed Recreation sections. Also covered by Directive (FSM 2611) and ESA.
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Off-Road Vehicle Management, p 34 and 35):** Existing, as well as additional ORV closures are implemented when one or more of the following situations or areas exist, and ORV use is likely to occur that would result in significant adverse effects: All critical areas as defined in Section 2(b) of the Rare and Endangered Species Act of 1973.	**ST Motorized Opportunities** Motorized vehicle travel shall be managed to occur only on the designated system of NFS roads and motorized trails and designated motorized areas. **ST Motorized Opportunities** Unless specifically authorized, motorized cross-country travel shall be managed to occur only in designated motorized areas.	Language retained and modified as two STs in the revised plan within the Motorized Opportunities section. Also covered by Directive (FSM 2670.44) and ESA.

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Aquatics/Fish	**Forest-Wide Standards And Guidelines (Off-Road Vehicle Management, p 34 and 35):** Existing, as well as additional ORV closures are implemented when one or more of the following situations or areas exist, and ORV use is likely to occur that would result in significant adverse effects: Areas where there is agreement with the Arizona Game & Fish Department to maintain a quality hunting and fishing experience.	**DC Overall Recreation Opportunities** Recreation activities occur within the ability of the land to support them and with minimal user conflicts. **ST Motorized Opportunities** Motorized vehicle travel shall be managed to occur only on the designated system of NFS roads and motorized trails and designated motorized areas. **ST Motorized Opportunities** Unless specifically authorized, motorized cross-country travel shall be managed to occur only in designated motorized areas.	Language retained and modified as one DC and two STs in the revised plan within the Overall Recreation Opportunities and Motorized Opportunities sections.
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Wildlife Management, p 46):** Manage threatened and endangered animal, fish, and plant habitat to achieve declassifying in a manner consistent with the goals established by the U.S. Fish and Wildlife Service and the Arizona Game and Fish Department.	**DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. **GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans.	Language retained and modified as two DCs and one GD in the revised plan within the Overall Ecosystem Health and Aquatic Habitat and Species sections. Also covered by Directives (FSM 2670.21, 2672.21, and 2672.31) and ESA.
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Wildlife Management, p 46):** Habitat management for Federally listed species will take precedence over unlisted species. Habitat management for endangered species will take precedence over threatened species. Habitat management for sensitive species will take precedence over non-sensitive species.	Direction not carried forward into the revised plan.	Directive (FSM 2670.31) places top priority only on endangered, threatened, and proposed species. Also covered by ESA.

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Aquatics/Fish	**Forest-Wide Standards And Guidelines (Wildlife Management, p 46):** Implement threatened and endangered species recovery plans.	**DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. **GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans.	Language retained and modified as two DCs and one GD in the revised plan within the Overall Ecosystem Health and Aquatic Habitat and Species sections. Also covered by ESA.
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Wildlife Management, p 46):** Carry out the appropriate management activities outlined in the Rocky Mountain Southwest Peregrine Falcon and Apache Trout Recovery Plans.	**GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans.	Language retained and modified as one GD in the revised plan within the Aquatic Habitat and Species section. Also covered by Directives (FSM 2670.12 and 2670.21) and ESA.
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Threatened, Endangered, and Sensitive Species, p 47):** Continue to identify existing and potential habitat for peregrine falcons and Apache Trout as outlined in the Species Recovery Plans.	**DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. **GD Aquatic habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans.	Language retained and modified as one DC and one GD in the revised plan within the Aquatic Habitat and Species section. Also covered by ESA.
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Threatened, Endangered, and Sensitive Species, p 47):** Monitor management practices within occupied and potential peregrine falcon, Apache Trout, bald eagle, loach minnow, and Little Colorado River spinedace habitat, and evaluate impacts.	**GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans.	Language retained and modified as one GD in the revised plan within the Aquatic Habitat and Species section. Also covered by Directives (FSM 2670.12 and 2670.21) and ESA.

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Aquatics/Fish	**Forest-Wide Standards And Guidelines (Threatened, Endangered, and Sensitive Species, p 47):** Monitor management practices within occupied and potential habitat of plants listed as threatened, endangered, state sensitive animals, 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.	**DC Overall Ecosystem Health** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. **DC Aquatic Habitat and Species** Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. Aquatic species habitat conditions provide the resiliency and redundancy necessary to maintain species diversity and metapopulations. **GD Aquatic Habitat and Species** Management and activities should not contribute to a trend toward the Federal listing of a species.	Language retained and modified as 4 DCs and one GD in the revised plan within the Overall Ecosystem Health and Aquatic Habitat and Species sections. Also covered by Directives (FSM 2670.12, 2670.22, and 2670.32).
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Threatened, Endangered, and Sensitive Species, p 59):** Recovery activities will be pursued where pertinent.	**DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. **GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans.	Language retained and modified as 2 DCs and one GD in the revised plan within the Overall Ecosystem Health and Aquatic Habitat and Species sections. Also covered by Directive (FSM 2670.11) and ESA.
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Threatened, Endangered, and Sensitive Species, p 59):** Monitor actions to determine effect of management practices on T&E species habitat and the need for a consultation with the U.S. Fish	**Monitoring Question** Are habitats for threatened, endangered, sensitive, and other species for the forests being maintained or enhanced; meeting recovery objectives; moving toward desired conditions; and contributing to species viability?	This direction was not carried forward because it duplicates law, regulation, or policy found in Directives (FSM 2634,

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	and Wildlife Service.		2671.45, and 2672.4) and ESA. Also brought forward in the revised plan in the Monitoring Strategy.
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Threatened, Endangered, and Sensitive Species, p 59):** Monitor status of federal listings. If elevated to threatened or endangered status. Consult with U.S. Fish and Wildlife Service as needed.	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in the ESA and covered in Directives (FSM 2601.2, 2670.11, 2670.31, and 2671.45).
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Threatened, Endangered, and Sensitive Species, p 59):** All vegetation manipulations will be coordinated with threatened and endangered species requirements.	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in the ESA and covered in Directive (FSM 2634).
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Threatened, Endangered, and Sensitive Species, p 59):** Studies by appropriate, qualified personnel will be conducted to ascertain suitability of reintroduction of endangered, threatened, proposed, and State listed native species to suitable habitat where not presently occupied.	**Management Approaches for Aquatic Habitat and Species** The Apache-Sitgreaves NFs assists Arizona Game and Fish Department (AZGFD) with efforts to protect and reintroduce native aquatic species where appropriate and control or eradicate nonnative species.	Modified and included in the revised plan as a Management Approach.

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Aquatics/Fish	**Forest-Wide Standards And Guidelines (Threatened, Endangered, and Sensitive Species, p 60):** The Forest Wildlife Biologist will be consulted on all proposed activities, modifications, and other commitments of lands within known habitats of peregrine falcon, bald eagle, spotted owl, loach minnow, Little Colorado spinedace, and Apache Trout, threatened, endangered or sensitive plants.	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in Directives (FSM 2670.45 and 2670.46).
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Threatened, Endangered, and Sensitive Species, p 60):** When management practices are proposed in listed or proposed species habitats, the Forest Wildlife Biologist will evaluate the need for consultation of conference with the Fish and Wildlife Service and Arizona Game and Fish Department.	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in the ESA and covered in Directives (FSM 2670.45 and 2670.46).
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Threatened, Endangered, and Sensitive Species, p 60):** Allow area closures to protect habitat of listed, sensitive, or proposed T&E species.	**Management Approaches for Wildlife and Rare plants** Where the need is demonstrated, seasonal road restrictions and area closures may be used to provide refuge in small and large blocks of land for a wide range of species.	Modified in the revised plan as a Management Approach. Also covered by FSM 2670.44.
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Wildlife Management, p 60):** Consult and cooperate with Arizona Game and Fish Department to achieve management goals and objectives specified in the Arizona Wildlife and Fisheries Comprehensive Plan and State-wide Strategic Plans. Cooperate with the Fish and Wildlife Service and other agencies and organizations as the need arises.	**Management Approaches for Aquatic Habitat and Species** The Apache-Sitgreaves NFs assists Arizona Game and Fish Department (AZGFD) with efforts to protect and reintroduce native aquatic species where appropriate and control or eradicate nonnative species.	Modified in the revised plan as a Management Approach. Also required by the ESA and covered in Directives (FSM 2603, 2604.2, 2604.21, 2610.1, 2610.2, 2610.3, 2610.42,

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			2610.43, 2610.44, 2611.1, 2612, 2613, 2641, 2670.31, 2671.1, 2671.4, 2672.24b, and 2611).
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Wildlife Management, p 60):** Cooperate with Arizona Game and Fish Department in evaluating proposals for reintroducing extirpated species into suitable habitat and on fish stocking and public access for fishing.	**Management Approaches for Aquatic Habitat and Species** The Apache-Sitgreaves NFs assists Arizona Game and Fish Department (AZGFD) with efforts to protect and reintroduce native aquatic species where appropriate and control or eradicate nonnative species.	Modified in the revised plan as a Management Approach. Also covered in Directives (FSM 2601.2, 2603, 2604.21, 2610.1, 2610.2, 2610.3, 2610.42, 2620.2, 2620.43, 2620.44, 2624.01, 2630.3, 2635.01, 2640.2, 2640.3, 2640.41, 2640.42, 2641, 2671.1, 2672.24b, and 2611).
Aquatics/Fish	**Forest-Wide Standards And Guidelines (Wildlife Management, p 62):** Maintain habitat for viable populations of all existing vertebrate wildlife species.	**DC Overall Ecosystem Health** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Aquatic Habitat and Species** Streams and aquatic habitats support native fish and/or other aquatic species providing the quantity and quality of aquatic habitat within reference conditions. **DC Aquatic Habitat and Species** Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat.	Retained and modified as OBJs, DCs, and GDs within the Overall Ecosystem Health and Aquatic Habitat and Species sections of the revised plan. Also covered by Directives (FSM 2601.2, 2602, 2604.11, 2620.1, 2622.01, 2670.12, 2672.1, and 2672.32) and ESA. Language

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		DC Aquatic Habitat and Species Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **DC Aquatic Habitat and Species** Aquatic species habitat conditions provide the resiliency and redundancy necessary to maintain species diversity and metapopulations. **OBJ Aquatic habitat and Species** Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species. **OBJ Aquatic habitat and Species** During the planning period, complete at least five projects (e.g., remove barriers, restore dewatered stream segments, or connect fragmented habitat) to provide for aquatic and riparian associated species and migratory species. **GD Aquatic Habitat and Species** Management and activities should not contribute to a trend toward the Federal listing of a species.	updated in revised plan with 2 OBJs, 6 DCs, and 1 GD.
Aquatics/Fish	**MANAGEMENT AREA 3, Recreation (Standards and Guidelines, p 124):** Prepare implementation plans for dispersed recreation use areas in those riparian areas associated with a viable fishery.	**DC Dispersed Recreation** Water-based settings are available, and the associated recreation opportunities (e.g., canoeing, fishing, waterfowl hunting) do not degrade aquatic resources.	Modified language and changed to a DC in the Dispersed Recreation section of the revised plan.
Aquatic/Fish	**MANAGEMENT AREA 3, Wildlife Management (Standards and Guidelines, p 125):** Cooperate with Arizona Game and Fish Department to: 1. develop implementation plans for Arizona Cold Water Fisheries Strategic Plan; 2. plan lake and stream habitat improvement projects; 3. maintain a current fish habitat inventory; and 4. control fish populations, aquatic plants, and fish stocking to meet state fisheries management goals.	**OBJ Aquatic Habitat and Species** Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species. **OBJ Aquatic Habitat and Species** During the planning period, complete at least five projects (e.g., remove barriers, restore dewatered stream segments, or connect fragmented habitat) to provide for aquatic and riparian associated species and migratory species. **Management Approaches for Aquatic Habitat and Species** The Apache-Sitgreaves NFs assists Arizona Game and Fish Department (AZGFD) with efforts to protect and reintroduce native aquatic species where appropriate and control or eradicate nonnative species.	Reworded as 2 OBJs and a Management Approach in the Aquatic Habitat and Species section of the revised plan. Also covered by Directives (FSM 2601.2, 2603, 2604.21, 2610.1, 2610.2, 2610.3, 2610.42, 2620.2, 2620.43, 2620.44,

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			2624.01, 2630.3, 2635.01, 2640.2, 2640.3, 2640.41, 2640.42, 2641, 2671.1, 2672.24b, and 2611).
Aquatics/Fish	**MANAGEMENT AREA 3, Wildlife Management (Standards and Guidelines, p 125):** Manage for or maintain a least 60% of potential habitat capability for Apache Trout, Rainbow Trout, Brook Trout, Brown Trout, Loach Minnow, and Little Colorado Spinedace.	**DC Overall Ecosystem Health -** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Aquatic Habitat and Species** Streams and aquatic habitats support native fish and/or other aquatic species providing the quantity and quality of aquatic habitat within reference conditions. **DC Aquatic Habitat and Species** Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **DC Aquatic Habitat and Species** Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **DC Aquatic habitat and Species** Aquatic species habitat conditions provide the resiliency and redundancy necessary to maintain species diversity and metapopulations.	Reworded as 6 DCs within the Overall Ecosystem Health and Aquatic Habitat and Species section of the revised plan.
Aquatics/Fish	**MANAGEMENT AREA 3, Wildlife Management (Standards and Guidelines, p 125 and 126):** For Priority 1 and 2 Riparian Areas: a) Aquatic resources: (1) Manage for and maintain at least 80 percent of near natural shade over water surfaces.	**DC Overall Ecosystem Health** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC Aquatic Habitat and Species** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species.	Reworded as 6 DCs within the Overall Ecosystem Health and Aquatic Habitat and Species section of the revised plan. Also covered by FSM 2636.4.

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	(2) Manage for and maintain at least 80 percent of streambank total linear distance in stable condition. (3) Prevent siltation not to exceed 20 percent fines (<855mm) in riffle areas. (4) Maintain 80 percent of the spawning gravel surface free of inorganic sediment. (5) Manage for stream temperatures not to exceed 68 degrees F, unless not technically feasible. (6) Manage for and maintain at least a 80 Biotic Condition Index on all perennial streams.	**DC Aquatic Habitat and Species** Streams and aquatic habitats support native fish and/or other aquatic species providing the quantity and quality of aquatic habitat within reference conditions. **DC Aquatic Habitat and Species** Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **DC Aquatic Habitat and Species** Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **DC Aquatic Habitat and Species** Aquatic species habitat conditions provide the resiliency and redundancy necessary to maintain species diversity and metapopulations.	
Aquatics/Fish	**MANAGEMENT AREA 11, Wildlife and Fish (Standards and Guidelines, p 161):** Manage waters capable of supporting fish to maintain a fishery.	**DC Aquatic Habitat and Species** Streams and aquatic habitats support native fish and/or other aquatic species providing the quantity and quality of aquatic habitat within reference conditions. **DC Aquatic Habitat and Species** Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **DC Aquatic Habitat and Species** Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **DC Aquatic Habitat and Species** Aquatic species habitat conditions provide the resiliency and redundancy necessary to maintain species diversity and metapopulations. **GD Water Resources** Streams, streambanks, shorelines, lakes, wetlands, seeps, springs and other bodies of water should be protected from detrimental changes in water temperature and sediment to protect aquatic species and riparian habitat.	Reworded as 4 DCs within the Aquatic Habitat and Species section of the revised plan, and one guideline within the Water Resources section of the plan.
Aquatics/Fish	**MANAGEMENT AREA 11, Wildlife and Fish (Standards and Guidelines, p 161):** Manage lakes to improve fisheries habitat through construction of structures as selected based on analysis and professional judgment of the responsible	**OBJ Aquatic Habitat and Species** During the planning period, complete at least five projects (e.g., remove barriers, restore dewatered stream segments, or connect fragmented habitat) to provide for aquatic and riparian associated species and migratory species.	Rewritten as an OBJ in the Aquatic Habitat and Species section of the revised plan.

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	official and resource specialist:		
Aquatics/Fish	**MANAGEMENT AREA 11, Wildlife and Fish (Standards and Guidelines, p 161):** Manage waters to perpetuate Apache Trout in order that this species can be delisted from the endangered category.	**DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. **GD Aquatic Habitat and Species** Management and activities should not contribute to a trend toward the Federal listing of a species. **GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans.	Modified as 1 DC and 2 GDs in the Aquatic Habitat and Species section of the revised plan, as lentic systems are not part of recovery for this species. Also covered by ESA.
Aquatics/Fish	**MANAGEMENT AREA 12, Bear Wallow Wilderness Area (Standards and Guidelines, p 164):** Cooperate with the Arizona Game and Fish Department in the management of the Threatened Apache Trout.	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in Directives (FSM 2601.2, 2603, 2610.2, 2671.1, and 2672.24b) and ESA.
Aquatics/Fish	**MANAGEMENT AREA 17, East and West Forks Little Colorado River (Standards and Guidelines, p 179):** Improve habitat capability for fish, and maintain stream channel stability.	**DC Overall Ecosystem Health** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC Water Resources** Water quality, stream channel stability, and aquatic habitats retain their inherent resilience to natural and other disturbances. **DC Water Resources** Stream channels and floodplains are dynamic and resilient to disturbances. The water and sediment balance between streams and their watersheds allow a natural frequency of low and high flows. **DC Water Resources** Stream condition is sufficient to withstand floods without disrupting normal stream characteristics (e.g., water transport,	Language now captured in 4 DCs from the Overall Ecosystem Health and Water Resources sections of the revised plan.

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		sediment, woody material) or altering stream dimensions (e.g., bankfull width, depth, slope, sinuosity).	
Aquatics/Fish	**MANAGEMENT AREA 18, Sandrock (Standards and Guidelines, p 182):** Cooperate with the Arizona Game & Fish Department and the U.S. Fish and Wildlife Service in the management of the Loach Minnow.	Direction not carried forward into revised plan.	This direction was not carried forward because it duplicates law, regulation, or policy found in the ESA and covered in Directives (FSM 2603, 2604.2, 2604.21, 2610.1, 2610.2, 2610.3, 2610.42, 2610.43, 2610.44, 2611.1, 2612, 2613, 2641, 2670.31, 2671.1, 2671.4, 2672.24b, and 2611).
Aquatics/Fish	**MONITORING PLAN: AQUATIC MACROINVERTEBRATES,** **LOACH MINNOW, LITTLE COLORADO SPINEDACE, APACHE TROUT, SPIKEDACE, RAZORBACK SUCKER, ROUNDTAIL CHUB, GILA CHUB (p 190-192):** Maintain and/or improve aquatic habitat effectiveness. Sustain viable habitats. Meet recovery plans where completed. Manage at appropriate levels to prevent listings as threatened or endangered.	**Monitoring Strategy -** Monitoring Question: Are habitats for threatened, endangered, sensitive, and other species for the forests being maintained or enhanced; meeting recovery objectives; moving toward desired conditions; and contributing to species viability? Monitoring Method: Review implementation of biological opinion terms and conditions and aquatic habitat and population surveys using current approved methodologies. Review implementation and evaluate effectiveness of project mitigation measures affecting habitat.	Modified monitoring strategy and methodologies to address outdated protocols and reduce costs.

Engineering

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Engineering	**Goal (P 17):** Provide and manage a serviceable road transportation system that meets needs for public access, land management, resource protection, and user safety. Provisions are made for construction/reconstruction, maintenance, seasonal and special closures, and obliterating unnecessary roads.	**DC Motorized Opportunities** A maintained road and motorized trail system is in place and provides for safety and access for the use (e.g. recreation, minerals, vegetation treatment, fire protection) of the Apache-Sitgreaves NFs **DC Motorized Opportunities** Users have opportunities for motorized access and travel on a system of designated NFS roads, motorized trails, and motorized areas. **DC Motorized Opportunities** The transportation system provides a variety of recreation opportunities including varying degrees of difficulty, from OHV trails to paved scenic byways, while limiting resource and/or user conflicts. **OBJ Motorized Opportunities** Annually maintain at least 20 percent of the passenger vehicle and 10 percent of the high-clearance vehicle NFS roads. **OBJ Motorized Opportunities** Annually maintain at least 20 percent of NFS motorized trails. **ST Motorized Opportunities** Motorized vehicle travel shall be managed to occur only on the designated system of NFS roads and motorized trails and designated motorized areas. **ST Motorized Opportunities** Unless specifically authorized, motorized cross-country travel shall be managed to occur only in designated motorized areas.	Retained through detailed objectives, desired conditions, and standards throughout the new plan and Forest Service Manual 7700 – Chapter 7730
Engineering	**Standard and Guideline (P 87):** Seasonally or permanently close existing roads prohibit off-road vehicle use or manage use when conflicts occur with wildlife and soil resource objectives. Generally limit closures to local roads in erosive soil areas, riparian areas, or wildlife areas that require specific management practices	**DC Riparian Areas** Soil compaction from forest activities (e.g., vehicle use, recreation, livestock grazing) does not negatively impact riparian areas. **DC Motorized Opportunities** The location and design of roads and trails does not impede wildlife and fish movement. **DC Wildlife Quiet Areas** WQAs lack disturbance from motorized vehicles, resulting in less stress to wildlife. **DC Research natural Area** Recreation opportunities, although not encouraged, are semi-primitive nonmotorized. **ST Motorized Opportunities** Motorized vehicle travel shall be	Retained through detailed objectives, desired conditions, standards and guidelines throughout the new plan.

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		managed to occur only on the designated system of NFS roads and motorized trails and designated motorized areas. **ST Motorized Opportunities** Unless specifically authorized, motorized cross-country travel shall be managed to occur only in designated motorized areas. **ST Motorized Opportunities** Road maintenance and construction activities shall be designed to reduce sediment (e.g., water bars, sediment traps, grade dips) while first providing for user safety. **ST Research Natural Area** The Phelps Cabin RNA will be managed for nonmotorized access within the area; exceptions may be made for permitted research use. **GD Motorized Opportunities** New roads or motorized trails should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified; seasonal restrictions may be an option. **GD Motorized Opportunities** New roads, motorized trails, or designated motorized areas should be located to avoid meadows, wetlands, riparian areas, stream bottoms, sacred sites, and areas with high concentrations of significant archaeological sites. The number of stream crossings should be minimized or mitigated to reduce impacts to aquatic species. **GD Motorized Opportunities** As projects occur in riparian or wet meadow areas, unneeded roads or motorized trails should be closed or relocated, drainage restored, and native vegetation reestablished to move these areas toward their desired condition. **GD Motorized Opportunities** As project occur, roads or motorized trails that contribute to negative impacts on cultural resources should be closed or relocated. **GD Motorized Opportunities** As projects occur, redundant roads or motorized trails should be removed to reduce degradation of natural resources. **GD Motorized Opportunities** Roads and motorized trails removed from the transportation network should be treated in order to avoid future risk to hydrologic function and aquatic habitat. **GD Motorized Opportunities** Roads and motorized trails should be designed and located so as to not impede terrestrial and aquatic	

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		species movement and connectivity. **GD Motorized Opportunities** As projects occur, existing meadow crossings should be relocated or redesigned, as needed, to maintain or restore hydrologic function using appropriate tools such as French drains, and elevated culverts. **GD Wildlife Quiet Area** Hiding cover and travelways should be maintained to provide for security and connectivity of habitat. **GD Recommended Research Natural Area** Recommended RNA's should be managed for nonmotorized access within the area to minimize ground disturbances and protect the resources which make these areas unique. **GD Recommended Wilderness** Only nonmotorized travel may occur in recommended wilderness. However, motorized use associated with grazing allotments may occur and should be limited to that needed to carry out required management practices and comply with the terms and conditions of term grazing permits.	
Engineering	**Standard and Guideline (P 87):** Roads not needed for industry, public, and/or administrative use which are uneconomical to maintain or which are causing significant resource conflicts will be obliterated. Obliteration of unneeded roads and trails is a means of implementing Resource Access/Travel Management (RATM) decisions. Obliteration will be accomplished by mechanically destroying the facility or by implementing management strategies to discourage, eliminate, or prohibit traffic to allow natural vegetation to return to the site. The road or trail shall be removed from the inventory when obliteration is complete.	**OBJ Overall Ecosystem Health** During the planning period, improve the condition class on at least 10 priority 6th level HUC watersheds by removing or mitigating degrading factors. Footnote: Degrading factors include, but are not limited to, actions that cause or maintain high departure from historic vegetation conditions, unsatisfactory or impaired soil condition, nonfunctioning riparian areas, impaired species habitat, occurrence of invasive species, and unstable road and trail conditions. **OBJ Riparian Areas** Within the planning period, relocate, repair, improve, or decommission a minimum of 4 miles of National Forest System roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas** Annually, remove an average of 2 miles of unauthorized roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **GD Motorized Opportunities** As projects occur in riparian or wet meadow areas, unneeded roads or motorized trails should be closed or relocated, drainage restored and native vegetation	Retained through detailed objectives, desired conditions, and standards throughout the new plan, Forest Service Manual 7700 – Chapter 7730 and 36 CFR 212 Travel Management. The term obliteration is now referred to as Road decommissioning – Activities that result in the stabilization and restoration of unneeded roads to a more natural state (36CFR 212.1). It includes a range of activities from ripping and seeding to full reclamation by restoring the original topography. Road decommissioning results in the removal of a National Forest System road.

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		reestablished to move these areas toward their desired condition. **GD Motorized Opportunities** As projects occur, redundant roads or motorized trails should be removed to reduce degradation of natural resources. **GD Motorized Opportunities** Roads and motorized trails removed from the transportation network should be treated in order to avoid future risk to hydrologic function and aquatic habitat.	
Engineering	**Standard and Guideline Management Area 1 (P 115):** Construct/reconstruct access roads minimal standard, and minimal density necessary for removing green firewood and in a manner to minimize resource impacts and ground disturbance and provide for user safety. Use collections from firewood permit surcharge to fund road work activities.	**DC Motorized Opportunities** A maintained road and motorized trail system is in place and provides for safety and access for the use (e.g. recreation, minerals, vegetation treatment, fire protection) of the Apache-Sitgreaves N.F. **DC Motorized Opportunities** The location and design of roads and trails does not impede wildlife and fish movement. **ST Motorized Opportunities Temporary** road construction shall minimize the impacts to resource values and facilitate road rehabilitation. Temporary roads shall be rehabilitated following completion of the activities for which they were constructed. **ST Motorized Opportunities** Road maintenance and construction activities shall be designed to reduce sediment (e.g., water bars, sediment traps, grade dips) while first providing for user safety. **GD Motorized Opportunities** As projects occur, roads or motorized trails that contribute to negative impacts on cultural resources should be closed or relocated.	Retained through detailed objectives, desired conditions, and standards throughout the new plan, Forest Service Manual 7700 – Chapter 7730 and 36 CFR 212 Travel Management. Funding mechanisms are a function of appropriation law, and WO, RO and Forest Budget direction/ advice, not plan direction.

Fire and Fuels

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Fire/Fuels	**Fire and Fuels Management** Fire is used as a resource management tool where it can effectively accomplish resource management objectives. (p. 17)	**DC Wildland Fire Management** •Human life, property, and natural and cultural resource are protected within and adjacent to NFS lands. •Wildland fires burn within the range of frequency and intensity of natural fire regimes. Uncharacteristic high severity fires rarely occur and do not burn at the landscape scale. •Wildland fire maintains and enhances resources and functions in its natural ecological role. •For all PNVTs, the composition, cover, structure, and mosaic of vegetative conditions reduce uncharacteristic wildfire hazard to local communities and forest ecosystems. **GD Wildland Fire Management** •Wildland fire may be used to meet PNVT desired conditions and enable natural fire regimes. •Human-induced impacts (e.g., smoke production, suppression actions) to natural processes, resources, or infrastructure attributable to wildland fire activities should be managed towards achieving objectives as identified in the applicable decision document.	Plan Direction carried forward with updates to comply with Federal Wildland Fire Management Policy (Forest Service and DOI, 2009).

Goshawk

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Goshawk	Establish a minimum of three nest areas and three replacement nest areas per Post-fledgling family area. The nest areas and replacement nest areas should be approximately 30 acres in size. A minimum total of 180 acres of nest areas should be identified within each PFA. Post-fledgling family areas (PFA) will be approximately 600 acres in size. Post-fledgling family areas will include the nest sites and consist of the habitat most likely to be used by the fledglings during their early development.	**GD Wildlife and Rare Plants** A minimum of six nest areas (known and replacement) should be located per northern goshawk territory. Northern goshawk nest and replacement nest areas should be located around active nests, in drainages, at the base of slopes, and on northerly (northwest to northeast) aspects. Nest areas should be 25 to 30 acres each in size. **GD Wildlife and Rare Plants** Northern goshawk post-fledging family areas (PFAs) of approximately 420 acres in size should be designated around the nest sites.	The requirements in the new plan are the same as the old plan. The new plan nest areas plus PFAs add up to 600 acres (6x30=180 acres plus 420 acres), same as in the previous direction.
Goshawk	**Within PFAs** General: Provide for healthy sustainable forest environment for the post-fledgling family needs of goshawks. The principle difference between within the post-fledgling family area and outside the post-fledgling family area is the higher canopy cover within the post-fledgling family area and smaller opening size within the post-fledgling family area. Vegetative Structural Stage distribution and structural conditions are the same within and outside the post-fledgling family area.	**DC Ponderosa Pine** Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. **DC Ponderosa Pine** Northern goshawk nest areas have forest conditions that are multi-aged and dominated by large trees with relatively denser canopies than the surrounding forest. **DC Dry Mixed Conifer** Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. **DC Dry Mixed Conifer** Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest **DC Wet Mixed Conifer** Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest.	The new plan direction, along with other Desired Conditions for forested types, provides the same direction as the previous plan. The previous direction specified higher canopy cover and smaller openings in PFAs; the increased basal area will provide both, as well as the requirement for nesting areas (which are within PFAs) to have denser canopies than surrounding stands.

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		DC Wet Mixed Conifer Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest **DC Spruce-fir** Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. **DC Spruce-fir** Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest.	
Goshawk	**Within nesting areas:** The structure of the vegetation within nest areas is associated with the forest type, and tree age, size, and density, and the developmental history of the stand. Table 5 of RM-217 presents attributes required for goshawks on locations with "low" and "high" site productivity.	See above, also: **DC Ponderosa Pine** Ponderosa pine forest is characterized by variation in the size and number of tree groups depending on elevation, soil type, aspect, and site productivity. The more biologically productive sites contain more trees per group and more groups per area, resulting in less space between groups. Openings typically range from 10 percent in more biologically productive sites to 70 percent in the less productive sites. Tree density within forested areas ranges from 20 to 80 square feet basal area per acre. **DC Dry Mixed Conifer** The dry mixed conifer forest is characterized by a variety of size and number of tree groups depending on elevation, soil type, aspect, and site productivity. The more biologically productive sites contain more trees per group and more groups per area, resulting in less space between groups. Openings typically range from 10 percent in more biologically productive sites to 50 percent in less productive sites. Tree density within forested areas ranges from 30 to 100 square feet basal area per acre. **DC Wet Mixed Conifer** The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are frequently hundreds of acres and rarely thousands of acres. Groups of tens of acres or less are relatively common. There	The new direction captures the degree of site variation within each vegetation type within the desired conditions themselves. The degree of site variation exhibited is based on more recent work than RM-217. See Desired Conditions for Use in Forest Planning in the Southwestern Region: Development and Science Basis (USDA, 2013) and also see Reynolds et al., 2013. Site productivity (site index) and site capability to provide the RM-217 Table 5 criteria are determined by specialists using site (stand) level data collected for project activity analysis and implementation.

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		is a mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age. Grass, forb, and shrub openings created by disturbances may comprise 10 to 100 percent of the area depending on the type of disturbance. **DC Spruce-fir** The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are mostly hundreds of acres and rarely thousands of acres. There may be frequent small disturbances resulting in groups of tens of acres or less. A mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age, is present. Grass, forb, and shrub openings created by disturbances may comprise 10 to 100 percent of the area depending on time since disturbances. Aspen is occasionally present in large patches.	
Goshawk	**Human disturbance**. Limit human disturbance in or near nest sites and PFAs during the breeding season so that goshawk reproductive success is not affected by human activities. The breeding season extends from March 1 through September 30.	**GD Wildlife and Rare Plants** Active raptor nests should be protected from treatments and disturbance during the nesting season to provide for successful reproduction. Specifically for northern goshawk nest areas, human presence should be minimized during nesting season of March 1 through September 30. **GD Motorized Opportunities** New roads or motorized trails should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified; seasonal restrictions may be an option.	The new plan has different wording, but the guidance remains the same.
Goshawk	**Applicability:** The northern goshawk standards and guidelines apply to the forest and woodland communities described below 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	Direction not carried forward into revised plan.	This precedence statement is no longer necessary and is not included in the new plan. The new plan sets direction for forested PNVTs that is designed to restore these systems to a level of ecological function similar to historical reference conditions. Protection of and requirements for

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	northern goshawk standards and guidelines. One or the other set of standards and guidelines apply to all forest and woodland communities but the Mexican spotted owl standards always take precedence in areas of overlap.		listed species, such as the Mexican spotted owl, already exist in law, regulation, and policy and are not duplicated in the plan. In addition, the statutory requirement to conserve listed species is met in the plan by guidance emphasizing actions that provide for listed species recovery.
Goshawk	Establish, and delineate on a map, a post-fledgling family area that includes six nesting areas per pair of nesting goshawks for known nest sites, old nest sites, areas where historical data indicates goshawks have nested there in the past, and where goshawks have been repeatedly sighted over a two year or greater time period but no nest sites have been located.	**GD Wildlife and Rare Plants** A minimum of six nest areas (known and replacement) should be located per northern goshawk territory. Northern goshawk nest and replacement nest areas should be located around active nests, in drainages, at the base of slopes, and on northerly (northwest to northeast) aspects. Nest areas should be 25 to 30 acres each in size. **GD Wildlife and Rare Plants** Northern goshawk post-fledging family areas (PFAs) of approximately 420 acres in size should be designated around the nest sites.	The new plan guidance meets the same intent as prior plan guidance.
Goshawk	**Forest wide ST under Management for goshawk habitat.** Survey the management analysis area prior to habitat modifying activities including a 1/2 mile beyond the boundary. **Forest wide GDs for goshawk inventories.** For areas where complete inventories cannot be done, use aerial photographs to locate vegetative structural stages (VSS) 4-6 within the project area and inventory just those sites for goshawk nest areas using R3 inventory protocol. All un-inventoried areas (VSS 1-3) will be managed to post-fledgling family area (PFA) specifications while in that stage. If, while using this inventory option, evidence suggests	Direction not carried forward into revised plan.	Inventories for goshawks, while not specifically required, will need to be conducted in order to fulfill provisions of the new plan for disturbance, establishment of nest sites and PFAs, and other provisions in the new plan.

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	goshawks are present (such as finding plucking perches or molted goshawk feathers) conduct a complete inventory as outlined above. **Forest wide GDs for goshawk inventories**. If forests have goshawks commonly nesting in stands classified as VSS 1-3, use the complete inventory methods for those areas. There may be situations where an area is classified as a VSS 3, based on the predominant VSS class, but in actuality a combination of VSS 4 & 5 predominate the area. For those situations, use the complete inventory methods.		
Goshawk	**Forest wide ST for goshawk habitats.** Limit human activity in nesting areas during the breeding season.	**GD Wildlife and Rare Plants** Active raptor nests should be protected from treatments and disturbance during the nesting season to provide for successful reproduction. Specifically for northern goshawk nest areas, human presence should be minimized during nesting season of March 1 through September 30. **GD Motorized Opportunities** New roads or motorized trails should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified; seasonal restrictions may be an option.	The new plan guidance meets the intent of the previous guidance.
Goshawk	**Forest wide GD for goshawk habitats.** Refer to USDA Forest Service General Technical Report RM-217 entitled "Management Recommendations for the Northern Goshawk in the Southwestern United States" for scientific information on goshawk ecology and management which provide the basis for the management guidelines. Supplemental information on	Direction not carried forward into revised plan.	The science in RM-217, as well as more recent work, has been incorporated into the plan components for all forested PNVTs, including those PNVTs (Ponderosa pine, Dry and Wet Mixed Conifer, and Spruce-fir) that are goshawk habitat. Survey protocols have changed since the 1996 ROD

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	goshawk ecology and management may be found in "The Northern Goshawk: Ecology and Management" published by the Cooper Ornithological Society as Studies in Avian Biology No. 16. In woodland forest cover types, use empirical data to determine desired habitat conditions. **Forestwide GD for goshawk habitats.** Use the R3 survey protocol to get complete coverage of the management analysis area (Kennedy and Stahlecker 1993, as modified by Joy, Reynolds, and Leslie 1994.) Management analysis areas should be entire ecosystem management areas if possible. Complete at least one year of survey, but two years of survey should be done to verify questionable sightings, unconfirmed nest sites, etc. If nesting goshawks are found during the first year of inventory, a second year of inventory is not needed in that territory.		amended the forest plan; the current survey protocol is from 2006, and may change in future. The new plan does not specify the monitoring protocol to be used because this may change.
Goshawk	**Forest wide GDs for goshawk home range.** Manage for nest replacement sites to attain sufficient quality and size to replace the three suitable nest sites. **Forest wide GDs for goshawk home range**. Nest site selection will be based first on using active nest sites followed by the most recently used historical nest areas. When possible, all historical nest areas should be maintained.	**GD Wildlife and Rare Plants** A minimum of six nest areas (known and replacement) should be located per northern goshawk territory. Northern goshawk nest and replacement nest areas should be located around active nests, in drainages, at the base of slopes, and on northerly (northwest to northeast) aspects. Nest areas should be 25 to 30 acres each in size. **GD Wildlife and Rare Plants** A minimum of six nest areas (known and replacement) should be located per northern goshawk territory. Northern goshawk nest and replacement nest areas should be located around active nests, in drainages, at the base of slopes, and on northerly (northwest to northeast) aspects. Nest areas should be 25 to 30 acres each in size.	The new plan direction meets the intent of the previous direction.

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Goshawk	**Forest wide GDs outside PFAs**. The distribution of VSS, tree density, and tree age are a product of site quality in the ecosystem management area. Use site quality to guide in the distribution of VSS, tree density and tree ages. Use site quality to identify and manage dispersal PFA and nest habitat at 2 - 2.5 mile spacing across the landscape.	**DC Ponderosa Pine** Ponderosa pine forest is characterized by variation in the size and number of tree groups depending on elevation, soil type, aspect, and site productivity. The more biologically productive sites contain more trees per group and more groups per area, resulting in less space between groups. Openings typically range from 10 percent in more biologically productive sites to 70 percent in the less productive sites. Tree density within forested areas ranges from 20 to 80 square feet basal area per acre. **DC Dry Mixed Conifer** The dry mixed conifer forest is characterized by a variety of size and number of tree groups depending on elevation, soil type, aspect, and site productivity. The more biologically productive sites contain more trees per group and more groups per area, resulting in less space between groups. Openings typically range from 10 percent in more biologically productive sites to 50 percent in less productive sites. Tree density within forested areas ranges from 30 to 100 square feet basal area per acre. **DC Wet Mixed Conifer** The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are frequently hundreds of acres and rarely thousands of acres. Groups of tens of acres or less are relatively common. There is a mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age. Grass, forb, and shrub openings created by disturbances may comprise 10 to 100 percent of the area depending on the type of disturbance. **DC Spruce-fir** The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are mostly hundreds of acres and rarely thousands of acres. There may be frequent small disturbances resulting in groups of tens of acres or less. A mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age, is present. Grass, forb, and shrub openings created by disturbances may comprise 10 to 100 percent of the area	The new plan direction, while it does not mention VSS, specifies that the variation in forested systems is a product of local site conditions and management must account for this and incorporate this variation into the variation in the vegetation type. This fully meets the intent of the old guidance.

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		depending on time since disturbances. Aspen is occasionally present in large patches.	
Goshawk	**Forest wide GDs within nesting areas**. Limit dozer use for piling or scattering of logging debris so that the forest floor and herbaceous layer is not displaced or destroyed.	**DC Soil** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soil** Soils provide for diverse native plant species [9]. Vegetative ground cover (herbaceous vegetation and litter) is distributed evenly across the soil surface to promote nutrient cycling, water infiltration, and to maintain natural fire regimes. **GD Soil** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed.	The new plan direction meets the intent of the previous direction.
Goshawk	**Forest wide GDs for human disturbance.** Limit human activities in or near nest sites and post-fledgling family areas during the breeding season so that goshawk reproductive success is not affected by human activities.	**GD Wildlife and Rare Plants** Active raptor nests should be protected from treatments and disturbance during the nesting season to provide for successful reproduction. Specifically for northern goshawk nest areas, human presence should be minimized during nesting season of March 1 through September 30. **GD Motorized Opportunities** New roads or motorized trails should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified; seasonal restrictions may be an option.	The new plan direction meets the intent of the previous direction.
Goshawk	**Forest wide ST for goshawk.** When activities conducted in conformance with these standards and guidelines may adversely affect other threatened, endangered, or sensitive species or may conflict with other established recovery plans or conservation agreements; consult with U.S. Fish and Wildlife Service to resolve the conflict.	**GD Wildlife and Rare Plants** Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans.	This precedence statement is no longer necessary and is not included in the new plan. Protection of and requirements for listed species, such as the Mexican spotted owl, already exist in law, regulation, and policy and are not duplicated in the plan. In addition, the statutory requirement to conserve listed species is met in the

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			plan by guidance emphasizing actions that provide for listed species recovery.
Goshawk	**Forest wide ST for goshawk**. Within the ranges of the Kaibab pincushion cactus, *Pediocactus paradinei*, and the Arizona leatherflower, *Clematis hirsutissima arizonica*, management activities needed for the conservation of these two species that may conflict with northern goshawk standards and guidelines will be exempt from the conflicting northern goshawk standards and guidelines until conservation strategies or recovery plans (if listed) are developed for the two species.	Direction not carried forward into revised plan.	These species do not occur on the forests.
Goshawk	**Forest wide ST for NOGO Habitat:** Manage for uneven-age stand conditions for live trees and retain live reserve trees, snags, downed logs, and woody debris levels throughout woodland, ponderosa pine, mixed conifer and spruce-fir forest cover types. Manage for old age trees such that as much old forest structure as possible is sustained over time across the landscape. Sustain a mosaic of vegetation densities (overstory and understory), age classes and species composition across the landscape. Provide foods and cover for goshawk prey. **Forest wide GDs outside PFAs. Woodland:** Manage for uneven age conditions to sustain a mosaic of vegetation densities (overstory and understory), age classes, and species	**Concept retained, but specific text deleted. Replaced with:** *multiple DCs and GDs for forest and woodland densities, structure, arrangement, and function at the landscape, mid-scale and fine scale for All PNVTs and for each PNVT in the revised plan. As written, most revised plan DCs describe uneven-aged (multiple-aged) conditions that would make habitats more sustainable, providing both vertical and horizontal diversity, as well as tree age and species diversity. See new plan direction already presented in this crosswalk's **Vegetation** section for addressing the existing plan's "old growth" STs & GDs, wildlife "vertical and horizontal diversity" STs & GDs, deer/elk "hiding and thermal cover" STs & GDs, and "uneven-aged" management STs & GDs, as well as those presented in this crosswalk for MSO habitat. Those DCs and GDs are further supplemented in the revised plan with the following applicable for NOGO:* **DC for Overall Ecosystem Health** Large blocks of habitat are interconnected, allowing for behavioral and predator-prey interactions, and the persistence of metapopulations and	Redundant with revised plan's PNVT DCs and GDs. The revised plan presents a more holistic approach to providing wildlife habitat needs, including NOGO and its prey base. New plan direction is consistent with GTR RM-217 (MRNG). Also see Desired Conditions for Use in Forest Planning in the Southwestern Region: Development and Science Basis (USDA, 2013). **Management Approach for All Forested PNVTs -** Mexican spotted owl and northern goshawk are management indicator species (MIS) of forest density and structure. The treatment objective listed (*Annually treat 5,000 to*

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	composition well distributed across the landscape. Provide for reserve trees, snags, and down woody debris.	highly interactive wildlife species across the landscape. Ecological connectivity extends through all plant communities. **DCs for All PNVTs** Herbaceous vegetation amount and structure (e.g., plant density, height, litter, seed heads) provides habitat to support wildlife and prey species. **DCs for Forests: PP** •Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged and dominated by large trees with relatively denser canopies than the surrounding forest. **DCs for Forests: DMC** •Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest. **DCs for Forests: WMC** •Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest. **DCs for Forests: SF** •Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest. **OBJ for Woodlands: All Woodland PNVTs** Annually, treat or maintain 5,000 to 15,000 acres to promote a highly diverse	*35,000 acres …)* would contribute to species viability. Uneven-aged management techniques are used primarily, and some even-aged management is used especially when managing species such as aspen and spruce. Even-aged treatments may be applied in the short term for forest health concerns (e.g., heavy dwarf mistletoe infections) to facilitate a transition to uneven-aged management.

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		structure. **DCs for Woodlands: Madrean Pine-Oak** •A mix of desired species[10], ages, heights, and groupings of trees create a mosaic across the landscape. •The majority of this woodland has an open canopy consisting of large trees and an herbaceous understory, with some groups of closed canopy. Overall, canopy cover is 10 to 50 percent. •Snags, averaging 1 to 2 per acre, and older trees are scattered across the landscape. Coarse woody debris averages 1 to 5 tons per acre. •Understory vegetation includes evergreen oaks, mountain mahogany, grasses, and forbs. •Ground cover consists of perennial grasses and forbs that frequently carry fire through the landscape. •Grasses, forbs, shrubs, needles, leaves, and small trees support the natural fire regime. The larger proportion (60 percent or greater) of soil cover is composed of grasses and forbs as opposed to needles and leaves. Mid-Scale Desired Conditions (100 to 1,000 acres) •Some large patches in the Madrean pine-oak woodland are closed canopy, have multiple age classes, large trees, and old growth-like characteristics (e.g., numerous snags, large coarse woody debris) in order to provide for wildlife such as Mexican spotted owl and black bear, that need denser habitat. •The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are mostly tens of acres, with rare disturbances of hundreds of acres. There may be frequent small disturbances resulting in groups and patches of tens of acres or less. A mosaic of groups and patches of trees, primarily even-aged, that are variable in size, species composition, and age, is present. Grass, forb, and shrub openings created by disturbance may comprise 10 to 100	

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		percent of the area depending on the disturbances. •Woodland densities range from 15 to 50 square feet basal area per acre. **DCs for Woodlands: Piñon-Juniper – Savanna** •The piñon-juniper savanna is open in appearance with trees occurring as individuals or in small groups and ranging from young to old. Overall, tree canopy cover is 10 to 15 percent, but may range up to 30 percent. •Scattered shrubs and a continuous herbaceous understory, including native grasses, forbs, and annuals, are present to support a natural fire regime. •Grasses, forbs, shrubs, needles, leaves, and small trees support the natural fire regime. The larger proportion (60 percent or greater) of soil cover is composed of grasses and forbs as opposed to needles and leaves. •Old growth occurs in isolated locations scattered throughout the landscape, as individual old trees or as clumps of old trees. Other old growth components may also be present including dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. **DCs for Woodlands: Piñon-Juniper – Persistent Woodland** •A mix of desired species[10], ages, heights, and groupings of trees create a mosaic across the landscape. •Tree canopy cover is closed (greater than 30 percent), shrubs are sparse to moderate, and herbaceous cover is patchy. •Snags, averaging one to two per acre, and older trees with dead limbs and tops are scattered across the landscape. Coarse woody debris averages 2 to 5 tons per acre. •Old growth includes old trees, dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality).	

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		GDs for Wildlife and Rare Plants •Management and activities should not contribute to a trend toward the Federal listing of a species. •Modifications, mitigations, or other measures should be incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives.	
Goshawk	**Forest wide GD outside PFAs: General**: The distribution of vegetation structural stages for **ponderosa pine, mixed conifer and spruce-fir forests** is 10% grass/forb/shrub (VSS1), 10% seedling-sapling (VSS2), 20% young forest (VSS 3), 20% mid-aged forest (VSS4), 20% mature forest (VSS 5), 20% old forest (VSS6). NOTE: The specified percentages are a guide and actual percentages are expected to vary + or - up to 3%.	**General concept retained, but prescriptive VSS provisions deleted.** **DCs for Overall Ecosystem Health –** •Natural ecological cycles (i.e., hydrologic, energy, nutrient) facilitate shifting of plant communities, structure, and ages across the landscape. Ecotone shifts are influenced at both the landscape and watershed scale by ecological processes. The mosaic of plant communities and the variety within the communities are resilient to disturbances. •Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. •Habitat configuration and availability allows wildlife populations to adjust their movements (e.g., seasonal migration, foraging) in response to climate change and promote genetic flow between wildlife populations. •Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DCs for All PNVTs –** •Each PNVT contains a mosaic of vegetative conditions, densities, and structures. This mosaic occurs at a variety of scales across landscapes and watersheds. The distribution of physical and biological conditions is appropriate to the natural disturbance regimes affecting the area.	Revised plan's DCs for all Forests, Woodlands, and PNVTs are consistent with GTR-217 (MRNG) and provide for sustainable goshawk habitat. Uneven-aged management is emphasized as the silvicultural tool to help achieve a sustainable range of tree age/size classes across the NOGO's habitat. See Desired Conditions for Use in Forest Planning in the Southwestern Region: Development and Science Basis (USDA 2013), including illustration of VSS class distribution as a form of uneven-aged management. Also see Reynolds et al., 2013 for further illustrations of how revised plan direction is consistent with the MRNG, especially for the frequent-fire PNVTs (PP and DMC). **Management Approaches for Wildlife and Rare Plants -** The management approach is to provide a diversity of habitats, well distributed, with ecological conditions that support native and

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		•Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth forests. •Old growth is dynamic in nature and occurs in well-distributed patches that spatially shift across forest and woodland landscapes over time. •Old or large trees, multistoried canopies, large coarse woody debris, and snags provide the structure, function, and associated vegetation composition as appropriate for each forested and woodland PNVTs. •Stand densities and species compositions are such that vegetation conditions are resilient under a variety of potential future climates. **Also see DCs for Forests: Ponderosa pine, Dry Mixed conifer, Wet mixed conifer, Spruce-fir, Aspen; and DCs for Woodlands: Madrean pine-oak, and Piñon-juniper.**	desired nonnative animal species over the long term. The forests also provide for wildlife and their needs consistent with recovery plans, biological opinions, conservation strategies, conservation assessments, management plans, memorandums of understanding (MOUs), and Forest Service direction. Species conservation assessments/strategies and agreements executed at the forest level are reviewed every 10 years and updated as necessary. The forests participate in the development and implementation of conservation plans and activities for identified species to help preclude Federal or State listing. Actions (e.g., closures, timing of treatments) are implemented to limit management impacts and disturbances and to help prevent listing of species as threatened or endangered.
Goshawk	**Forest wide GDs outside PFAs: Spruce-fir**: Canopy cover for mid-aged forest (VSS 4) should average 1/3 60% and 2/3 40%, mature forest (VSS 5) should average 60+%, and old forest (VSS 6) should average 60+%. Maximum opening size is 1 acre with a maximum width of 125 feet. Provide two groups of reserve trees per acre with six trees per group when opening size exceeds 0.5. Leave at least 3 snags, 5 downed logs, and 10-15 tons	**Concept retained but prescriptive text deleted. Replaced with:** **GDs for All PNVTs** •During project design and implementation, precautions should be taken to reduce the potential for damage to residual vegetation in order to prevent premature or excessive mortality. •Project plans should include quantitative and/or qualitative objectives for implementation monitoring and effectiveness monitoring to assist in moving toward or maintaining desired conditions. **OBJ for All Forested PNVTs** Annually, treat 5,000 to 35,000 acres to reduce tree densities, restore natural fire regimes, promote species habitat and ecosystem health, reduce fire	The majority of this forested PNVT lies within designated wilderness areas. Thus no SF acres in the revised plan are classified as suitable timberlands. Much of the remaining habitat in this type needs restoration to sustainable conditions, where possible. From revised plan's **Spruce-Fir forest Background** section:

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	of woody debris per acre (including the downed logs).	hazard, maintain desired conditions, initiate recovery from uncharacteristic disturbance, and provide forest products, leaving a desired mix of species with the range of desired densities that are resilient to changing climatic conditions. **See <u>all</u> DCs for Forests: Spruce-Fir at Landscape Scale, Mid-scale, and Fine scale.** (Listing them all here would be too lengthy and redundant) **GD for Wildlife and Rare Plants**- Modifications, mitigations, or other measures should be incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives. **GDs for Landscape Scale Disturbance Events** •Where conifer seed sources are lost or poorly distributed and/or deciduous tree species are not adequately resprouting, artificial regeneration (e.g., planting, seeding) should be used to promote movement toward desired conditions, provided adequate site conditions exist. •Management should emphasize long term reestablishment of native deciduous trees, shrubs, and herbaceous vegetation to maintain ecosystem diversity. •An adequate number and size of snags and logs, appropriate for the affected PNVT, should be retained individually and in clumps to provide benefits for wildlife and coarse woody debris for soil and other resource benefits. **STs for Wilderness and Primitive Area, and Recommended Wilderness** •Objective(s) and strategies for all wildfires shall be identified. •Human-caused disturbed areas that do not complement wilderness characteristics will be rehabilitated to a natural appearance, using species or other materials native to the area. **GD for Wilderness and Primitive Area, and Recommended Wilderness** Prescribed fire should be considered to reduce the risks and consequences of	"Spruce-fir intergrades with the wet mixed conifer PNVT at lower elevations. This PNVT's overstory is currently (post-Wallow Fire) highly departed from reference conditions. There is a lack of aspen regeneration. There are also too few large to very large shade tolerant trees with closed canopies. Approximately 31 percent of this PNVT was reset to an early developmental state because of the 2011 Wallow Fire. The natural fire regime is also moderately departed from reference conditions. Historically, principal ecological disturbance factors were insects, disease, and wind followed by infrequent high severity fires."

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		uncharacteristic wildfire within wilderness or escaping from wilderness by reducing unnatural fuel accumulations, if necessary to meet wilderness fire management objectives. Naturally occurring wildfires should be allowed to perform, as much as possible, their natural ecological role within wilderness.	
Goshawk	**Forest wide GDs outside PFAs: Mixed Conifer**: Canopy cover for mid-aged forest (VSS 4) should average 1/3 60+% and 2/3 40+%, mature forest (VSS 5) should average 50+%, and old forest (VSS 6) should average 60+%. Maximum opening size is up to 4 acres with a maximum width of up to 200 feet. Retain one group of reserve trees per acre of 3-5 trees per group for openings greater than 1 acre in size. Leave at least 3 snags, 5 downed logs, and 10-15 tons of woody debris per acre, (including the downed logs).	**Concept retained but prescriptive text deleted. Replaced with:** **GDs for All PNVTs** •During project design and implementation, precautions should be taken to reduce the potential for damage to residual vegetation in order to prevent premature or excessive mortality. •Project plans should include quantitative and/or qualitative objectives for implementation monitoring and effectiveness monitoring to assist in moving toward or maintaining desired conditions. **OBJ for All Forested PNVTs** Annually, treat 5,000 to 35,000 acres to reduce tree densities, restore natural fire regimes, promote species habitat and ecosystem health, reduce fire hazard, maintain desired conditions, initiate recovery from uncharacteristic disturbance, and provide forest products, leaving a desired mix of species with the range of desired densities that are resilient to changing climatic conditions. **See <u>all</u> DCs for Forests: Dry Mixed Conifer at Landscape Scale, Mid-scale, and Fine scale.** + also **See <u>all</u> DCs for Forests: Wet Mixed Conifer at Landscape Scale, Mid-scale, and Fine scale.** (Listing them all here would be too lengthy and redundant) **GD for Wildlife and Rare Plants**- Modifications, mitigations, or other measures should be incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives. **GDs for Landscape Scale Disturbance Events**	Much of the remaining habitat in types needs restoration to sustainable conditions. From revised plan's **DMC and WMC forests Background** sections: **-DMC: "**This PNVT's overstory is currently (post-Wallow Fire) highly departed from reference conditions. The forest composition has shifted toward more shade tolerant species that are not adapted to fire, such as true firs. It also has too many stands with a closed canopy characteristic, and there is an underrepresentation of medium to very large size trees with an open canopy character. Approximately 25 percent of this PNVT was reset to an early developmental state because of the 2011 Wallow Fire. The natural fire regime is also severely departed from reference conditions. Historically, fire burned relatively frequently (every 10 to 22 years) and at low intensities. This historic regime kept the forest open and maintained fire-resistant species and an abundant herbaceous understory." **-WMC:** "This PNVT's overstory is currently (post-Wallow Fire) highly

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		•Where conifer seed sources are lost or poorly distributed and/or deciduous tree species are not adequately resprouting, artificial regeneration (e.g., planting, seeding) should be used to promote movement toward desired conditions, provided adequate site conditions exist. •Management should emphasize long term reestablishment of native deciduous trees, shrubs, and herbaceous vegetation to maintain ecosystem diversity. •An adequate number and size of snags and logs, appropriate for the affected PNVT, should be retained individually and in clumps to provide benefits for wildlife and coarse woody debris for soil and other resource benefits.	departed from reference conditions. There is a lack of aspen regeneration and too few large to very large shade tolerant trees with a closed canopy characteristic. Approximately 35 percent of this PNVT was reset to an early developmental state because of the 2011 Wallow Fire. The majority (approximately 74 percent) of the herbaceous understory vegetation within the wet mixed conifer forest is highly to severely departed from desired conditions. The natural fire regime is also moderately departed from reference conditions. Historic fire regimes were typically of mixed severity fires (every 35 to 50 years) and occasional high severity, stand replacing, crown fires (every 120 to 400 or more years). Natural ecological disturbances in this PNVT typically occur at two spatial and temporal scales: large scale infrequent (mostly fire) and small scale frequent (e.g., fire, insects, disease, wind)." Analyses done for the revised plan's EIS show that increasing the annual treatment OBJ acres and/or the ASQ stated in the revised plan could jeopardize key habitat conditions for NOGO and MSO in the short-term (i.e., during life of the revised plan).

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Goshawk	**Forestwide GDs outside PFAs. Ponderosa Pine**: Canopy Cover for mid-aged forest (VSS 4) should average 40+%, mature forest (VSS 5) should average 40+%, and old forest (VSS 6) should average 40+%. Opening size is up to 4 acres with a maximum width of up to 200 feet. One group of reserve trees, 3-5 trees per group, will be left if the opening is greater than an acre in size. Leave at least 2 snags per acre, 3 downed logs per acre, and 5-7 tons of woody debris per acre, (including the downed logs).	**Concept retained but prescriptive text deleted. Replaced with:** **GDs for All PNVTs** •During project design and implementation, precautions should be taken to reduce the potential for damage to residual vegetation in order to prevent premature or excessive mortality. •Project plans should include quantitative and/or qualitative objectives for implementation monitoring and effectiveness monitoring to assist in moving toward or maintaining desired conditions. **OBJ for All Forested PNVTs** Annually, treat 5,000 to 35,000 acres to reduce tree densities, restore natural fire regimes, promote species habitat and ecosystem health, reduce fire hazard, maintain desired conditions, initiate recovery from uncharacteristic disturbance, and provide forest products, leaving a desired mix of species with the range of desired densities that are resilient to changing climatic conditions. **See <u>all</u> DCs for Forests: Ponderosa pine at Landscape Scale, Mid-scale, and Fine scale**. (Listing them all here would be too lengthy and redundant) **OBJ for Grasslands** Decrease or maintain the woody canopy cover at less than 10 percent by treating up to 25,000 acres annually. **GD for Wildlife and Rare Plants**- Modifications, mitigations, or other measures should be incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives. **GDs for Landscape Scale Disturbance Events** •Where conifer seed sources are lost or poorly distributed and/or deciduous tree species are not adequately resprouting, artificial regeneration (e.g., planting, seeding) should be used to promote movement toward desired conditions, provided adequate site conditions exist. •Management should emphasize long term reestablishment of native deciduous trees, shrubs, and herbaceous vegetation to maintain ecosystem diversity.	Much of the remaining habitat in this type needs restoration to sustainable conditions. From revised plan's **Ponderosa pine forest Background** section: "This PNVT's overstory is currently (post-Wallow Fire) severely departed from reference conditions. There are too many stands in all diameter classes with a closed canopy characteristic, and there are too few large to very large size trees with an open canopy character. The majority (85 percent) of the herbaceous understory vegetation within ponderosa pine forest is highly to severely departed from desired conditions. Approximately 9 percent of this PNVT was reset to an early developmental state because of the 2011 Wallow Fire. The natural fire regime is also severely departed from reference conditions. Historically, fire burned relatively frequently (every 2 to 17 years) and at low intensities that kept the forest open with abundant herbaceous cover. Some areas that appear to be ponderosa pine forest are actually historic montane/subalpine or Great Basin grasslands that have been encroached by conifer species." By removing trees to restore grasslands, natural fire breaks will

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		•An adequate number and size of snags and logs, appropriate for the affected PNVT, should be retained individually and in clumps to provide benefits for wildlife and coarse woody debris for soil and other resource benefits.	result to help prevent wildfire spread to adjacent NOGO and MSO habitat. Analyses done for the revised plan's EIS show that increasing the annual treatment OBJ acres and/or the ASQ stated in the revised plan could jeopardize key habitat conditions for NOGO and MSO in the short-term (i.e., during life of the revised plan).
Goshawk	**Forest wide GDs within Nesting Areas** General: Provide unique nesting habitat conditions for goshawks. Important features include trees of mature to old age with high canopy cover.	**DC Ponderosa Pine** Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged and dominated by large trees with relatively denser canopies than the surrounding forest. **DC Dry Mixed Conifer:** Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest **DC Wet Mixed Conifer:** Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively	The new plan direction, along with other Desired Conditions for forested types, provides the same direction as the previous plan. The previous direction specified higher canopy cover and smaller openings in PFAs; the increased basal area will provide both, as well as the requirement for nesting areas (which are within PFAs) to have denser canopies than surrounding stands.

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		denser canopies than the surrounding forest **DC Spruce-fir:** Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest	
Goshawk	**Forest wide GDs within PFAs. Spruce-fir, Mixed Conifer and Ponderosa Pine Cover Types:** The **nesting area** contains only mature to old forest (VSS 5 & 6) having a canopy cover (measured vertically) between 50-70% with mid-aged VSS 6 trees 200-300 years old. Non-uniform spacing of trees and clumpiness is desirable. **Forest wide GDs within PFAs: Spruce-fir**: Canopy Cover for mid-aged forest (VSS 4) should average 60+% and for mature (VSS 5) and old forest (VSS 6) should average 70+%. **Forest wide GDs within PFAs Mixed Conifer**: Canopy Cover for mid-aged (VSS 4) to old forest (VSS 6) should average 60+%. **Forest wide GDs within PFAs: Ponderosa Pine:** Canopy Cover for mid-aged forest (VSS 4) should average 1/3 60+% and 2/3 50+%. Mature (VSS 5) and old forest (VSS 6) should average 50+%.	**Concept retained but prescriptive text deleted. Replaced with:** **DCs for All PNVTs Landscape Scale** Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth. **GD for All Forested PNVTs** -Trees, snags, and logs immediately adjacent to active red squirrel cone caches, Abert's squirrel nests, and raptor nests should be retained to maintain needed habitat components and provide tree groupings. **DCs for Forests: PP** •Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged and dominated by large trees with relatively denser canopies than the surrounding forest. **DCs for Forests: DMC** •Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are	Revised plan's DCs and GDs are consistent with GTR-RM-217 (MRNG), and provide for healthy and sustainable NOGO habitat at multiple scales. Uneven-aged management is emphasized as the silvicultural tool to help achieve a sustainable range of tree age/size classes across the NOGO's habitat. See Desired Conditions for Use in Forest Planning in the Southwestern Region: Development and Science Basis (USDA 2013), including illustration of VSS class distribution as a form of uneven-aged management.

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		multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest. **DCs for Forests: WMC** •Canopies are more closed than dry mixed conifer. •Tree density ranges from 30 to 180 square feet basal area per acre depending upon time since disturbance and seral states of groups and patches. •In mid-aged and older forests, trees are typically variably spaced with crowns interlocking (grouped and clumped trees) or nearly interlocking providing for species such as red squirrel. Trees within groups can be of similar or variable species and ages. •Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest. **DCs for Forests: SF** •Tree canopies in this forest are closed. An understory, consisting of native grass, forbs, and/or shrubs, is present in early seral states and is replaced by trees in later seral states. •Old growth occurs over large, continuous areas. … •Tree density ranges from 30 to 250 square feet basal area per acre, depending upon disturbance and seral states of the groups and patches. •Mid-aged to old trees grow tightly together with interlocking crowns. Trees are of the same size and/or age class in early group/patch development. In late development, they may be multilayered. •Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest. **GDs for Wildlife and Rare Plants** – •Modifications, mitigations, or other measures should be	

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		incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives. •Cool and/or dense vegetation cover should be provided for species needing these habitat components … **DCs for Wildlife Quiet Area** •WQAs provide blocks of core habitat to meet wildlife life stage requirements during the breeding, rearing, and, in some cases, the critical wintering period. •WQAs contribute to preserving natural behaviors and processes that sustain wildlife populations associated with each WQA (see below) {different for each WQA listed in the WQA section}. •The Hulsey Bench WQA on the Alpine Ranger District provides Mexican spotted owl, northern goshawk, elk, deer, turkey, and bear refuge habitat. •Middle Mountain WQA provides refuge for northern goshawk, turkey, deer, elk, and Mexican spotted owl amid extensive dispersed recreation on the Alpine Ranger District.	
Goshawk	**Forest wide GDs within Nesting areas.** Woodland: Maintain existing canopy cover levels. Forest wide GDs within PFAs. Woodland: Maintain existing canopy cover levels.	**Deleted. Replaced with:** **OBJ for Woodlands: All Woodland PNVTs** Annually, treat or maintain 5,000 to 15,000 acres to promote a highly diverse structure. **GDs for Woodlands: All Woodland PNVTs** •Treatments should leave single or small groups of medium to large native trees that are widely spaced with expanses of herbaceous vegetation and coarse woody debris to provide for soil productivity, traditional uses (e.g., piñon nut gathering), and wildlife needs such as foraging habitat for migratory birds (e.g., black-throated gray warbler, piñon jay) and other birds. •Hiding cover, approach cover (by waters), and travel corridor cover should be provided where needed by wildlife. **DCs for Woodlands: Madrean Pine-Oak –**	**Background for Woodlands: Madrean Pine-Oak -** This PNVT's overstory is currently (2011) highly departed from reference conditions. There are too many acres of closed canopy conditions consisting of small, medium, or large trees. Medium to very large trees with herbaceous understory and open canopy are lacking. The herbaceous understory vegetation within the Madrean pine-oak woodland is split, nearly equally, between low to moderately departed and highly to severely departed from desired conditions. The fire regime is also severely

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		•The majority of this woodland has an open canopy consisting of large trees and an herbaceous understory, with some groups of closed canopy. Overall, canopy cover is 10 to 50 percent. •Some large patches in the Madrean pine-oak woodland are closed canopy, have multiple age classes, large trees, and old growth-like characteristics (e.g., numerous snags, large coarse woody debris) in order to provide for wildlife such as Mexican spotted owl and black bear, that need denser habitat. •The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are mostly tens of acres, with rare disturbances of hundreds of acres. There may be frequent small disturbances resulting in groups and patches of tens of acres or less. A mosaic of groups and patches of trees, primarily even-aged, that are variable in size, species composition, and age, is present. Grass, forb, and shrub openings created by disturbance may comprise 10 to 100 percent of the area depending on the disturbances. •Woodland densities range from 15 to 50 square feet basal area per acre. •Single large trees or small groups are widely spaced between large expanses of herbaceous vegetation and shrubs. **DCs for Woodlands: Piñon-Juniper - Savanna** The piñon-juniper savanna is open in appearance with trees occurring as individuals or in small groups and ranging from young to old. Overall, tree canopy cover is 10 to 15 percent, but may range up to 30 percent. **DCs for Woodlands: PJ - Persistent Woodland** •A mix of desired species[10], ages, heights, and groupings of trees create a mosaic across the landscape. •Tree canopy cover is closed (greater than 30 percent), shrubs are sparse to moderate, and herbaceous cover is patchy. **OBJ for Grasslands** Decrease or maintain the woody canopy cover at less than 10 percent by treating up to 25,000	departed from reference conditions. Low severity surface fires frequently (every 3 to 8 years) burned through this PNVT maintaining an open stand structure. Some areas that appear to be Madrean pine-oak woodlands are actually historic semi-desert grasslands that have been encroached by woody species. **Background for Woodlands: PJ** - The piñon-juniper woodland can be divided into two subgroups: savanna and persistent woodland. This PNVT's overstory is currently (2011) slightly departed from reference conditions. When compared to desired conditions, there are too many medium to very large trees with open and/or closed canopies. While there are too few seedlings, saplings, and small trees with open and/or closed canopies, understory vegetation is lacking in many areas. The majority (91 percent) of the herbaceous understory vegetation within the piñon-juniper woodland is highly to severely departed from desired conditions. The current fire regime is similar to reference conditions. Many areas that appear to be piñon-juniper woodland are actually historic Great Basin grassland that has been encroached by woody species.

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		acres annually. **GD for Wildlife and Rare Plants** Cool and/or dense vegetation cover should be provided for species needing these habitat components. **DC for Wildlife Quiet Area –** The Hulsey Bench WQA on the Alpine Ranger District provides Mexican spotted owl, northern goshawk, elk, deer, turkey, and bear refuge habitat.	Given that many existing "woodland" acres on the ASNFs are not sustainable with an existing closed canopy condition, this existing plan direction is not restoration-based in many cases and will ultimately not favor the NOGO. Acres that have existing canopy cover densities more consistent with the DCs (especially PJ persistent woodland) will be treated to maintain that existing canopy cover. Project specialists will need to determine if existing acres that appear to be woodland are actually encroached grasslands in need of tree removal for grassland restoration. Hulsey Bench WQA contains some PJ woodland.
Goshawk	**Forest wide GDs outside PFAs.** Canopy Cover: Canopy cover guidelines apply only to mid-aged to old forest structural stages (VSS 4, VSS 5, and VSS 6) and not to grass/forb/shrub to young forest structural stages (VSS 1, VSS 2, and VSS 3).	Direction not carried forward into revised plan.	Canopy cover not defined in revised plan glossary. This GD is outdated since revised plan does not use VSS classes. DCs are designed to be consistent with MRNG.
Goshawk	**Forest wide GDs outside PFAs.** Snags are 18" or larger DBH and 30 feet or larger in height, downed logs are 12 inches in diameter and at least 8 feet long, woody debris is 3 inches or larger on the forest floor, canopy cover is measured with vertical crown projection on average	**Deleted. Replaced with:** **DC for Forests: PP** Snags and coarse woody debris are well distributed throughout the landscape. Ponderosa pine snags are typically 18 inches or greater in diameter and average 1 to 2 per acre. **DC for Forests: DMC** Snags and coarse woody debris are well distributed throughout the landscape. Snags are typically	**Glossary: Snags** – "Standing dead or partially dead trees (snag topped), often missing many or all limbs and/or bark. Snags (generally 12 inches or larger) provide essential wildlife habitat for many species and are important for forest ecosystem function".

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	across the landscape.	18 inches in diameter or greater and average 3 per acre. **DC for Forests: WMC** There are 20 or more snags greater than 8 inches in diameter per acre and 1 to 5 of those snags are 18 inches or greater in diameter. **DC for Forests: SF** In general, there are 13 to 30 snags greater than 8 inches in diameter per acre and 1 to 3 of those snags are 18 inches or greater in diameter. **Glossary: Coarse woody debris –** Woody material, including logs, on the ground greater than 3 inches in diameter—a component of litter. Large coarse woody debris is often considered to be downed logs at least 12 inches in diameter and 8 feet in length.	Larger snag sizes are embedded in the DCs. Sizes of CWD are not repeated in the DCs, since they are consistently defined in the revised plan's glossary. The exact canopy cover measurement method to use is not specified in the revised plan because better scientific methods may be developed, which would require a forest plan amendment to utilize them.
Goshawk	**Forest wide GD at the management scale**. Distribution of habitat structures (tree size and age classes, tree groups of different densities, snags, dead and down woody material, etc.) should be evaluated at the ecosystem management area level, at the mid-scale such as drainage, and at the small scale of site.	**Modified with:** Desired conditions are now set at these three scales: **Landscape Scale (10,000 acres or greater)** **Mid-Scale (100 to 1,000 acres)** **Fine Scale (less than 10 acres)**	Ecosystem management areas (EMAs) were distinct geographic delineated areas across each ranger district, and are no longer a relevant designation under the revised plan. Thus, one scale below and one scale above the EMA level are also obsolete. Habitat structure distribution for each proposed project will now be analyzed for compliance with the revised plan at the scales stated for each applicable DC. The mid-scale is viewed as containing assemblages of the fine scale. The landscape scale is viewed as containing assemblages of the mid-scale. Also see Desired Conditions for Use in Forest Planning in the Southwestern Region: Development and Science Basis (USDA, 2013).

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Goshawk	**Forest wide GDs outside PFAs.** The order of preferred treatment for woody debris is: 1) prescribed burning, 2) lopping & scattering, 3) hand piling or machine grapple piling, 4) dozer piling. **Forest wide GDs within nesting areas.** Preferred treatments to maintain the desired structure are to thin from below with non-uniform spacing and use of hand tools and fire to reduce fuel loads. Lopping and scattering of thinning debris is preferred if prescribed fire cannot be used. Piling of debris should be limited. When necessary, hand piling should be used to minimize compaction within piles and to minimize displacement and destruction of the forest floor and the herbaceous layer. Do not grapple or Dozer pile debris. Manage road densities at the lowest level possible to minimize disturbance in the nest area. Use small, permanent skid trails in lieu of roads for timber harvesting. **Forest wide GDs for human disturbance.** Low intensity ground fires are allowed at any time in all forested cover types, but high intensity crown fires are not acceptable in the post-fledgling family area or nest areas. Avoid burning the entire home range of a goshawk pair in a single year. For fires planned in the occupied nest area, a fire management plan should be prepared. The fire management plan should minimize the risk of goshawk abandonment while low intensity ground fire burns in the nesting area. Prescribed fire within nesting areas	Preferred order of woody debris retention has been excluded from the new plan direction. **Desired Conditions for All PNVTs** • Natural processes and human and natural disturbances (e.g., wildland fire, mechanical vegetation treatments) provide desired overall tree density, structure, species composition, coarse woody debris, and nutrient cycling. Natural fire regimes are restored. Uncharacteristic fire behavior is minimal or absent on the landscape. • Wildland fire maintains and enhances resources and, as nearly as possible, is allowed to function in its natural ecological role.• Old or large trees, multistoried canopies, large coarse woody debris, and snags provide the structure, function, and associated vegetation composition as appropriate for each forested and woodland PNVT. **GD All PNVTs** • Restoration methods, such as thinning or prescribed fire, should leave a mosaic of untreated areas within the larger treated project area to allow recolonization of treated areas by plants, small mammals, and insects (e.g., long-tailed voles, fritillary butterflies). • Wildland fires may be used to meet desired resource conditions, maintain or promote desired vegetation species, and enable natural fires to return to their historic role. **DC for PP** • The ponderosa pine forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. Ponderosa pine snags are typically 18 inches or greater in diameter and average 1 to 2 per acre. • Coarse woody debris, including logs, ranges from 3 to 10 tons per acre. Logs average 3 per acre within the forested area of the landscape. **DC for DMC** • The dry mixed conifer forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. Snags are typically 18 inches in diameter or greater and average 3 per acre. •	

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	should be planned to move with prevailing winds away from the nest tree to minimize smoke and risk of crown fire developing and driving the adults off or consuming the nest tree.	Coarse woody debris, including logs, ranges from 5 to 15 tons per acre. Logs average 3 per acre within the forested area of the landscape. **DC for WMC** • The wet mixed conifer forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. The number of snags and logs and amount of coarse woody debris varies by seral state ranging from 8 to more than 16 tons per acre. • Coarse woody debris, including logs, varies by seral state, ranging from 5 to 20 tons per acre for early-seral states; 20 to 40 tons per acre for mid-seral states; and may be as high as 35 tons per acre, or greater, for late-seral states. These conditions also provide an abundance of fungi including mushrooms and truffles used by small mammals. **GD for All Forested PNVTs** •Trees, snags, and logs immediately adjacent to active red squirrel cone caches, Abert's squirrel nests, and raptor nests should be retained to maintain needed habitat components and provide tree groupings. **GDs for Motorized Opportunities** •New roads or motorized trails should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified; seasonal restrictions may be an option. •As projects occur, redundant roads or motorized trails should be removed to reduce degradation of natural resources.	
Goshawk	**Forest wide GDs for Ground Surface Layer.** Manage road densities at the lowest level possible. Where timber harvesting has been prescribed to achieve desired forest condition, use small, skid trails in lieu of roads.	**Text deleted, but concept retained. Replaced with:** **GD for Water Resources** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to water resources. Where disturbance cannot be avoided, project specific soil and water conservation practices and best management practices (BMPs) should be developed. **DC for Riparian Areas** Sedimentation and soil compaction	Since the existing plan GD was written, modern harvesting equipment has evolved to efficient vehicles that drive to every tree cut (e.g. feller-bunchers), which requires the revised plan to provide more holistic direction for soils and ground cover protections.

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		from forest activities (e.g., vehicle use, recreation, livestock grazing) do not negatively impact riparian areas. **OBJs for Riparian Areas** •Within the planning period, relocate, repair, improve, or decommission a minimum of 4 miles of National Forest System roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. •Annually, remove an average of 2 miles of unauthorized roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **DCs for Soil** •Ecological and hydrologic functions are not impaired by soil compaction. •Soils are stable within their natural capability4. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. •Soils provide for diverse native plant species. Vegetative ground cover (herbaceous vegetation and litter) is distributed evenly across the soil surface to promote nutrient cycling, water infiltration, and maintain natural fire regimes. •Logs and other woody material are distributed across the surface to maintain soil productivity. •Vegetation and litter are sufficient to maintain and improve water infiltration, nutrient cycling, and soil stability. **OBJ for Soil** Annually, enhance or restore an average of 350 acres within priority 6th level HUC watersheds, including treating the causes of State and federally designated impaired or threatened waters to improve watershed condition and water quality. **GDs for Soil** •Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. •Coarse woody debris retention and/or creation should be used as needed to help retain long term soil productivity. **DCs for All PNVTs** – •Natural processes and human and	Site-specific mitigations for protecting more sensitive soils and/or more sensitive desired residual vegetation should be integrated into project activity designs and contracts for compliance with the revised plan, as well as post-project road closures. Small skid trails may not be a suitable substitute for well-designed and maintained roads or using temporary roads. The revised plan recognizes the added resource value of using road closures/restrictions (either seasonal or year-round), and using temporary road construction for mechanized treatment access with post-project removal of temporary roads. The revised plan also provides the framework to guide future changes to the transportation system. Once the final decision of this plan has been made, potential changes to the forests' transportation system will be evaluated under this framework and through implementation of the Travel Management Rule (36 CFR § 212) as required by Executive Order 11644. That analysis will consider potential resource impacts, access

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		natural disturbances (e.g., wildland fire, mechanical vegetation treatments) provide desired overall tree density, structure, species composition, coarse woody debris, and nutrient cycling. … •Organic soil cover and herbaceous vegetation protect soil, facilitate moisture infiltration, and contribute to plant and animal diversity and ecosystem function. **GD for All PNVTs** -During project design and implementation, precautions should be taken to reduce the potential for damage to residual vegetation in order to prevent premature or excessive mortality. **GD for All Woodland PNVTS** Mechanical restoration of woodlands should emphasize individual tree removal to limit ground disturbance. **GD for Wildlife and Rare Plants** Constructed features should be maintained to support the purpose(s) for which they were built. Constructed features should be removed when no longer needed. **DCs for Motorized Opportunities** •A maintained road and motorized trail system is in place and provides for safety and access for the use (e.g., recreation, minerals, vegetation treatment, fire protection) of the Apache-Sitgreaves NFs. •As projects occur, redundant roads or motorized trails should be removed to reduce degradation of natural resources. **ST for Motorized Opportunities** Temporary road construction shall minimize the impacts to resource values and facilitate road rehabilitation. Temporary roads shall be rehabilitated following completion of the activities for which they were constructed. **GD for Motorized Opportunities** New roads or motorized trails should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified; seasonal restrictions may be an option. ***Also see many more plan components listed for road density management in the Vegetation & Engineering***	needs, public input, and alternative views rather than setting a uniform road density target. *Also see more rationale listed for road density management in the Vegetation & Engineering sections of this crosswalk*.

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		sections of this crosswalk.	
Goshawk	**Forest wide GDs for Ground Surface Layer.** Piling of debris should be limited. When necessary, hand or grapple piling should be used to minimize soil compaction within piles and to minimize forest floor and herbaceous layer displacement and destruction.	**DC Soils** Ecological and hydrologic functions are not impaired by soil compaction. **DC Soils** Soil condition rating is satisfactory [2]. **DC Soils** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soils** Soil loss rates do not exceed tolerance soil loss rates [3]. **DC Soils** Vegetation and litter are sufficient to maintain and improve water infiltration, nutrient cycling, and soil stability. **GD Soils** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD Soils** Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted.	Carried forward through modified DCs, GDs and management approach.
Goshawk	**Forest wide ST for NOGO Habitat**: Manage the ground surface layer to maintain satisfactory soil conditions i.e. to minimize soil compaction; and to maintain hydrologic and nutrient cycles.	**DC Soils** Ecological and hydrologic functions are not impaired by soil compaction. **DC Soils** Soil condition rating is satisfactory [2]. **DC Soils** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soils** Soil loss rates do not exceed tolerance soil loss rates [3]. **DC Soils** Vegetation and litter are sufficient to maintain and improve water infiltration, nutrient cycling, and soil stability. **GD Soils** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be	Carried forward through modified DCs, GDs and management approach.

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		developed. **GD Soils** Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted.	
Goshawk	**Forest wide GD for NOGO Habitat:** Emphasize maintenance and restoration of healthy riparian ecosystems through conformance with forest plan riparian standards and guidelines. Management strategies should restore degraded riparian areas to good condition as soon as possible. Damage to riparian vegetation, stream banks, and channels should be prevented.	**DC Water Resources** Water quality, stream channel stability, and aquatic habitats retain their inherent resilience to natural and other disturbances. **DC Water Resources** Vegetation and soil conditions above the floodplain protect downstream water quality, quantity, and aquatic habitat. **GD Water Resources** Streams, streambanks, shorelines, lakes, wetlands, seeps, springs and other bodies of water should be protected from detrimental changes [4] in water temperature and sediment to protect aquatic species and riparian habitat. **GD Water Resources** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species. **DC Aquatic Habitat and Species** Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **DC Aquatic Habitat and Species** Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **OBJ Aquatic Habitat and Species** Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species. **DC Riparian Areas** Natural ecological disturbances (e.g., flooding, scouring) promote a diverse plant structure consisting of herbaceous, shrub, and tree species of all ages and size classes necessary for the recruitment of riparian-dependent species.	Retained through numerous objectives, desired conditions, standards and guidelines within soil, water, aquatic species, riparian and grazing sections.

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		DC Riparian Areas Riparian-wetland conditions maintain water-related processes (e.g., hydrologic, hydraulic, geomorphic). They also maintain the physical and biological community characteristics, functions, and processes. **DC Riparian Areas** Stream (lotic) riparian-wetland areas have vegetation, landform, and/or large coarse woody debris to dissipate stream energy associated with high water flow. **DC Riparian Areas** Streams and their adjacent floodplains are capable of filtering, processing, and storing sediment; aiding floodplain development; improving floodwater retention; and increasing groundwater recharge. **DC Riparian Areas** Vegetation and root masses stabilize streambanks, islands, and shoreline features against the cutting action of water. **DC Riparian Areas** Willows (e.g., Bebb, Geyer, Arizona, Goodding's) are reproducing with all age classes present, where the potential exists. **DC Riparian Areas** Diversity and density of riparian forest vegetation provides for breeding, escape, hiding, and resting cover for wildlife and provides travelways between other habitat areas and seasonal ranges. **DC Riparian Areas** The ecological function of riparian areas is resilient to animal and human use. **DC Riparian Areas** Riparian obligate species within wet meadows, around springs and seeps, along streambanks, and active floodplains provide sufficient [5] vegetative ground cover (herbaceous vegetation, litter, and woody riparian species) to protect and enrich soils, trap sediment, mitigate flood energy, stabilize streambanks, and provide for wildlife and plant needs. **DC Riparian Areas** Riparian soil productivity is optimized as described by the specific TES map unit[5] as indicated by the vigor of the herbaceous vegetation community. Based on species composition, ungrazed plant heights [7] range from 10 inches to 36 inches. **DC Riparian Areas** Large coarse woody debris provides	

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		stability to riparian areas and stream bottoms lacking geologic control (e.g., bedrock) or geomorphic features (e.g., functioning floodplains, stream sinuosity, width/depth ratio). **OBJ Riparian Areas** Annually, move 200 to 500 acres toward desired composition, structure, and function of streams, floodplains, and riparian vegetation. **OBJ Riparian Areas** Within the planning period, relocate, repair, improve, or decommission a minimum of 4 miles of National Forest System roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas** Annually, remove an average of 2 miles of unauthorized roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas** Within the planning period, enhance or restore 5 to 25 wet meadows, springs, seeps or cienegas to proper hydrologic function and native plant and animal species composition. **OBJ Riparian Areas** Annually, work with partners to reduce animal damage to native willows and other riparian species on an average of 5 miles of riparian habitat. **GD Riparian Areas** Ground-disturbing projects (including prescribed fire) which may degrade long term riparian conditions should be avoided. **GD Riparian Areas** Wet meadows, springs, seeps and cienegas should not be used for concentrated activities (e.g., equipment storage, forest product or mineral stockpiling, livestock handling facilities, special uses) that cause damage to soil and vegetation. **GD Riparian Areas** Active grazing allotments should be managed to maintain or improve to desired riparian conditions.	

Lands and Minerals

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Lands and Minerals	Administer compliance with 36 CFR 228 (Forest Service surface use regulations). Fulfill Forest's responsibilities regarding the processing of contests, suits, hearing, and appeals under the terms of the 1872 Mining Law. 36 CFR 228 regulations and appropriate environmental analysis are used to minimize potential adverse effects from mining activities. Review and administer Operating Plans to ensure that; 1) the proposed operations are reasonable methods of operations; 2) reclamation needs are properly addressed, 3) where appropriate, a bond to insure reclamation is secured, and 4) operations receive monitoring during operations. STs &GDs - Mining Law Compliance and Administration – Pg. 72-73	Direction not carried forward into revised plan. The Apache-Sitgreaves NFs would work with claimants to ensure their actions are consistent with overall plan guidance, laws, policy, and regulations.	Due to Public comments, clarification was needed in the Minerals and Energy section of the Plan Revision. Regulations governing locatable minerals are found in 36 CFR § 228, Part A. The plan does not repeat existing law, policy, or regulation. Locatable minerals are discussed in the "Minerals and Energy" section in chapter 3 of the EIS.
Lands and Minerals	Off-Road Vehicle activities will be managed to minimize conflicts with other uses, to prevent interference with the management of other resources, to prevent general environmental degradation, while providing a range of ORV opportunities. The three wilderness areas and the Blue Range Primitive Area are closed to ORV use. STs &GDs - Off-Road Vehicle Management, pg. 34. The Resource Access and Travel Management (RATM) process will be used to determine the management strategies for all existing roads, trails, and areas. RATM will also consider the management of off-road and off-trail use by motorized vehicles with the objective of resolving user conflicts, eliminating wildlife harassment and resource damage. STs &GDs - Off-Road Vehicle	**GD Energy Corridor** Energy corridors should be managed as nonmotorized areas to avoid conflicts with corridor operations and maintenance needs, although operations and maintenance activities may use motorized equipment.	Comments provided by the public requested that the plan address allowing for utilities users to have motorized access to the energy corridors as well as within the energy corridor. Clarification was needed in the Plan Revision to address this concern so that only utility operators may use corridors for operations and maintenance. This guideline to manage energy corridors for nonmotorized travel has been modified to allow motorized equipment for operations and maintenance.

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	Management, pg. 34. New corridors are managed to maintain current resource protection and outputs to the degree possible. STs &GDs - Lands & Special Use Management, pg. 76.		
Lands and Minerals	Request for transmission corridors are evaluated based on public need, economics, and environmental impacts of the alternatives. Emphasis is to use existing corridors to their capacity with compatible utilities, including upgrade power lines, before evaluating new routes. New corridors through avoidance areas in the ponderosa pine and mixed Conifer vegetation types will be minimized and always avoided when feasible. New corridors are managed to maintain current resource protection and outputs to the degree possible. In period 1, determine those special uses and rights-of-way grants with potential to highly impact the environment or other resource management and administer them per FSM standards. Inspections of permitted uses will be made where potential for serious damage to the environment exists where public health and safety could be seriously affected and when permits are reissued or transferred. STs &GDs - Lands & Special Use Management, pg. 76.	**GD Energy Corridor** To limit impacts to undisturbed areas, new utilities (e.g., power lines, telephone lines, gas lines) should be co-located within existing corridors whenever technically feasible, within existing rights-of-way (including road rights-of-way), or follow major transportation routes. The following statement has been added to the Management Approaches for Energy Corridor section of the plan in chapter 3: Energy utility companies also comply with maintenance standards enforced by the North American Electric Reliability Corporation.	There are increasing demands for goods, services, and forest access from growing populations and urban developments that border the forests. Many communities are surrounded by the forests and can be affected by adjustment to the forests' land ownership. Commodity use and production have shown declines from the past. However, these forest uses contribute to sustaining the lifestyles and traditions of local communities. Energy resource demands also continue to grow. There was a need to update and include more information in the Plan revision due to growing needs of the communities.

Mexican Spotted Owl

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MSO	**Forest wide GD for MSO "Protected Areas":** **In PACs:** Manage (fuelwood harvest) within the following limitations to minimize effects on the owl: **In PACs**: Retain key forest species such as oak. Retain key habitat components such as snags and large downed logs. **In and outside of PACs:** 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.	**Concept retained but specific text deleted. Replaced with:** **DC for All PNVTS -** Disjunct populations of Chihuahuan pine, Arizona cypress, and Rocky Mountain maple are present with the ability to reproduce on capable sites. **GD for All PNVTs** -During project design and implementation, precautions should be taken to reduce the potential for damage to residual vegetation in order to prevent premature or excessive mortality. **GD for All Forested PNVTS** - Trees, snags, and logs immediately adjacent to active red squirrel cone caches, Abert's squirrel nests, and raptor nests should be retained to maintain needed habitat components and provide tree groupings. **GD for All Forested PNVTs -** Where a site-specific analysis indicates the need to reduce fire-kill of desired residual trees, fuel continuity and/or loading should be reduced before use of prescribed fire. **DCs for Forests: PP** - •The ponderosa pine forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. Ponderosa pine snags are typically 18 inches or greater in diameter and average 1 to 2 per acre. •Coarse woody debris, including logs, ranges from 3 to 10 tons per acre. Logs average 3 per acre within the forested area of the landscape. •Where it naturally occurs, Gambel oak is present with all age classes represented. It is reproducing to maintain or expand its presence on capable sites across the landscape. Large Gambel oak snags are typically 10 inches or larger in diameter and are well distributed. •Where Gambel oak occurs, the majority are single trunk trees over 8 inches in diameter with full crowns. **GD for Forests: PP** - Where Gambel oak or other native hardwood trees and shrubs are desirable to retain for diversity, treatments should improve vigor and growth of these species.	ASNFs revised plan contains a total of 2 PNVTS that cover the "Pine-oak" type as defined in the MSO Recovery Plan: the **Ponderosa pine forest PNVT** includes Pine-Gambel oak as a subtype, and **MPO woodland.** ASNFs revised plan contains a total of 3 PNVTs that cover the "Mixed Conifer" type as defined in the MSO Recovery Plan: DMC, WMC, and SF forests. The SF forest on the ASNFs is the low elevation, mixed species SF PNVT, which also can provide MSO habitat = see revised plan's "Background" section for the SF forest PNVT. Revised plan **Glossary** defines **Snags** as "generally 12 inches or larger". **Coarse woody debris** is defined as "Woody material, including logs, on the ground greater than 3 inches in diameter—a component of litter. Large coarse woody debris is often considered to be downed logs at least 12 inches in diameter and 8 feet in length." Hardwood and oak diameters stated in the revised plan imply measurement at diameter root collar (DRC), because these species are always measured at DRC. See "Diameter" definitions in

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		DCs for Forests: DMC - •The dry mixed conifer forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. Snags are typically 18 inches in diameter or greater and average 3 per acre. •Coarse woody debris, including logs, ranges from 5 to 15 tons per acre. Logs average 3 per acre within the forested area of the landscape. • …Where they naturally occur, groups of Gambel oak are healthy and maintained or increased. … •Where Gambel oak occurs, the majority are single trunk trees over 8 inches in diameter with full crowns. **GD for Forests: DMC** - Where Gambel oak or other native hardwood trees and shrubs are desirable to retain for diversity, treatments should improve vigor and growth of these species. **DCs for Forests: WMC** - •The wet mixed conifer forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. The number of snags and logs and amount of coarse woody debris varies by seral state ranging from 8 to more than 16 tons per acre. •There are 20 or more snags greater than 8 inches in diameter per acre and 1 to 5 of those snags are 18 inches or greater in diameter. •Coarse woody debris, including logs, varies by seral state, ranging from 5 to 20 tons per acre for early-seral states; 20 to 40 tons per acre for mid-seral states; and may be as high as 35 tons per acre, or greater, for late-seral states. These conditions also provide an abundance of fungi including mushrooms and truffles used by small mammals. **DCs for Forests: SF -** •In general, there are 13 to 30 snags greater than 8 inches in diameter per acre and 1 to 3 of those snags are 18 inches or greater in diameter. •Coarse woody debris, including logs, varies by seral state, ranging from 5 to 30 tons per acre for early-seral states; 30 to 40 tons per acre for mid-seral states; and 40 tons per acre or greater for late-seral states. These conditions also provide an abundance of fungi	revised plan's **Glossary.** Sizes of snags, logs, and large trees to be retained at the project and activity level are dependent upon existing site conditions, capabilities, and objectives and should be determined by project interdisciplinary specialists using local data for the specific area while keeping MSO recovery needs in mind.

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		including mushrooms and truffles used by small mammals. **DC for Forests: Aspen** - Aspen may comprise 10 to 100 percent of the area depending on disturbance (e.g., fire, insects, silvicultural treatments) in multistoried patches. **DC for Woodlands: MPO** - Some large patches in the Madrean pine-oak woodland are closed canopy, have multiple age classes, large trees, and old growth-like characteristics (e.g., numerous snags, large coarse woody debris) in order to provide for wildlife such as Mexican spotted owl and black bear, that need denser habitat. **GD for Woodlands: Madrean Pine-Oak -** Where Mexican spotted owls are found nesting in canyons or on north slopes within the Madrean pine-oak woodland, adjacent treatments should be modified to meet the needs of foraging owls. **GD for Landscape Scale Disturbance Events** - Management should emphasize long term reestablishment of native deciduous trees, shrubs, and herbaceous vegetation to maintain ecosystem diversity. **GDs for Wildlife and Rare Plants** - •Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans. •Modifications, mitigations, or other measures should be incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives.	
MSO	**Forest wide GD for MSO in "Protected Areas":** **In PACs**: Harvest conifers less than 9 inches in diameter only within those protected activity centers treated to abate fire risk as described below. **In PACs:** Use combinations of thinning trees less than 9	**Deleted. Replaced with:** **GD for Wildlife and Rare Plants -** Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans. **GD for All PNVTs -**During project design and implementation, precautions should be taken to reduce the potential for damage to residual vegetation in order to prevent premature or excessive mortality. **GD for All PNVTs -** Projects should include quantitative and/or qualitative objectives for implementation monitoring and effectiveness monitoring to assist in moving toward or	The 2012 Revised MSO RP no longer specifies a 9-inch diameter upper cutting limit. While PACs remain unchanged, the "Protected Areas" terminology is no longer consistent with the 2012 Revised MSO RP. Mechanical fuel treatment is usually not

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	inches in diameter, mechanical fuel treatment and prescribed fire to abate fire risk in the remainder of the selected protected activity center outside the 100 acre "no treatment" area. **Protected Areas outside of PACs** (MC and pine-oak forest on slopes over 40% not logged in past 20 yrs.)**:** Use combinations of thinning trees less than 9 inches in diameter, mechanical fuel removal, and prescribed fire.	maintaining desired conditions. **GD for Forests: All Forested PNVTs -** Where a site-specific analysis indicates the need to reduce fire-kill of desired residual trees, fuel continuity and/or loading should be reduced before use of prescribed fire. **GD for Woodlands: Madrean Pine-Oak -** Where Mexican spotted owls are found nesting in canyons or on north slopes within the Madrean pine-oak woodland, adjacent treatments should be modified to meet the needs of foraging owls. **DCs for Wildland Fire Management:** •Human life, property, and natural and cultural resource are protected within and adjacent to NFS lands. •Wildland fires burn within the range of frequency and intensity of natural fire regimes. Uncharacteristic high severity fires rarely occur and do not burn at the landscape scale. •Wildland fire maintains and enhances resources and functions in its natural ecological role. •For all PNVTs, the composition, cover, structure, and mosaic of vegetative conditions reduce uncharacteristic wildfire hazard to local communities and forest ecosystems. **GD for Wildland Fire Management** - Wildland fire may be used to meet PNVT desired conditions and enable natural fire regimes. **Chapter 4. Table 8. Suitability of lands for timber production and tree cutting:** Timber production is classified as not suitable in MSO PACs, while tree cutting is suitable if used to meet DCs for MSO and its habitat in PACs.	feasible, as most MSO PACs are on very steep, unroaded, inaccessible slopes. Hand thinning and prescribed fire remain the most practical tools of choice, to be determined by specialists at the project and activity level. See revised forest plan's definition of "Wildland fire."
MSO	**Forest wide GD for MSO in PACs.** No seasonal restrictions apply. Treat fuel accumulations to abate fire risk. **Forest wide GD for MSO in PACs**. Use light prescribed burns in non-selected protected activity centers on a case-by-case basis. Burning	**DC for Overall Ecosystem Health** •Natural ecological disturbances return to their characteristic roles within the ecosystem. Wildfire, in particular, is restored to a more natural function. **DC for all PNVTs** • Natural processes and human and natural disturbances (e.g., wildland fire, mechanical vegetation treatments) provide desired overall tree density, structure, species composition, coarse woody debris, and nutrient cycling. Natural fire regimes are restored. Uncharacteristic fire behavior is minimal or absent on the landscape. • Wildland fire maintains	**Mgmt. Approach for Overall Ecosystem Health** - Wildland fire has played an important ecological role in shaping the vegetation on the Apache-Sitgreaves NFs. Forest managers utilize prescribed fire (planned ignitions) and wildfire (unplanned ignitions) to help reintroduce fire into the ecosystems, restore natural fire regimes, and remove excessive fuels. Fire may be used alone

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	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 inches diameter at the root collar.	and enhances resources and, as nearly as possible, is allowed to function in its natural ecological role. •Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth. **GD for All PNVTs** • During project design and implementation, precautions should be taken to reduce the potential for damage to residual vegetation in order to prevent premature or excessive mortality. • Restoration methods, such as thinning or prescribed fire, should leave a mosaic of untreated areas within the larger treated project area to allow recolonization of treated areas by plants, small mammals, and insects (e.g., long-tailed voles, fritillary butterflies).	or in combination with other treatments. Direction for managing wildland fire is found in the "Wildland Fire Management" section. **Background for all PNVTs** -Vegetation conditions for Mexican spotted owl (MSO) and other federally listed species, although not described in detail below, are managed consistent with the habitat requirements specified in the appropriate species recovery plan.
MSO	**Forest wide GD for MSO in Restricted Areas (Mixed conifer and pine-oak forests):** Attempt to mimic natural disturbance patterns by incorporating natural variation, such as irregular tree spacing and various patch sizes, into management prescriptions. Maintain all species of native trees in the landscape including early seral species. Allow natural canopy gap processes to occur, thus producing horizontal variation in stand structure.	Text deleted but concept retained. Replaced with: numerous DCs, STs, GDs and monitoring strategy. See crosswalk sections on *old growth* in particular for detailed components that provide for *vertical* diversity and some *horizontal* diversity. Additional revised plan components for *native tree species* and *early seral tree species* maintenance include: **DC for Overall Ecosystem Health** - •Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC for all PNVTS** – •Native plant communities dominate the landscape. •Species genetic diversity remains within native vegetation and animal populations, thus enabling species to adapt to changing environmental and climatic conditions. •Diverse vegetation structure, species composition, densities,	Background for all PNVTs -Vegetation conditions for Mexican spotted owl (MSO) and other federally listed species, although not described in detail below, are managed consistent with the habitat requirements specified in the appropriate species recovery plan. The term "Restricted" MSO habitat became obsolete with the 2012 revision of the MSO RP. Mgmt. Approach for All Forested PNVTs - Mexican spotted owl and northern goshawk are management indicator species (MIS) of forest density and structure. The treatment objective listed (*Annually, treat 5,000 to 35,000 acres…)* would contribute to species viability. - Cone collection, tree planting, and

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		and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth. •Disjunct populations of Chihuahuan pine, Arizona cypress, and Rocky Mountain maple are present with the ability to reproduce on capable sites. **GD for All Forested PNVTs** - Healthy southwestern white pine should be retained to maintain the wide range of genetic variability that contributes to resistance against the nonnative white pine blister rust disease. **GD for Forests**: PP - •Where Gambel oak or other native hardwood trees and shrubs are desirable to retain for diversity, treatments should improve vigor and growth of these species. **DC for Forests**: DMC - Southwestern white pine is present with the ability to reproduce on capable sites. **DC for Forests**: SF - Corkbark fir is present with the ability to reproduce on late-seral sites appropriate for the species. **GDS for Forests**: Aspen - •When managing for early seral states, competing conifers should be removed from aspen stands when needed to increase aspen longevity and increase diversity of aspen age classes. •Aspen restoration and retention efforts should include measures to ensure viability of aspen on the landscape. **GD for Landscape Scale Disturbances** - •Where conifer seed sources are lost or poorly distributed and/or deciduous tree species are not adequately resprouting, artificial regeneration (e.g., planting, seeding) should be used to promote movement toward desired conditions, provided adequate site conditions exist. •Management should emphasize long term reestablishment of native deciduous trees, shrubs, and herbaceous vegetation to maintain ecosystem diversity. **ST for Special Uses**- •Special use authorizations for the collection of live species with limited distribution (e.g., some invertebrates, plants) shall include permit provisions to ensure	natural regeneration are used to ensure the perpetuation of desired tree species. Management Approach for Landscape Scale Disturbances - Based on site conditions, ecological restoration projects and activities focus on establishing and ensuring survival of native vegetation. Native tree and shrub planting follows plan guidelines for those individual forested and woodland PNVTs. To ensure their persistence, there is a focus on reintroduction of fire, protection of tree regeneration, treatment of insects and disease, or adjustment of management actions as needed. Additional direction found in the FSM 2400, Chapters 70 and 90, and FSM 2300, Chapter 20, guides managers in silvicultural practices, reforestation, and forest management in wilderness.

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		the species persist onsite. Additional revised plan components for *horizontal* diversity and *canopy gap processes* include: **DC for Forests**: PP - The forest arrangement consists of individual trees, small clumps, and groups of trees with variably-sized interspaces of grasses, forbs, and shrubs. Vegetation associations are similar to reference conditions. The size, shape, and number of trees per group and the number of groups per area vary across the landscape. Tree density may be greater in some locations, such as north-facing slopes and canyon bottoms. **DC for Forests**: PP - Ponderosa pine forest is characterized by variation in the size and number of tree groups depending on elevation, soil type, aspect, and site productivity. The more biologically productive sites contain more trees per group and more groups per area, resulting in less space between groups. Interspaces typically range from 10 percent in more biologically productive sites to 70 percent in the less productive sites. Tree density within forested areas ranges from 20 to 80 square feet basal area per acre. **DC for Forests**: PP - Interspaces surrounding tree groups are variably shaped and composed of a grass, forb, and shrub mix. Some may contain individual trees or snags. **DC for Forests**: PP - Forest structure in the wildland-urban interface (WUI) may have smaller, more widely spaced groups of trees than in the non-WUI areas. **GD for Forests**: PP - Where consistent with project or activity objectives, canopy cover should be retained on the south and southwest sides of small, existing forest openings that are naturally cooler and moister. These small (generally one-tenth to one-quarter acre) shaded openings provide habitat conditions needed by small mammals, plants, and insects (e.g., Merriam's shrew, Mogollon clover, four-spotted skipperling butterfly). Where these openings naturally occur across a project area, these conditions should be maintained on an average of 2 or more	

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		such openings per 100 acres. **DC for Forests**: DMC - The forest arrangement consists of small clumps and groups of trees with variably-sized interspaces of grass, forb, and shrub vegetation associations similar to reference conditions. Size, shape, number of trees per group, and number of groups per area are variable across the landscape. Where they naturally occur, groups of Gambel oak are healthy and maintained or increased. Tree density may be greater in some locations, such as north-facing slopes and canyon bottoms. **DC for Forests**: DMC – The dry mixed conifer forest is characterized by a variety of size and number of tree groups depending on elevation, soil type, aspect, and site productivity. The more biologically productive sites contain more trees per group and more groups per area, resulting in less space between groups. Interspaces typically range from 10 percent in more biologically productive sites to 50 percent in less productive sites. Tree density within forested areas ranges from 30 to 100 square feet basal area per acre. **DC for Forests**: DMC - Forest structure in the wildland-urban interface (WUI) may have smaller, more widely spaced groups of trees than in the non-WUI areas. **DC for Forests**: DMC -Interspaces surrounding tree groups are composed of a grass, forb, and shrub mix. Some may contain individual trees or snags. **GD for Forests**: DMC - Where consistent with project or activity objectives, canopy cover should be retained on the south and southwest sides of small, existing forest openings that are naturally cooler and moister. These small (generally one-tenth to one-quarter acre) shaded openings provide habitat conditions needed by small mammals, plants, and insects (e.g., Merriam's shrew, Mogollon clover, four-spotted skipperling butterfly). Where these openings naturally occur across a project area, these conditions should be maintained on an average of 2 or more such openings per 100 acres. **DC for Forests**: WMC - The size and number of groups and patches vary depending on disturbance, elevation, soil type,	

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		aspect, and site productivity. Patch sizes vary but are frequently hundreds of acres and rarely thousands of acres. Groups of tens of acres or less are relatively common. There is a mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age. Grass, forb, and shrub openings created by disturbances may comprise 10 to 100 percent of the area depending on the type of disturbance. **DC for Forests**: WMC - Small openings are present as a result of disturbances (e.g., wind, disease). **DC for Forests**: SF - The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are mostly hundreds of acres and rarely thousands of acres. There may be frequent small disturbances resulting in groups of tens of acres or less. A mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age, is present. Grass, forb, and shrub openings created by disturbances may comprise 10 to 100 percent of the area depending on time since disturbances. Aspen is occasionally present in large patches. **DC for Forests**: SF - Small openings are present as a result of localized disturbances (e.g., wind, disease).	
MSO	**GDs for MSO Restricted (Nest/Roost in MC and Pine-oak) :** The following **table** displays the minimum percentage of restricted area, by MSO Recovery Unit, which should be managed to have nest/roost characteristics. The minimum mixed conifer restricted area includes 10% at 170 basal area and an additional 15% of MC or 10% of Pine-oak area at 150 basal area. Minimum 20 trees/acre over 18 inches diameter, + 10% total stand	Table deleted. Concept retained. Replaced with: **DCs for All PNVTs Landscape Scale** - Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth. **GD for All PNVTs** - During project design and implementation, precautions should be taken to reduce the potential for damage to residual vegetation in order to prevent premature or excessive mortality. **GD for Forests** - All Forested PNVTs - Where a site-specific analysis indicates the need to reduce fire-kill of desired residual trees, fuel continuity and/or loading should be reduced before	Background for all PNVTs -Vegetation conditions for Mexican spotted owl (MSO) and other federally listed species, although not described in detail below, are managed consistent with the habitat requirements specified in the appropriate species recovery plan. The terms “Restricted” MSO habitat and “threshold values” became obsolete with the 2012 revision of the MSO RP. Table C.3. is the replacement table of habitat criteria of “Minimum desired conditions for mixed conifer and pine-oak forest areas managed for Recovery

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	density index by 3 large tree size classes in MC, or 15% per3 large tree size class in Pine-oak. The variables are for stand averages, are minimum threshold values and must be met simultaneously. In project design, no stands simultaneously meeting or exceeding the minimum threshold values should be reduced below the threshold values unless a district-wide or larger landscape analysis of restricted areas shows that there is a surplus of restricted area acres simultaneously meeting the threshold values. Management should be designed to create minimum threshold conditions on project areas where there is a deficit of stands simultaneously meeting minimum threshold conditions unless the district-wide or larger landscape analysis shows there is a surplus. **Table: Minimum Percentage of Restricted Area Managed for Nest/Roost Characteristics**	use of prescribed fire. **DCs for Forests**: WMC - •Canopies are more closed than dry mixed conifer. •Tree density ranges from 30 to 180 square feet basal area per acre depending upon time since disturbance and seral states of groups and patches. •In mid-aged and older forests, trees are typically variably spaced with crowns interlocking (grouped and clumped trees) or nearly interlocking providing for species such as red squirrel. Trees within groups can be of similar or variable species and ages. **DCs for Forests**: SF - •Tree canopies in this forest are closed. An understory, consisting of native grass, forbs, and/or shrubs, is present in early seral states and is replaced by trees in later seral states. • Old growth occurs over large, continuous areas. … •Tree density ranges from 30 to 250 square feet basal area per acre, depending upon disturbance and seral states of the groups and patches. •Mid-aged to old trees grow tightly together with interlocking crowns. Trees are of the same size and/or age class in early group/patch development. In late development, they may be multilayered. **GDs for Wildlife and Rare Plants** – •Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans. •Modifications, mitigations, or other measures should be incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives. •Cool and/or dense vegetation cover should be provided for species needing these habitat components … **DCs for Wildlife Quiet Area** - •WQAs provide blocks of core habitat to meet wildlife life stage requirements during the breeding, rearing, and, in some cases, the critical wintering period. •WQAs contribute to preserving natural behaviors and processes that sustain wildlife populations associated with each WQA (see below) {different for each WQA listed in the WQA section}.	nesting/roosting habitat" in the 2012 MSO RP that replaces the now obsolete table in the existing forest plan. Before decision, every project must first consult with the U.S. Fish and Wildlife Service with respect to compliance with the revised (now current) MSO RP. Specific numeric values or criteria from any species recovery plan are not displayed in the revised forest plan because if those values should change during the life of the forest plan, a forest plan amendment would be required first to adopt the new values. The GD stated is intended to provide the forests enough flexibility to more quickly adopt new recovery plans as they become available or are updated. Meeting the higher stand densities stated in DCs for forested PNVTs, as well as the old growth aspects of the revised plan's DCs, STs and GDs should assist with ensuring the values in Table C.3. in the 2012 MSO RP could be met. Additionally, Wildlife Quiet Areas, Wilderness, Recommended RNAs (like the recommended Lower Campbell Blue RNA), and other MAs in the revised plan can contribute to meeting these habitat criteria. Project analysis will be required to analyze all such considerations at various scales and build mitigations into project design if needed. The revised plan also uses "closed canopy" and/or "dense canopy" as terms

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		•The Hulsey Bench WQA on the Alpine Ranger District provides Mexican spotted owl, northern goshawk, elk, deer, turkey, and bear refuge habitat. •Middle Mountain WQA provides refuge for northern goshawk, turkey, deer, elk, and Mexican spotted owl amid extensive dispersed recreation on the Alpine Ranger District. •St. Peters Dome WQA on the Springerville Ranger District provides high quality spruce-fir habitat for dusky grouse, bear, and other high elevation species. **GDs for Wildlife Quiet Area** - •Hiding cover and travelways for wildlife should be maintained to provide for security and connectivity of habitat. •Restoration treatments should consider the needs of wildlife (e.g., calving/fawning areas, wallows, game crossings) to minimize potential impacts to the species and their habitat. **Chapter 5 Table 12** - Monitoring Strategy questions: - What is the effect of management upon habitat and population trends of management indicator species (Mexican spotted owl, northern goshawk, pronghorn antelope) across the forests? -How are management activities affecting late successional forest structure in relation to desired conditions? -Are management activities moving vegetation communities and habitats closer to the desired condition identified at the appropriate scales?	to describe a more densely stocked forest condition.
MSO	**GDs for MSO Restricted (MC, Pine oak, and Riparian).** Encourage prescribed and prescribed natural wildland fire use to reduce hazardous fuel accumulation. Thinning from below may be desirable or necessary before burning to reduce ladder fuels and the risk of crown fire.	Replaced with: **DC for All PNVTs** - Natural processes and human and natural disturbances (e.g., wildland fire, mechanical vegetation treatments) provide desired overall tree density, structure, species composition, coarse woody debris, and nutrient cycling. Natural fire regimes are restored. Uncharacteristic fire behavior is minimal or absent on the landscape. **GDs for All PNVTs** – •During project design and implementation, precautions should be taken to reduce the potential for damage to residual vegetation in order to prevent premature or excessive mortality. •Restoration methods, such as	Revised plan DCs and GDs were used to capture this concept.

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		thinning or prescribed fire, should leave a mosaic of untreated areas within the larger treated project area to allow recolonization of treated areas by plants, small mammals and insects (e.g., long-tailed voles, fritillary butterflies). •Wildfire may be used to meet desired resource conditions, maintain or promote desired vegetation species, and enable natural fires to return to their historic role. **GD for Riparian Areas** - Ground-disturbing projects (including prescribed fire) which may degrade long term riparian conditions should be avoided. **GD for All Forested PNVTs** - Where a site specific analysis indicates the need to reduce fire-kill of desired residual trees, fuel continuity and/or loading should be reduced before use of prescribed fire. **DCS for Wildland Fire Management** - •Human life, property, and natural and cultural resources are protected within and adjacent to NFS lands. •Wildland fires burn within the range of frequency and intensity of natural fire regimes. Uncharacteristic high-severity fires rarely occur and do not burn at the landscape scale. •Wildland fire maintains and enhances resources and functions in its natural ecological role. •For all PNVTs, the composition, cover, structure, and mosaic of vegetative conditions reduce uncharacteristic wildfire hazard to local communities and forest ecosystems. **GDs for Wildland Fire Management** - •Wildland fire may be used to meet PNVT desired conditions and enable natural fire regimes. •Human-induced impacts (e.g., smoke production, suppression actions) to natural processes, resources, or infrastructure attributable to wildland fire activities should be managed towards achieving objectives as identified in the applicable decision document. •Firelines, helispots, and fire camps should be located to avoid disturbance to critical species and impacts to cultural resources. •Aerial retardant drops should avoid threatened, endangered, proposed, or candidate, or identified sensitive species and waterways [11].	

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MSO	**GDs for MSO Restricted (MC and Pine oak)**. Emphasize uneven-aged management systems. However, both even-aged and uneven-aged systems may be used where appropriate to provide variation in existing stand structure and species diversity. Existing stand conditions will determine which system is appropriate. Extend rotation ages for even-aged stands to greater than 200 years. Silvicultural prescriptions should explicitly state when vegetative manipulation will cease until rotation age is reached.	Text deleted, but concepts retained. Replaced with: *See revised plan components and additional rationale listed in this crosswalk's Vegetation section for existing plan's "MA #1 STs & GDs, pg. 107" which pertain to using uneven-aged and even-aged management systems.*	Mgmt. Approach for All Forested PNVTs - Uneven-aged management techniques are used primarily, and some even-aged management is used especially when managing species such as aspen and spruce. Even-aged treatments may be applied in the short term for forest health concerns (e.g., heavy dwarf mistletoe infections) to facilitate a transition to uneven-aged management. *Rotation age* is a concept specific to even-aged management and is the biological point at which thinnings no longer produce stand growth results. Longer rotation ages are set to ensure that the stand of trees reaches mature-to-overmature age status, with some degree of decadence like snags developing over that period of time. Large tree size is also dependent on site capability, which in some cases 200 years may or may not be adequate to achieve such a goal. This silvicultural tool was used in the existing plan as a surrogate means to ensure that large/old trees would be permitted to remain on the landscape in the event that even-aged management was employed more than uneven-aged cutting systems were. In cases when even-aged management is used, rotation age should be determined and documented by interdisciplinary specialists at the project and activity level, using site-specific information and objectives to move toward the revised plan's DCs, including MSO habitat needs for recovery.

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MSO	**GDs for MSO Restricted Areas (MC, Pine oak, and Riparian):** In pine-oak forests, retain existing large oaks and promote growth of additional large oaks.	**GD for Forests: PP** - Where Gambel oak or other native hardwood trees and shrubs are desirable to retain for diversity, treatments should improve vigor and growth of these species. **DC for Woodlands: MPO** - Some large patches in the Madrean pine-oak woodland are closed canopy, have multiple age classes, large trees, and old growth-like characteristics (e.g., numerous snags, large coarse woody debris) in order to provide for wildlife such as Mexican spotted owl and black bear, that need denser habitat. **GD for Landscape Scale Disturbance Events** - Management should emphasize long term reestablishment of native deciduous trees, shrubs, and herbaceous vegetation to maintain ecosystem diversity.	The term "Restricted" MSO habitat became obsolete with the 2012 revision of the MSO RP. "Pine-oak" forests exist in two PNVTs in the ASNFs revised plan: Ponderosa pine PNVT (pine-Gambel oak is a subtype), and Madrean pine-oak PNVT.
MSO	**GDs for MSO Restricted Areas (MC, Pine oak, and Riparian).** Retain substantive amounts of key habitat components: Snags 18 inches in diameter and larger, down logs over 12 inches midpoint diameter, hardwoods for retention, recruitment, and replacement of large hardwoods. Save all trees greater than 24 inches dbh.	**Concept retained but specific text deleted. Replaced with:** **DC for All PNVTS -** Disjunct populations of Chihuahuan pine, Arizona cypress, and Rocky Mountain maple are present with the ability to reproduce on capable sites. **GD for All PNVTs -**During project design and implementation, precautions should be taken to reduce the potential for damage to residual vegetation in order to prevent premature or excessive mortality. **DC for Riparian Areas -** Diversity and density of riparian forest vegetation provides for breeding, escape, hiding, and resting cover for wildlife and provides travelways between other habitat areas and seasonal ranges. **GD for Riparian Areas -** Ground-disturbing projects (including prescribed fire) which may degrade long term riparian conditions should be avoided. **GD for All Forested PNVTS** - Trees, snags, and logs immediately adjacent to active red squirrel cone caches, Abert's squirrel nests, and raptor nests should be retained to maintain needed habitat components and provide tree groupings. **GD for All Forested PNVTs -** Where a site-specific analysis indicates the need to reduce fire-kill of desired residual trees, fuel continuity and/or loading should be reduced before use of	The term "Restricted" MSO habitat became obsolete with the 2012 revision of the MSO RP. The 2012 MSO RP directs managers to strive to retain trees over 24 inches as much as possible, and also over 18 inches diameter, but stresses that removal of some trees these sizes should be done judiciously and only when necessary to meet specific resource objectives. It states on pg. 269 that previous wording of this GD to not allow cutting any trees over 18 inches was misinterpreted. Although not a separate PNVT in the revised forest plan, aspen is included here as an important hardwood habitat component within the mixed conifer, and spruce-fir PNVTs, and sometimes also occurs within the pine-oak (ponderosa pine) and some riparian forest PNVTs.

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		prescribed fire. **DCs for Forests: PP** - •The ponderosa pine forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. Ponderosa pine snags are typically 18 inches or greater in diameter and average 1 to 2 per acre. •Coarse woody debris, including logs, ranges from 3 to 10 tons per acre. Logs average 3 per acre within the forested area of the landscape. •Where it naturally occurs, Gambel oak is present with all age classes represented. It is reproducing to maintain or expand its presence on capable sites across the landscape. Large Gambel oak snags are typically 10 inches or larger in diameter and are well distributed. •Where Gambel oak occurs, the majority are single trunk trees over 8 inches in diameter with full crowns. **GD for Forests: PP** - Where Gambel oak or other native hardwood trees and shrubs are desirable to retain for diversity, treatments should improve vigor and growth of these species. **DCs for Forests: DMC** - •The dry mixed conifer forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. Snags are typically 18 inches in diameter or greater and average 3 per acre. •Coarse woody debris, including logs, ranges from 5 to 15 tons per acre. Logs average 3 per acre within the forested area of the landscape. • …Where they naturally occur, groups of Gambel oak are healthy and maintained or increased. •Where Gambel oak occurs, the majority are single trunk trees over 8 inches in diameter with full crowns. **GD for Forests: DMC** - Where Gambel oak or other native hardwood trees and shrubs are desirable to retain for diversity, treatments should improve vigor and growth of these species. **DCs for Forests: WMC** - •The wet mixed conifer forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and	Sizes of snags, logs, and large trees to be retained at the project and activity level are dependent upon existing site conditions, capabilities, and objectives and should be determined by project interdisciplinary specialists using local data for the specific area while keeping MSO recovery needs in mind.

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		coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. The number of snags and logs and amount of coarse woody debris varies by seral state ranging from 8 to more than 16 tons per acre. •There are 20 or more snags greater than 8 inches in diameter per acre and 1 to 5 of those snags are 18 inches or greater in diameter. •Coarse woody debris, including logs, varies by seral state, ranging from 5 to 20 tons per acre for early-seral states; 20 to 40 tons per acre for mid-seral states; and may be as high as 35 tons per acre, or greater, for late-seral states. These conditions also provide an abundance of fungi including mushrooms and truffles used by small mammals. **DCs for Forests: SF -** •In general, there are 13 to 30 snags greater than 8 inches in diameter per acre and 1 to 3 of those snags are 18 inches or greater in diameter. •Coarse woody debris, including logs, varies by seral state, ranging from 5 to 30 tons per acre for early-seral states; 30 to 40 tons per acre for mid-seral states; and 40 tons per acre or greater for late-seral states. These conditions also provide an abundance of fungi including mushrooms and truffles used by small mammals. **DC for Forests: Aspen** - Aspen may comprise 10 to 100 percent of the area depending on disturbance (e.g., fire, insects, silvicultural treatments) in multistoried patches. **DC for Woodlands: MPO** - Some large patches in the Madrean pine-oak woodland are closed canopy, have multiple age classes, large trees, and old growth-like characteristics (e.g., numerous snags, large coarse woody debris) in order to provide for wildlife such as Mexican spotted owl and black bear, that need denser habitat. **GD for Landscape Scale Disturbance Events** - Management should emphasize long term reestablishment of native deciduous trees, shrubs, and herbaceous vegetation to maintain ecosystem diversity. **GDs for Wildlife and Rare Plants -** Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans. •Modifications, mitigations, or other measures should be	

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		incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives.	
MSO	**GDs for MSO in Riparian Areas.** Emphasize maintenance and restoration of healthy riparian ecosystems through conformance with forest plan riparian standards and guidelines. Management strategies should move degraded riparian vegetation toward good condition as soon as possible. Damage to riparian vegetation, stream banks, and channels should be prevented.	**DC Water Resources** - Water quality, stream channel stability, and aquatic habitats retain their inherent resilience to natural and other disturbances. **DC Water Resources** - Vegetation and soil conditions above the floodplain protect downstream water quality, quantity, and aquatic habitat. **GD Water Resources** - Streams, streambanks, shorelines, lakes, wetlands, seeps, springs and other bodies of water should be protected from detrimental changes [4] in water temperature and sediment to protect aquatic species and riparian habitat. **GD Water Resources** - Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species. **DC Aquatic Habitat and Species** - Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **DC Aquatic Habitat and Species** - Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **OBJ Aquatic Habitat and Species** - Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species. **DC Riparian Areas** - Natural ecological disturbances (e.g., flooding, scouring) promote a diverse plant structure consisting of herbaceous, shrub, and tree species of all ages and size classes necessary for the recruitment of riparian-dependent species. **DC Riparian Areas** - Riparian-wetland conditions maintain water-related processes (e.g., hydrologic, hydraulic, geomorphic). They also maintain the physical and biological	Retained through numerous objectives, desired conditions, standards and guidelines within soil, water, aquatic species, riparian and grazing sections.

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		community characteristics, functions, and processes. **DC Riparian Areas** - Stream (lotic) riparian-wetland areas have vegetation, landform, and/or large coarse woody debris to dissipate stream energy associated with high water flow. **DC Riparian Areas** - Streams and their adjacent floodplains are capable of filtering, processing, and storing sediment; aiding floodplain development; improving floodwater retention; and increasing groundwater recharge. **DC Riparian Areas** - Vegetation and root masses stabilize streambanks, islands, and shoreline features against the cutting action of water. **DC Riparian Areas** - Willows (e.g., Bebb, Geyer, Arizona, Goodding's) are reproducing with all age classes present, where the potential exists. **DC Riparian Areas** - Diversity and density of riparian forest vegetation provides for breeding, escape, hiding, and resting cover for wildlife and provides travelways between other habitat areas and seasonal ranges. **DC Riparian Areas** - The ecological function of riparian areas is resilient to animal and human use. **DC Riparian Areas** - Riparian obligate species within wet meadows, around springs and seeps, along streambanks, and active floodplains provide sufficient [5] vegetative ground cover (herbaceous vegetation, litter, and woody riparian species) to protect and enrich soils, trap sediment, mitigate flood energy, stabilize streambanks, and provide for wildlife and plant needs. **DC Riparian Areas** - Riparian soil productivity is optimized as described by the specific TES map unit [5] as indicated by the vigor of the herbaceous vegetation community. Based on species composition, ungrazed plant heights [7] range from 10 inches to 36 inches. **DC Riparian Areas** - Large coarse woody debris provides stability to riparian areas and stream bottoms lacking geologic control (e.g., bedrock) or geomorphic features (e.g., functioning floodplains, stream sinuosity, width/depth ratio). **OBJ Riparian Areas** - Annually, move 200 to 500 acres toward	

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		desired composition, structure, and function of streams, floodplains, and riparian vegetation. **OBJ Riparian Areas** - Within the planning period, relocate, repair, improve, or decommission a minimum of 4 miles of National Forest System roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas** - Annually, remove an average of 2 miles of unauthorized roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas** - Within the planning period, enhance or restore 5 to 25 wet meadows, springs, seeps or cienegas to proper hydrologic function and native plant and animal species composition. **OBJ Riparian Areas** - Annually, work with partners to reduce animal damage to native willows and other riparian species on an average of 5 miles of riparian habitat. **GD Riparian Areas** - Ground-disturbing projects (including prescribed fire) which may degrade long term riparian conditions should be avoided. **GD Riparian Areas** - Wet meadows, springs, seeps and cienegas should not be used for concentrated activities (e.g., equipment storage, forest product or mineral stockpiling, livestock handling facilities, special uses) that cause damage to soil and vegetation. **GD Riparian Areas** - Active grazing allotments should be managed to maintain or improve to desired riparian conditions.	
MSO	**GDs for MSO - Old growth:** Except where otherwise noted, implement forest plan old growth standards and guidelines to maintain and promote development of owl	**Existing plan old growth STs & GDs deleted. Replaced with:** *Forest/woodland density, structure, age classes, species, and vertical and horizontal diversity revised plan components pertaining to old growth are already displayed elsewhere = See revised plan direction already presented in this crosswalk's Vegetation section for addressing the existing plan's "old growth" STs & GDs, wildlife "vertical and horizontal diversity" STs & GDs, deer/elk "hiding and thermal cover" STs & GDs. Those DCs and*	Redundant with revised plan's old growth components already addressed elsewhere in this crosswalk. **Management Approaches for Wildlife and Rare Plants -** The forests provide for wildlife and their needs consistent with recovery plans, biological opinions,

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	habitat.	*GDs are further supplemented in the revised plan with the following direction applicable for MSO habitat:* **GDs for Wildlife and Rare Plants** - •Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans. •Modifications, mitigations, or other measures should be incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives.	conservation strategies, conservation assessments, management plans, memorandums of understanding (MOUs), and Forest Service direction. The forests actively participate in implementation of recovery plan actions for federally listed species.
MSO	**GDs for MSO Other Forest and Woodland Types**. 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.	**Concept retained, but specific text deleted. Replaced with:** **DCs for Overall Ecosystem Health –** •Ecological components (e.g., soil, vegetation, water) are resilient to disturbances including human activities and natural ecological disturbances (e.g., fire, drought, wind, insects, disease, pathogens). •Natural ecological disturbances return to their characteristic roles within the ecosystem. Wildfire, in particular, is restored to a more natural function. •Natural ecological cycles (i.e., hydrologic, energy, nutrient) facilitate shifting of plant communities, structure, and ages across the landscape. Ecotone shifts are influenced at both the landscape and watershed scale by ecological processes. The mosaic of plant communities and the variety within the communities are resilient to disturbances. •Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. •Large blocks of habitat are interconnected, allowing for behavioral and predator-prey interactions, and the persistence of metapopulations and highly interactive wildlife species across the landscape. Ecological connectivity extends through all plant communities.	In the ASNFs revised plan, "Other Forest and Woodland Types" not already identified for MSO "Protected and Restricted" habitats (per the 1987 forest plan amended to incorporate the 1995 MSO RP) include the following PNVTS: PJ Woodland, various types of Grasslands, and Interior Chaparral. The **2012 revised MSO RP** now states (on page VIII) "Other forest and woodland types, such as ponderosa pine forest, spruce-fir forest, and pinyon-juniper woodland. No specific management is suggested for these habitat types, recognizing that current emphasis for sustainable and resilient forests should be compatible with needs of the owl." On pages 268-269 it also uses the term "other forest types where hardwoods are a component of owl habitat". The ASNFs grasslands and interior chaparral PNVTs do not typically contain hardwood trees, except in transitional ecotones, which are addressed here in the crosswalk. Because the Ponderosa pine - Gambel

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		•Habitat configuration and availability allows wildlife populations to adjust their movements (e.g., seasonal migration, foraging) in response to climate change and promote genetic flow between wildlife populations. •Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. •Watersheds exhibit high geomorphic, hydrologic, and biotic integrity relative to their natural potential condition. **DCs for All PNVTs –** •Each PNVT contains a mosaic of vegetative conditions, densities, and structures. This mosaic occurs at a variety of scales across landscapes and watersheds. The distribution of physical and biological conditions is appropriate to the natural disturbance regimes affecting the area. •The vegetative conditions and functions are resilient to the frequency, extent, and severity of disturbances (e.g., fire, insects and disease, flood, climate change, management activities). The landscape is a functioning ecosystem that contains all its components and processes. •Natural processes and human and natural disturbances (e.g., wildland fire, mechanical vegetation treatments) provide desired overall tree density, structure, species composition, coarse woody debris, and nutrient cycling. Natural fire regimes are restored. Uncharacteristic fire behavior is minimal or absent on the landscape. •Wildland fire maintains and enhances resources and, as nearly as possible, is allowed to function in its natural ecological role. •Native plant communities dominate the landscape. •Species genetic diversity remains within native vegetation and animal populations, thus enabling species to adapt to changing environmental and climatic conditions. •Vegetative connectivity provides for species dispersal, genetic exchange, and daily and seasonal movements across multiple spatial scales. •Organic soil cover and herbaceous vegetation protect soil,	oak type is a subtype of the ASNFs PP PNVT, and because the ASNFs SF forest fits the MSO RP definition of "mixed conifer" both of these PNVTS have already been addressed for the Protected and Restricted MSO amended 1987 plan crosswalk items, thus not redundantly presented here. Likewise, old growth revised plan components specific to each PNVT are not repeated here as they are already covered elsewhere in this same crosswalk.

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		facilitate moisture infiltration, and contribute to plant and animal diversity and ecosystem function. •Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth. •Old growth is dynamic in nature, well distributed, and spatially shifts across forest and woodland landscapes over time. •Old or large trees, multistoried canopies, large coarse woody debris, and snags provide the structure, function, and associated vegetation composition as appropriate for each forested and woodland PNVT. •Vegetation conditions allow for transition zones or ecotones between riparian areas, forests, woodlands, shrublands, and grasslands. Transition zones may shift in time and space due to changing site conditions from disturbances (e.g., fire, climate change). •Insect and disease populations are at endemic levels with occasional outbreaks. A variety of seral states usually restricts the scale of localized insect and disease outbreaks. •Disjunct populations of Chihuahuan pine, Arizona cypress, and Rocky Mountain maple are present with the ability to reproduce on capable sites. •Herbivory is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). •Vegetation conditions within each PNVT should be similar to site potential. •Shrub components contain a diverse array of native vegetation that is well distributed across the landscape to provide nutritional needs for browsers. •Vegetation provides products—such as wood fiber or forage—to	

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		help meet local and regional needs in a manner that is consistent with other desired conditions on a sustainable basis within the capacity of the land. •Stand densities and species compositions are such that vegetation conditions are resilient under a variety of potential future climates. •Vegetation conditions provide hiding and thermal cover in contiguous blocks for wildlife. Native plant species are present in all age classes and are healthy, reproducing, and persisting. •Vegetative ground cover (herbaceous vegetation and litter) is optimized to protect and enrich soils and promote water infiltration. There is a diverse mix of cool and warm season grasses and desirable forbs species. •Grasses, forbs, shrubs, and litter are abundant and continuous to support natural fire regimes. •The composition, density, structure, and mosaic of vegetative conditions reduce uncharacteristic wildfire hazard to local communities and forest ecosystems. •Some isolated infestations of mistletoe provide for a diversity of habitat components (e.g., food, nesting, cover) for a variety of species such as owls, squirrels, and some birds and insects. **STs for All PNVTs -** •Across the planning unit, within each PNVT, vegetation management activities shall be designed to maintain or move plant composition toward a moderate to high plant community similarity as compared to site potential. •Vegetation treatments shall include measures to reduce the potential for introduction of invasive plants and animals and damage from nonnative insects and diseases. **GDs for All PNVTs -** •During project design and implementation, precautions should be taken to reduce the potential for damage to residual vegetation in order to prevent premature or excessive mortality. •Landscape scale restoration projects should be designed to spread treatments out spatially and/or temporally within the	

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		project area to reduce implementation impacts and allow reestablishment of vegetation and soil cover. •Restoration methods, such as thinning or prescribed fire, should leave a mosaic of untreated areas within the larger treated project area to allow recolonization of treated areas by plants, small mammals, and insects (e.g., long-tailed voles, fritillary butterflies). •Wildland fires may be used to meet desired resource conditions, maintain or promote desired vegetation species, and enable natural fires to return to their historic role. •Insect and disease infected trees should be removed to prevent spread beyond endemic levels. •Project implementation should include bark beetle monitoring within and adjacent to all active slash-creating projects to help prevent beetle outbreak. •Projects should include quantitative and/or qualitative objectives for implementation monitoring and effectiveness monitoring to assist in moving toward or maintaining desired conditions. **GD for Woodlands: Madrean Pine-Oak -** Where Mexican spotted owls are found nesting in canyons or on north slopes within the Madrean pine-oak woodland, adjacent treatments should be modified to meet the needs of foraging owls. **DCs for Woodlands: Piñon-Juniper – Savanna:** •The piñon-juniper savanna is open in appearance with trees occurring as individuals or in small groups and ranging from young to old. Overall, tree canopy cover is 10 to 15 percent, but may range up to 30 percent. •Scattered shrubs and a continuous herbaceous understory, including native grasses, forbs, and annuals, are present to support a natural fire regime. •Grasses, forbs, shrubs, needles, leaves, and small trees support the natural fire regime. The larger proportion (60 percent or greater) of soil cover is composed of grasses and forbs as opposed to needles and leaves. •Old growth occurs in isolated locations scattered throughout the landscape, as individual old trees or as clumps of old trees.	

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		Other old growth components may also be present including dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. •Fires are low to mixed severity (fire regime I), occurring every 1 to 35 years. **DCs for Woodlands: Piñon-Juniper – Persistent Woodland:** •A mix of desired species[10], ages, heights, and groupings of trees create a mosaic across the landscape. •Tree canopy cover is closed (greater than 30 percent), shrubs are sparse to moderate, and herbaceous cover is patchy. •Snags, averaging one to two per acre, and older trees with dead limbs and tops are scattered across the landscape. Coarse woody debris averages 2 to 5 tons per acre. •Old growth includes old trees, dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). •Fire is less frequent and more variable than in the savanna due to patchiness of ground cover. The fires that do occur are mixed to high severity (fire regimes II, III, IV, and V).	
MSO	**Forest wide GDs for MSO.** The activity center is defined as the nest site. In the absence of a known nest, the activity center should be defined as a roost grove commonly used during breeding. In the absence of a known nest or roost, the activity center should be defined as the best nest/roost habitat. **Forest wide ST for MSO.** Other forest and woodland types include all ponderosa pine, spruce-fir, woodland, and	**DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. **GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans. **DC Wildlife and Rare Plants** Habitat conditions contribute to the recovery of federally listed species. **GD Wildlife and Rare Plants** Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans.	These are administrative designations and other measures that were included in the previous direction and came from the first Mexican spotted owl recovery plan. The new recovery plan designations of habitat are different, though PACs remain. Rather than cite the material from the recovery plan in the forest plan, including language on using the recovery plan provides for incorporating recovery plan designations as plan guidance while allowing for changes in the recovery plan to make their way into projects without the need to revise the forest plan.

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	aspen forests outside protected and restricted areas. **Forest wide ST for MSO.** Protected areas include delineated protected activity centers; mixed conifer and pine-oak forests with slopes greater than 40% where timber harvest has not occurred in the last 20 years; and reserved lands which include wilderness, research natural areas, wild and scenic rivers, and congressionally recognized wilderness study areas. **Forest wide ST for MSO.** Restricted areas include all mixed-conifer, pine-oak, and riparian forests outside of protected areas. **Forest wide ST for MSO.** Survey all potential spotted owl areas including protected, restricted, and other forest and woodland types within an analysis area plus the area 1/2 mile beyond the perimeter of the proposed treatment area. **Neither ST nor GD for MSO.** As the foregoing example shows, the guidelines are the detailed information about implementation of the standards. While standards and guidelines both specify the management bounds and		In terms of survey requirements, the forest must survey for owls in order to meet its legal obligation to consult on projects under Section 7(a)(2) of the ESA. The provisions for allowing no timber harvest have also changed in the recovery plan since it is recognized that treatments to restore natural fire regimes are necessary to preserve owl habitat. Avoiding disturbance is adequately covered in new plan guidance addressed elsewhere, and treatment of PACs and other habitats will designed to meet recovery objectives.

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	constraints, the standards contain no discretionary elements and the guidelines may occasionally contain discretionary elements. For example one of the Mexican spotted owl guidelines is "The Protected Activity Center should enclose the best possible owl habitat..." The terms "should" and "best" imply some discretion on the part of the person implementing the guideline. **Neither ST nor GD for MSO.** Submit protected activity center maps and descriptions to the recovery unit working group for comment as soon as possible after completion of surveys. **Neither ST nor GD for MSO.** The corresponding guidelines read "Delineate an area of not less than 600 acres around the activity center using boundaries of known habitat polygons and/or topographic features. Written justification for boundary delineation should be provided". **Neither ST nor GD for MSO.** The Protected Activity Center boundary should enclose the best possible owl habitat configured in as compact a unit as possible, with the nest		

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	or activity center located near the center. **Forest wide ST for MSO.** Provide three levels of habitat management - protected, restricted, and other forest and woodland types to achieve a diversity of habitat conditions across the landscape. **Forest wide ST for MSO.** Provide three levels of habitat management - protected, restricted, and other forest and woodland types to achieve a diversity of habitat conditions across the landscape. **Forest wide ST for MSO.** Establish a protected activity center at all Mexican spotted owl sites located during surveys and all management territories established since 1989. **Forest wide ST for MSO.** Allow no timber harvest except for fire risk abatement in mixed conifer and pine-oak forests on slopes greater than 40%where timber harvest has not occurred in the last 20 years. **Forest wide STs for MSO.** Allow no timber harvest except for fuelwood and fire risk abatement in established protected activity centers. For protected activity centers destroyed by fire, windstorm,		

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	or other natural disaster, salvage timber harvest or declassification may be allowed after evaluation on a case-by-case basis in consultation with U.S. Fish and Wildlife Service. Limit human activity in protected activity centers during the breeding season. In protected and restricted areas, when activities conducted in conformance with these standards and guidelines may adversely affect other threatened, endangered, or sensitive species or may conflict with other established recovery plans or conservation agreements; consult with US Fish and Wildlife Service to resolve the conflict. Monitor changes in owl populations and habitat needed for de-listing. **Forest wide GD for MSO.** Breeding season is March 1 to August 31. Conduct surveys following Region 3 survey protocol. **Forest wide GD for MSO in PACs**. Delineate an area of not less than 600 acres around the activity center using boundaries of known habitat polygons and/or topographic features. Written justification		

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	for boundary delineation should be provided.		
MSO	**Forest wide GD for MSO in PACs.** Generally allow continuation of the level of recreation activities that was occurring prior to listing.	**DC Overall Recreation Opportunities** Recreation use does not negatively affect wildlife habitat and populations. Negative interactions between people and wildlife are minimized. **GD Dispersed Recreation** Timing restrictions on recreation uses should be considered to reduce conflicts with wildlife needs or soil moisture conditions. Dispersed campsites should not be located on or adjacent to archaeological sites or sensitive wildlife areas. **DC Motorized Opportunities** The location and design of roads and trails does not impede wildlife and fish movement. **ST Motorized Opportunities** Temporary road construction shall minimize the impacts to resource values and facilitate road rehabilitation. Temporary roads shall be rehabilitated following completion of the activities for which they were constructed. **GD Motorized Opportunities** New roads or motorized trails should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified; seasonal restrictions may be an option. **GD Motorized Opportunities** Roads and motorized trails should be designed and located so as to not impede terrestrial and aquatic species movement and connectivity. **GD Nonmotorized Opportunities** New trails and trail relocations should be designed and located so as to not impede terrestrial and aquatic species movement and connectivity.	The new plan direction meets the intent of the previous direction.
MSO	**Forest wide GD for MSO in PACs.** Protected Activity Center boundaries should not overlap.	**DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. **GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans. **DC Wildlife and Rare Plants** Habitat conditions contribute to the recovery of federally listed species.	This is an administrative designation and was included in the previous direction from the first Mexican spotted owl recovery plan. The new recovery plan contains guidance on designating PACs. Rather than cite the material from the recovery plan in the forest plan,

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		GD Wildlife and Rare Plants Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans.	including language on using the recovery plan provides for incorporating recovery plan designations as plan guidance while allowing for changes in the recovery plan to make there way into projects without the need to revise the forest plan.
MSO	**Forest wide GD for MSO in PACs.** 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.	**DC Wildlife and Rare Plants** Collection of animals and plants does not negatively impact species abundance.	The new plan language broadens the intent to more than the MSO while not getting into specific requirements of permitting under existing law, regulation, and policy.
MSO	**Forest wide GD for MSO in PACs.** Road or trail building in protected activity centers should be avoided but maybe permitted on a case-by-case basis for pressing management reasons.	**DC Overall Recreation Opportunities** Recreation use does not negatively affect wildlife habitat and populations. Negative interactions between people and wildlife are minimized. **GD Dispersed Recreation** Timing restrictions on recreation uses should be considered to reduce conflicts with wildlife needs or soil moisture conditions. **GD Dispersed Recreation** Dispersed campsites should not be located on or adjacent to archaeological sites or sensitive wildlife areas. **DC Motorized Opportunities** The location and design of roads and trails does not impede wildlife and fish movement. **ST Motorized Opportunities** Temporary road construction shall minimize the impacts to resource values and facilitate road rehabilitation. Temporary roads shall be rehabilitated following completion of the activities for which they were constructed. **GD Motorized Opportunities** New roads or motorized trails	The new plan direction meets the intent of the previous direction.

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		should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified; seasonal restrictions may be an option. **GD Motorized Opportunities** Roads and motorized trails should be designed and located so as to not impede terrestrial and aquatic species movement and connectivity.	
MSO	**Forest wide GD for MSO in PACs.** 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 on the owl: Harvest conifers less than 9 inches in diameter only within those protected activity centers treated to abate fire risk as described below. 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. Retain key forest species such as oak. Retain key habitat components such as snags and large downed logs. **Forest wide GD for MSO in PACs.** Pre and post treatment monitoring should occur within all steep slopes treated for fire risk abatement. (See	**DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Wildlife and Rare Plants** Habitat conditions contribute to the recovery of federally listed species. **GD Wildlife and Rare Plants** Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans.	These are administrative designations and other measures that were included in the previous direction and came from the first Mexican spotted owl recovery plan. The new recovery plan designations of habitat are different, though PACs remain. Rather than cite the material from the recovery plan in the forest plan, including language on using the recovery plan provides for incorporating recovery plan designations as plan guidance while allowing for changes in the recovery plan to make their way into projects without the need to revise the forest plan. In terms of survey and monitoring requirements, the forest must survey for owls in order to meet its legal obligation to consult on projects under Section 7(a)(2) of the ESA. The provisions for management activities have also changed in the recovery plan since it is recognized that treatments to restore natural fire regimes are necessary to preserve owl habitat. Avoiding disturbance is adequately covered in new plan guidance

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	monitoring guidelines) **Forest wide GD for MSO in PACs.** Pre- and post-treatment monitoring should be conducted in all protected activity centers treated for fire risk abatement. (See monitoring guidelines) **Forest wide GD for MSO in PACs.** Reserved Lands (Wilderness, Research Natural Areas, Wild and Scenic Rivers, and Congressionally Recognized Wilderness Study Areas). Allow prescribed fire where appropriate. **Forest wide GD for MSO in PACs.** Select and treat additional protected activity centers in 10% 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. **Forest wide GD for MSO in PACs.** Select for treatment 10% of the protected activity centers where nest sites are known in each recovery unit having high fire risk conditions. Also select another 10% of the protected activity centers where nest sites are known as a paired sample to serve as control areas.		addressed elsewhere, and treatment of PACs and other habitats will designed to meet recovery objectives.

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	Forest wide GD for MSO in PACs. Steep Slopes (Mixed conifer and pine-oak forests outside protected activity centers with slopes greater than 40% that have not been logged within the past 20 years)		
MSO	GDs for MSO Restricted (MC, Pine oak, and Riparian) Manage to ensure a sustained level of owl nest/roost habitat well distributed across the landscape. Create replacement owl nest/roost habitat where appropriate while providing a diversity of stand conditions across the landscape to ensure habitat for a diversity of prey species.	**DC All PNVTs** Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth forests. **GD All PNVTs** Restoration methods, such as thinning or prescribed fire, should leave a mosaic of untreated areas within the larger treated project area to allow recolonization of treated areas by plants, small mammals and insects (e.g., long-tailed voles, fritillary butterflies). **DC Ponderosa Pine** Where it naturally occurs, Gambel oak is present with all age classes represented. It is reproducing to maintain or expand its presence on capable sites across the landscape. Large Gambel oak snags are typically 10 inches or larger in diameter and are well distributed. **DC Ponderosa Pine** Old growth occurs throughout the landscape, in small, discontinuous areas consisting of clumps of old trees, or occasionally individual old trees. Other old growth components are also present including dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). **DC Ponderosa Pine** Where Gambel oak occurs, the majority are single trunk trees over 8 inches in diameter with full crowns. **GD Ponderosa Pine** Where Gambel oak or other native hardwood trees and shrubs are desirable to retain for diversity,	The new plan guidance provides for the maintenance of owl nest/roost habitat within each forest type. This specificity meets the intent of the previous guidance while allowing for the different potentials for habitat development within these sites, as well as allowing for greater management flexibility to achieve these conditions.

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		treatments should improve vigor and growth of these species. **DC Dry Mixed Conifer** Old growth occurs throughout the landscape, in small, discontinuous areas consisting of clumps of old trees, or occasionally individual old trees. Other old growth components are also present including dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). **DC Wet Mixed Conifer** Old growth occurs over large, continuous areas. Old growth components include old trees, dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). **DC Madrean Pine-Oak** Some large patches in the Madrean pine-oak woodland are closed canopy, have multiple age classes, large trees, and old growth-like characteristics (e.g., numerous snags, large coarse woody debris) in order to provide for wildlife such as Mexican spotted owl and black bear that need denser habitat. **GD Madrean Pine-Oak** Where Mexican spotted owls are found nesting in canyons or on north slopes within the Madrean pine-oak woodland, adjacent treatments should be modified to meet the needs of foraging owls.	
MSO	GDs for MSO Livestock Grazing. Implement forest plan forage utilization standards and guidelines to maintain owl prey availability, maintain potential for beneficial fire while inhibiting potential destructive fire, maintain and restore riparian ecosystems, and promote development of owl habitat. Strive to attain good to excellent range	**DC Livestock Grazing** Livestock grazing and associated activities contribute to healthy, diverse plant communities, satisfactory condition soils, and wildlife habitat. **DC Livestock Grazing** Range developments for livestock minimize impacts to wildlife and blend with the natural environment. **GD Livestock Grazing** Forage, browse, and cover needs of wildlife, authorized livestock, and wild horses should be managed in balance with available forage so that providing for these needs remain at or move toward a healthy, persistent state. **DC for Overall Ecosystem Health** Large blocks of habitat are	The new plan guidance meets the intent of the previous guidance.

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	conditions. GDs for MSO Livestock Grazing. Implement forest plan forage utilization standards and guidelines to maintain owl prey availability, maintain potential for beneficial fire while inhibiting potential destructive fire, maintain and restore riparian ecosystems, and promote development of owl habitat. Strive to attain good to excellent range conditions.	interconnected, allowing for behavioral and predator-prey interactions, and the persistence of metapopulations and highly interactive wildlife species across the landscape. Ecological connectivity extends through all plant communities. **DC for All PNVTs** Herbaceous vegetation amount and structure (e.g., plant density, height, litter, seed heads) provides habitat to support wildlife and prey species.	
MSO	GDs for MSO Monitoring. Monitoring and evaluation should be collaboratively planned and coordinated with involvement from each national forest, USFWS Ecological Services Field Office, USFWS Regional Office, USFS Regional Office, Rocky Mountain Research Station, recovery team, and recovery unit working groups. Population monitoring should be a collaborative effort with participation of all appropriate resource agencies. Habitat monitoring of gross habitat changes should be a collaborative effort of all appropriate resource agencies. Habitat monitoring of treatment effects (pre and post treatment) should be done by	**DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. **GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans. **DC Wildlife and Rare Plants** Habitat conditions contribute to the recovery of federally listed species. **GD Wildlife and Rare Plants** Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans.	These provisions came from the first Mexican spotted owl recovery plan. The new recovery plan has monitoring provisions that vary from these. Rather than cite the material from the recovery plan in the forest plan, including language on using the recovery plan provides for incorporating recovery plan designations as plan guidance while allowing for changes in the recovery plan to make their way into projects without the need to revise the forest plan. In terms of survey and monitoring requirements, the forest must survey for owls in order to meet its legal obligation to consult on projects under Section 7(a)(2) of the ESA, and must also contribute to species recovery under Section 7(a)(1). There is no need to duplicate these requirements in the plan language.

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	the agency conducting the treatment. Prepare an annual monitoring and evaluation report covering all levels of monitoring done in the previous year. The annual report should be forwarded to the Regional Forester with copies provided to the recovery unit working groups, USFWS Ecological Services field offices, and the USFWS Regional Office. GDs for MSO Monitoring Rangewide. Track gross changes in acres of owl habitat resulting from natural and human caused disturbances. Acreage changes in vegetation composition, structure, and density should be tracked, evaluated, and reported. Remote sensing techniques should provide an adequate level of accuracy. In protected and restricted areas where silvicultural or fire abatement treatments are planned, monitor treated stands pre and post treatment to determine changes and trajectories in fuel levels; snag basal areas; live tree basal areas; volume of down logs over 12 inches in diameter; and basal area of hardwood trees over 10 inches in diameter at the root crown.		

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	GDs for MSO Monitoring Upper Gila RUs. Assist the recovery team and recovery unit working group to establish sampling units consisting of 19 to 39 square mile quadrats randomly allocated to habitat strata. Quadrats should be defined based on ecological boundaries such as ridge lines and watersheds. Quadrat boundaries should not traverse owl territories. Twenty percent of the quadrats will be replaced each year at random. Using the sample quadrats, monitor the number of territorial individuals and pairs per quadrat; reproduction; apparent survival; recruitment; and age structure. Track population density both per quadrat and habitat stratum.		

Plan

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Plan	Mission Section Mission P. 14 The Apache-Sitgreaves Forest mission is to effectively and efficiently manage National Forest lands and resources to meet the needs and desires of the public while enhancing the environment.	**The Apache-Sitgreaves NFs Mission** The Apache-Sitgreaves NFs staff strives to effectively and efficiently manage National Forest System lands and resources to meet the needs and desires of the public following applicable laws, regulations, and policies while enhancing the environment.	No substantive changes
Plan	Goals Section Goal P. 14 By the end of Decade 5, the Forest is attempting to achieve a management situation that can respond to local and national demands for wood products, livestock production, water yield, and a wide mix of recreation opportunities, including hunting and fishing, that range from the primitive to the urban. The goal is to produce these outputs and opportunities on a sustained basis while maintaining air, soil, and water resources at or above minimum applicable standards. Levels of outputs and uses are adjusted to be within long-term supply potentials, and to ensure the harmonious and coordinated management of all resources, each with the other, without impairing the productivity of the land. Non-renewable resources are adequately protected to ensure their future availability.	**DC Overall Ecosystem Health** Ecological components (e.g., soil, vegetation, water) are resilient to disturbances including human activities and natural ecological disturbances (e.g., fire, drought, wind, insects, disease, pathogens). **DC Forest Products** The Apache-Sitgreaves NFs provide a sustainable supply of forest products (e.g., small roundwood, sawlogs, biomass, firewood, cones, Christmas trees, wildlings) to businesses and individuals within the capability of the land. **DC Forest Products** The collection of live plants, mushrooms, and other forest products does not impact species persistence onsite. **OBJ Forest Products** Annually, prepare and offer up to an average of 122,000 CCF from suitable timberlands resulting from sustainable harvest to provide wood products to businesses and individuals. **OBJ Forest Products** Annually, provide up to 94,000 CCF (119,380 cords) of firewood for personal and commercial use. **OBJ Forest Products** Annually, provide an average of 5,000 permits for Christmas trees. **ST Forest Products** Authorizations to cut, collect, or use forest products for any personal, commercial, or scientific purpose (i.e., permits, contracts, agreements) shall include provisions to ensure the needs of wildlife, which depend upon those forest products, will continue to be met (e.g., fungi and cone collection with respect to overwinter forage needs of squirrels). **GD Forest Products** Permits issued for forest products should include	Overall goal from 1987 plan is carried forward and distributed through several places in the new plan.

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	Goals have been identified for each resource.	stipulations to protect resources. **DC All PNVTs** Herbivory is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). **DC All PNVTs** Vegetation provides products—such as wood fiber or forage—to help meet local and regional needs in a manner that is consistent with other desired conditions on a sustainable basis within the capacity of the land. **DC Livestock Grazing** Livestock grazing contributes to the social, economic, and cultural diversity and stability of rural communities. **DC Livestock Grazing** Livestock grazing and associated activities occur such that healthy, diverse plant communities, satisfactory condition soils, and wildlife habitat are maintained or improved. **DC Livestock Grazing** Range developments for livestock minimize impacts to wildlife and blend with the natural environment. **DC Livestock Grazing** Livestock grazing is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). **DC Livestock Grazing** Livestock grazing and associated activities do not negatively impact cultural resources. **GD Livestock Grazing** Forage, browse, and cover needs of wildlife, authorized livestock, and wild horses should be managed in balance with available forage so that plants providing for these needs remain at or move toward a healthy, persistent state. **GD Livestock Grazing** New range developments should be located to minimize impacts to scenic resources and reduce the potential for vandalism and livestock-vehicle conflicts. Range developments should be designed in consideration of public safety, especially in areas of concentrated recreation use. **DC Minerals and Geology** Mineral materials (e.g., gravel, cinders) are available for road maintenance activities for the Forest Service transportation system, public road system, and ADOT use. **DC Minerals and Geology** Mineral materials (e.g., cinders, decorative stone) are available to support resource management needs, personal	

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		use, and commercial pursuits. **DC Minerals and Geology** Lands where past mineral development or exploration has occurred are returned to stable conditions and vegetated with native species. **GD Minerals and Geology** Existing designated mineral material collection areas and community pits should be utilized to the maximum before new areas are developed. Additional mineral material development should balance private and community needs while providing for sustainable administrative use. **GD Minerals and Geology** To reduce disturbances from human activities and prevent the spread of disease, bat gates should be constructed and installed in cave and mine entrances used as shelter for bats within 3 years of discovery when there are no conflicts with cultural resources. **GD Minerals and Geology** Caves and abandoned mines that are used by bats should be managed to prevent disturbance to species and spread of disease (e.g., white-nose syndrome). **DC Natural Landscape** These areas contribute to ecosystem and species diversity and sustainability; serve as habitat for plants and animals; and offer wildlife corridors, reference areas, primitive and semi-primitive nonmotorized recreation opportunities, and places for people seeking natural scenery and solitude. **DC Cultural Resources** Significant cultural resources (i.e., archaeological, historic, traditional cultural properties (TCPs), known American Indian sacred sites) are preserved and protected for their cultural importance and are free from adverse impacts. **ST Cultural Resources** Human remains shall not intentionally be excavated for educational purposes (e.g., research, field schools). **ST Cultural Resources** Contracts, permits, or leases that have the potential to affect cultural resources shall include appropriate clauses specifying site protection responsibilities and liabilities for damage. **GD Cultural Resources** Activities that have the potential to adversely affect cultural resources should be discouraged in areas with a high concentration of significant archaeological sites or in areas of cultural or religious significance to American Indians. **GD Cultural Resources** Avoidance or protection measures should be the preferred method to prevent or minimize adverse effects to cultural	

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		resources listed in, nominated to, eligible for, or unevaluated for the NRHP. **GD Cultural Resources** Historic facilities that are eligible for the NRHP should be managed to retain their integrity.	
Plan	Management Emphasis Section MA 1 P. 95 Emphasize a combination of multiple uses including a sustained yield of timber and firewood production, wildlife habitat, livestock grazing, watershed, and dispersed recreation. Manage for timber production using integrated resource management to achieve diverse stands protected from losses due to insects or diseases exceeding endemic levels. Visual quality levels are generally modification, partial retention and retention. Maximum modification is allowed to manage insect or disease outbreaks or to harvest fire-killed timber.	**DC Overall Ecosystem Health** Ecological components (e.g., soil, vegetation, water) are resilient to disturbances including human activities and natural ecological disturbances (e.g., fire, drought, wind, insects, disease, pathogens). **DC Overall Ecosystem Health** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC All PNVTs** The vegetative conditions and functions are resilient to the frequency, extent, and severity of disturbances (e.g., fire, insects and disease, flood, climate change, management activities). The landscape is a functioning ecosystem that contains all its components and processes. **DC All PNVTs** Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth. **GD Woodlands: All Woodland PNVTs** Mechanical restoration of woodlands should emphasize individual tree removal to limit ground disturbance. **GD Landscape Scale Disturbance Events** Projects and activities should include both short and long term provisions for scenic integrity, especially in sensitive foreground areas (high and very high scenic integrity). **DC General Forest** Landscapes in the General Forest Management Area vary from moderately altered where human activities are evident (low scenic integrity) to natural where generally only ecological changes occur (very high scenic integrity). **DC All PNVTs** Insect and disease populations are at endemic levels with occasional outbreaks. A variety of seral states usually restricts the scale of	Multiple Use and Sustained Yield are carried forward, distributed throughout the new plan in various DCs and GDs. Management of visual quality is likewise carried forward.

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		localized insect and disease outbreaks. **GD All PNVTs** Insect and disease infected trees should be removed to prevent spread beyond endemic levels.	
Plan	Section MA 3 P. 123 Priority 1 areas will be placed under proper management by 1992. Priority 2 areas will be placed under proper management by 1996. Proper management means that systems are in place and activities are scheduled that will put unsatisfactory areas on the road to recovery.	**DC Water Resources** Water quality, stream channel stability, and aquatic habitats retain their inherent resilience to natural and other disturbances. **DC Water Resources** Water resources maintain the capability to respond and adjust to disturbances without long term adverse changes. **DC Water Resources** Vegetation and soil conditions above the floodplain protect downstream water quality, quantity, and aquatic habitat. **DC Water Resources** Instream flows provide for channel and floodplain maintenance, recharge of riparian aquifers, water quality, and minimal temperature fluctuations. **DC Water Resources** Streamflows provide connectivity among fish populations and provide unobstructed routes critical for fulfilling needs of aquatic, riparian-dependent, and many upland species of plants and animals. **DC Water Resources** Water quantity meets the needs for forest administration and authorized activities (e.g., livestock grazing, recreation, firefighting, domestic use, road maintenance). **DC Water Resources** Stream channels and floodplains are dynamic and resilient to disturbances. The water and sediment balance between streams and their watersheds allow a natural frequency of low and high flows. **DC Water Resources** Stream condition is sufficient to withstand floods without disrupting normal stream characteristics (e.g., water transport, sediment, woody material) or uncharacteristically altering stream dimensions (e.g., bankfull width, depth, slope, sinuosity). **DC Water Resources** Floodplains are functioning and lessen the impacts of floods on human safety, health, and welfare. **DC Water Resources** Water quality meets or exceeds Arizona State standards or Environmental Protection Agency water quality standards for designated uses. **DC Water Resources** Water quality meets the needs of desirable aquatic species such as the California floater, northern and Chiricahua leopard frog, and invertebrates that support fish populations.	Proper management of riparian zones is carried forward in numerous places in the new plan. In addition to those listed here, see the section in this table labeled “Air, Soil, Water, & Riparian”

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		ST Water Resources Consistent with existing water rights, water diversions or obstructions shall at all times allow sufficient water to pass downstream to preserve minimum levels of water flow that maintain aquatic life and other purposes of national forest establishment. **GD Water Resources** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to water resources. Where disturbance cannot be avoided, project specific soil and water conservation practices and best management practices (BMPs) should be developed. **GD Water Resources** Streams, streambanks, shorelines, lakes, wetlands, seeps, springs and other bodies of water should be protected from detrimental changes in water temperature and sediment to protect water quality, aquatic species and riparian habitat. **GD Water Resources** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species. **GD Water Resources** As State of Arizona water rights permits (e.g., water impoundments, diversions) are issued, the base level of instream flow should be retained by the Apache-Sitgreaves NFs. **GD Water Resources** Constraints (e.g., maximum limit to which water level can be drawn down or minimum distance from a connected river, stream, wetland, or groundwater-dependent ecosystem) should be established for new groundwater pumping sites permitted on NFS lands in order to protect the character and function of water resources. **GD Water Resources** Short term impacts in watersheds containing Outstanding Arizona Waters may be allowed when long term benefits to water quality, riparian areas, and aquatic resources would occur. **GD Water Resources** Treated wastewater may be used to provide wetland habitats. **GD Water Resources** To protect water quality and aquatic species, heavy equipment and vehicles driven into a water body to accomplish work should be completely clean of petroleum residue. Water levels should be below the gear boxes of the equipment in use. Lubricants and fuels should be sealed such that inundation by water should not result in leaks. **DC All PNVTs** Vegetation conditions allow for transition zones or	

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		ecotones between riparian areas, forests, woodlands, shrublands, and grasslands. Transition zones may shift in time and space due to changing site conditions from disturbances (e.g., fire, climate change). **DC Riparian Areas** Natural ecological disturbances (e.g., flooding, scouring) promote a diverse plant structure consisting of herbaceous, shrub, and tree species of all ages and size classes necessary for the recruitment of riparian-dependent species. **DC Riparian Areas** Riparian-wetland conditions maintain water-related processes (e.g., hydrologic, hydraulic, geomorphic). They also maintain the physical and biological community characteristics, functions, and processes. **DC Riparian Areas** Stream (lotic) riparian-wetland areas have vegetation, landform, and/or large coarse woody debris to dissipate stream energy associated with high water flow. **DC Riparian Areas** Streams and their adjacent floodplains are capable of filtering, processing, and storing sediment; aiding floodplain development; improving floodwater retention; and increasing groundwater recharge. **DC Riparian Areas** Vegetation and root masses stabilize streambanks, islands, and shoreline features against the cutting action of water. **DC Riparian Areas** Ponding and channel characteristics provide habitat, water depth, water duration, and the temperatures necessary for maintaining populations of riparian-dependent species and for their dispersal. **DC Riparian Areas** Beavers occupy capable stream reaches and help promote the function and stability of riparian areas. **DC Riparian Areas** Lentic riparian areas (e.g., wet meadows, fens, bogs) have vegetation and landform present to dissipate wind action, wave action, and overland flow from uplands. **DC Riparian Areas** Wetland riparian areas are capable of filtering sediment and aiding floodplain development that contribute to water retention and groundwater recharge. **DC Riparian Areas** Willows (e.g., Bebb, Geyer, Arizona, Goodding's) are reproducing with all age classes present, where the potential exists. **DC Riparian Areas** The spatial extent of wetlands is maintained. **DC Riparian Areas** Sedimentation and soil compaction from forest	

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		activities (e.g., vehicle use, recreation, livestock grazing) do not negatively impact riparian areas. **DC Riparian Areas** Riparian vegetation consists mostly of native species that support a wide range of vertebrate and invertebrate species and are free of invasive plant and animal species. **DC Riparian Areas** Riparian-obligate species within wet meadows, around springs and seeps, along streambanks, and active floodplains provide sufficient[10] vegetative ground cover (herbaceous vegetation, litter, and woody riparian species) to protect and enrich soils, trap sediment, mitigate flood energy, stabilize streambanks, and provide for wildlife and plant needs. **DC Riparian Areas** Diversity and density of riparian forest vegetation provides for breeding, escape, hiding, and resting cover for wildlife and provides travelways between other habitat areas and seasonal ranges. **DC Riparian Areas** The ecological function of riparian areas is resilient to animal and human use. **DC Riparian Areas** Riparian soil productivity is optimized as described by the specific TES map unit[10] under consideration as indicated by the vigor of the vegetation community. Based on species composition, ungrazed plant heights range from 10 inches to 36 inches. **DC Riparian Areas** Floodplains and adjacent upland areas provide diverse habitat components (e.g., vegetation, debris, logs) as necessary for migration, hibernation, and brumation (extended inactivity) specific to the needs of riparian-obligate species (e.g., New Mexico meadow jumping mouse, Arizona montane vole, narrow-headed gartersnake). **DC Riparian Areas** Large coarse woody debris provides stability to riparian areas and stream bottoms lacking geologic control (e.g., bedrock) or geomorphic features (e.g., functioning floodplains, stream sinuosity, width/depth ratio). **DC Riparian Areas** Vegetation is structurally diverse, often dense, providing for high bird species diversity and abundance, especially neotropical migratory birds. It includes large trees and snags in the cottonwood-willow and mixed broadleaf deciduous riparian forests to support species such as beaver, yellow-billed cuckoo, bald eagles, Arizona gray squirrel, and various bat species. **OBJ Riparian Areas** Annually, move 200 to 500 acres toward desired	

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		composition, structure, and function of streams, floodplains, and riparian vegetation. **OBJ Riparian Areas** Within the planning period, relocate, repair, improve, or decommission a minimum of 4 miles of National Forest System roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas** Annually, remove an average of 2 miles of unauthorized roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ Riparian Areas** Within the planning period, enhance or restore 5 to 25 wet meadows, springs, seeps, or cienegas to proper hydrologic function and native plant and animal species composition. **OBJ Riparian Areas** Annually, work with partners to reduce animal damage to native willows and other riparian species on an average of 5 miles of riparian habitat. **GD Riparian Areas** Ground-disturbing projects (including prescribed fire) which may degrade long term riparian conditions should be avoided. **GD Riparian Areas** Wet meadows, springs, seeps and cienegas should not be used for concentrated activities (e.g., equipment storage, forest product or mineral stockpiling, livestock handling facilities, special uses) that cause damage to soil and vegetation. **GD Riparian Areas** Active grazing allotments should be managed to maintain or improve to desired riparian conditions. **GD Riparian Areas** Storage of fuels and other toxicants should be located at least 100 feet outside of riparian areas to prevent spills that could impair water quality or harm aquatic species. **GD Riparian Areas** Equipment should be fueled or serviced at least 100 feet outside of riparian areas to prevent spills that could impair water quality or harm aquatic species. **GD Riparian Areas** Construction or maintenance equipment service areas should be located at least 100 feet from riparian areas, and treated to prevent gas, oil, or other contaminants from washing or leaching into streams. **DC Livestock Grazing** Livestock grazing and associated activities	

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		contribute to healthy, diverse plant communities, satisfactory condition soils, and wildlife habitat. **DC Livestock Grazing** Livestock grazing is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). **GL Livestock Grazing** Critical areas should be managed to address the inherent or unique site factors, conditions, values, or potential conflicts associated with them. **GL Livestock Grazing** New livestock troughs, tanks, and holding facilities should be located out of riparian areas to reduce concentration of livestock in these areas. Existing facilities in riparian areas should be modified, relocated, or removed where their presence is determined to inhibit movement toward desired riparian or aquatic conditions. **GL Livestock Grazing** Forage, browse, and cover needs of wildlife, authorized livestock, and wild horses should be managed in balance with available forage so that providing for these needs remain at or move toward a healthy, persistent state. **GL Livestock Grazing** To minimize potential resource impacts from livestock, salt or nutritional supplements should not be placed within a quarter of a mile of any riparian area or water source. Salt or nutritional supplements should also be located to minimize herbivory impacts to aspen clones. **GL Livestock Grazing** To prevent resource damage (e.g., streambanks) and disturbance to federally listed and sensitive wildlife species, trailing of livestock should not occur along riparian areas. Where no alternative route is available, approval may be granted where effective mitigation measures are implemented (e.g., timing of trailing, number of livestock trailed at one time).	
Plan	Section MA 7 P. 138 Mount Baldy Wilderness Acres: 7,079 The Mount Baldy Wilderness was designated as part of the National Wilderness Preservation System in 1970. Its	**DC Air** Air quality related values, including high quality visual conditions, are maintained within the Class I airshed over Mount Baldy Wilderness. **DC Wilderness** Ecological conditions are affected primarily by natural ecological processes, with the appearance of little or no human intervention. **DC Wilderness** Fire functions as a natural ecological process.	Wilderness area management was carried forward in accordance with law, policy, and regulation.

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	7,079 acres on the eastern slope of Mount Baldy lie entirely within the Springerville Ranger District of the Apache National Forest. Elevations range from 9,000 feet to 11,550 feet above sea level. Mount Baldy is an extinct volcano which has experienced three distinct periods of glaciation. The peak itself is on the Fort Apache Indian Reservation. Two developed trails pass through the wilderness to the top of Mount Baldy. The West Fork Trail begins near the Sheep Crossing parking lot and ascends along the West Fork of the Little Colorado River. The East Fork Trail begins near Phelps Cabin and ascends along the East Fork of the Little Colorado River. The 2 trails meet near the top and continue to the summit. Each trail is approximately seven miles in length. The average annual precipitation is about 45 inches. Half of this comes as snow. Severe thunderstorms and frequent showers are common during July and August. Range status data used in the development of this plan indicates that there are 600 acres of full capacity range,	**DC Wilderness** There is little evidence of human developments and little or no evidence of camping activity, unauthorized trails, trash, or other human impacts on the environment. **DC Wilderness** Visitor use does not affect wilderness characteristics. **DC Wilderness** Wilderness boundaries are posted and visible to visitors. **DC Wilderness** There are unconfined opportunities for exploration, solitude, risk, and challenge. The nonmotorized trail system enhances the wilderness character. Where there is public demand, outfitters and guides provide services to visitors seeking a wilderness experience. **DC Wilderness** Bear Wallow Wilderness provides outstanding opportunities for solitude and isolation. Encounters with small groups or individuals are infrequent. **DC Wilderness** Within Mount Baldy and Escudilla Wilderness areas, trails concentrate use and provide access to popular destinations. Encounters with other users may occur. **DC Wilderness** Wilderness areas maintain natural landscapes where generally only ecological changes occur (very high scenic integrity) and provide primitive and/or semi-primitive nonmotorized recreation opportunities. **DC Wilderness** Wilderness contributes to preserving natural behaviors and processes that sustain wildlife populations. **ST Wilderness** Party size of 12 persons and/or 12 head of stock for hiking and riding groups in Mount Baldy Wilderness shall not be exceeded. A party size of 6 persons for overnight camping shall not be exceeded. **ST Wilderness** Party size of 12 persons and/or 15 head of stock for hiking and riding groups in Escudilla and Bear Wallow Wilderness and the Blue Range Primitive Area shall not be exceeded. **ST Wilderness** Objective(s) and strategies for all wildfires shall be identified. **ST Wilderness** Fire management activities shall be conducted in a manner compatible with the overall wilderness management objectives (minimum impact suppression tactics). **ST Wilderness** Human-caused disturbed areas that do not complement wilderness characteristics will be rehabilitated to a natural appearance,	

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	of which 600 acres are in satisfactory condition. As new inventories become available they will be utilized to make future adjustments to these management area range status descriptions.	using species or other materials native to the area. **GD Wilderness** New trail construction may be considered if the objective is enhancement of the wilderness character (e.g., increase solitude opportunities, restore naturalness). **GD Wilderness** Trail maintenance should be coordinated around anticipated visitor high use periods to minimize encounters. **GD Wilderness** Trails that have minimal use, detract from the wilderness character, or cannot practically be maintained or reconstructed should be obliterated. **GD Wilderness** Prescribed fire should be considered to reduce the risks and consequences of uncharacteristic wildfire within wilderness or escaping from wilderness by reducing unnatural fuel accumulations, if necessary to meet wilderness fire management objectives. Naturally occurring wildfires should be allowed to perform, as much as possible, their natural ecological role within wilderness. **GD Wilderness** Fire camps, helispots, and other temporary facilities should be located outside the wilderness boundary to protect wilderness character. **GD Wilderness** Firelines and spike camps (i.e., a remote camp usually near a fireline) should not be constructed adjacent to trails or camp areas to protect wilderness values. **GD Wilderness** Grazing of pack stock should not occur except as authorized by the district ranger when adequate forage is available.	
Plan	MA 8 P. 141 Blue Range Primitive Area and Additions The Blue Range was classified as a Primitive Area in 1933, to preserve its wilderness qualities. Its 187,410 acres include deep, rugged canyons separated by steep timbered ridges. The Mogollon Rim bisects the area and provides dramatic topographic features. Elevations	**DC Primitive Area** The Blue Range Primitive Area and presidential recommended additions maintain natural landscapes where generally only ecological changes occur (very high scenic integrity) and provide primitive recreation opportunities, except along the designated road (36 CFR § 293.17(a)). **All Wilderness DC** apply to the entire Blue Range Primitive Area and presidential recommended additions until congressional action has been taken. **All Wilderness ST and GD** apply to the entire Blue Range Primitive Area and presidential recommended additions until congressional action has	Management of the primitive area was carried forward in the new plan.

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	range from 4,500 feet in the southern portion to 9100 feet along the Rim. This rapid change in elevation exposes several interesting and unique ecological and geological associations. Unusual and spectacular rock formations are common. Several perennial streams have population of trout. The abundant deer herds are hunted each fall, and the 150 miles of trails provide good access throughout the area. The best time to hike this area above the Rim is in the spring or fall, whereas winter hiking is encouraged in the lower elevations. This area is not as heavily visited as are other wildernesses, so solitude is a prize reward to the hardy hiker. Range status data used in the development of this plan indicated that there are 60,303 acres of full capacity range of which 48,242 are in satisfactory condition and 12,061 are in unsatisfactory condition. As new inventories become available they will be utilized to make future adjustments to these management area range status descriptions.	been taken.	

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Plan	MA 10 P. 157 Management Emphasis: Emphasis protection of the natural ecosystem for research purposes.	**GD Minerals and Geology** Key cultural sites, research natural areas, and administrative and recreation sites with an investment in facilities should be withdrawn from mineral entry to protect resources and existing infrastructure. **GD Minerals and Geology** Oil and geothermal leases should contain the "no surface occupancy" restriction in designated or recommended special areas (e.g., recommended wilderness, primitive area, eligible or suitable wild and scenic rivers corridors, research natural areas, botanical area, and wild horse territory), sacred sites, American Indian TCPs, and properties on the National Register of Historic Places to protect the unique character of these areas. **GD Special Uses** Large group and recreation event special uses should not be authorized within wilderness, recommended wilderness, primitive area, wildlife quiet areas, eligible "wild" river corridors, riparian and wetland areas, cultural resource sites, Phelps Cabin Botanical Area, Phelps Cabin Research Natural Area, or recommended research natural areas to protect the unique character of these areas. **DC Research Natural Area** The Phelps Cabin RNA provides opportunities for research, study, observation, monitoring, and educational activities that maintain the natural conditions for which the area was established. **DC Research Natural Area** The Phelps Cabin RNA, outside of Mount Baldy Wilderness, exhibits landscapes that vary from natural appearing where human activities do not stand out (high scenic integrity) to natural where generally only ecological changes occur (very high scenic integrity). **DC Research Natural Area** Recreation opportunities, although not encouraged, are semi-primitive nonmotorized. **ST Research Natural Area** The Phelps Cabin RNA will be surveyed and posted with boundary signs within the planning period. **ST Research Natural Area** The Phelps Cabin RNA will be managed for nonmotorized access within the area; exceptions may be made for permitted research use. **GD Research Natural Area** Management measures should be used (e.g., fencing) to protect unique features. **GD Research Natural Area** To minimize impacts to unique and sensitive plant species, recreational activities (other than use on the designated	Additional direction added in new plan in response to identified needs for change from the 1987 plan, including specifically: • Incorporate direction for special areas that were not included in the 1987 plan, including recommended research natural areas, the Heber Wild Horse Territory, scenic byways, and national recreation trails. • Recommend additional special areas (i.e., research natural areas) where needed. The intent is to recommend these areas in the revised forest plan; subsequent analyses would determine whether they should become official designated areas.

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		trail) should not be encouraged. **GD Research Natural Area** Research special use authorizations should limit impacts to sensitive resources, unique features, and species within the RNA. **DC Recommended Research Natural Area** The recommended RNAs provide opportunities for research, study, observation, monitoring, and educational activities that maintain the natural conditions for which the area was recommended. **DC Recommended Research Natural Area** The Three Forks Closure Area (30 acres) of the recommended Three Forks RNA is free from human trampling and other disturbances to protect very sensitive and unique species, such as the Three Forks springsnail, California floater, New Mexico meadow jumping mouse, Chiricahua leopard frog, and loach minnow. **DC Recommended Research Natural Area** The recommended Three Forks, Campbell Blue, Corduroy, and Sandrock RNAs, outside of any eligible or suitable wild and scenic river corridor, exhibit unaltered appearing landscapes where human activities do not stand out (high scenic integrity). **DC Recommended Research Natural Area** The recommended Thomas Creek RNA exhibits slightly altered landscapes where human activities may be seen but do not attract attention (moderate scenic integrity). **DC Recommended Research Natural Area** The recommended Phelps Cabin RNA addition (currently the Phelps Cabin Botanical Area), outside of any eligible or suitable wild and scenic river corridor, exhibits unaltered appearing landscapes where human activities do not stand out (high scenic integrity). **DC Recommended Research Natural Area** Natural conditions prevail in the recommended Phelps Cabin RNA addition while providing an opportunity for interpretation, education, and research. **DC Recommended Research Natural Area** Unique plant species, including willows, paintbrushes, and gentians, thrive in the recommended Phelps Cabin RNA addition. **GD Recommended Research Natural Area** To minimize impacts to unique and sensitive plant and animal species, recreational activities should not be encouraged.	

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		GD Recommended Research Natural Area If necessary, recommended RNAs should be fenced to manage unique features. **GD Recommended Research Natural Area** Research special use authorizations should limit impacts to sensitive resources, unique features, and species within recommended RNAs. **GD Recommended Research Natural Area** Recommended RNAs should be managed for nonmotorized access within the area to minimize ground disturbances and protect the resources which make these areas unique.	
Plan	MA 12 Analysis Areas: 381-385 Acres: 11,080 Bear Wallow Wilderness Area. The newly established Bear Wallow Wilderness in eastern Arizona boasts a sizeable amount of virgin ponderosa pine for its size. Only a few trails provide access into and within this area, and only limited grazing of domestic livestock in the west half has kept this area pristine. Bear Wallow Creek flows throughout the year, providing suitable habitat for the threatened Apache trout. Wildlife is abundant throughout the area. A majestic view from atop the Mogollon Rim is available to the hiker from the Rim Tail on the southern boundary of the wilderness. Range status data use in the	All **DC**, **ST**, and **GD** for **Wilderness** listed above for Mount Baldy Wilderness apply to Bear Wallow Wilderness.	Wilderness area management was carried forward into the new plan.

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	development of this plan indicates that there are 600 acres of full capacity range, of which 600 acres are in satisfactory condition. As new inventories become available they will be utilized to make future adjustments to these management area range status descriptions.		
Plan	MA 13 Analysis Areas: 91-94 Acres: 5,200 The Escudilla Wilderness, designated in 1984 and containing 5,200 acres, lies atop Arizona's third highest peak, Escudilla Mountain. Its 10,912 feet elevation provides marvelous vistas. It is home to several pristine, high elevation meadows which are comprised of relatively rare plant associations. Notable landmarks in or just outside the wilderness include Profanity Ridge, Terry Flat, Toolbox Draw, and the Punchbowl. A trail takes the visitor to Escudilla Lookout where he/she can absorb vistas many miles distant. Because of the relative scarcity of water and the small size of this wilderness, day use is encouraged. Range status data used in the development of	All **DC**, **ST**, and **GD** for **Wilderness** listed above for Mount Baldy Wilderness apply to Escudilla Wilderness.	Wilderness area management was carried forward into the new plan.

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	this plan indicates that there are 1500 acres of full capacity range, of which 1500 acres are in satisfactory condition. As new inventories become available they will be utilized to make future adjustments to these management area range status descriptions.		
Plan	MA 14 Acres: 7,176 Black River (Mainstem) The 16 mile Black River is a major tributary of the Salt River and flows in a sometimes tortuous channel winding through conifer covered mountainous terrain. The river corridor provides important habitat to a wide range of animals; deer, elk, bear, and turkey to name a few. As well, the river provides nesting habitat for many bird species including, southern bald eagles and possible peregrine falcons. The Black River provides a highly scenic, water based, semi-primitive recreation opportunity for those hardy individuals willing to take the time, as access is not easy.	**DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable wild river segments display unaltered landscapes where generally only ecological changes occur (very high scenic integrity) and provide primitive and/or semi-primitive nonmotorized recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable scenic river segments display landscapes which vary from slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity) and provide semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable recreational river segments display landscapes which vary from moderately altered where human activities are evident (low scenic integrity) to slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) and provide primitive, semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **ST Eligible and Suitable Wild and Scenic Rivers** Each eligible river's free-flowing condition, outstandingly remarkable values, and classification shall be sustained until further study is conducted. **ST Eligible and Suitable Wild and Scenic Rivers** Each suitable river's free-flowing condition, outstandingly remarkable values, and classification shall be maintained until congressional action is completed.	Management of wild and scenic rivers was carried forward and modified to reflect law, policy, and regulation.

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Plan	MA 15 Acres: 3,465 East and West Fork of the Black River This Management Area includes a 14 mile segment of the West Fork of the Black River from the confluence of the East and West Forks of the Black River near Buffalo Crossing upstream to the forest boundary just south of the Mt. Baldy Wilderness. With the main stem of the Black River, this segment forms a continuous 30 mile river segment from the headwaters to the forest boundary. The West Fork of the Black River not only provides highly scenic water based recreation opportunities, it also represents a valuable fishery as well as habitat for a wide range of wildlife.	**DC** and **ST** for **Eligible and Suitable Wild and Scenic Rivers** apply to East and West Forks of the Black River.	Process for identification of eligible and suitable Wild and Scenic River segments has been completed. Management of wild and scenic rivers was carried forward and modified to reflect law, policy, and regulation.
Plan	MA 16 Acres: 11,534 Chevelon Canyon This management area includes 29.9 miles of Chevelon Creek from the confluence of Willow Canyon and Woods Canyon downstream to the forest boundary. Except for Chevelon Canyon Lake, the area will be recommended for addition to the Wild and Scenic Rivers System.	**DC** and **ST** for **Eligible and Suitable Wild and Scenic Rivers** apply to Chevelon Creek	Process for identification of eligible and suitable Wild and Scenic River segments has been completed. Management of wild and scenic rivers was carried forward and modified to reflect law, policy, and regulation.

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	The corridor is a major drainage of the Mogollon Rim. Chevelon Creek cuts a scenic, steep, and twisting canyon through terrain covered with a mosaic of vegetation. Chevelon Canyon provides a canyon ecosystem relatively undistributed by human intrusion. It is a unique aquatic habitat in a relatively arid region with high semi-primitive recreation and wildlife values. This management area is not assigned any grazing capacity.		
Plan	MA 17 Acres: 2,360 East and West Forks Little Colorado River The East and West Forks of the Little Colorado River possess a high quality semi-primitive non-motorized water based recreation opportunities adjacent to the popular resort community of Greer. In addition, within the corridor are several unique stands of willow deserving special protection.	**DC** and **ST** for **Eligible and Suitable Wild and Scenic Rivers** apply to East and West Forks of the Little Colorado River.	Management of wild and scenic rivers was carried forward and modified to reflect law, policy, and regulation.

Range

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Range	Emphasize maintenance and restoration of healthy riparian ecosystems through conformance with forest plan riparian standards and guidelines. Management strategies should restore degraded riparian areas to good condition as soon as possible. Damage to riparian vegetation, streambanks and channels should be prevented.	**GD Water Resources** Projects with ground-disturbing activities should be designed to minimize long and short-term impacts to water resources. Where disturbance cannot be avoided, project specific soil and water conservation practices and best management practices (BMPs) should be developed. **DC Riparian Areas Fine Scale** Riparian obligate species within wet meadows, around springs and seeps, along streambanks and active floodplains provide sufficient[5] vegetative ground cover (herbaceous vegetation, litter, and woody riparian species) to protect and enrich soils, trap sediment, mitigate flood energy, stabilize streambanks, and provide for wildlife and plant needs. **DC Riparian Areas Fine Scale** Riparian soil productivity is optimized as described by the specific TES map unit [5] as indicated by the vigor of the herbaceous vegetation community. Based on species composition, ungrazed plant heights [7] range from 10 inches to 36 inches **GD Riparian Areas** Wet meadows, springs, seeps and cienegas should not be used for concentrated activities (e.g., equipment storage, forest product or mineral stockpiling, livestock handling facilities, special uses) that cause damage to soil and vegetation. **GD Riparian Areas** Active grazing allotments should be managed to maintain or improve to desired riparian conditions. **GD Livestock Grazing** New livestock troughs, tanks, and holding facilities should be located out of riparian areas to reduce concentration of livestock in these areas. Existing facilities in riparian areas should be modified, relocated, or removed where their presence is determined to inhibit movement toward desired riparian or aquatic conditions. **GD Livestock Grazing** To minimize potential resource impacts from livestock, salt or nutritional supplements	Guidelines were modified to be more explicit. Desired Conditions provide aspirational direction for Guidelines.

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		should not be placed within a quarter of a mile of any riparian area or water source. Salt or nutritional supplements should also be located to minimize herbivory impacts to aspen clones **GD Livestock Grazing** To prevent resource damage (e.g., streambanks) and disturbance to federally listed and sensitive wildlife species, trailing of livestock should not occur along riparian areas. Where no alternative route is available, approval may be granted where effective mitigation measures are implemented (e.g., timing of trailing, number of livestock trailed at one time).	
Range	To improve rangeland condition and resolve conflicts with other resource objectives, improved allotment management plans will be developed using the Integrated Resource Management process. Allotment management plans will implement Forest Plan objectives. Improved allotment management plans will give equal consideration of innovative practices and techniques, structural and non-structural range improvements, non-use agreements, and stocking rate adjustment to achieve integrated resource objectives.	**DC Aquatic Habitat and Species** Aquatic habitat conditions contribute to the recovery of federally listed species. **DC Aquatic Habitat and Species** Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **DC Aquatic Habitat and Species** Wetlands are hydrologically functioning and have sufficient (composing 50 percent of the wetland) emergent vegetation and macroinvertebrate populations to support resident and migratory wetland dependent species. **GD Aquatic Habitat and Species** Management and activities should not contribute to a trend toward the Federal listing of a species. **GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans. **DC Aquatic Habitat and Species** Vegetation characteristics (e.g., density, litter) provide favorable conditions for water flow and quality. **GD Aquatic Habitat and Species** Organic soil cover and herbaceous vegetation protect soil, facilitate moisture infiltration, and contribute to plant and animal diversity and ecosystem function.	Standards and Guidelines were modified to be more explicit. Desired Conditions provide aspirational direction for Standards and Guidelines.

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		DC All PNVTs at Mid-Scale Vegetative ground cover (herbaceous vegetation and litter cover) is optimized [5] to protect and enrich soils and promote water infiltration. There is a diverse mix of cool and warm season grasses and desirable forbs species. **DC All PNVTs at Fine Scale** Herbaceous vegetation amount and structure (e.g., plant density, height, litter, seed heads) provides habitat to support wildlife and prey species. **ST All PNVTs** Within each PNVT, vegetation management activities shall be designed to maintain or move plant composition towards a moderate to high plant community similarity as compared to site potential. **DC Grasslands Fine Scale** During the critical pronghorn fawning period (May through June [12]), cool season grasses and forbs provide nutritional forage; while shrubs and standing grass growth from the previous year provide adequate hiding cover (10 to 18 inches) to protect fawns from predation. **DC Wildlife and Rare Plants Landscape Scale** Habitat conditions contribute to the recovery of federally listed species. **GD Wildlife and Rare Plants** Management and activities should not contribute to a trend toward the Federal listing of a species. GL 65 Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans. **GD Wildlife and Rare Plants** Modifications, mitigations, or other measures should be incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives. **GD Wildlife and Rare Plants** Active raptor nests should be protected from treatments and disturbance during the nesting season to provide for successful reproduction. Specifically for northern goshawk nest areas, human	

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		presence should be minimized during nesting season of March 1 through September 30. **GD Wildlife and Rare Plants** Rare and unique features (e.g., talus slopes, cliffs, canyon slopes, caves, fens, bogs, sinkholes) should be protected from damage or loss to retain their distinctive ecological functions and maintain viability of associated species. **GD Wildlife and Rare Plants** The needs of localized species (e.g., New Mexico meadow jumping mouse, Bebb willow, White Mountains paintbrush) should be considered and provided for during project activities to ensure their limited or specialized habitats are not lost or degraded. **GD Wildlife and Rare Plants** Constructed features should be maintained to standard or removed when no longer needed. **DC Cultural Resources** Significant cultural resources (i.e., archaeological, historic, traditional cultural properties (TCPs), and known American Indian sacred sites) are preserved and protected for their cultural importance and are free from adverse impacts. **GD Cultural Resources** Activities that have the potential to adversely affect cultural resources should be discouraged in areas with a high concentration of significant archaeological sites or in areas of cultural or religious significance [13] to American Indians. **GD Cultural Resources** Avoidance or protection measures should be the preferred method to prevent or minimize adverse effects to cultural resources listed in, nominated to, eligible for, or unevaluated for the NRHP. **DC Livestock Grazing** Livestock grazing and associated activities contribute to healthy, diverse plant communities, satisfactory condition soils, and wildlife habitat. **GD Livestock Grazing** As areas are mechanically treated or burned, timing of livestock grazing should be modified as needed, in order to move toward desired conditions and to accomplish the objectives for the treatment.	

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		GD Research Natural Area Management measures should be used (e.g., fencing) to protect unique features. **GD Recommended Research Natural Area** If necessary, recommended RNAs should be fenced to manage unique features. **DC Wilderness and Primitive Area** There is little evidence of human developments and little or no evidence of camping activity, unauthorized trails, trash, or other human impacts on the environment.	
Range	Basic allotment analysis will evaluate grazing capability. Determine and map which lands are suitable and unsuitable for livestock grazing. Benchmark transects for range condition trends will be maintained. Amend the Forest Plan, as appropriate, to reflect changes as new data becomes available.	**DC All PNVTs at Landscape Scale** Herbivory is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). **DC Livestock Grazing** Livestock grazing is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels. **GD Livestock Grazing** Forage, browse, and cover needs of wildlife, authorized livestock, and wild horses should be managed in balance with available forage so that providing for these needs remain at or move toward a healthy, persistent state.	Allotment management Plans would address forage and utilization (through NEPA process) on site specific basis.
Range	Reconstruct range structural improvements to original construction standards or better according to FSM 2244, and FSH 2209.22. Permittees will maintain range structural improvements operable condition according to FSM 2224, FSH 2209, and FSM 2320.	**GD Aspen** To preclude concentrated herbivore impacts, new surface water development should not be constructed within proximity to aspen stands (approximately a quarter of a mile). **GD Grasslands** New fence construction or reconstruction where pronghorn antelope may be present should have a barbless bottom wire which is 18 inches from the ground to facilitate movement between pastures and other fenced areas. Pole and other types of fences should also provide for pronghorn antelope passage where they are present. **GD Grasslands** Pronghorn antelope fence and other crossings should be installed along known movement corridors to prevent habitat	Additional standards and guidelines for wildlife, scenic resources, and the aspen PNVT.

Resource	1987 Plan Content (as amended). Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
		fragmentation. **GD Wildlife and Rare Plants** Constructed features should be maintained to standard or removed when no longer needed. **GD Scenic Resources** Constructed features and landscape alterations should be designed to complement the natural setting. **ST Livestock Grazing** New or reconstructed fencing shall allow for wildlife passage, except where specifically intended to exclude wildlife (e.g., elk fencing). **ST Livestock Grazing** New livestock watering facilities shall be designed to allow wildlife access and escape. **ST Livestock Grazing** During maintenance of existing watering facilities, escape ramps that are ineffective or missing should be replaced. **ST Livestock Grazing** Constructed features should be maintained to standard or removed when no longer needed. **ST Livestock Grazing** New range developments should be located to minimize impacts to scenic resources and reduce the potential for vandalism and livestock-vehicle conflicts. Range developments should be designed in consideration of public safety, especially in areas of concentrated recreation use.	
Range	Conserve soil and water resources; avoid permanent impairment of site productivity and ensure conservation of soil and water resources. The minimum soil and resource management requirement is to control surface water runoff and erosion at not less than tolerance conditions.	**DC Soil Landscape Scale** Ecological and hydrologic functions are not impaired by soil compaction. **DC Soil Mid-Scale** Soil condition rating is satisfactory [2]. **DC Soil Mid-Scale** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **DC Soil Mid-Scale** Soils provide for diverse native plant species [9]. Vegetative ground cover (herbaceous vegetation and litter) is distributed evenly across the soil surface to promote nutrient cycling, water infiltration, and to maintain natural fire regimes.	Guidelines were modified to be more explicit. Desired Conditions provide aspirational direction for Guidelines.

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		DC Soil Mid-Scale Biological soil crusts (e.g., mosses, lichens, algae, liverworts) are present and reestablished if potential exists. **DC Soil Fine Scale** Soil loss rates do not exceed tolerance soil loss rates [3]. **DC Soil Fine Scale** Logs and other woody material are distributed across the surface to maintain soil productivity [14]. **DC Soil Fine Scale** Vegetation and litter are sufficient to maintain and improve water infiltration, nutrient cycling, and soil stability. **GD Soil** Projects with ground-disturbing activities should be designed to minimize long- and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **DC Riparian Areas Mid-Scale** Soil compaction from forest activities (e.g., vehicle use, recreation, livestock grazing) does not negatively impact riparian areas. **DC Dry Mixed Conifer Landscape Scale** Grasses, forbs, shrubs, needles, leaves, and small trees support the natural fire regime. The larger proportion (60 percent or greater) of soil cover is composed of grasses and forbs as opposed to needles and leaves. **DC Madrean Pine-Oak Mid-Scale** Grasses, forbs, shrubs, leaves, needles, and small trees maintain the natural fire regime with a greater proportion of the soil cover as grasses and forbs as opposed to leaves and needles. **DC Piñon-Juniper-Savanna Landscape Scale** Grasses, forbs, shrubs, needles, leaves, and small trees support the natural fire regime. The larger proportion (60 percent or greater) of soil cover is composed of grasses and forbs as opposed to needles and leaves. **DC Piñon-Juniper-Persistent Woodland Mid-Scale** Grass and forb cover is maximized, based on site capability, to	

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		protect and enrich soils. **DC Grasslands Landscape Scale** Perennial herbaceous species dominate and include native grasses, grass-like plants (sedges and rushes), and forbs, and in some locations, a diversity of shrubs. **DC Grasslands Landscape Scale** Vegetative ground cover (herbaceous vegetation and litter cover) is optimized (as defined by the TES map unit [5] under consideration) to prevent accelerated erosion, dissipate rainfall, facilitate the natural fire regimes, and provide wildlife and insect habitat. Ungrazed herbaceous vegetation heights [7] range from 7 to 32 inches [15] depending on grassland type. **DC Grasslands Fine Scale** Average herbaceous vegetation heights [15] vary by grassland PNVT and yearly weather conditions. Ungrazed herbaceous vegetation heights [7] range from 7 to 29 inches in Great Basin grasslands, 7 to 26 inches in montane/subalpine grasslands, and 10 to 32 inches in semi-desert grasslands.	
Range	**Forest wide ST for Grazing.** Forage use by grazing ungulates will be maintained at or above a condition which assures recovery and continued existence of threatened and endangered species. **Forest wide GDs for Grazing.** Identify key ungulate forage monitoring areas. These key areas will normally be 1/4 to 1 mile from water, located on productive soils on level to intermediate slopes, and be readily accessible for grazing. Size of the key forage 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 1/4 mile from water and less than 20 acres. Within key forage monitoring areas, select appropriate key species to monitor average allowable use.	**DC Livestock Grazing** Livestock grazing and associated activities contribute to healthy, diverse plant communities, satisfactory condition soils, and wildlife habitat. **DC Livestock Grazing** Range developments for livestock minimize impacts to wildlife and blend with the natural environment. **GD Livestock Grazing** Forage, browse, and cover needs of wildlife, authorized livestock, and wild horses should be managed in balance with available forage so that providing for these needs remain at or move toward a healthy, persistent state. **DC for Overall Ecosystem Health** Large blocks of habitat are interconnected, allowing for behavioral and predator-prey interactions, and the persistence of metapopulations and highly interactive wildlife species across the landscape. Ecological connectivity extends through all plant communities. **DC for All PNVTs** Herbaceous vegetation amount and	The new plan guidance meets the intent of the previous guidance.

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		structure (e.g., plant density, height, litter, seed heads) provides habitat to support wildlife and prey species.	

Recreation

Resource	1987 Plan Content (as amended). Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
Recreation	Manage to ensure the maintenance of the existing diversity of recreation opportunities, settings, and activities.	**DC Overall Recreation Opportunities** The Apache-Sitgreaves NFs offer a spectrum of recreation settings and opportunities varying from primitive to rural and dispersed to developed, with an emphasis on the natural appearing character of the forests. **DC Overall Recreation Opportunities** Recreation activities occur within the ability of the land to support them and with minimal user conflicts. **DC Overall Recreation Opportunities** Recreation enhances the quality of life for local residents (e.g., social interaction, physical activity, connection with nature), provides tourist destinations, and contributes monetarily to local economies. **DC Overall Recreation Opportunities** Recreation opportunities provide for a variety of skill levels, needs, and desires in partnership with recreation permit holders, private entities, volunteer groups, community groups, and State, Federal, and tribal governments.	Retained, expanded, and updated through numerous desired conditions
Recreation	Dispersed recreation in high-use areas is managed at a high intensity level, even though use will increase significantly. pp10, Issues	**DC Dispersed Recreation** Dispersed recreation opportunities (e.g., hunting, fishing, hiking, camping) are available and dispersed recreation sites (e.g., campsites, trailheads, vistas, parking areas) occur in a variety of ROS classes throughout the forests.	Retained and refined through desired condition
Recreation	Concentrated Undeveloped Use Sites 1. 14-day stay limits may be imposed in desirable locations (water, view, solitude, etc.) within a concentrated undeveloped area. These sites will be posted or users personally notified by a Forest Officer. 2. 14-day stay limits may be imposed for entire concentrated dispersed use areas. These areas will be posted. 3. Stay limits will be imposed for a concentrated	**DC Dispersed Recreation** Facilities for dispersed recreation activities are appropriate for the ROS class and scenic integrity objective of the location and are designed to the minimum necessary to protect natural and cultural resources. **DC Dispersed Recreation** Access, parking, regulations, orientation, and safety information are in place to provide safe and enjoyable dispersed recreation opportunities. **DC Dispersed Recreation** Winter nonmotorized areas provide a variety of nonmotorized recreation opportunities in a quiet, natural setting (including groomed and ungroomed ski trails). Noise from motorized use is uncommon in areas away from	Retained, expanded, and updated through numerous objectives, desired conditions and guidelines

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	use area when the District Ranger feels any 1 or more of the following conditions are likely to occur: a) A concentration of users because of their number, actions, or equipment would detract from the area's natural setting or significantly reduces the quality of the standard recreational experience expected for the area. b) Vegetation damage or soil compaction is a problem in the area and extended stay prevents even partial relief from these adverse effects. c) Users tend to construct certain improvements or bring in equipment that detracts from the area's setting and that normally doesn't occur when visits are of shorter duration. pp. 32 Standards and Guidelines **Undeveloped Portions of National Forest** The same criteria as for concentrated undeveloped use sites will be utilized to determine where stay limits are to be imposed. pp. 32 Standards and Guidelines	main road corridors. **DC Dispersed Recreation** Roads and trails provide a variety of opportunities to view natural landscapes and wildlife. **OBJ Dispersed Recreation** Annually, rehabilitate, stabilize, revegetate, or relocate an average of five dispersed campsites to improve recreation opportunities and/or protect the environment. **OBJ Dispersed Recreation** Within the planning period, work with the AZGFD, ADOT, and other partners to provide at least 10 new wildlife viewing opportunities. **ST Dispersed Recreation** Dispersed campsites shall not be designated in areas with sensitive soils or within 50 feet of streams, wetlands, or riparian areas to prevent vegetation and bank damage, soil compaction, additional sediment, or soil and water contamination. **GD Dispersed Recreation** In dispersed areas, the priority for facilities or minor developments should be access and protection of the environment, rather than the comfort or convenience of the visitors. **GD Dispersed Recreation** Timing restrictions on recreation uses should be considered to reduce conflicts with wildlife needs or soil moisture conditions. **GD Dispersed Recreation** Dispersed campsites should not be located on or adjacent to archaeological sites or sensitive wildlife areas.	
Recreation	**Outdoor Recreation** Manage the recreation resource to provide opportunities for a wide variety of developed and dispersed experiences. Provide for developed site and dispersed visitor use. pp14, Goal	**DC Overall Recreation Opportunities** The Apache-Sitgreaves NFs offer a spectrum of recreation settings and opportunities varying from primitive to rural and dispersed to developed, with an emphasis on the natural appearing character of the forests. **DC Overall Recreation Opportunities** Recreation activities occur within the ability of the land to support them and with minimal user conflicts. **DC Overall Recreation Opportunities** Recreation enhances the quality of life for local residents (e.g., social interaction,	Retained, expanded, and updated through numerous desired conditions and guidelines

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		physical activity, connection with nature), provides tourist destinations, and contributes monetarily to local economies. **DC Overall Recreation Opportunities** Recreation opportunities provide for a variety of skill levels, needs, and desires in partnership with recreation permit holders, private entities, volunteer groups, community groups, and State, Federal, and tribal governments.	
Recreation	Recreation use, including off-road vehicle use, will be prohibited or restricted and sites rehabilitated in areas in unsatisfactory condition, when recreation was a significant causative factor affecting condition. pp. 124 MA 3	**DC Overall Recreation Opportunities** Recreation activities occur within the ability of the land to support them and with minimal user conflicts. **ST Motorized Opportunities** Motorized vehicle travel shall be managed to occur only on the designated system of NFS roads and motorized trails [16] and designated motorized areas [17]. **ST Motorized Opportunities** Unless specifically authorized, motorized cross-country travel shall be managed to occur only in designated motorized areas.	Retained, expanded, and updated through desired conditions and standards
Recreation	Where concentrated dispersed recreation conflicts with wildlife or riparian objectives, consider alternative recreation strategies to meet demand. pp14, Goal	**DC Dispersed Recreation** Wildlife viewing areas are dispersed throughout the forests and provide opportunities to view waterfowl, migratory birds, elk, and other species. **DC Dispersed Recreation** Access, parking, regulations, orientation, and safety information are in place to provide safe and enjoyable dispersed recreation opportunities. **DC Dispersed Recreation** Water-based settings are available and the associated recreation opportunities (e.g., canoeing, fishing, waterfowl hunting) do not degrade aquatic resources. **DC Dispersed Recreation** Winter nonmotorized areas provide a variety of nonmotorized recreation opportunities in a quiet, natural setting (including groomed and ungroomed ski trails). Noise from motorized use is uncommon in areas away from main road corridors. **DC Dispersed Recreation** Winter motorized areas provide a variety of motorized recreation opportunities with a variety of challenges including areas open to cross-country, over-snow motorized use, some with groomed or ungroomed trails. **DC Dispersed Recreation** Roads and trails provide a variety	Retained, expanded, and updated through numerous objectives, desired conditions and guidelines

Resource	1987 Plan Content (as amended). Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
		of opportunities to view natural landscapes and wildlife. **OBJ Dispersed Recreation** Annually, rehabilitate, stabilize, revegetate, or relocate an average of five dispersed campsites to improve recreation opportunities and/or protect the environment. **OBJ Dispersed Recreation** Within the planning period, work with the AZGFD, ADOT, and other partners to provide at least 10 new wildlife viewing opportunities. **ST Dispersed Recreation** Dispersed campsites shall not be designated in areas with sensitive soils or within 50 feet of streams, wetlands, or riparian areas to prevent vegetation and bank damage, soil compaction, additional sediment, or soil and water contamination. **GL Dispersed Recreation** In dispersed areas, the priority for facilities or minor developments should be access and protection of the environment, rather than the comfort or convenience of the visitors. **GL Dispersed Recreation** Timing restrictions on recreation uses should be considered to reduce conflicts with wildlife needs or soil moisture conditions. **GL Dispersed Recreation** Dispersed campsites should not be located on or adjacent to archaeological sites or sensitive wildlife areas. Within the planning period, accessible and wildlife-proof trash facilities should be provided in all developed sites where trash is collected. Where trash facilities are provided, they shall be bear resistant. **DC Motorized Opportunities** The location and design of roads and trails does not impede wildlife and fish movement. **GD Motorized Opportunities** New roads or motorized trails should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified; seasonal restrictions may be an option. **GD Motorized Opportunities** New roads, motorized trails, or designated motorized areas should be located to avoid meadows, wetlands, seeps, springs, riparian areas, stream	

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		bottoms, sacred sites, and areas with high concentrations of significant archaeological sites. The number of stream crossings should be minimized or mitigated to reduce impacts to aquatic species. **GD Motorized Opportunities** As projects occur in riparian or wet meadow areas, unneeded roads or motorized trails should be closed or relocated, drainage restored, and native vegetation reestablished to move these areas toward their desired condition. **GD Motorized Opportunities** Roads and motorized trails removed from the transportation network should be treated in order to avoid future risk to hydrologic function and aquatic habitat. **GD Motorized Opportunities** Roads and motorized trails should be designed and located so as to not impede terrestrial and aquatic species movement and connectivity. **GD Motorized Opportunities** As projects occur, existing meadow crossings should be relocated or redesigned, as needed, to maintain or restore hydrologic function using appropriate tools such as French drains and elevated culverts.	
Recreation	**UNAUTHORIZED USE.** There is increased emphasis on law enforcement, especially for cultural resources, ORV use, fuelwood theft, and vandalism. pp12, Issues	**GD Motorized Opportunities** After management activities occur in areas with high potential for cross-country motorized vehicle use, methods (e.g., barriers, signing) should be used to control unauthorized motorized use.	Changed to emphasize engineering and education first, does not repeat relevant law, regulation, and policy
Recreation	Establish ORV use areas and closures as needed to meet demand and other resource objectives. Manage ORV use to provide ORV opportunities while protecting resources and minimizing conflicts with other users. pp15, Goal	**DC Motorized Opportunities** A maintained road and motorized trail system is in place and provides for safety and access for the use (e.g., recreation, minerals, vegetation treatment, fire protection) of the Apache-Sitgreaves NFs. **DC Motorized Opportunities** Users have opportunities for motorized access and travel on a system of designated NFS roads, motorized trails, and motorized areas. **DC Motorized Opportunities** The transportation system provides a variety of recreation opportunities including varying degrees of difficulty, from OHV trails to paved scenic byways, while limiting resource and/or user conflicts.	Retained, expanded, and updated through numerous objectives, desired conditions and guidelines

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		DC Motorized Opportunities NFS roads, motorized trails, and motorized areas are easily identified on the ground (e.g., well marked). **DC Motorized Opportunities** The road and trail system is accessible from local communities, State, county, and local public roads and trails. **DC Motorized Opportunities** Loop trails exist for motorized trail users. **DC Motorized Opportunities** Tread Lightly!® principles are commonly practiced. **DC Motorized Opportunities** The location and design of roads and trails does not impede wildlife and fish movement. **ST Motorized Opportunities** Unless specifically authorized, motorized cross-country travel shall be managed to occur only in designated motorized areas. **ST Motorized Opportunities** Motorized vehicle travel shall be managed to occur only on the designated system of NFS roads and motorized trails [16] and designated motorized areas [17]. **GD Motorized Opportunities** New motorized trails or additions to existing trails should include destinations and loops to provide for a variety of opportunities. **GD Motorized Opportunities** New roads or motorized trails should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified; seasonal restrictions may be an option. **GD Motorized Opportunities** New roads, motorized trails, or designated motorized areas should be located to avoid meadows, wetlands, seeps, springs, riparian areas, stream bottoms, sacred sites, and areas with high concentrations of significant archaeological sites. The number of stream crossings should be minimized or mitigated to reduce impacts to aquatic species. **GD Motorized Opportunities** As projects occur in riparian or wet meadow areas, unneeded roads or motorized trails should be closed or relocated, drainage restored, and native	

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		vegetation reestablished to move these areas toward their desired condition. **GD Motorized Opportunities** As projects occur, roads or motorized trails that contribute to negative impacts on cultural resources should be closed or relocated. **GD Motorized Opportunities** As projects occur, redundant roads or motorized trails should be removed to reduce degradation of natural resources. **GD Motorized Opportunities** Roads and motorized trails removed from the transportation network should be treated in order to avoid future risk to hydrologic function and aquatic habitat. **GD Motorized Opportunities** Trail markings (e.g., signs) should be designed to complement the character of the surrounding lands. **GD Motorized Opportunities** Roads and motorized trails should be designed and located so as to not impede terrestrial and aquatic species movement and connectivity. **GD Motorized Opportunities** As projects occur, existing meadow crossings should be relocated or redesigned, as needed, to maintain or restore hydrologic function using appropriate tools such as French drains and elevated culverts. **GD Motorized Opportunities** After management activities occur in areas with high potential for cross-country motorized vehicle use, methods (e.g., barriers, signing) should be used to control unauthorized motorized use.	
Recreation	**Off-Road Vehicle Management** Off-Road Vehicle activities will be managed to minimize conflicts with other uses, to prevent interference with the management of other resources, to prevent general environmental degradation, while providing a range of ORV opportunities. The three wilderness areas and the Blue Range Primitive Area are closed to ORV use. pp 34 Standards and Guidelines	**DC Motorized Opportunities** A maintained road and motorized trail system is in place and provides for safety and access for the use (e.g., recreation, minerals, vegetation treatment, fire protection) of the Apache-Sitgreaves NFs. **DC Motorized Opportunities** Users have opportunities for motorized access and travel on a system of designated NFS roads, motorized trails, and motorized areas. **DC Motorized Opportunities** The transportation system provides a variety of recreation opportunities including varying	Retained, expanded, and updated through numerous objectives, desired conditions and guidelines

Resource	1987 Plan Content (as amended). Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
		degrees of difficulty, from OHV trails to paved scenic byways, while limiting resource and/or user conflicts. **DC Motorized Opportunities** NFS roads, motorized trails, and motorized areas are easily identified on the ground (e.g., well marked). **DC Motorized Opportunities** The road and trail system is accessible from local communities, State, county, and local public roads and trails. **DC Motorized Opportunities** Loop trails exist for motorized trail users. **DC Motorized Opportunities** Tread Lightly!® principles are commonly practiced. **DC Motorized Opportunities** The location and design of roads and trails does not impede wildlife and fish movement. **ST Motorized Opportunities** Unless specifically authorized, motorized cross-country travel shall be managed to occur only in designated motorized areas. **ST Motorized Opportunities** Motorized vehicle travel shall be managed to occur only on the designated system of NFS roads and motorized trails [16] and designated motorized areas [17]. **GD Motorized Opportunities** New motorized trails or additions to existing trails should include destinations and loops to provide for a variety of opportunities. **GD Motorized Opportunities** New roads or motorized trails should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified; seasonal restrictions may be an option. **GD Motorized Opportunities** New roads, motorized trails, or designated motorized areas should be located to avoid meadows, wetlands, seeps, springs, riparian areas, stream bottoms, sacred sites, and areas with high concentrations of significant archaeological sites. The number of stream crossings should be minimized or mitigated to reduce impacts to aquatic species.	

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		GD Motorized Opportunities As projects occur in riparian or wet meadow areas, unneeded roads or motorized trails should be closed or relocated, drainage restored, and native vegetation reestablished to move these areas toward their desired condition. **GD Motorized Opportunities** As projects occur, roads or motorized trails that contribute to negative impacts on cultural resources should be closed or relocated. **GD Motorized Opportunities** As projects occur, redundant roads or motorized trails should be removed to reduce degradation of natural resources. **GD Motorized Opportunities** Roads and motorized trails removed from the transportation network should be treated in order to avoid future risk to hydrologic function and aquatic habitat. **GD Motorized Opportunities** Trail markings (e.g., signs) should be designed to complement the character of the surrounding lands. **GD Motorized Opportunities** and located so as to not impede terrestrial and aquatic species movement and connectivity. **GD Motorized Opportunities** As projects occur, existing meadow crossings should be relocated or redesigned, as needed, to maintain or restore hydrologic function using appropriate tools such as French drains and elevated culverts. **GD Motorized Opportunities** After management activities occur in areas with high potential for cross-country motorized vehicle use, methods (e.g., barriers, signing) should be used to control unauthorized motorized use.	
Recreation	Maintain a variety of Forest trails, considering people's needs. Includes foot and motorized and challenge and adventure opportunities, as well as opportunities for the handicapped. pp15, Goal	**DC Motorized Opportunities** A maintained road and motorized trail system is in place and provides for safety and access for the use (e.g., recreation, minerals, vegetation treatment, fire protection) of the Apache-Sitgreaves NFs. **DC Motorized Opportunities** Users have opportunities for motorized access and travel on a system of designated NFS roads, motorized trails, and motorized areas.	Retained, expanded, and updated through numerous objectives, desired conditions and guidelines

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		DC Motorized Opportunities The transportation system provides a variety of recreation opportunities including varying degrees of difficulty, from OHV trails to paved scenic byways, while limiting resource and/or user conflicts. **DC Motorized Opportunities** NFS roads, motorized trails, and motorized areas are easily identified on the ground (e.g., well marked). **DC Motorized Opportunities** The road and trail system is accessible from local communities, State, county, and local public roads and trails. **DC Motorized Opportunities** Loop trails exist for motorized trail users. **DC Motorized Opportunities** Tread Lightly!® principles are commonly practiced. **GD Motorized Opportunities** New motorized trails or additions to existing trails should include destinations and loops to provide for a variety of opportunities. **GD Motorized Opportunities** New roads or motorized trails should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified; seasonal restrictions may be an option. **GD Motorized Opportunities** Trail markings (e.g., signs) should be designed to complement the character of the surrounding lands. **DC Nonmotorized Opportunities** Nonmotorized opportunities are available in a variety of settings that provide differing levels of challenge and seclusion. **DC Nonmotorized Opportunities** Blocks of forest land accessible from populated areas are available for nonmotorized opportunities. These areas are free from the sights and sounds of motorized recreation. **DC Nonmotorized Opportunities** Opportunities for primitive recreation are available. **DC Nonmotorized Opportunities** A maintained and	

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		environmentally sound nonmotorized trail network is in place, providing for user safety and access to locations of interest for a variety of uses. **DC Nonmotorized Opportunities** Nonmotorized trails are defined and marked. **DC Nonmotorized Opportunities** Destination and loop trails exist for nonmotorized users. **OBJ Nonmotorized Opportunities** Annually, maintain at least 20 percent of nonmotorized trails. **GD Nonmotorized Opportunities** Trail markings (e.g., signs, blazes) should be designed to complement the character of the surrounding lands. **GD Nonmotorized Opportunities** To maintain nonmotorized user opportunities, nonmotorized trails should not be co-located on open motorized routes.	
Recreation	Maximum group size will be limited to 25 persons and/or 35 head of pack and saddle stock. The responsible District has the option to further restrict group size if it is felt wilderness experience levels or values would be adversely impacted. pp 42 Standards and Guidelines	**DC Wilderness** Visitor use does not affect wilderness characteristics. **DC Wilderness** There are unconfined opportunities for exploration, solitude, risk, and challenge. The nonmotorized trail system enhances the wilderness character. Where there is public demand, outfitters and guides provide services to visitors seeking a wilderness experience. **DC Wilderness** Bear Wallow Wilderness provides outstanding opportunities for solitude and isolation. Encounters with small groups or individuals are infrequent. **DC Wilderness** Within Mount Baldy and Escudilla Wilderness areas, trails concentrate use and provide access to popular destinations. Encounters with other users may occur. **ST Wilderness** Party size of 12 persons and/or 12 head of stock for hiking and riding groups in Mount Baldy Wilderness shall not be exceeded. A party size of 6 persons for overnight camping shall not be exceeded. **ST Wilderness** Party size of 12 persons and/or 15 head of stock for hiking and riding groups in Escudilla and Bear Wallow Wilderness and the Blue Range Primitive Area shall not be	Retained, expanded, and updated with emphasis on resource protection and with quantitative changes through numerous objectives, desired conditions and guidelines

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		exceeded. **GD Recommended Wilderness** The wilderness characteristics of each recommended wilderness should remain intact until a congressional decision on wilderness designation is made. Characteristics include naturalness, opportunities for solitude, opportunities for primitive recreation, and identified special features.	
Recreation	Provide a wilderness management program that achieves the intent of the Wilderness Act of 1964 and direction in FSM 2230. More specifically, the program must maintain enduring, high quality wilderness values while providing for quality wilderness recreation experiences. Allow wildfire to play a more natural role. Protect the current status of air quality related values (AQRV's) in the Mt. Baldy Class I Airshed and in other wildernesses. pp. 15, Goal	**DC Wilderness** Ecological conditions are affected primarily by natural ecological processes, with the appearance of little or no human intervention. **DC Wilderness** Fire functions as a natural ecological process. **DC Wilderness** There is little evidence of human developments and little or no evidence of camping activity, unauthorized trails, trash, or other human impacts on the environment. **DC Wilderness** Visitor use does not affect wilderness characteristics. **DC Wilderness** Wilderness boundaries are posted and visible to visitors. **DC Wilderness** There are unconfined opportunities for exploration, solitude, risk, and challenge. The nonmotorized trail system enhances the wilderness character. Where there is public demand, outfitters and guides provide services to visitors seeking a wilderness experience. **DC Wilderness** Bear Wallow Wilderness provides outstanding opportunities for solitude and isolation. Encounters with small groups or individuals are infrequent. **DC Wilderness** Within Mount Baldy and Escudilla Wilderness areas, trails concentrate use and provide access to popular destinations. Encounters with other users may occur. **DC Wilderness** Wilderness areas maintain natural landscapes where generally only ecological changes occur (very high scenic integrity) and provide primitive and/or semi-primitive nonmotorized recreation opportunities. **DC Wilderness** Wilderness contributes to preserving natural	Retained, expanded, and updated through numerous objectives, desired conditions and guidelines

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		behaviors and processes that sustain wildlife populations. **ST Wilderness** Party size of 12 persons and/or 12 head of stock for hiking and riding groups in Mount Baldy Wilderness shall not be exceeded. A party size of 6 persons for overnight camping shall not be exceeded. **ST Wilderness** Party size of 12 persons and/or 15 head of stock for hiking and riding groups in Escudilla and Bear Wallow Wilderness and the Blue Range Primitive Area shall not be exceeded. **ST Wilderness** Objective(s) and strategies for all wildfires shall be identified. **ST Wilderness** Fire management activities shall be conducted in a manner compatible with the overall wilderness management objectives (minimum impact suppression tactics). **ST Wilderness** Human-caused disturbed areas that do not complement wilderness characteristics will be rehabilitated to a natural appearance, using species or other materials native to the area. **GD Wilderness** New trail construction may be considered if the objective is enhancement of the wilderness character (e.g., increase solitude opportunities, restore naturalness). **GD Wilderness** Trail maintenance should be coordinated around anticipated visitor high-use periods to minimize encounters. **GD Wilderness** Trails that have minimal use, detract from the wilderness character, or cannot practically be maintained or reconstructed should be obliterated. **GD Wilderness** Prescribed fire should be considered to reduce the risks and consequences of uncharacteristic wildfire within wilderness or escaping from wilderness by reducing unnatural fuel accumulations, if necessary to meet wilderness fire management objectives. Naturally occurring wildfires should be allowed to perform, as much as possible, their natural ecological role within wilderness. **GD Wilderness** Fire camps, helispots, and other temporary facilities should be located outside the wilderness boundary to	

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		protect wilderness character. **GD Wilderness** Firelines and spike camps (i.e., a remote camp usually near a fireline) should not be constructed adjacent to trails or camp areas to protect wilderness values. **GD Wilderness** Grazing of pack stock should not occur except as authorized by the district ranger when adequate forage is available.	
Recreation	Management emphasis: Emphasize wilderness recreation while maintaining wilderness resource values. pp. 138, MA7; pp. 141, MA 8; pp. 162 MA 11; pp. 165 MA 13	**DC Wilderness** There are unconfined opportunities for exploration, solitude, risk, and challenge. The nonmotorized trail system enhances the wilderness character. Where there is public demand, outfitters and guides provide services to visitors seeking a wilderness experience. **DC Wilderness** Bear Wallow Wilderness provides outstanding opportunities for solitude and isolation. Encounters with small groups or individuals are infrequent. **DC Wilderness** Within Mount Baldy and Escudilla Wilderness areas, trails concentrate use and provide access to popular destinations. Encounters with other users may occur. **DC Wilderness** Wilderness areas maintain natural landscapes where generally only ecological changes occur (very high scenic integrity) and provide primitive and/or semi-primitive nonmotorized recreation opportunities.	Retained, expanded, and updated through numerous objectives, desired conditions and guidelines
Recreation	Maximum camping group size is limited to 5 persons or the number of members of an immediate family. Hiking and riding groups are limited to 25 participants. pp. 139, MA 7	**ST Wilderness** Party size of 12 persons and/or 12 head of stock for hiking and riding groups in Mount Baldy Wilderness shall not be exceeded. A party size of 6 persons for overnight camping shall not be exceeded.	Retained, but updated with quantitative changes through new standard

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Recreation	Recommend Chevelon Creek for addition to the Wild and Scenic Rivers System as a Scenic River. The recommendation will include 29.9 miles of Chevelon Canyon from the confluence of Woods Canyon and Willow Canyon downstream to the forest boundary except for Chevelon Canyon Lake. Pp. 175, MA 16	Direction not carried forward into revised plan.	Process for identification of eligible and suitable Wild and Scenic River segments has been completed (see Eligibility Report for the National Wild and Scenic River System, Apache-Sitgreaves National Forests May 2009)
Recreation	Management Emphasis: Emphasize semi-primitive recreation opportunities while preserving the highly scenic qualities of the corridor. Manage for possible inclusion into the Wild and Scenic River System under a scenic classification. pp. 168, MA 14	**DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable wild river segments display unaltered landscapes where generally only ecological changes occur (very high scenic integrity) and provide primitive and/or semi-primitive nonmotorized recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable scenic river segments display landscapes which vary from slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity) and provide semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable recreational river segments display landscapes which vary from moderately altered where human activities are evident (low scenic integrity) to slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) and provide primitive, semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **ST Eligible and Suitable Wild and Scenic Rivers** Each eligible river's free-flowing condition, outstandingly remarkable values, and classification shall be sustained until further study is conducted. **ST Eligible and Suitable Wild and Scenic Rivers** Each	Retained, expanded, and updated through numerous desired conditions and standards

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		suitable river's free-flowing condition, outstandingly remarkable values, and classification shall be maintained until congressional action is completed.	
Recreation	Recommend the mainstem of the Black River (approximately 16 miles) from the Buffalo Crossing area to the reservation boundary (see Management Areas Index Map) be designated as part of the National Wild and Scenic River System as a scenic river. pp. 169, MA 14	Direction not carried forward into revised plan.	Process for identification of eligible and suitable Wild and Scenic River segments has been completed (see Eligibility Report for the National Wild and Scenic River System, Apache-Sitgreaves National Forests May 2009)
Recreation	Maintain at least the current semi-primitive recreation opportunities. pp. 169, MA 14 pp. 172, MA 15	**DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable wild river segments display unaltered landscapes where generally only ecological changes occur (very high scenic integrity) and provide primitive and/or semi-primitive nonmotorized recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable scenic river segments display landscapes which vary from slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity) and provide semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable recreational river segments display landscapes which vary from moderately altered where human activities are evident (low scenic integrity) to slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) and provide primitive, semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities.	Retained, expanded, and updated through numerous desired conditions
Recreation	Within the boundaries of the river corridor, allow management actions that would cause a shift from acres classification as Roaded Natural to a	**DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable wild river segments display unaltered landscapes where generally only ecological changes occur (very high	Retained, expanded, and updated through numerous desired conditions and

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	classification of semi-primitive, motorized, or non-motorized. pp. 169, MA 14	scenic integrity) and provide primitive and/or semi-primitive nonmotorized recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable scenic river segments display landscapes which vary from slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity) and provide semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable recreational river segments display landscapes which vary from moderately altered where human activities are evident (low scenic integrity) to slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) and provide primitive, semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **ST Eligible and Suitable Wild and Scenic Rivers** Each eligible river's free-flowing condition, outstandingly remarkable values, and classification shall be sustained until further study is conducted. **ST Eligible and Suitable Wild and Scenic Rivers** Each suitable river's free-flowing condition, outstandingly remarkable values, and classification shall be maintained until congressional action is completed.	standards
Recreation	Management Emphasis: Emphasize a wide spectrum of recreation opportunities similar to that which currently exists. Manage to maintain or enhance the scenic quality of the corridor. pp. 171, MA 15	**DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable wild river segments display unaltered landscapes where generally only ecological changes occur (very high scenic integrity) and provide primitive and/or semi-primitive nonmotorized recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable scenic river segments display landscapes which vary from slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) to natural appearing where human activities do not stand out	Retained, expanded, and updated through numerous desired conditions

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		(high scenic integrity) and provide semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable recreational river segments display landscapes which vary from moderately altered where human activities are evident (low scenic integrity) to slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) and provide primitive, semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities.	
Recreation	Recommend 14 miles of the West Fork of the Black River for inclusion in the Wild and Scenic Rivers System. Recommend 7 miles for wild designation, 3 miles for scenic designation, and 4 miles for recreation designation. pp. 172, MA 15	Direction not carried forward into revised plan.	Process for identification of eligible and suitable Wild and Scenic River segments has been completed (see Eligibility Report for the National Wild and Scenic River System, Apache-Sitgreaves National Forests May 2009)
Recreation	Management Emphasis: Emphasize semi-primitive non-motorized recreation opportunities (except at Chevelon Crossing). Strive to maintain the current opportunities for solitude. Protect the high scenic values, and maintain the current wildlife habitat values. 174, MA 16	**DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable wild river segments display unaltered landscapes where generally only ecological changes occur (very high scenic integrity) and provide primitive and/or semi-primitive nonmotorized recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable scenic river segments display landscapes which vary from slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity) and provide semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **DC Eligible and Suitable Wild and Scenic Rivers** Eligible and suitable recreational river segments display landscapes which vary from moderately altered where human activities are	Retained, expanded and updated through numerous desired conditions and standards

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		evident (low scenic integrity) to slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) and provide primitive, semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **ST Eligible and Suitable Wild and Scenic Rivers** Each eligible river's free-flowing condition, outstandingly remarkable values, and classification shall be sustained until further study is conducted. **ST Eligible and Suitable Wild and Scenic Rivers** Each suitable river's free-flowing condition, outstandingly remarkable values, and classification shall be maintained until congressional action is completed.	
Recreation	Manage RNA's for scientific research or baseline studies. Protect potential RNA's pending implementation. pp. 17, Goal	**DC Research Natural Area** The Phelps Cabin RNA provides opportunities for research, study, observation, monitoring, and educational activities that maintain the natural conditions for which the area was established. **ST Research Natural Area** The Phelps Cabin RNA will be managed for nonmotorized access within the area; exceptions may be made for permitted research use. **GD Research Natural Area** Research special use authorizations should limit impacts to sensitive resources, unique features, and species within the RNA. **DC Recommended Research Natural Area** The recommended RNAs provide opportunities for research, study, observation, monitoring, and educational activities that maintain the natural conditions for which the area was recommended. **DC Recommended Research Natural Area** The Three Forks Closure Area (30 acres) of the recommended Three Forks RNA is free from human trampling and other disturbances to protect very sensitive and unique species, such as the Three Forks springsnail, California floater, New Mexico meadow jumping mouse, Chiricahua leopard frog, and loach minnow. **DC Recommended Research Natural Area** The recommended Three Forks, Campbell Blue, Corduroy, and	Retained, expanded, and updated through numerous desired conditions and guidelines

Resource	1987 Plan Content (as amended). Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
		Sandrock RNAs, outside of any eligible or suitable wild and scenic river corridor, exhibit unaltered appearing landscapes where human activities do not stand out (high scenic integrity). **DC Recommended Research Natural Area** The recommended Thomas Creek RNA exhibits slightly altered landscapes where human activities may be seen but do not attract attention (moderate scenic integrity). **DC Recommended Research Natural Area** The recommended Phelps Cabin RNA addition (currently the Phelps Cabin Botanical Area), outside of any eligible or suitable wild and scenic river corridor, exhibit unaltered appearing landscapes where human activities do not stand out (high scenic integrity). **DC Recommended Research Natural Area** Natural conditions prevail in the recommended Phelps Cabin RNA addition while providing an opportunity for interpretation, education, and research. **DC Recommended Research Natural Area** Unique plant species, including willows, paintbrushes, and gentians, thrive in the recommended Phelps Cabin RNA addition. **GD Recommended Research Natural Area** To minimize impacts to unique and sensitive plant and animal species, recreational activities should not be encouraged. **GD Recommended Research Natural Area** If necessary recommended RNAs should be fenced to manage unique features. **GD Recommended Research Natural Area** Research special use authorizations should limit impacts to sensitive resources, unique features, and species within recommended RNAs. **GD Recommended Research Natural Area** Recommended RNAs should be managed for nonmotorized access within the area to minimize ground disturbances and protect the resources which make these areas unique.	

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Recreation	Campsite reservations for Outfitter/Guides will not be made.	**GD Special Uses** Commercial outfitters and guides should not be authorized to use developed campgrounds so those sites remain available for noncommercial forest visitors.	Retained, expanded, and updated through guideline
Recreation	Region 3 operation and maintenance standards will be used for administration of developed sites, winter sports sites, and dispersed areas. Update operation and administration plans annually to reflect these standards. STs &GDs - Recreation Management, Pg. 31. Issue and administer dispersed recreation special use permits and agreement to minimize user conflicts and ensure public safety and resource protection. STs &GDs - Recreation Management, Pg. 31. Manage to ensure the maintenance of the existing diversity of recreation opportunities, settings, and activities. STs &GDs - Recreation Management, Pg. 31.	**GD Special Uses** Commercial outfitters and guides should not be authorized to use developed campgrounds so those sites remain available for noncommercial forest visitors.	The public commented due to competition for trailheads on a certain district with outfitter & guides. A guideline was added to reduce the competition with public recreationists. The interdisciplinary team discussed the proposed change and concluded parking at trailheads could be allowed by outfitters and guides to reduce parking along roads that could interfere with safe travel. Restrictions at trailheads could be imposed during the outfitter-guide permitting process or through site specific analysis.

Vegetation

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Vegetation	**Chapter 2 Issues -Timber And Fuelwood - Pg. 7, & Chapter 3 Summary of the Analysis of the Management Situation - pgs. 13 & 19:** **Timber Volume Offered (MMBF) - Decade 1 : 119** [2/] [2/] The 119 MMBF Allowable Sale Quantity (ASQ) is made up of 99 MMBF of sawtimber and 20 MMBF of products (roundwood). On May 15, 1990, a Settlement Agreement was signed in which the Parties agreed to an Interim Offering Schedule with a reduced rate of implementation, and to additional analysis to determine what the Offering Schedule should be for the remainder of the decade. The Interim Offering Schedule is documented in Table 3. If the Forest Supervisor determines that changes are needed to Table 3 prior to September 30, 1992, a meeting of the Parties to the Settlement Agreement will be convened to address the issues needing resolution. In the event that the Offering Schedule has not been revised to incorporate the recalculated ASQ prior to September 30, 1992, the Parties to the Settlement Agreement will reconvene to agree upon a revised interim Offering Schedule, with the harvest level not to exceed 83 MMBF of sawtimber per year. Long-Term Sustained Yield Capacity =	**Deleted. Replaced with:** **OBJ for Forest Products -** Annually, prepare and offer up to an average of 122,000 CCF from suitable timberlands resulting from sustainable harvest to provide wood products to businesses and individuals.	Obsolete ASQ, per NFMA it must be re-calculated upon re-assessment of suitable timberlands every decade. New assessment was done for revised plan with new ASQ. The existing plan's record documents show that plan amendment #4 (signed Feb. 1991 = prior to Sept. 30, 1992) was used to execute the May 1990 settlement agreement which reduced the forest ASQ to 99 MMBF. Apparently the "83 MMBF" level was never made official. Wood volume is no longer measured in units of board feet (MBF, thousand board feet, or MMBF, million board feet). Units of CCF (hundred cubic feet) are now used. For comparison: 99 MMBF = 99,000 MBF = 198,000 CCF. Long-term Sustained Yield Capacity (LTSYC) is not a required plan component. The ASNFs' LTSYC was re-evaluated and used in the calculation of the revised plan's ASQ as disclosed in the plan's EIS and supporting documentation.

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	36,813 MCF		
Vegetation	**Riparian Goal**: Improve vegetation condition in riparian areas. This is an emphasis area for the plan. Improvements will be accomplished by reducing or, in some cases, eliminating adverse impacts from grazing, vehicles, and over-use by man. **Page 16.**	Identified as a "**Need for Change**" to describe the desired composition, structure, and cover of these vegetation communities that will result in resilient, functioning ecosystems… **DC**: Healthy ecosystems are diverse and self-sustaining, displaying a variety of conditions (e.g., composition, structure, function, processes) between and within them. **Management Approach for Riparian Area**: Treatments include those that restore and then maintain natural fire regimes, improve riparian condition, restore meadows or openings, repair gullies, and reduce erosion. **GD for Water Resources**: Streams, streambanks, shorelines, lakes, wetlands, and other bodies of water should be protected from detrimental changes in water temperature and sediment to protect aquatic species and riparian habitat. **4th Level (Subbasin) to 5th Level (Watershed) HUC Watershed Scale DC for Aquatic Habitat and Species**: Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **6th Level (Sub-watershed) HUC Watershed Scale DC for Aquatic Habitat and Species**: Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian-dependent plant and animal species. **OBJ for Aquatic Habitat and Species**: Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species. **OBJ for Aquatic Habitat and Species**: During the planning period, complete at least five projects (e.g., remove barriers, restore dewatered stream segments, or	The intent of this riparian goal has been carried forward into revised Land Management Plan (LMP).

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		connect fragmented habitat) to provide for aquatic and riparian associated species and migratory species. **GD for Aquatic Habitat and Species**: To prevent degradation of native species habitat and the incidental or accidental introduction of diseases or nonnative species, aquatic species should not be transferred through management activities from one 6th level HUC watershed to another.	
Vegetation	**Chapter 4. Management Direction - GOALS - Timber, Pg. 16 :** On forested lands identified as suitable for commercial timber production, manage the timber resource to provide a sustained yield of forest products through integrated stand resource management. Timber management activities will be designed to integrate considerations for economic, water quality, soils, wildlife habitat, recreation opportunities, visual, and other values to meet forest plan objectives. Develop and implement a sustained yield program for firewood and other miscellaneous forest products including posts, poles, Christmas trees, and wildlings.	**Replaced with:** **DC for Overall Ecosystem Health -** Healthy ecosystems provide a wide range of ecosystem services. **DC for All PNVTs -** Vegetation provides products-such as wood fiber or forage-to help meet local and regional needs in a manner that is consistent with other desired conditions on a sustainable basis within the capacity of the land. **DC for All PNVTs** - Ecosystem services are available as forests, woodlands, grasslands, and riparian communities successfully adapt to a changing and variable climate. **OBJ for All Forested PNVTs –** Annually, treat 5,000 to 35,000 acres to reduce tree densities, restore natural fire regimes, promote species habitat and ecosystem health, reduce fire hazard, maintain desired conditions, initiate recovery from uncharacteristic disturbance, and provide forest products, leaving a desired mix of species with the range of desired densities that are resilient to changing climatic conditions. **STs for All Forested PNVTs -** •Regulated timber harvest activities shall occur only on those lands classified as suitable for timber production. •Harvesting systems shall be selected based on their ability to meet desired conditions and not strictly on their ability to provide the greatest dollar return. **OBJ for All Woodland PNVTs -** Annually, treat or maintain 5,000 to 15,000 acres to promote a highly	**Background for Overall Ecosystem Health** - The intent of this plan is to guide management efforts in the restoration and/or maintenance of ecosystems by maintaining or moving towards desired conditions. Treatment and product objectives are not cut volume-driven. Sustainable supplies of resources such as timber, recreation, and forage are byproducts of healthy, functioning ecosystems. PNVT acres restored toward the DCs should support more sustainable forests and woodlands resilient against losses to uncharacteristic disturbances like stand-replacement wildfire and severe insect outbreaks. Sustained yield of forest products is directed by the Natl. Forest Mgmt. Act of October 22, 1976, and the Multiple Use-Sustained Yield Act of June 12, 1960. The ASQ of 122,000 CCF was derived from cuts modeled to move each PNVT toward DCs while keeping the STs and GDs in mind, as

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		diverse structure. **OBJ for Grasslands -** Decrease or maintain the woody canopy cover at less than 10 percent by treating up to 25,000 acres annually. **DC for Landscape Scale Disturbance Events -** The Apache-Sitgreaves NFs landscapes retain the resiliency to survive landscape scale disturbance events**.** **DC for Forest Products -** The Apache-Sitgreaves NFs provide a sustainable supply of forest products (e.g., small roundwood, sawlogs, biomass, firewood, cones, Christmas trees, wildlings) to businesses and individuals within the capability of the land. **OBJ for Forest Products -** Annually, prepare and offer up to an average of 122,000 CCF from suitable timberlands resulting from sustainable harvest to provide wood products to businesses and individuals. **OBJ for Forest Products -** Annually, provide up to 94,000 CCF (119,380 cords) of firewood for personal and commercial use. **OBJ for Forest Products -** Annually, provide an average of 5,000 permits for Christmas trees.	well as incorporating the LTSYC of the suitable timberlands, plus local demands, realistic budgets/ ASNFs' workforce capacity, and industrial capabilities/ limitations. For example: The **forest product OBJs** in the revised plan include cut volumes reflecting the elimination of steep slopes and MSO PACs from the suitable timberland base. They also reflect reduced cuts modeled on suitable timberlands intended to simulate providing stand conditions for MSO replacement nesting/roosting habitat. These considerations during development of the cutting volume OBJs are intended to benefit soils, watershed, fisheries, wildlife, and timber program economic feasibility.

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Vegetation	**Forest-wide STs & GDs, MA #1, MA #9, pgs. 68, 111, 153:** Slash created by timber harvest activities will be made available for fuelwood when feasible.	**Deleted. Replaced with:** **OBJ for Forest Products -** Annually, provide up to 94,000 CCF (119,380 cords) of firewood for personal and commercial use. **GD for Soil** - Coarse woody debris retention and/or creation should be used as needed to help retain long term soil productivity. **GD for Landscape Scale Disturbance Events** - An adequate number and size of snags and logs, appropriate for the affected PNVT, should be retained individually and in clumps to provide benefits for wildlife and coarse woody debris for soil and other resource benefits. **Chapter 5 Monitoring Strategy question:** Are outputs of goods and services being produced at a rate consistent with projections?	This has not been an issue, as an abundance of fuelwood has continued to be available for all demands. Some local concerns were shared during the revised plan's development regarding reducing fuel-loadings to minimize smoke from slash pile &/or broadcast prescribed burns, but this did not surface as a specific comment to the Draft Plan or DEIS. Volumes stated in the revised plan's wood products OBJs reflect an average reduction from model cutting projections of 5% total harvest volume to be left on-site for soils DCs. In some cases additional slash needs to be left on-site to meet DCs for stabilizing ground cover after disturbances like severe wildfire. Less activity-created slash is being left on site now than when the existing plan was written, as more diverse industries can now utilize woody debris created from restoration operations. Slash left unclaimed by a contractor usually does become available for public fuelwood gathering after contract termination.

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Vegetation	**MA #1 – Wildlife, pg. 97:** Maintain structural diversity of vegetation within each diversity unit (10K) that are dominated by Forest or woodland ecosystems. a) Manage for minimum of 20% of the forested area within a diversity unit to provide vertical diversity except in areas where uneven-aged management is used. b) Manage for a minimum of 30% of the forested area within a diversity unit to provide horizontal diversity except in areas where uneven-aged management is used.	**Deleted. Replaced with:** numerous DCs, STs, GDs and monitoring strategy. See crosswalk sections on *old growth* in particular for detailed components that provide for *vertical* diversity and some *horizontal* diversity. Additional revised plan components for *horizontal* diversity include: **DC for Forests: PP -** The forest arrangement consists of individual trees, small clumps, and groups of trees with variably-sized interspaces of grasses, forbs, and shrubs. Vegetation associations are similar to reference conditions. The size, shape, and number of trees per group and the number of groups per area vary across the landscape. Tree density may be greater in some locations, such as north-facing slopes and canyon bottoms. **DC for Forests: PP** - Ponderosa pine forest is characterized by variation in the size and number of tree groups depending on elevation, soil type, aspect, and site productivity. The more biologically productive sites contain more trees per group and more groups per area, resulting in less space between groups. Interspaces typically range from 10 percent in more biologically productive sites to 70 percent in the less productive sites. Tree density within forested areas ranges from 20 to 80 square feet basal area per acre. **DC for Forests: PP -** Interspaces surrounding tree groups are variably shaped and composed of a grass, forb, and shrub mix. Some may contain individual trees or snags. **DC for Forests: PP** - Forest structure in the wildland-urban interface (WUI) may have smaller, more widely spaced groups of trees than in the non-WUI areas. **GD for Forests: PP -** Where consistent with project or activity objectives, canopy cover should be retained on the south and southwest sides of small, existing forest openings that are naturally cooler and moister. These	MA #1 in the existing plan covers all forested lands outside of wilderness and other designations. For similar revised plan uneven-aged/ even-aged components for woodlands, see the *old growth* items addressed elsewhere in this crosswalk. 10K (10,000 acre) diversity units are obsolete geographical delineations originally intended for use at the project level, but no longer useful because the "Landscape Scale" components in revised plan represent this size of analysis/management area. Vertical and horizontal structural diversity of forested and/or woodland ecosystems should be obtained by treating toward the revised plan's components with a greater emphasis on uneven-aged management. Horizontal diversity should result from the revised plan's restoration emphasis to permit characteristic disturbances to resume their natural role in the ecosystem, with management actions striving to mimic those natural processes. Also see revised plan Glossary definitions of *interspaces* and *openings*.

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		small (generally one-tenth to one-quarter acre) shaded openings provide habitat conditions needed by small mammals, plants, and insects (e.g., Merriam's shrew, Mogollon clover, four-spotted skipperling butterfly). Where these openings naturally occur across a project area, these conditions should be maintained on an average of 2 or more such openings per 100 acres. **DC for Forests: DMC -** The forest arrangement consists of small clumps and groups of trees with variably-sized interspaces of grass, forb, and shrub vegetation associations similar to reference conditions. Size, shape, number of trees per group, and number of groups per area are variable across the landscape. Where they naturally occur, groups of Gambel oak are healthy and maintained or increased. Tree density may be greater in some locations, such as north-facing slopes and canyon bottoms. **DC for Forests: DMC –** The dry mixed conifer forest is characterized by a variety of size and number of tree groups depending on elevation, soil type, aspect, and site productivity. The more biologically productive sites contain more trees per group and more groups per area, resulting in less space between groups. Interspaces typically range from 10 percent in more biologically productive sites to 50 percent in less productive sites. Tree density within forested areas ranges from 30 to 100 square feet basal area per acre. **DC for Forests: DMC -** Forest structure in the wildland-urban interface (WUI) may have smaller, more widely spaced groups of trees than in the non-WUI areas. **DC for Forests: DMC** -Interspaces surrounding tree groups are composed of a grass, forb, and shrub mix. Some may contain individual trees or snags. **GD for Forests: DMC -** Where consistent with project or activity objectives, canopy cover should be retained on the south and southwest sides of small, existing forest openings that are naturally cooler and moister. These	Also see Desired Conditions for Use in Forest Planning in the Southwestern Region: Development and Science Basis (USDA, 2013).

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		small (generally one-tenth to one-quarter acre) shaded openings provide habitat conditions needed by small mammals, plants, and insects (e.g., Merriam's shrew, Mogollon clover, four-spotted skipperling butterfly). Where these openings naturally occur across a project area, these conditions should be maintained on an average of 2 or more such openings per 100 acres. **DC for Forests: WMC -** The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are frequently hundreds of acres and rarely thousands of acres. Groups of tens of acres or less are relatively common. There is a mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age. Grass, forb, and shrub openings created by disturbances may comprise 10 to 100 percent of the area depending on the type of disturbance. **DC for Forests: WMC -** Small openings are present as a result of disturbances (e.g., wind, disease). **DC for Forests: SF -** The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are mostly hundreds of acres and rarely thousands of acres. There may be frequent small disturbances resulting in groups of tens of acres or less. A mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age, is present. Grass, forb, and shrub openings created by disturbances may comprise 10 to 100 percent of the area depending on time since disturbances. Aspen is occasionally present in large patches. **DC for Forests: SF** - Small openings are present as a result of localized disturbances (e.g., wind, disease).	
Vegetation	**Forest-wide and MA #1 - Old Growth Standards, pgs. 97-99 (for PJ woodland, PP, Aspen, MC and SF**	**Modified with:** **DCs for All PNVTs Landscape Scale:** •Diverse vegetation structure, species composition, densities, and	Percentage allocations overly prescriptive and outdated as per revised forest plan. This is now

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	forest types) : Until the forest plan is revised allocate no less than 20% of each forested ecosystem management area *(EMA)* to old growth as depicted in the following table. 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 areas.	seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth. •Old growth is dynamic in nature, well distributed, and spatially shifts across forest and woodland landscapes over time. **GDs for All Forested PNVTs:** •Where current forests are lacking proportional representation of late seral states and species composition on a landscape scale, old growth characteristics should be retained or encouraged to the greatest extent possible within the scope of meeting other desired conditions (e.g., reduce impacts from insects and disease, reduce the threat of uncharacteristic wildfire). **ALSO SEE revised plan content presented in this crosswalk table for existing plan - Old Growth Guidelines.**	captured by DCs, GDs, and Monitoring Strategy questions. EMAs are no longer a relevant designation under the revised plan. Under the new plan the forest is managed through a more holistic approach. Project specialists determine best methods to analyze and manage at multiple scales, keeping forest-wide DCs in mind. Also see Desired Conditions for Use in Forest Planning in the Southwestern Region: Development and Science Basis (USDA, 2013).
Vegetation	**MA1 Wildlife & Fish Habitat Improvement Guideline**: Old Growth 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. **Page 98**.	The ecological **DCs** are described at multiple scales and may only be achievable over a long timeframe (several hundred years). Descriptions at various scales are developed to provide detail and guidance for the design of future projects and activities that help achieve the desired conditions over time. Descriptions under the landscape scale provide the “big picture” desired conditions for terrestrial resources across the larger land area. Descriptions at the mid-scale and fine scale provide further details necessary for guiding future site specific projects and activities. A combination of fine scale units add up to the mid-scale and a combination of mid-scale units add up to the landscape scale. Conversely, desired conditions for aquatic resources are described using watershed scales to help provide their relative importance or niche. Conditions for larger land	Prescriptive: Project specialists determine scales of analyses keeping Forest-wide DCs in mind. The DCs in the revised forest plan are designed to account for scale (fine, mid, and landscape).

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		areas are described under the 4th level (subbasin) to 5th level (watershed) watershed scale. More detailed descriptions for site specific conditions are described at the 6th level (sub-watershed) HUC watershed scale. Not all resources require a description at each scale.	
Vegetation	**Forest-wide and MA #1 - Old Growth Guidelines (for PJ woodland, PP, Aspen, MC and SF forest types) :** 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% of the naturally forested area by forest type in any landscape. 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 sustaining old growth function at the appropriate scales, due to natural and human-caused events.	**Modified/Replaced with:** **GD for All PNVTs:** Projects should include quantitative and/or qualitative objectives for implementation monitoring and effectiveness monitoring to assist in moving toward or maintaining desired conditions. **DC for Riparian Areas Landscape Scale:** Natural ecological disturbances (e.g., flooding, scouring) promote a diverse plant structure consisting of herbaceous, shrub, and tree species of all ages and size classes necessary for the recruitment of riparian-dependent species. **DC for Riparian Areas Fine Scale:** Vegetation is structurally diverse, often dense, providing for high bird species diversity and abundance, especially neotropical migratory birds. It includes large trees and snags in the cottonwood-willow and mixed broadleaf deciduous riparian forests to support species such as beaver, yellow-billed cuckoo, bald eagles, Arizona gray squirrel, and various bat species. **OBJ for Forests: All Forested PNVTs:** Annually, treat 5,000 to 35,000 acres to reduce tree densities, restore natural fire regimes, promote species habitat and ecosystem health, reduce fire hazard, maintain desired conditions, initiate recovery from uncharacteristic disturbance, and provide forest products, leaving a desired mix of species with the range of desired densities that are resilient to changing climatic conditions. **DCs for Forests: PP Landscape Scale:** •The ponderosa pine forest is a mosaic of structural states ranging from young to old trees. Forest structure is	Redundant with much of the revised plan's goshawk and MSO direction. Percentage allocations overly prescriptive and outdated as per revised forest plan. Also see Desired Conditions for Use in Forest Planning in the Southwestern Region: Development and Science Basis (USDA, 2013). DCs and GDs throughout the revised plan, and the plan's monitoring strategy, were needed to address distinct differences in old growth characteristics, structure, spatial arrangement, and function in a holistically integrated plan, at multiple scales, by each PNVT. The concept of "old growth" is further recognized in the revised plan as a late successional stage of forest or woodland development, which is not static at any scale. Specialists determine best methods to quantify appropriate percentage of old growth to manage at the project level. For the ASNFs revised plan, Mexican

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		variable but uneven-aged and open in appearance. Sporadic areas of even-aged structure may be present on 10 percent or less of the landscape to provide structural diversity. •Old growth occurs throughout the landscape, in small, discontinuous areas consisting of clumps of old trees, or occasionally individual old trees. Other old growth components are also present including dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). **DCs for Forests: PP Mid-Scale:** •The tree group mosaic comprises an uneven-aged forest with all age classes, size classes, and structural stages present. Occasionally, patches of even-aged forest structure are present (less than 50 acres). Disturbances sustain the overall age and structural distribution. •Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged and dominated by large trees with relatively denser canopies than the surrounding forest. **DCs for Forests: PP Fine Scale:** •Trees typically occur in irregularly-shaped groups and are variably spaced with some tight clumps. Tree crowns in the mid- to old-aged groups are interlocking or nearly interlocking providing for species such as Abert's squirrel. •Trees within groups are of similar or variable ages and may contain species other than ponderosa pine. Tree groups are typically less than 1 acre and average ½ acre. Mid- to old-aged tree groups consist of approximately 2 to 40 trees with interlocking canopies. **DCs for Forests: DMC Landscape Scale:** •The dry mixed conifer forest is a mosaic of conditions composed of structural states ranging from young to old trees. Forest structure and density are similar to ponderosa pine forest. Forest appearance is variable but uneven-	spotted owl and northern goshawk are management indicator species (MIS) of forest density and structure. The forest and woodland treatment objectives listed in the revised plan would contribute to species viability and prevent loss of old growth acres due to natural and human-caused events.

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		aged and open. Sporadic areas of even-aged structure may be present on 10 percent or less of the landscape to provide structural diversity. •Old growth occurs throughout the landscape, in small, discontinuous areas consisting of clumps of old trees, or occasionally individual old trees. Other old growth components are also present including dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). **DCs for Forests: DMC Mid-Scale:** •The dry mixed conifer forest is characterized by a variety of size and number of tree groups depending on elevation, soil type, aspect, and site productivity. The more biologically productive sites contain more trees per group and more groups per area, resulting in less space between groups. Interspaces typically range from 10 percent in more biologically productive sites to 50 percent in less productive sites. Tree density within forested areas ranges from 30 to 100 square feet basal area per acre. •The mosaic of tree groups is composed of uneven-aged forest. All age classes and structural stages are present. Occasionally, there are small patches (less than 50 acres) of even-aged forest present. Disturbances sustain the overall age and structural distribution. •Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest. **DCs for Forests: DMC Fine Scale**: •Trees typically occur in irregularly-shaped groups and are variably spaced with some tight clumps. Tree crowns in the mid- to old-aged groups are interlocking or nearly interlocking providing for species such as red squirrel.	

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		•Interspaces surrounding tree groups are composed of a grass, forb, and shrub mix. Some may contain individual trees or snags. •Trees within groups are of similar or variable ages and one or more species. Tree group sizes typically are less than 5 acres, but often less than 1 acre, and at the mature and old stages consist of approximately 2 to 50 trees**. DCs for Forests: WMC Landscape Scale:** •The wet mixed conifer forest is a mosaic of structural stages and seral states ranging from young to old trees. The landscape arrangement is an assemblage of variably-sized and aged groups and patches of trees and other vegetation associations similar to reference conditions. •Old growth occurs over large, continuous areas. Old growth components include old trees, dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). **DCs for Forests: WMC Mid-Scale:** •The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are frequently hundreds of acres and rarely thousands of acres. Groups of tens of acres or less are relatively common. There is a mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age. •Uneven-aged groups and patches, comprising about 20 percent of this PNVT, provide for species such as the black bear and red-faced warbler that need multistoried canopies with dense low- to mid-canopy layers. •Tree density ranges from 30 to 180 square feet basal area per acre depending upon time since disturbance and seral states of groups and patches. •Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged but are dominated	

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		by large trees with relatively denser canopies than the surrounding forest. **DCs for Forests: WMC Fine Scale:** •In mid-aged and older forests, trees are typically variably spaced with crowns interlocking (grouped and clumped trees) or nearly interlocking providing for species such as red squirrel. Trees within groups can be of similar or variable species and ages. **DCs for Forests: SF Landscape Scale** •The spruce-fir forest is a mosaic of structural stages and seral states ranging from young to old trees 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 similar to reference conditions. •Tree canopies in this forest are closed. An understory, consisting of native grass, forbs, and/or shrubs, is present in early seral states and is replaced by trees in later seral states. •Old growth occurs over large, continuous areas. Old growth components include old trees, dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality**). DCs for Forests: SF Mid-Scale:** •The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are mostly hundreds of acres and rarely thousands of acres. There may be frequent small disturbances resulting in groups of tens of acres or less. A mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age, is present. •Uneven-aged groups and patches, comprising about 20 percent of this PNVT, provide for species such as the MacGillivray's warbler and Swainson's thrush that need multistoried canopies with dense low- to mid-canopy layers. • Tree density ranges from 30 to 250 square feet basal area per acre, depending upon disturbance and seral states of the groups and patches. •Northern goshawk post-fledging family areas (PFAs)	

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		may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. •Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest. **DCs for Forests: SF Fine Scale** •Mid-aged to old trees grow tightly together with interlocking crowns. Trees are of the same size and/or age class in early group/patch development. In late development, they may be multilayered. **DCs for Forests: Aspen Landscape Scale:** Areas of aspen occur and shift across the forested landscape. They are successfully regenerating and being recruited into older and larger size classes. Size classes have a natural distribution, with the greatest number of stems in the smaller size classes. **OBJ for Forests: Aspen**: Aspen dominated and codominated acres within forested PNVTs, representing a range of age classes, are maintained on at least 50,000 acres during the planning period. **DC for Woodlands: MPO Landscape Scale:** •A mix of desired species[10], ages, heights, and groupings of trees create a mosaic across the landscape. **DC for Woodlands: MPO Mid-scale:** •Some large patches in the Madrean pine-oak woodland are closed canopy, have multiple age classes, large trees, and old growth-like characteristics (e.g., numerous snags, large coarse woody debris) in order to provide for wildlife such as Mexican spotted owl and black bear, that need denser habitat. •The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are mostly tens of acres, with rare disturbances of hundreds of acres. There may be frequent small disturbances resulting in groups and patches of tens of acres or less. A mosaic of groups and patches of trees, primarily even-aged, that are variable in size, species composition, and age, is	

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		present. **DC for Woodlands: PJ – Savanna Landscape Scale:** •Old growth occurs in isolated locations scattered throughout the landscape, as individual old trees or as clumps of old trees. Other old growth components may also be present including dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. **DC for Woodlands: PJ - Persistent Woodland Landscape Scale:** •A mix of desired species[10], ages, heights, and groupings of trees create a mosaic across the landscape. •Tree canopy cover is closed (greater than 30 percent), shrubs are sparse to moderate, and herbaceous cover is patchy. •Old growth includes old trees, dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). **DCs for Interior Chaparral:** •In the early seral state, chaparral contains an herbaceous component in the understory. Later seral states are dense, nearly impenetrable thickets with considerable leaf litter. Standing dead material may accumulate in areas that have not burned for several decades. Chaparral is in a constant state of transition from early to late seral state and back again, with fire being the major ecological disturbance. **Chapter 5. Monitoring Strategy Table 12. questions:** -Are management activities moving vegetation communities and habitats closer to the desired condition identified at the appropriate scales? -How are management activities affecting late successional forest structure in relation to desired conditions?	
Vegetation	**MA1 Wildlife & Fish Habitat Improvement Guideline**: Old Growth Use quantitative models at the appropriate scales when considering the importance of various factors. These models may include, but are not limited	Direction not carried forward into revised plan.	Prescriptive: Project specialists determine scale(s) of analyses and what modeling methods and analytical procedures are most appropriate for the level(s) of project and resource analyses.

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	to: Forest Vegetation Simulator, BEHAVE, and FARSITE. **Page 99**.		
Vegetation	**MA #1 - Old Growth Standards & Guidelines, pgs. 97-99:** **-**Forested sites should meet or exceed the structural attributes to be considered old growth in the 5 primary forest cover types in the southwest as depicted in the following table. The Minimum Criteria for the Structural Attributes Used to Determine Old-Growth = **TABLE on existing plan pg. 99 (for PJ woodland, PP, Aspen, MC and SF forest types).**	**REPLACED with:** **DC for All PNVTs Landscape scale:** •Old or large trees, multistoried canopies, large coarse woody debris, and snags provide the structure, function, and associated vegetation composition as appropriate for each forested and woodland PNVT. **DCs for Forests: PP Landscape Scale:** •The ponderosa pine forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. Ponderosa pine snags are typically 18 inches or greater in diameter and average 1 to 2 per acre. •Coarse woody debris, including logs, ranges from 3 to 10 tons per acre. Logs average 3 per acre within the forested area of the landscape. **DCs for Forests: DMC Landscape Scale:** •The dry mixed conifer forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. Snags are typically 18 inches in diameter or greater and average 3 per acre. •Coarse woody debris, including logs, ranges from 5 to 15 tons per acre. Logs average 3 per acre within the forested area of the landscape. **DCs for Forests: WMC Landscape Scale:** •The wet mixed conifer forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. The number of snags and logs and amount of coarse woody debris varies by seral state ranging from 8 to more than 16 tons per acre. **DCs for Forests: WMC Mid-Scale:** •There are 20 or more snags greater than 8	Table in existing plan was unclear if criteria constituted STs or GDs. Some table criteria were left unclear as "not determined". Prescriptive and outdated table criteria not consistent with best available recent science. See revised plan Glossary for three definitions and Appendix B for description of southwestern old growth. Project specialists determine best methods to analyze and implement at the project level. Will be monitored through relevant plan monitoring strategy questions.

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		inches in diameter per acre and 1 to 5 of those snags are 18 inches or greater in diameter. •Coarse woody debris, including logs, varies by seral state, ranging from 5 to 20 tons per acre for early-seral states; 20 to 40 tons per acre for mid-seral states; and may be as high as 35 tons per acre, or greater, for late-seral states. These conditions also provide an abundance of fungi including mushrooms and truffles used by small mammals. **DCs for Forests: SF Landscape Scale:** •The spruce-fir forest is composed predominantly of vigorous trees, but declining top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. **DCs for Forests: SF Mid-Scale:** •In general, there are 13 to 30 snags greater than 8 inches in diameter per acre and 1 to 3 of those snags are 18 inches or greater in diameter. •Coarse woody debris, including logs, varies by seral state, ranging from 5 to 30 tons per acre for early-seral states; 30 to 40 tons per acre for mid-seral states; and 40 tons per acre or greater for late-seral states. These conditions also provide an abundance of fungi including mushrooms and truffles used by small mammals. **DC for Woodlands: MPO Landscape scale:** Snags, averaging 1 to 2 per acre, and older trees are scattered across the landscape. Coarse woody debris averages 1 to 5 tons per acre. **DC for Woodlands: Piñon-Juniper – Savanna Landscape Scale:** Old growth occurs in isolated locations scattered throughout the landscape, as individual old trees or as clumps of old trees. Other old growth components may also be present including dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. **DCs for Woodlands: PJ - Persistent Woodland Landscape Scale:** Snags, averaging one to two per acre, and older trees with dead limbs and tops are	

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		scattered across the landscape. Coarse woody debris averages 2 to 5 tons per acre. **Chapter 5. Monitoring Strategy Table 12. questions:** -Are PNVTs and habitat needs being provided for and contributing to desired conditions? -How are management activities affecting late successional forest structure in relation to desired conditions? -Are the standards and guidelines prescribed being incorporated in NEPA documents and implemented in projects and activities? **ALSO SEE revised plan content presented in this crosswalk table for existing plan - Old Growth Standards.**	
Vegetation	**MA1 Wildlife & Fish Habitat Improvement Guideline**: In forested areas of a diversity unit, create or modify created openings so they have a Patton edge shape index of at least 1.4 and have at least a medium edge contrast. **Page 101**.	**GDs for PP and DMC Forests**: Where consistent with project or activity objectives, canopy cover should be retained on the south and southwest sides of small, existing forest openings that are naturally cooler and moister. These small (generally one-tenth to one-quarter acre) shaded openings provide habitat conditions needed by small mammals, plants, and insects (e.g., Merriam's shrew, Mogollon clover, four-spotted skipperling butterfly). Where these openings naturally occur across a project area, these conditions should be maintained on an average of 2 or more such openings per 100 acres. **Mid-Scale DCs for WMC and SF Forests**: The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are frequently hundreds of acres and rarely thousands of acres. Groups of tens of acres or less are relatively common. There is a mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age. Grass, forb, and shrub openings created by disturbances may	The term "**openings**" is included in the Glossary of Terms.

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		comprise 10 to 100 percent of the area depending on the type of disturbance. **Fine Scale DCs for WMC and SF Forests**: Small openings are present as a result of disturbances (e.g., wind, disease). **Mid-Scale DC for MPO**: The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are mostly tens of acres, with rare disturbances of hundreds of acres. There may be frequent small disturbances resulting in groups and patches of tens of acres or less. A mosaic of groups and patches of trees, primarily even-aged, that are variable in size, species composition, and age, is present. Grass, forb, and shrub openings created by disturbance may comprise 10 to 100 percent of the area depending on the disturbances. Included in the **Glossary of Terms:** Openings – Generally persistent treeless areas having a fairly distinct shape or size, occurring naturally due to differences in soil types as compared to sites that support forests or woodlands. Openings include meadows, grasslands, rock outcroppings, and wetlands. In contrast, created openings result from disturbances like severe fire or windthrow, or management activities to intentionally create space for new tree regeneration. Natural and created openings are not the same as interspaces found in the frequent-fire forests or woodlands.	
Vegetation	**MA1 Wildlife & Fish Habitat Improvement Guideline**: Manage to provide a variety of stand sizes, shapes, crown closure, edge contrast, age structure, and interspersion. **Page 101**.	**Landscape Scale DC for Overall Ecosystem Health**: Large blocks of habitat are interconnected, allowing for behavioral and predator-prey interactions, and the persistence of metapopulations and highly interactive wildlife species across the landscape. Ecological connectivity extends through all plant communities. **Landscape Scale DC for Overall Ecosystem Health**: Habitat configuration and availability allows wildlife populations to adjust their movements (e.g., seasonal	The intent of this guideline has been carried forward into revised LMP in numerous places because it encompasses more than wildlife and fish habitat.

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		migration, foraging) in response to climate change and promote genetic flow between wildlife populations. **Landscape Scale DC for All PNVTs**: Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth. **Mid-Scale DC for all PNVTs**: Vegetation conditions provide hiding and thermal cover in contiguous blocks for wildlife. Native plant species are present in all age classes and are healthy, reproducing, and persisting. **Fine Scale DC for all PNVTs**: Herbaceous vegetation amount and structure (e.g., plant density, height, litter, seed heads) provides habitat to support wildlife and prey species. **Mid-Scale DC for Riparian Areas**: Diversity and density of riparian forest vegetation provides for breeding, escape, hiding, and resting cover for wildlife and provides travelways between other habitat areas and seasonal ranges. **GDs for all Forested and Woodland PNVTs**: Hiding cover, approach cover (by waters), and travel corridor cover should be provided where needed by wildlife. **Mid-Scale DC for MPO**: Some large patches in the Madrean pine-oak woodland are closed canopy, have multiple age classes, large trees, and old growth-like characteristics (e.g., numerous snags, large coarse woody debris) in order to provide for wildlife such as Mexican spotted owl and black bear, that need denser habitat. **OBJ for Wildlife and Rare Plants**: Annually, improve wildlife habitat connectivity by removing at least five unneeded structures (e.g., fence).	

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		MA for Wildlife and Rare Plants: Large scale wildlife habitat restoration treatments benefit multiple species while small projects address the needs of localized species.	
Vegetation	**MA1 Wildlife & Fish Habitat Improvement Guideline**: Manage for interspersion of conifer groups when present. Limit conifer groups to 1 acre groups per 10 acres of aspen. **Page 101**.	**Landscape Scale DC for Aspen**: Areas of aspen occur and shift across the forested landscape. They are successfully regenerating and being recruited into older and larger size classes. Size classes have a natural distribution, with the greatest number of stems in the smaller size classes. **Mid-Scale DC for Aspen**: Aspen may comprise 10 to 100 percent of the area depending on disturbance (e.g., fire, insects, silvicultural treatments) in multistoried patches.	The intent of this guideline has been carried forward into revised LMP.
Vegetation	**MA1 Wildlife & Fish Habitat Improvement Guideline**: Where there has been manipulation to induce aspen regeneration, manage livestock to protect regeneration. **Page 101**.	**GD for Aspen**: To preclude concentrated herbivore impacts, new surface water development should not be constructed within proximity to aspen stands (approximately a quarter of a mile). **MA for Aspen**: Aspen restoration efforts may include providing/improving substitute forage away from aspen, removing conifer competition, fencing to exclude ungulates, and range management practices (e.g., salt locations; herding; timing, intensity, frequency, and duration of livestock use)	The intent of this guideline has been carried forward into revised LMP.
Vegetation	**MA1 Wildlife & Fish Habitat Improvement Guideline**: Meadows are natural openings greater than 1 acre. Each meadow greater than 1 acre will be managed toward or maintained with at least 40% of the perimeter in timber stands that provide cover. **Page 102**.	**GD for PP and DMC Forests**: Where consistent with project or activity objectives, canopy cover should be retained on the south and southwest sides of small, existing forest openings that are naturally cooler and moister. These small (generally one-tenth to one-quarter acre) shaded openings provide habitat conditions needed by small mammals, plants, and insects (e.g., Merriam's shrew, Mogollon clover, four-spotted skipperling butterfly). Where these openings naturally occur across a project area, these conditions should be maintained on an average of 2 or more such openings per 100 acres.	Meadows are now referred to as "**openings**" in the revised LMP and no size limitations are given.

Resource	1987 Plan Content (as amended). Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
		Mid-Scale DC for WMC and SF Forests: The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are frequently hundreds of acres and rarely thousands of acres. Groups of tens of acres or less are relatively common. There is a mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age. Grass, forb, and shrub openings created by disturbances may comprise 10 to 100 percent of the area depending on the type of disturbance. **Mid-Scale DC for SF**: The wildland-urban interface (WUI) is comprised primarily of grass/forb/shrub vegetation. Structures in the WUI are surrounded by grassy openings with very few or no trees. These conditions result in ground fires. **Fine Scale DC for SF**: Small openings are present as a result of localized disturbances (e.g., wind, disease). **Mid-Scale DC for MPO**: The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are mostly tens of acres, with rare disturbances of hundreds of acres. There may be frequent small disturbances resulting in groups and patches of tens of acres or less. A mosaic of groups and patches of trees, primarily even-aged, that are variable in size, species composition, and age, is present. Grass, forb, and shrub openings created by disturbance may comprise 10 to 100 percent of the area depending on the disturbances.	
Vegetation	**MA1 Wildlife & Fish Habitat Improvement Guideline**: Evaluation of existing and potential cover considers open road densities, topography, and tree, shrub, and herbaceous species to determine effective cover. The presence of species, such as Gambel oak, New Mexico locust, juniper, aspen, and	**GD for all Woodland PNVTs**: Hiding cover, approach cover (by waters), and travel corridor cover should be provided where needed by wildlife. **Landscape Scale DC for MPO**: The majority of this woodland has an open canopy consisting of large trees and an herbaceous understory, with some groups of closed canopy. Overall, canopy cover is 10 to 50	Cover and BA/GSL are not discussed in the same context within the revised plan compared to the 1987 plan, however, there are numerous GD and DCs that deal with cover and BA in the revised plan

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	bigtooth maple, or topographic features, will require less BA/GSL to meet cover requirements. **Page 102**.	percent. **Landscape Scale DC for MPO**: Ground cover consists of perennial grasses and forbs that frequently carry fire through the landscape. **Landscape Scale DCs for MPO and PJ Woodlands**: Grasses, forbs, shrubs, needles, leaves, and small trees support the natural fire regime. The larger proportion (60 percent or greater) of soil cover is composed of grasses and forbs as opposed to needles and leaves. **Landscape Scale DC for PJ Savanna Woodland**: The piñon-juniper savanna is open in appearance with trees occurring as individuals or in small groups and ranging from young to old. Overall, tree canopy cover is 10 to 15 percent, but may range up to 30 percent. **Landscape Scale DC for PJ Persistent Woodland**: Tree canopy cover is closed (greater than 30 percent), shrubs are sparse to moderate, and herbaceous cover is patchy. **Mid-Scale DC for PJ Persistent Woodland**: Grass and forb cover is maximized, based on site capability, to protect and enrich soils. **Fine Scale DC for Grasslands**: During the critical pronghorn antelope fawning period (May through June), cool season grasses and forbs provide nutritional forage; while shrubs and standing grass growth from the previous year provide adequate hiding cover (10 to 18 inches) to protect fawns from predation. **DC for IC**: Ground cover consists primarily (85 to 95 percent) of shrub litter (e.g., small stems, leaves). **GD for Wildlife and Rare Plants**: Cool and/or dense vegetation cover should be provided for species needing these habitat components (e.g., Goodding's onion, black bear, White Mountains chipmunk, western yellow-billed cuckoo). **GD for Livestock Grazing**: Forage, browse, and cover needs of wildlife, authorized livestock, and wild horses	

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		should be managed in balance with available forage so that plants providing for these needs remain at or move toward a healthy, persistent state. **DC for Wildland Fire Management**: For all PNVTs, the composition, cover, structure, and mosaic of vegetative conditions reduce uncharacteristic wildfire hazard to local communities and forest ecosystems. **DC for Wildlife Quiet Area**: Bear Springs and Cottonwood Seep WQAs provide quality travel, hiding, and thermal cover along the Mogollon Rim (Black Mesa and Lakeside Ranger Districts) for a wide variety of species ranging from turkeys to mountain lions. The WQAs provide an abundance of browse species important for deer and elk. **GD for Wildlife Quiet Area**: Hiding cover and travelways for wildlife should be maintained to provide for security and connectivity of habitat. **Landscape Scale DC for PP**: Where it naturally occurs, Gambel oak is present with all age classes represented. It is reproducing to maintain or expand its presence on capable sites across the landscape. Large Gambel oak snags are typically 10 inches or larger in diameter and are well distributed. **Fine Scale DC for PP and DMC Forests**: Where Gambel oak occurs, the majority are single trunk trees over 8 inches in diameter with full crowns. **GD for PP and DMC Forests**: Where Gambel oak or other native hardwood trees and shrubs are desirable to retain for diversity, treatments should improve vigor and growth of these species. **Landscape Scale DC for DMC**: The forest arrangement consists of small clumps and groups of trees with variably-sized interspaces of grass, forb, and shrub vegetation associations similar to reference conditions. Size, shape, number of trees per group, and number of groups per area are variable across the landscape.	

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		Where they naturally occur, groups of Gambel oak are healthy and maintained or increased. Tree density may be greater in some locations, such as north-facing slopes and canyon bottoms. **Mid-Scale DC for PP, DMC, WMC and SF Forests**: Northern goshawk post-fledging family areas (PFAs) may contain 10 to 20 percent higher basal area in mid-aged to old tree groups than northern goshawk foraging areas and the surrounding forest. **Mid-Scale DC for PP**: Ponderosa pine forest is characterized by variation in the size and number of tree groups depending on elevation, soil type, aspect, and site productivity. The more biologically productive sites contain more trees per group and more groups per area, resulting in less space between groups. Interspaces typically range from 10 percent in more biologically productive sites to 70 percent in the less productive sites. Tree density within forested areas ranges from 20 to 80 square feet basal area per acre. **Mid-Scale DC for DMC**: The dry mixed conifer forest is characterized by a variety of size and number of tree groups depending on elevation, soil type, aspect, and site productivity. The more biologically productive sites contain more trees per group and more groups per area, resulting in less space between groups. Interspaces typically range from 10 percent in more biologically productive sites to 50 percent in less productive sites. Tree density within forested areas ranges from 30 to 100 square feet basal area per acre. **GD for Community-Forest Intermix**: Due to the greater values to be protected (e.g., homes, property), tree basal areas should be at the lower end of the desired range and openings should occur at the higher end of the desired range (as described in the applicable PNVT desired conditions).	

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Vegetation	**MA #1, pgs. 100-102:** The following table lists basal area (BA) and growing stock levels (GSL) which experience has shown fully meet hiding and thermal cover requirements in even age ponderosa pine and mixed conifer when there are no cover effects from topographic features or other species. The presence of more than 1 size class may reduce the amount of BA/GSL required to provide effective cover. Before determining that cover must be obtained by managing stands in suitable lands for these BA/GSL's, conduct field examinations to evaluate cover distribution needs and to determine whether other factors contributing to effective cover are present.	**Table deleted. Replaced with:** **DC for All PNVTs –** Vegetation conditions provide hiding and thermal cover in contiguous blocks for wildlife. Native plant species are present in all age classes and are healthy, reproducing, and persisting. **GD for All PNVTs -**Projects should include quantitative and/or qualitative objectives for implementation monitoring and effectiveness monitoring to assist in moving toward or maintaining desired conditions. **DC for Riparian Areas -** Diversity and density of riparian forest vegetation provides for breeding, escape, hiding, and resting cover for wildlife and provides travelways between other habitat areas and seasonal ranges. **GD for Forests: All Forested PNVTs -** Hiding cover, approach cover (by waters), and travel corridor cover should be provided where needed by wildlife. **GD for Woodlands: All Woodland PNVTs -**Hiding cover, approach cover (by waters), and travel corridor cover should be provided where needed by wildlife. **DC for Grasslands Fine scale -** During the critical pronghorn antelope fawning period (May through June), cool season grasses and forbs provide nutritional forage; while shrubs and standing grass growth from the previous year provide adequate hiding cover (10 to 18 inches) to protect fawns from predation. **DC for Wildlife and Rare Plants –** Wildlife are free from harassment and disturbance at a scale that impacts vital functions (e.g., breeding, rearing young) that could affect persistence of the species. **GD for Wildlife and Rare Plants –** Modifications, mitigations, or other measures should be incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives. **GD for Wildlife and Rare Plants –** Cool and/or dense vegetation cover should be provided for species needing	Unclear if the existing plan table is a ST or GD. Pertains to deer and elk cover, as defined on pg. 100 of existing plan. Growing stock level is no longer used as a measure of forest or timber stand density. Majority of pine and mixed conifer are now to be managed as uneven-aged. Too prescriptive for a strategic forest plan, with detailed cover criteria for large ungulate habitat. Revised plan strives to provide programmatic direction for cover needs of all wildlife species. By restoring PNVTs toward revised plan DCs, habitat conditions are expected to be similar to the forest and woodland structures that provided adequate cover for these species to become established with stable populations. Project specialists are to determine adequate density and structure of vegetation combined with topographic features on a site-specific basis using latest science and local data. Management approach is to provide a diversity of habitats, well distributed, with ecological conditions that support native and desired nonnative animal species over the long term. The forests also provide for wildlife and their needs consistent with recovery plans, biological opinions,

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		these habitat components (e.g., Goodding's onion, black bear, White Mountains chipmunk, western yellow-billed cuckoo). **GD for Wildlife Quiet Area -** Hiding cover and travelways for wildlife should be maintained to provide for security and connectivity of habitat. **GD for Wildlife Quiet Area -** Bear Springs and Cottonwood Seep WQAs provide quality travel, hiding, and thermal cover along the Mogollon Rim (Black Mesa and Lakeside Ranger Districts) for a wide variety of species ranging from turkeys to mountain lions. The WQAs provide an abundance of browse species important for deer and elk. **Chapter 5. Monitoring Strategy -** Are habitats for threatened, endangered, sensitive, and other species for the forests being maintained or enhanced; meeting recovery objectives; moving toward desired conditions; and contributing to species viability? **Chapter 5. Monitoring Strategy** -Are PNVTs and habitat needs being provided for and contributing to desired conditions?	conservation strategies, conservation assessments, management plans, memorandums of understanding (MOUs), and Forest Service direction. The forests work collaboratively with the AZGFD to plan and implement projects that make progress toward the forests' desired conditions and help achieve conservation actions specified in the Arizona State Wildlife Action Plan. Large scale wildlife habitat restoration treatments benefit multiple species while small projects address the needs of localized species.
Vegetation	3. Gambel oak is important for cover, and patches of oak near nesting areas are an important consideration when selecting areas for retaining slash. Other species such as New Mexico locust and current also can provide cover. Oak stands in the nesting areas should be evaluated for opportunities to manage for cover.	**DC Overall Ecosystem Health**: Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC Overall Ecosystem Health:** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species.	The 1987 Plan direction was modified to ensure that Gambel oak (and other species) were recognized as an integral component of the landscape and of a functional forested system where it occurs naturally. The cover and tree species needs were made broader to ensure that the needs of more species than turkey were addressed.

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		DC All PNVTs: Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth forests. Vegetation conditions allow for transition zones or ecotones between riparian areas, forests, woodlands, shrublands, and grasslands. Transition zones may shift in time and space due to changing site conditions from disturbances (e.g., fire, climate variability). Vegetation conditions provide hiding and thermal cover in contiguous blocks for wildlife. Native plant species are present in all age classes and are healthy, reproducing, and persisting. Herbaceous vegetation amount and structure (e.g., plant density, height, litter, seed heads) provides habitat to support wildlife and prey species. **OBJ All Forested PNVTs:** Annually, treat 5,000 to 35,000 acres to reduce tree densities, restore natural fire regimes, promote species habitat and ecosystem health, reduce fire hazard, maintain desired conditions, initiate recovery from uncharacteristic disturbance, and provide forest products, leaving a desired mix of species with the range	

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		of desired densities that are resilient to changing climatic conditions. **GD All Forested PNVTs:** Hiding cover, approach cover (by waters), and travel corridor cover should be provided where needed by wildlife. **DC Ponderosa Pine:** Where it naturally occurs, Gambel oak is present with all age classes represented. It is reproducing to maintain or expand its presence on capable sites across the landscape. Large Gambel oak snags are typically 10 inches or larger in diameter and are well distributed. Where Gambel oak occurs, the majority are single trunk trees over 8 inches in diameter with full crowns. **GD Ponderosa Pine:** Where Gambel oak or other native hardwood trees and shrubs are desirable to retain for diversity, treatments should improve vigor and growth of these species. **DC Dry Mixed Conifer:** The forest arrangement consists of small clumps and groups of trees interspersed within variably-sized openings of grass, forb, and shrub vegetation associations similar to reference conditions. Size, shape, number of trees per group, and number of groups per area are variable across the landscape. Where they naturally occur, groups of Gambel oak are healthy and maintained or increased. Tree density may be greater in some locations, such as north-facing slopes and canyon bottoms.	

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		Where Gambel oak occurs, the majority are single trunk trees over 8 inches in diameter with full crowns. **GD Dry Mixed Conifer:** Where Gambel oak or other native hardwood trees and shrubs are desirable to retain for diversity, treatments should improve vigor and growth of these species.	
Vegetation	**MA1 Range O&M Guideline**: Where open meadows and parks in the pine/mixed conifer type are to be maintained, eliminate invading overstory vegetation, stabilize gullies to raise the water table, scarify the soil, and seed with appropriate grass and forage species. Control grazing though management and/or fencing to establish the revegetation. **Page 106**.	**Management Approach for Overall Ecosystem Health**: Treatments include those that restore and then maintain natural fire regimes, improve riparian condition, restore meadows or openings, repair gullies, and reduce erosion. **Mid-Scale DC for Soil**: Soils are stable within their natural capability4. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **Management Approach for Soil:** Restoration treatments may include seeding, mulching, stabilization of gullies, or obliteration of unauthorized routes. **OBJ for Riparian Areas**: Within the planning period, relocate, repair, improve, or decommission a minimum of 4 miles of National Forest System roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **OBJ for Riparian Areas**: Annually, remove an average of 2 miles of unauthorized roads or trails that add sediment to streams, damage riparian vegetation, erode streambanks, cause gullies, and/or compact floodplain soils. **Management Approach for All Woodland PNVTs**: Treatment methods may include wildland fire, mechanized and hand thinning, leaving woody debris scattered across the ground, soil erosion control,	The intent of this Range O&M Guideline has been carried forward into the revised LMP in numerous places.

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		stabilizing gullies to restore water tables, planting grass, and chemical treatments. The majority of treatments are focused in the Madrean pine-oak woodlands (primarily burning) with some treatments occurring in piñon-juniper. **Management Approach for Grasslands**: Management Approaches for Grasslands The management approach is to maintain and improve grasslands by eliminating competing conifers, leaving woody debris scattered across the ground, stabilizing gullies to restore water tables, and reseeding with native species. Treatments are located in restorable and treatable grasslands, primarily in the Great Basin and semi-desert grassland PNVTs. Obliteration and rehabilitation of unauthorized roads and trails may be needed. There is an emphasis to provide enough grass to reduce topsoil loss and allow fire to spread and resume its role in maintaining grasslands. Pronghorn antelope is a management indicator species (MIS) for grassland restoration. The treatment objective listed above would contribute to their viability. **Management Actions for Overall Ecosystem Health**: Restore watersheds through treatments to reestablish and then maintain natural fire regimes, improve riparian condition, restore meadows or openings, repair gullies, and reduce erosion. **Management Actions for Soil**: Restore areas by seeding, mulching, stabilization of gullies, and obliteration of unauthorized routes. **GD for RNA**: Management measures should be used (e.g., fencing) to protect unique features. **Possible Management Actions for Vegetation Management**: Work with the Arizona Game and Fish Department to address concerns about long term aspen reestablishment. Restore aspen by providing/improving substitute forage away from aspen, removing conifer competition, fencing to exclude ungulates, and range	

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		management practices. **Possible Management Actions for Riparian Areas**: Improve riparian conditions by removing non-riparian species, planting or restoring native species, stabilizing or eliminating roads, encouraging beaver colonization, and constructing fencing. Treatments may include restoration of hardwood and cottonwood galleries, restoration of upland conditions by removing encroaching trees and/or reducing tree densities, and restoration of infrequent fire. **Management Actions for Riparian Areas**: Riparian conditions may be improved by such techniques as removing non-riparian species, planting or restoring native species, stabilizing or eliminating roads, encouraging beaver colonization, or constructing fencing. **Management Actions for Riparian Areas**: In high impact areas, partnerships may be formed to construct and maintain exclosure fencing. **Management Actions for Aspen**: Aspen restoration efforts may include providing/improving substitute forage away from aspen, removing conifer competition, fencing to exclude ungulates, and range management practices (e.g., salt locations; herding; timing, intensity, frequency, and duration of livestock use). **GD for Aspen**: To preclude concentrated herbivore impacts, new surface water development should not be constructed within proximity to aspen stands (approximately a quarter of a mile).	
Vegetation	**MA1 Non-Sale Reforestation Guideline**: In mixed conifer stands that contain aspen, encourage aspen regeneration as a minor stand component (less than 50% of total stocking) at the time of regeneration, through location of skid trails, landings, and temporary roads.	**Landscape Scale DC for Aspen**: Areas of aspen occur and shift across the forested landscape. They are successfully regenerating and being recruited into older and larger size classes. Size classes have a natural distribution, with the greatest number of stems in the smaller size classes. **Mid-Scale DC for Aspen**: Aspen may comprise 10 to 100 percent of the area depending on disturbance (e.g.,	The intent of this Non-Sale Reforestation Guideline has been carried forward into the revised LMP in numerous places.

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	Page 106.	fire, insects, silvicultural treatments) in multistoried patches. **OBJ for Aspen**: Aspen dominated and codominated acres within forested PNVTs, representing a range of age classes, are maintained on at least 50,000 acres during the planning period. **GD for Aspen**: Restoration of aspen clones should occur where aspen is overmature or in decline to maintain a sustainable presence of this species at the landscape level. **GD for Aspen**: When managing for early seral states, competing conifers should be removed from aspen stands when needed to increase aspen longevity and increase diversity of aspen age classes. **GD for Aspen**: Aspen restoration and retention efforts should include measures to ensure viability of aspen on the landscape.	
Vegetation	**MA1 Timber Sale Guideline**: Maintain the existing total acreage of aspen stands on the Forest. This may be done by eliminating existing stands and creating new ones to replace them, maintaining existing stands, or a combination of both. **Page 108**.	**Landscape Scale DC for Aspen**: Areas of aspen occur and shift across the forested landscape. They are successfully regenerating and being recruited into older and larger size classes. Size classes have a natural distribution, with the greatest number of stems in the smaller size classes. **Mid-Scale DC for Aspen**: Aspen may comprise 10 to 100 percent of the area depending on disturbance (e.g., fire, insects, silvicultural treatments) in multistoried patches. **OBJ for Aspen**: Aspen dominated and codominated acres within forested PNVTs, representing a range of age classes, are maintained on at least 50,000 acres during the planning period. **GD for Aspen**: Restoration of aspen clones should occur where aspen is overmature or in decline to maintain a sustainable presence of this species at the landscape level. **GD for Aspen**: When managing for early seral states,	The intent of this Timber Sale Guideline has been carried forward into the revised LMP.

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		competing conifers should be removed from aspen stands when needed to increase aspen longevity and increase diversity of aspen age classes. **GD for Aspen**: Aspen restoration and retention efforts should include measures to ensure viability of aspen on the landscape.	
Vegetation	**MA1 Timber Sale Guideline**: Manage aspen stands for a combination of timber, aesthetic and wildlife values. Aspen will be included in commercial timber sales to the extent needed to meet management objectives, including aspen regeneration. **Page 108**.	**Management Actions for Forest Products**: Timber production and tree cutting are used to help achieve vegetation desired conditions, as well as contribute to the local and regional economy. **Management Actions for Forest Products**: Tree cutting on lands not suitable for timber production may occur for such purposes as restoration, salvage, fuels management, insect and disease mitigation, protection or enhancement of biological diversity or wildlife habitat, research or administrative studies, or recreation consistent with other management direction. **Landscape Scale DC for Aspen**: Areas of aspen occur and shift across the forested landscape. They are successfully regenerating and being recruited into older and larger size classes. Size classes have a natural distribution, with the greatest number of stems in the smaller size classes. **Mid-Scale DC for Aspen**: Aspen may comprise 10 to 100 percent of the area depending on disturbance (e.g., fire, insects, silvicultural treatments) in multistoried patches. **OBJ for Aspen**: Aspen dominated and codominated acres within forested PNVTs, representing a range of age classes, are maintained on at least 50,000 acres during the planning period. **GD for Aspen**: Restoration of aspen clones should occur where aspen is overmature or in decline to maintain a sustainable presence of this species at the landscape level. **GD for Aspen**: When managing for early seral states,	The intent of the revised LMP is to guide management efforts in the restoration and/or maintenance of ecosystems by maintaining or moving towards DCs. Sustainable supplies of resources such as timber, recreation, and forage are byproducts of healthy, functioning ecosystems.

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		competing conifers should be removed from aspen stands when needed to increase aspen longevity and increase diversity of aspen age classes. **GD for Aspen**: Aspen restoration and retention efforts should include measures to ensure viability of aspen on the landscape.	
Vegetation	**MA1 Timber Sale Guideline**: Clearcuts will be the preferred method of aspen regeneration. Conifers will be removed from regenerated aspen stands. **Page 108**.	**GD for Aspen**: Restoration of aspen clones should occur where aspen is overmature or in decline to maintain a sustainable presence of this species at the landscape level. **GD for Aspen**: When managing for early seral states, competing conifers should be removed from aspen stands when needed to increase aspen longevity and increase diversity of aspen age classes. **GD for Aspen**: Aspen restoration and retention efforts should include measures to ensure viability of aspen on the landscape.	The intent of this Timber Sale Guideline has been carried forward into the revised LMP.
Vegetation	**MA1 Timber Sale Guideline**: Natural regeneration with site preparation will be the only regeneration method for aspen. **Page 108**.	**ST for All Forested PNVTs**: On lands suitable for timber production, timber harvest and wildland fire intended to create openings for tree regeneration shall only be used when there is reasonable assurance of restocking within 5 years after final regeneration harvest. Restocking level is prescribed in a site-specific silviculture prescription for a project treatment unit and is determined to be adequate depending on the objectives and desired conditions for the plan area. In some instances, such as when lands are harvested or prescribed burned to create or maintain openings for firebreaks and vistas, it is appropriate not to restock. **GD for All PNVTs**: Wildland fires may be used to meet desired resource conditions, maintain or promote desired vegetation species, and enable natural fires to return to their historic role. **Management Actions for All Forested PNVTs**: The use of wildland fire to burn large areas is expected to be an important tool to manage some aspen and insect and	The intent of this Timber Sale Guideline has been expanded in the revised LMP to provide for more flexibility in the management of aspen.

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		disease populations. Uneven-aged management techniques are used primarily, and some even-aged management is used especially when managing species such as aspen and spruce. **Management Actions for Aspen**: Where appropriate, aspen may be seeded, planted, or transplanted. Wildland fire, sometimes over large acreages, may be used for regeneration or maintenance of aspen. Management activities that kill or stress overstory trees (e.g., clearcutting, fire) may be used since they mimic natural disturbances and enhance aspen regeneration. **GD for Aspen**: Restoration of aspen clones should occur where aspen is overmature or in decline to maintain a sustainable presence of this species at the landscape level. **GD for Aspen**: When managing for early seral states, competing conifers should be removed from aspen stands when needed to increase aspen longevity and increase diversity of aspen age classes. **GD for Aspen**: Aspen restoration and retention efforts should include measures to ensure viability of aspen on the landscape. **GD for Landscape Scale Disturbance Events**: Where conifer seed sources are lost or poorly distributed and/or deciduous tree species are not adequately resprouting, artificial regeneration (e.g., planting, seeding) should be used to promote movement toward desired conditions, provided adequate site conditions exist.	
Vegetation	**MA1 Timber Sale Guideline**: The preferred site preparation method for aspen will be by prescribed broadcast burning. **Page 108**.	**Management Actions for All Forested PNVTs**: The use of wildland fire to burn large areas is expected to be an important tool to manage some aspen and insect and disease populations. Uneven-aged management techniques are used primarily, and some even-aged management is used especially when managing species such as aspen and spruce. **Management Actions for Aspen**: Where appropriate,	The intent of this Timber Sale Guideline has been expanded in the revised LMP to provide for more flexibility in the management of aspen.

Resource	1987 Plan Content (as amended). Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
		aspen may be seeded, planted, or transplanted. Wildland fire, sometimes over large acreages, may be used for regeneration or maintenance of aspen. Management activities that kill or stress overstory trees (e.g., clearcutting, fire) may be used since they mimic natural disturbances and enhance aspen regeneration. **Mid-Scale DC for Aspen**: As an early seral species, aspen reproduction and recruitment benefit from low severity surface fires in association with ponderosa pine and dry mixed conifer forested PNVTs, and mixed-severity fires in association with wet mixed conifer and spruce-fir forested PNVTs.	
Vegetation	**MA #1 STs and GDs, pg. 107:** Manage aspen stands under the even-aged system using the clearcut method. Aspen Regeneration TABLE.	**Table deleted**. **Replaced with:** **DCs for Forests: Aspen Landscape Scale:** •Areas of aspen occur and shift across the forested landscape. They are successfully regenerating and being recruited into older and larger size classes. Size classes have a natural distribution, with the greatest number of stems in the smaller size classes. **DCs for Forests: Aspen Mid-Scale:** •Aspen may comprise 10 to 100 percent of the area depending on disturbance (e.g., fire, insects, silvicultural treatments) in multistoried patches. •As an early seral species, aspen reproduction and recruitment benefit from low severity surface fires in association with ponderosa pine and dry mixed conifer forested PNVTs, and mixed-severity fires in association with wet mixed conifer and spruce-fir forested PNVTs. •Aspen may comprise 10 to 100 percent of the area depending on disturbance (e.g., fire, insects, silvicultural treatments) in multistoried patches. •As an early seral species, aspen reproduction and recruitment benefit from low severity surface fires in association with ponderosa pine and dry mixed conifer forested PNVTs, and mixed-severity fires in association with wet mixed conifer and spruce-fir forested PNVTs. **OBJ for Forests: Aspen:** •Aspen dominated and codominated acres within forested PNVTs, representing a range of age classes, are	Specific aspen regeneration acreages listed by ranger district in the existing plan's table are obsolete and too prescriptive for a programmatic forest plan. The revised plan directs maintaining a minimum of 50,000 aspen acres during the planning period, but provides flexibility for managers to decide where this OBJ is best met at the project level, which also may include restoration of younger age classes if needed. New science focuses on aspen *recruitment* which shows promise of reaching maturity, rather than on aspen *regeneration* which is too young or small to certify as established aspen that will reach maturity. New science also is showing that healthy aspen areas can develop into multiple-aged canopies (uneven-aged structure) when protected long-term from repeated ungulate browsing. Where appropriate, aspen may be seeded, planted, or transplanted. Wildland

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		maintained on at least 50,000 acres during the planning period. **GDs for Forests: Aspen:** •Restoration of aspen clones should occur where aspen is overmature or in decline to maintain a sustainable presence of this species at the landscape level. •Aspen restoration and retention efforts should include measures to ensure viability of aspen on the landscape.	fire, sometimes over large acreages, may be used for regeneration or maintenance of aspen. Even-aged management activities that kill or stress overstory trees (e.g., clearcutting, fire) may be used since they mimic natural disturbances and enhance aspen re-establishment.
Vegetation	**MA #1 STs & GDs, pg. 107:** Silvicultural prescriptions will emphasize uneven-age management where possible. Even-age management may be used in special circumstances as determined through the IRM process. Timber stands will generally be managed for timber production using uneven-aged systems. Shelterwood or clearcutting may be used for special purposes. **GDs for MSO Restricted Areas (MC and Pine- oak):** Emphasize uneven-aged management systems. However, both even-aged and uneven-aged systems may be used where appropriate to provide variation in existing stand structure and species diversity. Existing stand conditions will determine which system is appropriate.	**Modified and Replaced with:** **DCs for Overall Ecosystem Health Landscape Scale:** •Natural ecological cycles (i.e., hydrologic, energy, nutrient) facilitate shifting of plant communities, structure, and ages across the landscape. Ecotone shifts are influenced at both the landscape and watershed scale by ecological processes. The mosaic of plant communities and the variety within the communities are resilient to disturbances. **DCs for All PNVTs Landscape Scale:** •Each PNVT contains a mosaic of vegetative conditions, densities, and structures. This mosaic occurs at a variety of scales across landscapes and watersheds. The distribution of physical and biological conditions is appropriate to the natural disturbance regimes affecting the area. •Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth. **STs for Forests: All Forested PNVTs:** •Regulated timber harvest activities shall occur only on those lands classified as suitable for timber production. •On lands suitable for timber production, even-aged stands shall have reached or surpassed culmination of mean annual increment (95 percent of culmination of mean annual increment of growth, as measured by cubic volume) prior	MA #1 in the existing plan covers all forested lands outside of wilderness and other designations. For similar revised plan uneven-aged/ even-aged components for woodlands, see the MSO and NOGO items addressed elsewhere in this crosswalk, as well as those for old growth items. To meet revised plan's holistic DCs for diverse forest structure of multiple size classes and age classes, uneven-aged silviculture systems will be inherently required in most cases for frequent-fire forest/woodland PNVTs, except when responsible disease management, stand-replacement disturbance events, or insect outbreaks dictate otherwise, as directed in the revised plan. **Management Approach for all Forested PNVTs:** Uneven-aged management techniques are used primarily, and some even-aged management is used especially when managing species such as aspen and spruce

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		to regeneration harvest, unless the following conditions have been identified during project development: (1) when such harvesting would assist in reducing fire hazard within the wildland-urban interface, or (2) when harvesting of stands will trend landscapes toward vegetation desired conditions (e.g., uneven-aged structure). •Harvesting systems shall be selected based on their ability to meet desired conditions and not strictly on their ability to provide the greatest dollar return. •Clearcutting shall be used only where it is the optimum method for meeting desired conditions. •If individual harvest openings created by even-aged silvicultural practices are proposed that would exceed 40 acres, then National Forest Management Act (NFMA) direction regarding public notification and regional forester approval shall be followed. These requirements do not apply to the size of areas harvested because of natural catastrophic conditions such as, but not limited to, fire, insect and disease attacks, or windstorms. •On lands suitable for timber production, timber harvest activities shall only be used when there is reasonable assurance of restocking within 5 years after final regeneration harvest. This also applies where wildland fire is used to create openings for tree regeneration purposes on suitable timber lands. Restocking level is prescribed in a site specific silvicultural prescription for a project treatment unit and is determined to be adequate depending on the objectives and desired conditions for the plan area. In some instances, such as when lands are harvested or prescribed burned to create openings for firebreaks and vistas or to prevent encroaching trees, it is appropriate not to restock. **GDs for Forests: All Forested PNVTs** •On single species dominated sites, uneven-aged management may be used where less than 20 percent of the host tree species—or less than 25 percent of the area—is infected by dwarf mistletoe. Thinning and	(as is appropriate to these species' silvics). Even-aged treatments may also be applied in the short term for forest health concerns (e.g., heavy dwarf mistletoe infections) to facilitate a transition to uneven-aged management. **Management Approaches for Forest Products:** Timber production and tree cutting are used to help achieve vegetation desired conditions, as well as contribute to the local and regional economy. Uneven-aged silvicultural systems are emphasized and even-aged systems are used where appropriate. Tree cutting on lands not suitable for timber production may occur for such purposes as restoration, salvage, fuels management, insect and disease mitigation, protection or enhancement of biological diversity or wildlife habitat, research or administrative studies, or recreation consistent with other management direction. The concept of timber stands is retained in the revised plan, but is further modified to clarify that assemblages of uneven-aged tree groups at the fine to mid scales can comprise a stand. The IRM (Integrated Resource Management)

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		under-burning may be used to keep dwarf mistletoe levels from increasing. Even-aged management or deferral should be considered when greater than 20 percent of the host species, or 25 percent of the area, is infected with dwarf mistletoe. •On single species dominated sites, thinning should not be attempted where more than 80 percent of the host species—or 90 percent of the area—is infected with dwarf mistletoe. Regeneration and/or deferral may be used in these cases. However, in the Community-Forest Intermix Management Area additional treatment options may be used. •On mixed species dominated sites, even-aged management or deferral should be used instead of uneven-aged management where more than 50 percent of conifer trees (excluding white fir) are infected by dwarf mistletoe. •Where a seed cut treatment (even-aged method to promote natural seedling establishment) is applied for dwarf mistletoe control, it should be followed within 10 years of seedling establishment by a final removal treatment or other effective means to prevent further infection. **DC for Forests: PP Landscape Scale:** •The ponderosa pine forest is a mosaic of structural states ranging from young to old trees. Forest structure is variable but uneven-aged and open in appearance. Sporadic areas of even-aged structure may be present on 10 percent or less of the landscape to provide structural diversity. **DC for Forests: PP Mid-Scale:** •The tree group mosaic comprises an uneven-aged forest with all age classes, size classes, and structural stages present. Occasionally, patches of even-aged forest structure are present (less than 50 acres). Disturbances sustain the overall age and structural distribution. **DC for Forests: DMC Landscape Scale:** •The dry mixed conifer forest is a mosaic of conditions composed of structural states ranging from young to old trees. Forest structure and density are similar to ponderosa pine forest. Forest appearance is variable but uneven-aged and open. Sporadic areas of even-aged structure may be	process is obsolete terminology, but is still accomplished through the interdisciplinary NEPA process. Other terminology in the revised plan such as “multiple-stories” or “multiple canopy layers” also usually describes uneven-aged conditions, while “single-storied” can describe even-aged. See revised plan’s **Glossary** for definitions of “Even-aged” and “Uneven-aged”. Also see Desired Conditions for Use in Forest Planning in the Southwestern Region: Development and Science Basis (USDA, 2013).

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		present on 10 percent or less of the landscape to provide structural diversity. **DC for Forests: DMC Mid-Scale:** •The mosaic of tree groups is composed of uneven-aged forest. All age classes and structural stages are present. Occasionally, there are small patches (less than 50 acres) of even-aged forest present. Disturbances sustain the overall age and structural distribution. **DC for Forests: WMC Landscape Scale:** •The wet mixed conifer forest is a mosaic of structural stages and seral states ranging from young to old trees. The landscape arrangement is an assemblage of variably-sized and aged groups and patches of trees and other vegetation associations similar to reference conditions. **DC for Forests: WMC Mid-Scale:** •The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are frequently hundreds of acres and rarely thousands of acres. Groups of tens of acres or less are relatively common. There is a mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age. •Uneven-aged groups and patches, comprising about 20 percent of this PNVT, provide for species such as the black bear and red-faced warbler that need multistoried canopies with dense low- to mid-canopy layers. **DC for Forests: SF Mid- Scale:** •The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary but are mostly hundreds of acres and rarely thousands of acres. There may be frequent small disturbances resulting in groups of tens of acres or less. A mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age, is present. Grass, forb, and shrub openings created by disturbances may comprise 10 to 100 percent of the area depending on time since disturbances. Aspen is occasionally present in large	

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		patches. •Uneven-aged groups and patches, comprising about 20 percent of this PNVT, provide for species such as the MacGillivray's warbler and Swainson's thrush that need multistoried canopies with dense low- to mid-canopy layers. **DC for Forests: Aspen - Landscape Scale -** •Areas of aspen occur and shift across the forested landscape. They are successfully regenerating and being recruited into older and larger size classes. Size classes have a natural distribution, with the greatest number of stems in the smaller size classes. **Plan Appendix B. Vegetation Conditions and Management Practices Table 14** displays silvicultural systems and management practices appropriate for meeting desired PNVT species composition, forest structure, and function.	
Vegetation	**Forest-wide STs & GDs + MA #1 STs & GDs, pgs. 68, 111, and 153:** Harvest of miscellaneous forest products, such as Christmas trees, posts, poles, etc., will be planned to meet integrated management goals.	**Replaced with:** **DC for All PNVTS Landscape Scale:** •Vegetation provides products—such as wood fiber or forage—to help meet local and regional needs in a manner that is consistent with other desired conditions on a sustainable basis within the capacity of the land. **OBJ for Forests: All Forested PNVTs:** •Annually, treat 5,000 to 35,000 acres to reduce tree densities, restore natural fire regimes, promote species habitat and ecosystem health, reduce fire hazard, maintain desired conditions, initiate recovery from uncharacteristic disturbance, and provide forest products, leaving a desired mix of species with the range of desired densities that are resilient to changing climatic conditions. **DCs for Forest Products:** •The Apache-Sitgreaves NFs provide a sustainable supply of forest products (e.g., small roundwood, sawlogs, biomass, firewood, cones, Christmas trees, wildlings) to businesses and individuals within the capability of the land. •The collection of live plants, mushrooms, and	Forest products include wood (timber, biomass, firewood) and special forest products. Special forest products include floral greenery, Christmas trees and boughs, mushrooms, wildlings (transplanted trees, shrubs, or herbaceous plants), cones, medicinal plants, cuttings, herbs, nuts, berries, and decorative wood. When cut on suitable timberlands, miscellaneous forest products like poles sold by permit are included in the total annual CCF wood volume objective in the revised plan. Wood products are viewed in the revised plan as a secondary benefit of treatments that are intended to restore the forests' ecological composition, structure, and function

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		other forest products does not impact species persistence onsite. **OBJ for Forest Products:** •Annually, prepare and offer up to an average of 122,000 CCF from suitable timberlands resulting from sustainable harvest to provide wood products to businesses and individuals. •Annually, provide up to 94,000 CCF (119,380 cords) of firewood for personal and commercial use. •Annually, provide an average of 5,000 permits for Christmas trees. **ST for Forest Products:** •Authorizations to cut, collect, or use forest products for any personal, commercial, or scientific purpose (i.e., permits, contracts, agreements) shall include provisions to ensure the needs of wildlife, which depend upon those forest products, will continue to be met (e.g., fungi and cone collection with respect to overwinter forage needs of squirrels). **GD for Forest Products:** •Permits issued for forest products should include stipulations to protect resources.	to a healthier, resilient condition. Timber production and tree cutting are used to help achieve vegetation desired conditions, as well as contribute to the local and regional economy. Tree cutting on lands not suitable for timber production may occur for such purposes as restoration, salvage, fuels management, insect and disease mitigation, protection or enhancement of biological diversity or wildlife habitat, research or administrative studies, or recreation consistent with other management direction. Other desired forest products, such as house logs, are available through permits or small sales. Areas may be identified for forest product removal (e.g., Christmas tree, firewood). Woody biomass not removed by project operations may be made available to meet public or industry needs. Plan direction and interdisciplinary input are used to develop additional project specific and/or resource specific conditions to be included in all forest product permits and contracts issued. A variety of partnerships and authorities are used for making forest products available to forest users (e.g., procurement contracts, stewardship contracts, forest products permits). The forests also use the Tribal Forest Protection Act to collaboratively work with adjacent

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			tribal governments to carry out restoration projects. Tribes culturally affiliated with lands on the Apache-Sitgreaves NFs may gather trees, portions of trees, or forest products free of charge for noncommercial traditional and cultural purposes. The gathering of forest products or temporary closures of forest lands may occur for traditional and cultural purposes if requested by a tribe. These activities are authorized by USC Title 25 Indians, Chapter 32A Cultural and Heritage Cooperation Authority, Sections 3051-3057.
Vegetation	**MA #1 and MA #9, pgs. 112 & 153:** Forest Insect and Disease Management Reduce loss of timber production through the control of root rots. 1) In root rot centers, salvage dead and dying trees during scheduled harvests. 2) Remove susceptible trees within 1 to 2 chains of the border of the center. 3) Do not invest in the thinning or planting in an infection center.	**Replaced with:** **DC for Overall Ecosystem Health Landscape Scale:** •Ecological components (e.g., soil, vegetation, water) are resilient to disturbances including human activities and natural ecological disturbances (e.g., fire, drought, wind, insects, disease, pathogens). **DCs for All PNVTs** **Landscape Scale:** •The vegetative conditions and functions are resilient to the frequency, extent, and severity of disturbances (e.g., fire, insects and disease, flood, climate change, management activities). The landscape is a functioning ecosystem that contains all its components and processes. •Insect and disease populations are at endemic levels with occasional outbreaks. A variety of seral states usually restricts the scale of localized insect and disease outbreaks. **ST for All PNVTs:** •Vegetation treatments shall include measures to reduce the potential for introduction of invasive plants and animals and damage from nonnative insects and diseases. **GD for All PNVTs:** •Insect and disease infected trees should be removed to prevent spread beyond endemic levels. **GDs for Forests: All Forested PNVTs:** •Tree species	MA #9 was not carried forward in the revised plan, because is now included with wilderness. Science continues to evolve regarding detailed management prescriptions for root diseases, which thus have been deleted. Forest Pathologists provide the most current, best available science as treatment recommendations to Silviculturists at the project and activity level. The revised plan further defines *endemic* levels of native diseases and recognizes that in that status they perform a natural role in the ecosystem that may help meet some revised plan DCs. The PNVTs (see specific PNVTs and revised plan appendix B) are validated at the project or activity level for application of plan desired

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		that are less susceptible to root disease should be retained within areas of root disease infection to reduce spread of disease. **DC for Forests: WMC Fine-Scale and Spruce-Fir Fine Scale:** •Small openings are present as a result of disturbances (e.g., wind, disease). **GD for Woodlands: All Woodland PNVTs:** •Tree species that are less susceptible to root disease should be retained within areas of root disease infection to reduce spread of disease. **GD for Community-Forest Intermix:** •To reduce fire hazard and spread of insects and disease onto adjacent lands, slash should be treated (e.g., removal, pull back, relocation, burned) as soon as possible. **Chapter 5. Monitoring Strategy:** Are insect and disease populations within reference conditions? Are their population levels compatible with achieving vegetation desired conditions and management approaches? **Appendix A. Climate Change and Apache-Sitgreaves NFs Land Management Planning:** Numerous considerations listed for native and nonnative diseases and pathogens.	conditions. Timber production and tree cutting are used to help achieve vegetation desired conditions, as well as contribute to the local and regional economy. Tree cutting on lands not suitable for timber production may occur for such purposes as restoration, salvage, fuels management, insect and disease mitigation, protection or enhancement of biological diversity or wildlife habitat, research or administrative studies, or recreation consistent with other management direction. As treatments are planned, forest managers consider native species resiliency in order to avoid loss of genetic diversity, including the widespread elimination of a particular native woody species and/or certain genotypes/phenotypes of any species. Managers also consider the impacts of insects and disease. Appropriate cutting methods and/or fire are used to manage mistletoe and other insect and disease infestations. The use of wildland fire to burn large areas is expected to be an important tool to manage some aspen and insect and disease populations. Native tree and shrub planting follows plan guidelines for individual forested and woodland PNVTs. To ensure their persistence, there is a focus on reintroduction of fire, protection of

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			tree regeneration, treatment of insects and disease, or adjustment of management actions as needed.
Vegetation	**MA #1 and MA #9, pgs.112 & 155:** Reduce loss of timber production to dwarf mistletoes through silvicultural controls. 1) No live trees will be left as potential snags if they are infected with dwarf mistletoe unless they are girdled or poisoned. 2) No live dwarf mistletoe infected overstory trees, including those used as seed sources will be left in areas with established regeneration	**Replaced with:** **DC for Overall Ecosystem Health Landscape Scale:** •Ecological components (e.g., soil, vegetation, water) are resilient to disturbances including human activities and natural ecological disturbances (e.g., fire, drought, wind, insects, disease, pathogens). **DCs for All PNVTs Landscape Scale:** •The vegetative conditions and functions are resilient to the frequency, extent, and severity of disturbances (e.g., fire, insects and disease, flood, climate change, management activities). The landscape is a functioning ecosystem that contains all its components and processes. •Insect and disease populations are at endemic levels with occasional outbreaks. A variety of seral states usually restricts the scale of localized insect and disease outbreaks. **ST for All PNVTs:** •Vegetation treatments shall include measures to reduce the potential for introduction of invasive plants and animals and damage from nonnative insects and diseases. **GD for All PNVTs:** •Insect and disease infected trees should be removed to prevent spread beyond endemic levels. **GDs for Forests: All Forested PNVTs:** •On single species dominated sites, uneven-aged management may be used where less than 20 percent of the host tree species—or less than 25 percent of the area—is infected by dwarf mistletoe. Thinning and under-burning may be used to keep dwarf mistletoe levels from increasing. Even-aged management or deferral should be considered when greater than 20 percent of the host species, or 25 percent of the area, is infected with dwarf mistletoe. •On single species dominated sites, thinning should not be attempted where more than 80 percent of the host species—or 90 percent of the area—is infected with dwarf mistletoe. Regeneration and/or deferral may be	MA #9 was not carried forward in the revised plan, because is now included with wilderness. Science has shown that dwarf mistletoe-diseased young trees (spread to them from other infected host trees above or near them) often do not live to reach maturity, and can be a forest or woodland sustainability issue, which is better addressed in the revised plan's direction using best, most recent science. Appropriate cutting methods, regeneration, and/or fire would be used to accomplish vegetation treatment objectives and to manage dwarf mistletoe and other insect and disease infestations. Possible vegetation management practices are identified in revised **Plan "Appendix B. Vegetation Management Practices."** From revised plan's **All Forested PNVTs Management Approach:** "Even-aged treatments may be applied in the short term for forest health concerns (e.g., heavy dwarf mistletoe infections) to facilitate a transition to uneven-aged management."

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		used in these cases. However, in the Community-Forest Intermix Management Area additional treatment options may be used. •On mixed species dominated sites, even-aged management or deferral should be used instead of uneven-aged management where more than 50 percent of conifer trees (excluding white fir) are infected by dwarf mistletoe. •When thinning dwarf mistletoe infected sites, as much mistletoe should be removed as possible without sacrificing the healthiest, most desirable trees for the particular site (in some situations, this may involve retaining some trees in the upper canopy that are lightly infected to meet multiple resource objectives). •Where a seed cut treatment (even-aged method to promote natural seedling establishment) is applied for dwarf mistletoe control, it should be followed within 10 years of seedling establishment by a final removal treatment or other effective means to prevent further infection. **GDs for Community-Forest Intermix:** •Where more than 80 percent of the host species or 90 percent of the area is infected with dwarf mistletoe (if regeneration or deferred treatment is not feasible), then thinning from below and/or prescribed fire should be used as needed for fire hazard reduction. •To reduce fire hazard and spread of insects and disease onto adjacent lands, slash should be treated (e.g., removal, pull back, relocation, burned) as soon as possible. **Chapter 5. Monitoring Strategy:** Are insect and disease populations within reference conditions? Are their population levels compatible with achieving vegetation desired conditions and management approaches? **Appendix A. Climate Change and Apache-Sitgreaves NFs Land Management Planning:** Numerous considerations listed for native and nonnative diseases and pathogens.	Also see Conklin and Fairweather, May 2010: Dwarf Mistletoes and their Management in the Southwest (especially Section 3a. - National Forest plans)
Vegetation	**MA #1 and MA #9: Bark Beetles, pgs. 112 & 155:** Reduce ponderosa pine stands' susceptibility to attack by IPS [sic]	**Replaced with:** **DC for Overall Ecosystem Health Landscape Scale:** •Ecological components (e.g., soil, vegetation, water) are resilient to disturbances including human activities and	Dozens more bark beetle species are now active across the ASNFs in addition to just the three listed in the existing plan. Prevention/control/

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	beetles. 1) Do not carry out slash creating activities on the same area for 2 or more consecutive years. 2) Maximize utilization of all trees cut during silvicultural treatments. 3) Treat slash in low elevation pine stands to make it unfavorable beetle habitat. 4) In precommercial thinning projects in low elevation pine, cut trees only during the period of July 1 through December 31.Reduce mixed conifer stands' susceptibility to attack by Douglas fir beetle. 1) Harvest over mature stands first consistent with other resource objectives. 2) Remove harvested logs within 1 year of felling. 3) Thin stands periodically to maintain vigor. Reduce susceptibility of Engelmann Spruce stands to Engelmann bark beetle. 1) Schedule over mature stands for harvest first, subject to other resource objectives. Remove defective, unsound, unhealthy trees during regeneration harvests. 2) Salvage wind-thrown trees as soon as possible. 3) Treat all green spruce slash over 6 inches DIB to make it unsuitable for bark beetle habitat.	natural ecological disturbances (e.g., fire, drought, wind, insects, disease, pathogens). **DCs for All PNVTs** **Landscape Scale:** •The vegetative conditions and functions are resilient to the frequency, extent, and severity of disturbances (e.g., fire, insects and disease, flood, climate change, management activities). The landscape is a functioning ecosystem that contains all its components and processes. •Insect and disease populations are at endemic levels with occasional outbreaks. A variety of seral states usually restricts the scale of localized insect and disease outbreaks. **ST for All PNVTs:** •Vegetation treatments shall include measures to reduce the potential for introduction of invasive plants and animals and damage from nonnative insects and diseases. **GD for All PNVTs:** •Insect and disease infected trees should be removed to prevent spread beyond endemic levels. •Green slash and decked logs should be managed, in a timely manner, to make them unfavorable bark beetle habitat. •Project implementation should include bark beetle monitoring within and adjacent to all active slash-creating projects to help prevent beetle outbreak. **GDs for Community-Forest Intermix:** •To reduce fire hazard and spread of insects and disease onto adjacent lands, slash should be treated (e.g., removal, pull back, relocation, burned) as soon as possible. **Chapter 5. Monitoring Strategy:** Are insect and disease populations within reference conditions? Are their population levels compatible with achieving vegetation desired conditions and management approaches? **Appendix A. Climate Change and Apache-Sitgreaves NFs Land Management Planning:** Numerous considerations listed for native and nonnative insects, including bark beetles.	management recommendations for each beetle species and host tree species are much too detailed to include in a programmatic forest plan. Site specific beetle population levels (endemic versus epidemic) are best addressed with actions at the project-level, as advised by forest Entomologists, which can vary from one year to the next. Only general beetle direction is included in the revised plan, with the caveat that all projects and actions should move the area toward plan DCs for forest and woodland sustainability and restored natural role of beetles in the ecosystem. Revised plan **Management Approach for All PNVTs:** Managers consider the impacts of insects and disease. Appropriate cutting methods and/or fire are used to manage mistletoe and other insect and disease infestations. Large project areas (generally larger than 500 to 1,000 acres) creating green slash for 2 or more consecutive years are generally spaced over 2 miles apart from each other to help prevent bark beetle population buildup. To further reduce bark beetle occurrence, managers attempt to effectively treat slash within approximately 30 days of slash creation.

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Vegetation	**MA #1 and MA #9, pgs. 112 & 155:** Reduce the amount of wood volume lost to stem decays. 1) Remove infected, unsound and defective trees at the first opportunity. 2) Strictly enforce all contractual provisions that will minimize wounding of residual trees during logging.	**Replaced with:** **GD for All PNVTs:** •During project design and implementation, precautions should be taken to reduce the potential for damage to residual vegetation in order to prevent premature or excessive mortality. **GD for Forests: All Forested PNVTs:** •Where a site-specific analysis indicates the need to reduce fire-kill of desired residual trees, fuel continuity and/or loading should be reduced before use of prescribed fire. **GD for Forests: Aspen:** •Aspen restoration and retention efforts should include measures to ensure viability of aspen on the landscape. **GD for Forest Products:** •Permits issued for forest products should include stipulations to protect resources.	Although stem decays in some conifer species can be a concern, this plan content was modified in the revised plan for Aspen in particular, because this species is most susceptible to stem decays as a result of bark/bole wounding by any form of physical damage, including logging equipment and prescribed fire. Once introduced, stem decays often cause mature tree mortality, and/or prevent younger trees from reaching maturity. Loss of wood volume has become less a concern than loss of desired conditions that trees provide (i.e. not sustainable). Plan direction and interdisciplinary input are used to develop additional project specific and/or resource specific conditions to be included in all forest product permits and contracts issued.
Vegetation	**Forest-wide STs & GDs + MA #1 STs & GDs, pgs. 86 and 113:** Road Maintenance and Management, Timber Sale Preparation and Administration Road densities should be planned to economically balance road costs and skidding costs. Permanent road densities should average 3.5 miles/square mile or less, unless topography dictates higher densities to economically remove the timber. Also, open road densities after Timber sale activities cease should	**Deleted. Replaced with:** **DCs for Overall Ecosystem Health, Landscape Scale:** •Healthy ecosystems provide a wide range of ecosystem services. •Watersheds exhibit high geomorphic, hydrologic, and biotic integrity relative to their natural potential condition. **OBJ for Overall Ecosystem Health -** During the planning period, improve the condition class on at least 10 priority 6th level HUC watersheds by removing or mitigating degrading factors[2]. [2]Degrading factors include, but are not limited to, actions that cause or maintain high departure from historic vegetation conditions, unsatisfactory or impaired soil condition, nonfunctioning riparian areas, impaired species habitat, occurrence of invasive species, and unstable road and trail conditions. **GD for Soil -**Projects with ground-	Road and skidding cost considerations for timber operations were included in the final determination of Suitable Timberlands, as mapped in the plan revision EIS. The rigid and/or arbitrary road densities stated per square mile in the existing plan may not be appropriate forest-wide. They were intended as a de-facto measure to reduce road-related impacts to soils, waters, vegetation, recreation quality, and wildlife/fish habitat. The revised plan provides managers flexibility to

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	average 2.0 mi/sq. mi. or less.	disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD for Water Resources -** Projects with ground-disturbing activities should be designed to minimize long and short term impacts to water resources. Where disturbance cannot be avoided, project specific soil and water conservation practices and best management practices (BMPs) should be developed. **GD for Wildlife and Rare Plants** - Constructed features should be maintained to support the purpose(s) for which they were built. Constructed features should be removed when no longer needed. **GD for Landscape Scale Disturbance Events -** Erosion control mitigation features should be implemented to protect significant resource values and infrastructure such as stream channels, roads, structures, threatened and endangered species, and cultural resources. **DCs for Motorized Opportunities:** •A maintained road and motorized trail system is in place and provides for safety and access for the use (e.g., recreation, minerals, vegetation treatment, fire protection) of the Apache-Sitgreaves NFs. •Users have opportunities for motorized access and travel on a system of designated NFS roads, NFS motorized trails, and motorized areas[25]. [25]The Apache-Sitgreaves NFs will designate NFS roads, NFS motorized trails, and motorized areas through a separate travel management analysis. •The transportation system provides a variety of recreation opportunities including varying degrees of difficulty, from OHV trails to paved scenic byways, while limiting resource and/or user conflicts. •NFS roads, motorized trails, and motorized areas are easily identified on the ground (e.g., well-marked). •The road and trail system is accessible from local communities, State, county, and local public roads	determine site-specific road densities/management appropriate for the resource conditions and transportation needs within any project area. It provides for protection & management of healthy/ sustainable soils, watersheds, and wildlife connectivity, which are the primary resource concerns associated with national forest system roads and motorized trails. The revised plan also provides the framework to guide future changes to the transportation system. Once the final decision of this plan has been made, potential changes to the forests' transportation system will be evaluated under this framework and through implementation of the Travel Management Rule (36 CFR § 212) as required by Executive Order 11644. That analysis will consider potential resource impacts, access needs, public input, and alternative views rather than setting an arbitrary road density target. Site specific open road density and temporary road construction needed for timber/thinning operations should to be determined at the project level to meet revised plan's DCs, OBJs, STs, and Suitability direction for each revised plan MA and PNVT the project area occupies, per revised plan's definitions of system roads,

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		and trails. •The location and design of roads and trails does not impede wildlife and fish movement. **OBJ for Motorized Opportunities:** •Annually, maintain at least 20 percent of the passenger vehicle and 10 percent of the high-clearance vehicle NFS roads**. STs for Motorized Opportunities:** •Temporary road construction shall minimize the impacts to resource values and facilitate road rehabilitation. Temporary roads shall be rehabilitated following completion of the activities for which they were constructed. •Road maintenance and construction activities shall be designed to reduce sediment (e.g., water bars, sediment traps, grade dips) while first providing for user safety. **GDs for Motorized Opportunities:** •New roads or motorized trails should be located to avoid Mexican spotted owl protected activity centers, northern goshawk post-fledging family areas, and other wildlife areas as identified; seasonal restrictions may be an option. •New roads, motorized trails, or designated motorized areas should be located to avoid meadows, wetlands, seeps, springs, riparian areas, stream bottoms, sacred sites, and areas with high concentrations of significant archaeological sites. The number of stream crossings should be minimized or mitigated to reduce impacts to aquatic species. •As projects occur in riparian or wet meadow areas, unneeded roads or motorized trails should be closed or relocated, drainage restored, and native vegetation reestablished to move these areas toward their desired condition. •As projects occur, roads or motorized trails that contribute to negative impacts on cultural resources should be closed or relocated. •As projects occur, redundant roads or motorized trails should be removed to reduce degradation of natural resources. •Roads and motorized trails removed from the transportation network should be treated in order to avoid future risk to hydrologic function and aquatic habitat. •Roads and motorized trails should be designed	temporary roads, & unauthorized roads. Approval of temporary road construction is contingent on the completion of an environmental analysis that addresses road construction and road obliteration, including setting timelines. When routes are removed from the transportation system, follow-up treatments may include outsloping roadbeds, removing stream crossing structures, breaching drainage ditches, removing unstable fills, maintaining or restoring fish passage, and removing invasive weeds. Measures (e.g., education, signage, law enforcement, seasonal road closures) are used to discourage encroachment of motorized vehicles into nonmotorized areas and to protect wildlife, infrastructure, and other resources. Emphasis is placed on reducing user conflict and resource damage. Resource damage from vehicle use is rehabilitated as soon as possible.

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		and located so as to not impede terrestrial and aquatic species movement and connectivity. •As projects occur, existing meadow crossings should be relocated or redesigned, as needed, to maintain or restore hydrologic function using appropriate tools such as French drains and elevated culverts. •After management activities occur in areas with high potential for cross-country motorized vehicle use, methods (e.g., barriers, signing) should be used to control unauthorized motorized use. **GDs for Natural Landscape MA:** •Limited cross-country motorized vehicle use may be authorized for administrative purposes. •Temporary road construction and motorized equipment may be used in order to achieve ecological desired conditions. **Chapter 4, Table 10. Suitability for new designated motorized areas, NFS roads, NFS motorized trails, and temporary road construction on the Apache-Sitgreaves NFs:** NFS roads and Temporary road construction is suitable for the following revised plan MAs: General Forest, Community-Forest Intermix, High Use Developed Recreation Area, Energy Corridor, Wild Horse Territory. Temporary road construction is also suitable for the following revised plan MAs: Wildlife Quiet Area, Natural Landscape. NFS Roads/Temp roads are also suitable in Eligible or suitable wild and scenic river corridor segments not classified as wild (FSH 1909.12 Chapter 82.51); and in Areas with high concentration of significant archaeological or historic sites, only where construction or rerouting of a NFS road or motorized trail will protect and/or reduce impacts to cultural resource values.	
Vegetation	**MA 2 Woodland Management Emphasis**: Emphasize fuelwood production, wildlife habitat, watershed condition, and livestock grazing. Other resources are managed in harmony with the	**Landscape Scale DC for Overall Ecosystem Health**: Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history,	The revised LMP provides direction for fuelwood harvest, wildlife habitat within the woodland PNVTs, and managed livestock grazing, and meets the intent of this provision.

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	emphasized resources. **Page 116**.	distribution, and natural population fluctuations of the species within the capability of the landscape. **Landscape Scale DC for Overall Ecosystem Health**: Large blocks of habitat are interconnected, allowing for behavioral and predator-prey interactions, and the persistence of metapopulations and highly interactive wildlife species across the landscape. Ecological connectivity extends through all plant communities. **Landscape Scale DC for Overall Ecosystem Health**: Habitat configuration and availability allows wildlife populations to adjust their movements (e.g., seasonal migration, foraging) in response to climate change and promote genetic flow between wildlife populations. **Landscape Scale DC for All PNVTs**: Vegetation provides products—such as wood fiber or forage—to help meet local and regional needs in a manner that is consistent with other desired conditions on a sustainable basis within the capacity of the land. **Mid-Scale DC for All PNVTs**: Vegetative ground cover (herbaceous vegetation and litter) is optimized to protect and enrich soils and promote water infiltration. There is a diverse mix of cool and warm season grasses and desirable forbs species. **Fine Scale DC for All PNVTs**: Herbaceous vegetation amount and structure (e.g., plant density, height, litter, seed heads) provides habitat to support wildlife and prey species. **GD for All Woodlands**: Treatments should leave single or small groups of medium to large native trees that are widely spaced with expanses of herbaceous vegetation and coarse woody debris to provide for soil productivity, traditional uses (e.g., piñon nut gathering), and wildlife needs such as foraging habitat for migratory birds (e.g., black-throated gray warbler, piñon jay) and other birds. **GD for All Woodlands**: Hiding cover, approach cover (by waters), and travel corridor cover should be provided	

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		where needed by wildlife. **Mid-scale DC for MPO**: Some large patches in the Madrean pine-oak woodland are closed canopy, have multiple age classes, large trees, and old growth-like characteristics (e.g., numerous snags, large coarse woody debris) in order to provide for wildlife such as Mexican spotted owl and black bear, that need denser habitat. **DC for Forest Products**: The Apache-Sitgreaves NFs provide a sustainable supply of forest products (e.g., small roundwood, sawlogs, biomass, firewood, cones, Christmas trees, wildlings) to businesses and individuals within the capability of the land. **OBJ for Forest Products**: Annually, provide up to 94,000 CCF (119,380 cords) of firewood for personal and commercial use. **ST for Forest Products**: Authorizations to cut, collect, or use forest products for any personal, commercial, or scientific purpose (i.e., permits, contracts, agreements) shall include provisions to ensure the needs of wildlife, which depend upon those forest products, will continue to be met (e.g., fungi and cone collection with respect to overwinter forage needs of squirrels). **DC for Livestock Grazing**: Livestock grazing and associated activities occur such that healthy, diverse plant communities, satisfactory condition soils, and wildlife habitat are maintained or improved. **DC for Livestock Grazing**: Livestock grazing is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). **GD for Livestock Grazing**: Forage, browse, and cover needs of wildlife, authorized livestock, and wild horses should be managed in balance with available forage so that plants providing for these needs remain at or move	

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		toward a healthy, persistent state.	
Vegetation	**MA2 Wildlife & Fish Habitat Improvement**: Manage areas that are harvested for fuelwood. a) Emphasize openings on existing and potential big game range. Retain thermal and hiding cover on north and east exposures. **Page 117**.	**Mid-Scale DC for All PNVTs**: Vegetation conditions provide hiding and thermal cover in contiguous blocks for wildlife. Native plant species are present in all age classes and are healthy, reproducing, and persisting. **Fine Scale DC for All PNVTs**: Herbaceous vegetation amount and structure (e.g., plant density, height, litter, seed heads) provides habitat to support wildlife and prey species. **GD for Wildlife and Rare Plants**: Cool and/or dense vegetation cover should be provided for species needing these habitat components (e.g., Goodding's onion, black bear, White Mountains chipmunk, western yellow-billed cuckoo). **Mid-Scale DC for Grasslands**: Woody (tree and shrub) canopy cover is less than 10 percent. **Fine Scale DC for Grasslands**: During the critical pronghorn antelope fawning period (May through June), cool season grasses and forbs provide nutritional forage; while shrubs and standing grass growth from the previous year provide adequate hiding cover (10 to 18 inches) to protect fawns from predation. **OBJ for Grasslands**: Decrease or maintain the woody canopy cover at less than 10 percent by treating up to 25,000 acres annually. **GD for Grasslands**: Restoration treatment of grasslands should result in a woody canopy cover of less than 10 percent; more than one treatment may be required. **GD for Grasslands**: Mechanical restoration of grasslands should emphasize individual tree removal to limit soil disturbance. **Management Actions for Grasslands:** The management approach is to maintain and improve grasslands by eliminating competing conifers, leaving woody debris scattered across the ground, stabilizing gullies to restore water tables, and reseeding with native	The revised LMP provides direction for fuelwood harvest, wildlife habitat within the woodland PNVTs, and managed livestock grazing, and meets the intent of this provision.

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		species.	
Vegetation	**MA2 Wildlife & Fish Habitat Improvement**: Manage areas that are harvested for fuelwood. b) Manage fuelwood sales to break up large areas of single-age classes. **Page 117**.	**GD for All Woodlands**: Treatments should leave single or small groups of medium to large native trees that are widely spaced with expanses of herbaceous vegetation and coarse woody debris to provide for soil productivity, traditional uses (e.g., piñon nut gathering), and wildlife needs such as foraging habitat for migratory birds (e.g., black-throated gray warbler, piñon jay) and other birds. **Landscape Scale DC for MPO**: A mix of desired species, ages, heights, and groupings of trees create a mosaic across the landscape. **Landscape Scale DC for MPO**: The majority of this woodland has an open canopy consisting of large trees and an herbaceous understory, with some groups of closed canopy. Overall, canopy cover is 10 to 50 percent. **Mid-Scale DC for MPO**: Some large patches in the Madrean pine-oak woodland are closed canopy, have multiple age classes, large trees, and old growth-like characteristics (e.g., numerous snags, large coarse woody debris) in order to provide for wildlife such as Mexican spotted owl and black bear, that need denser habitat. **Fine Scale DC for MPO**: Single large trees or small groups are widely spaced between large expanses of herbaceous vegetation and shrubs. **Landscape Scale DC for PJ**: The piñon-juniper savanna is open in appearance with trees occurring as individuals or in small groups and ranging from young to old. Overall, tree canopy cover is 10 to 15 percent, but may range up to 30 percent.	The revised LMP provides direction for fuelwood harvest and provides for a diversity of age classes, size classes and spatial arrangement, and meets the intent of this provision.
Vegetation	**MA2 Wildlife & Fish Habitat Improvement**: c) Leave cavity excavated trees, shrubs, and oak in openings created for wildlife	**Landscape Scale DC for PP:** Where it naturally occurs, Gambel oak is present with all age classes represented. It is reproducing to maintain or expand its presence on capable sites across the landscape. Large Gambel oak snags are typically 10 inches or larger in diameter and	The revised LMP provides direction for fuelwood harvest, wildlife habitat within the woodland PNVTs, and managed livestock grazing, and meets the intent of this provision.

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	habitat. **Page 117**.	are well distributed. **Landscape Scale DC for DMC**: The forest arrangement consists of small clumps and groups of trees with variably-sized interspaces of grass, forb, and shrub vegetation associations similar to reference conditions. Size, shape, number of trees per group, and number of groups per area are variable across the landscape. Where they naturally occur, groups of Gambel oak are healthy and maintained or increased. Tree density may be greater in some locations, such as north-facing slopes and canyon bottoms. **Fine Scale DC for PP**: Where Gambel oak occurs, the majority are single trunk trees over 8 inches in diameter with full crowns. **GDs for PP and DMC Forests**: Where Gambel oak or other native hardwood trees and shrubs are desirable to retain for diversity, treatments should improve vigor and growth of these species. **Landscape Scale DC for MPO**: Understory vegetation includes evergreen oaks, mountain mahogany, grasses, and forbs. **GD for MPO**: Where Mexican spotted owls are found nesting in canyons or on north slopes within the Madrean pine-oak woodland, adjacent treatments should be modified to meet the needs of foraging owls. **DC for Community-Forest Intermix**: Where potential occurs, pure deciduous stands (e.g., aspen, Gambel oak) act as natural firebreaks and enhance scenery.	Incorporating management direction to guide future projects to provide habitat to maintain viable populations of existing native and desired nonnative vertebrate species in the planning area has been identified as one of the "**Needs for Change**."
Vegetation	**MA2 Wildlife & Fish Habitat Improvement Standard and Guideline (Pages 116-117)**: The alligator juniper component of the ponderosa pine is managed primarily for maintenance and enhancement of wildlife habitat by the following criteria: - In areas where alligator juniper	**Landscape Scale DC for All PNVTs**: Old or large trees, multistoried canopies, large coarse woody debris, and snags provide the structure, function, and associated vegetation composition as appropriate for each forested and woodland PNVT. **GD for All Woodlands**: Treatments should leave single or small groups of medium to large native trees that are widely spaced with expanses of herbaceous vegetation	The revised LMP provides DCs for the retention of large trees for the maintenance and enhancement of wildlife habitat within the forested and woodland PNVTs. The revised LMP defines "large" trees into two diameter groups: large trees in woodlands and large trees in forests. Large trees in

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	comprise less than 50 percent of the total basal area, retain live alligator juniper trees > 12 inches D.B.H. **Page 117**. - In areas where alligator juniper comprise more than 50 percent of the total basal area, live trees > 12 inches D.B.H. may be removed if < 25 percent of the crown is living. **Page 117**. - In both of the above cases, some live trees < 12 inches D.B.H. may be removed. Retain at least 40 percent of the trees. **Page 117**.	and coarse woody debris to provide for soil productivity, traditional uses (e.g., piñon nut gathering), and wildlife needs such as foraging habitat for migratory birds (e.g., black-throated gray warbler, piñon jay) and other birds. **Landscape Scale DC for MPO**: The majority of this woodland has an open canopy consisting of large trees and an herbaceous understory, with some groups of closed canopy. Overall, canopy cover is 10 to 50 percent. **Mid-Scale DC for MPO**: Some large patches in the Madrean pine-oak woodland are closed canopy, have multiple age classes, large trees, and old growth-like characteristics (e.g., numerous snags, large coarse woody debris) in order to provide for wildlife such as Mexican spotted owl and black bear, that need denser habitat. **Fine Scale DC for MPO**: Single large trees or small groups are widely spaced between large expanses of herbaceous vegetation and shrubs.	woodlands are approximately 10 inches and greater in diameter and consist of piñon, juniper, oak, and other "dwarf" tree species where diameter is measured at the root collar (DRC). Large trees in forests are approximately 20 inches and greater that dominate montane and subalpine zones, and they are measured at "breast height" (DBH). Large trees are valued for their longevity in providing old growth habitat and for their added ability to enhance structure diversity.
Vegetation	**MA2 Wildlife & Fish Habitat Improvement**: e) Retain Ponderosa pine stringers as inclusions. **Page 118**.	**Fine Scale DC for Riparian Areas**: Vegetation is structurally diverse, often dense, providing for high bird species diversity and abundance, especially neotropical migratory birds. It includes large trees and snags in the cottonwood-willow and mixed broadleaf deciduous riparian forests to support species such as beaver, yellow-billed cuckoo, bald eagles, Arizona gray squirrel, and various bat species. **ST for All Forested PNVTs**: Regulated timber harvest activities shall occur only on those lands classified as suitable for timber production.	The revised LMP defines grasslands, woodlands, interior chaparral, and riparian forested PNVTs as areas not suitable for timber product; however, tree cutting may be used to move toward the vegetation desired condition.
Vegetation	**MA2 Wildlife & Fish Habitat Improvement**: Manage for at least an average of 100 snags per 100 acres on 40 percent of the pinyon-juniper woodland acres in each diversity unit. Snags are at least 9"	**Landscape Scale DC for All PNVTs**: Old or large trees, multistoried canopies, large coarse woody debris, and snags provide the structure, function, and associated vegetation composition as appropriate for each forested and woodland PNVT. **Landscape Scale DC for MPO**: Snags, averaging 1 to 2	The revised LMP provides direction for number of snags per acre within the woodland PNVTs. Large trees in woodlands are approximately 10 inches and greater in diameter and consist of piñon, juniper, oak, and

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	diameter at the root collar and at least 10" high. **Page 118**.	per acre, and older trees are scattered across the landscape. Coarse woody debris averages 1 to 5 tons per acre. **Mid-Scale DC for MPO**: Some large patches in the Madrean pine-oak woodland are closed canopy, have multiple age classes, large trees, and old growth-like characteristics (e.g., numerous snags, large coarse woody debris) in order to provide for wildlife such as Mexican spotted owl and black bear, that need denser habitat. **Landscape Scale DC for PJ Savana Woodland**: Old growth occurs in isolated locations scattered throughout the landscape, as individual old trees or as clumps of old trees. Other old growth components may also be present including dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. **Landscape Scale DC for PJ Persistent Woodland**: Snags, averaging one to two per acre, and older trees with dead limbs and tops are scattered across the landscape. Coarse woody debris averages 2 to 5 tons per acre. **Landscape Scale DC for PJ Persistent Woodland**: Old growth includes old trees, dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality).	other "dwarf" tree species where diameter is measured at the root collar (DRC). The revised LMP meets the intent of this provision.
Vegetation	**MA2 Range Improvement, Range Forage Improvement Maintenance**: Where seral grasslands are maintained in the pinyon-juniper woodland, eliminate invading vegetation through mechanical, chemical, or planed fire treatments on a maintenance schedule averaging once approximately every 25 years. Stabilize gullies, scarify the soil, and seed	**Landscape Scale DC for All PNVTs**: Vegetation conditions allow for transition zones or ecotones between riparian areas, forests, woodlands, shrublands, and grasslands. Transition zones may shift in time and space due to changing site conditions from disturbances (e.g., fire, climate change). **Landscape Scale DC for Grasslands**: Perennial herbaceous species dominate and include native grasses, grass-like plants (sedges and rushes), and	Many of the areas that appear to woodland are actually grasslands that have been encroached by conifer species. Along with the mentioned reference from the revised LMP; the **Management Approaches for Grasslands** is to maintain and improve grasslands by eliminating competing conifers, leaving woody

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	disturbed soils with a mix tailored for the site. Seed suitable areas in all range condition classes. Control grazing through management and/or fencing to allow for adequate revegetation of treated areas. **Page 119**.	forbs, and in some locations, a diversity of shrubs. **Landscape Scale DC for Grasslands**: Herbaceous vegetation and litter provide for and maintain the natural fire regime (fire regime I and II). In semi-desert grasslands, the natural fire return interval is approximately every 2 to 10 years. In Great Basin grasslands the natural fire return interval is approximately every 10 to 30 years. In montane/subalpine grasslands it ranges from approximately 2 to 400 years, depending on the adjacent forested PNVT. **Mid-Scale DC for Grasslands**: Woody (tree and shrub) canopy cover is less than 10 percent. **Fine Scale DC for Grasslands**: Average herbaceous vegetation heights vary by grassland PNVT and yearly weather conditions. Ungrazed herbaceous vegetation heights20 range from 7 to 29 inches in Great Basin grasslands, 7 to 26 inches in montane/subalpine grasslands, and 10 to 32 inches in semi-desert grasslands. **OBJ for Grasslands**: Decrease or maintain the woody canopy cover at less than 10 percent by treating up to 25,000 acres annually. **GD for Grasslands**: Restoration treatment of grasslands should result in a woody canopy cover of less than 10 percent; more than one treatment may be required. **GD for Grasslands**: Mechanical restoration of grasslands should emphasize individual tree removal to limit soil disturbance. **DC for Livestock Grazing**: Livestock grazing and associated activities occur such that healthy, diverse plant communities, satisfactory condition soils, and wildlife habitat are maintained or improved. **DC for Livestock Grazing**: Livestock grazing is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not	debris scattered across the ground, stabilizing gullies to restore water tables, and reseeding with native species. Treatments are located in restorable and treatable grasslands, primarily in the Great Basin and semi-desert grassland PNVTs. Obliteration and rehabilitation of unauthorized roads and trails may be needed. There is an emphasis to provide enough grass to reduce topsoil loss and allow fire to spread and resume its role in maintaining grasslands.

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		exceed available forage production within established use levels). **DC for Livestock Grazing**: Critical areas should be managed to address the inherent or unique site factors, condition, values, or potential conflicts associated with them. **DC for Livestock Grazing**: As areas are mechanically treated or burned, or after large disturbances, timing of livestock grazing should be modified as needed, in order to move toward desired conditions and to accomplish the objectives for the treatment or disturbed area. **DC for Livestock Grazing**: Forage, browse, and cover needs of wildlife, authorized livestock, and wild horses should be managed in balance with available forage so that plants providing for these needs remain at or move toward a healthy, persistent state.	
Vegetation	**MA2 Range Improvement, Range Forage Improvement**: Small site conversions to a lower successional state occur only where the rating of soil potential for revegetation and the erosion potential (TESH, January 7, 1985) are determined to be suitable and where the forage production rating is moderate or high. **Page 119**.	**Landscape Scale DC for Overall Ecosystem Health**: Ecological components (e.g., soil, vegetation, water) are resilient to disturbances including human activities and natural ecological disturbances (e.g., fire, drought, wind, insects, disease, pathogens). **Management Approaches for Overall Ecosystem Health**: Highest priority treatments are those that remove risk factors that may threaten the integrity of the watershed, specifically those that cause low geomorphic, hydrologic, and biotic integrity relative to the watershed's natural potential condition and that lead to unstable drainage networks or to conditions which may not support beneficial uses of water. **Landscape Scale DC for Soil**: Ecological and hydrologic functions are not impaired by soil compaction. **Mid-Scale DC for Soil**: Soil condition rating is satisfactory (Satisfactory soil condition exists when indicators signify that soil function is being sustained and soil is functioning properly and normally. The ability of soil to maintain resource values and sustain outputs is	The intent of this Range Improvement, Range Forage Improvement item has been carried forward into revised LMP. Using Terrestrial Ecosystem Survey for the Apache-Sitgreaves National Forests" (Laing et al., 1987, as amended) as the primary reference for soil capability, soil loss, vegetation composition and cover, and litter cover has been cited several times throughout the revised LMP. The Terrestrial Ecosystem Survey (TES) for the Apache-Sitgreaves NFs was developed using local, regional, and southwestern U.S. research data collected prior to its publication in 1987. The forests use ground cover and vegetation canopy cover

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		high). **Mid-Scale DC for Soil**: Soils are stable within their natural capability4. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **Fine Scale DC for Soil**: Soil loss rates do not exceed tolerance soil loss rates. **Fine Scale DC for Soil**: Logs and other woody material are distributed across the surface to maintain soil productivity **Fine Scale DC for Soil**: Vegetation and litter are sufficient to maintain and improve water infiltration, nutrient cycling, and soil stability. **OBJ for Soil**: Annually, enhance or restore an average of 350 acres within priority 6th level HUC watersheds, including treating the causes of State and federally designated impaired or threatened waters to improve watershed condition and water quality. **GD for Soil**: Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices should be developed. **GD for Soil**: Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted. **GD for Soil**: Locally collected seed should be used where available and cost effective. Seeds should be tested to ensure they are free from noxious weeds and invasive nonnative plants at a State certified seed testing laboratory before acceptance and mixing. **GD for Soil**: Coarse woody debris retention and/or creation should be used as needed to help retain long term soil productivity. **Management Approach for Soil**: The forests emphasize restoration treatments in priority 6th level	provided for each mapping unit to establish resource value ratings for soil and plant health for many management activities, particularly in the analysis and monitoring of restoration treatments and for grazing allotment management. The TES will be updated as new information is available to reflect current conditions and concepts. Ecological site descriptions will be developed using the TES as a baseline for further refinement of resource value ratings. This is a **Management Approach for Soil**

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		HUC watersheds that have a high risk to ecologic sustainability. **Landscape Scale DC for All PNVTs**: Organic soil cover and herbaceous vegetation protect soil, facilitate moisture infiltration, and contribute to plant and animal diversity and ecosystem function. **Landscape Scale DC for All PNVTs**: Vegetation conditions within each PNVT should be similar to site potential (Similarity refers to a method of comparing the composition of the existing plant community to the potential natural plant community as described by the ecological unit in the "Terrestrial Ecosystem Survey for the Apache-Sitgreaves National Forests" (Laing et al., 1987, as amended)). **Mid-Scale DC for All PNVTs**: Vegetative ground cover (herbaceous vegetation and litter) is optimized (Based on site capability as defined by the specific ecological unit under consideration in the "Terrestrial Ecosystem Survey for the Apache-Sitgreaves National Forests" (Laing et al., 1987, as amended)) to protect and enrich soils and promote water infiltration. There is a diverse mix of cool and warm season grasses and desirable forbs species. **DC for Livestock Grazing**: Livestock grazing and associated activities occur such that healthy, diverse plant communities, satisfactory condition soils, and wildlife habitat are maintained or improved. **GD for Livestock Grazing**: Critical areas should be managed to address the inherent or unique site factors, condition, values, or potential conflicts associated with them.	
Vegetation	MA2 Range Improvement, Range Forage Improvement: When seeding is necessary, sites are seeded with a mix that emphasizes creating a balance between warm and cool season grasses. Control grazing through management	**GD for Soil:** Locally collected seed should be used where available and cost effective. Seeds should be tested to ensure they are free from noxious weeds and invasive nonnative plants at a State certified seed testing laboratory before acceptance and mixing. **Mid-Scale DC for All PNVTs**: Vegetative ground cover	This item is prescriptive: Project specialists determine project recovery activities and set of required mitigation measures to insure success of specific projects. However, principles for ecological

Resource	1987 Plan Content (as amended). Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
	and/or fencing to allow for adequate revegetation protection of treated areas. Page 119	(herbaceous vegetation and litter) is optimized to protect and enrich soils and promote water infiltration. There is a diverse mix of cool and warm season grasses and desirable forbs species. **GD for Livestock Grazing**: As areas are mechanically treated or burned, or after large disturbances, timing of livestock grazing should be modified as needed, in order to move toward desired conditions and to accomplish the objectives for the treatment or disturbed area. **GD for Livestock Grazing**: Constructed features should be maintained to support the purpose(s) for which they were built. Constructed features should be removed when no longer needed.	restoration and resilience as outlined in FSM 2020 are the basis for ecological restoration projects and activities.
Vegetation	**MA3 Land Management Planning, Planning and Inventory**: Recovery activities such as fencing, vegetation projects, and special management prescriptions will be maintained until the affected area(s) are brought into satisfactory condition and as long thereafter as necessary to maintain the area(s) in satisfactory condition, or until they are replaced by more effective techniques. **Page 124**.	**GD for Soil**: Projects with ground-disturbing activities should be designed to minimize long and short term impacts to soil resources. Where disturbance cannot be avoided, project specific soil and water conservation practices (Soil and water conservation practices – Set of practices, which when applied during implementation of a project, protects soil and water quality to the level required by beneficial uses. These lead to the formation of site-specific BMPs during project planning.) should be developed. **GD for Water Resources**: Projects with ground-disturbing activities should be designed to minimize long and short term impacts to water resources. Where disturbance cannot be avoided, project specific soil and water conservation practices and best management practices (BMPs) should be developed. **GD for Aspen**: To preclude concentrated herbivore impacts, new surface water development should not be constructed within proximity to aspen stands (approximately a quarter of a mile). **GD for Aspen**: Aspen restoration and retention efforts should include measures to ensure viability of aspen on the landscape.	Overall direction within the revised LMP is geared more toward mitigation to prevent resource damage and to protect treatment activities. However, this item is prescriptive: Project specialists determine project recovery activities and set of required mitigation measures to insure success of specific projects.

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		Management Approach for Aspen: Aspen restoration efforts may include providing/improving substitute forage away from aspen, removing conifer competition, fencing to exclude ungulates, and range management practices (e.g., salt locations; herding; timing, intensity, frequency, and duration of livestock use). **GD for Wildlife and Rare Plants**: Modifications, mitigations, or other measures should be incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives. **GD for Wildlife and Rare Plants**: Constructed features should be maintained to support the purpose(s) for which they were built. Constructed features should be removed when no longer needed. **GD for Livestock Grazing**: As areas are mechanically treated or burned, or after large disturbances, timing of livestock grazing should be modified as needed, in order to move toward desired conditions and to accomplish the objectives for the treatment or disturbed area. **GD for Livestock Grazing**: Constructed features should be maintained to support the purpose(s) for which they were built. Constructed features should be removed when no longer needed.	
Vegetation	**MA3 Wildlife & Fish O&M, Wildlife Management:** b) Vegetation resource (where the site is capable of supporting woody plants): (1) Manage for and maintain at least 60 percent of the woody plant composition in three or more riparian species. (2) Manage for and maintain at least three age classes of riparian woody plants, with at least 10 percent of the woody plant cover in sprouts, seedlings, and saplings.	Identified as a "**Need for Change**" to describe the desired composition, structure, and cover of these vegetation communities that will result in resilient, functioning ecosystems. **DC for Maintenance and Improvement of Ecosystem Health**: Healthy ecosystems are diverse and self-sustaining, displaying a variety of conditions (e.g., composition, structure, function, processes) between and within them. **Landscape Scale DC for All PNVTs**: Each PNVT contains a mosaic of vegetative conditions, densities, and structures. This mosaic occurs at a variety of scales	The intent of this has been carried forward into revised LMP.

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	(3) Manage for and maintain at least 60 percent near natural shrub and tree crown cover. (4) Determine need and rehabilitate riparian areas through seeding and planting woody species in areas that are in unsatisfactory condition. **Page 126**.	across landscapes and watersheds. The distribution of physical and biological conditions is appropriate to the natural disturbance regimes affecting the area. **Management Actions for Overall Ecosystem Health**: Treatments include those that restore and then maintain natural fire regimes, improve riparian condition, restore meadows or openings, repair gullies, and reduce erosion. **GD for Water Resources**: Streams, stream banks, shorelines, lakes, wetlands, and other bodies of water should be protected from detrimental changes in water temperature and sediment to protect aquatic species and riparian habitat. **4th Level (Subbasin) to 5th Level (Watershed) HUC Watershed Scale DC for Aquatic Habitat and Species**: Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **6th Level (Sub-watershed) HUC Watershed Scale DC for Aquatic Habitat and Species**: Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian-dependent plant and animal species. **OBJ for Aquatic Habitat and Species**: Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species. **OBJ for Aquatic Habitat and Species**: During the planning period, complete at least five projects (e.g., remove barriers, restore dewatered stream segments, or connect fragmented habitat) to provide for aquatic and riparian associated species and migratory species. **Landscape Scale DC for Riparian Areas**: Natural ecological disturbances (e.g., flooding, scouring) promote a diverse plant structure consisting of	

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		herbaceous, shrub, and tree species of all ages and size classes necessary for the recruitment of riparian-dependent species. **Mid-Scale DC for Riparian Areas**: Willows (e.g., Bebb, Geyer, Arizona, Goodding's) are reproducing with all age classes present, where the potential exists. **Mid-Scale DC for Riparian Areas**: Riparian-obligate species within wet meadows, around springs and seeps, along streambanks, and active floodplains provide sufficient[10] vegetative ground cover (herbaceous vegetation, litter, and woody riparian species) to protect and enrich soils, trap sediment, mitigate flood energy, stabilize streambanks, and provide for wildlife and plant needs. **Fine Scale DC for Riparian Areas**: Vegetation is structurally diverse, often dense, providing for high bird species diversity and abundance, especially neotropical migratory birds. It includes large trees and snags in the cottonwood-willow and mixed broadleaf deciduous riparian forests to support species such as beaver, yellow-billed cuckoo, bald eagles, Arizona gray squirrel, and various bat species.	
Vegetation	**MA3 Timber Sales, Timber Management**: Use vegetation manipulation, e.g. salvage, thinning, slash piling, planting, seeding, only where needed to enhance riparian objectives. **Page 128**.	**DC Riparian Areas** Sedimentation and soil compaction from forest activities (e.g., vehicle use, recreation, livestock grazing) do not negatively impact riparian areas. **GD Riparian Areas** Ground-disturbing projects (including prescribed fire) which may degrade long term riparian conditions should be avoided. **GD Riparian Areas** Wet meadows, springs, seeps and cienegas should not be used for concentrated activities (e.g., equipment storage, forest product or mineral stockpiling, livestock handling facilities, special uses) that cause damage to soil and vegetation.	This provision has been carried over to the revised plan where riparian forested PNVTs are not suitable for timber production; however, tree cutting may occur when consistent with movement toward DCs.

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Vegetation	**MA5 Timber Sales, Timber Resource Management Planning & Inventory**: No timber activities are planned unless requested for maintenance of the desired setting, or hazard tree removal. If harvest is necessary, follow standards and guidelines found in management area. **Page 138**.	**GD for High Use Developed Recreation Area**: Management should focus on operation and maintenance, safety, aesthetics, and control of noxious weeds and nonnative invasive species. **Management Actions for High Use Developed Recreation Area**: Recreation site plans describe the detailed management for each high use developed recreation area, including vegetation management plans for campgrounds. In addition to recreation use, other uses (including livestock grazing, timber management, and wildlife management) may occur in combination with surrounding recreation and scenic desired conditions	This has been carried over to the revised plan where high use developed recreation areas and developed recreation sites are not suitable for timber production, however tree cutting may occur.
Vegetation	**MA10 Research Natural Areas, Management Emphasis**: No vegetative management practices are planned in this management area. **Page 139**.	**Background for Research Natural Area:** RNAs are 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. However, under unusual circumstances, deliberate manipulation may be utilized to maintain the unique feature that the RNA was established to protect. Research natural areas (RNAs) are considered special areas by the Forest Service. RNAs are part of a national network of natural areas designated in perpetuity for research and education and/or to maintain biological diversity on NFS lands. RNAs are principally for non-manipulative research, observation, and study. However, RNAs can be used for manipulative research to help quantify and understand ecosystem processes and to improve forest management practices.	Management direction for RNAs is provided in FSM 4063 – Research Natural Areas.
Vegetation	**MA15 Wildlife & Fish Habitat Improvement**: Timber harvesting and road building will not occur in the 7 mile wild segment of the West Fork of the Black River. **Page 173**.	Direction for timber cutting within eligible or suitable wild river corridors is found in FSH 1909.12, Chapter 82.53. Eligible or suitable wild (8.6 mi.) and scenic (3.0 mi.) river corridors associated with the West Fork of the Black River have not been classified as suitable for timber production, and tree cutting is not suitable in segments	Management direction for eligible or suitable wild and scenic rivers is provided in FSH 1909.12 – Land Management Planning Handbook Chapter 80 – Wild and Scenic River Evaluation

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		classified as wild (8.6 mi.) except where needed in association with a primitive recreation experience such as to clear trails. Direction for roads within eligible or suitable wild river corridors is found in FSH 1909.12 Chapter 82.3; "*No roads, railroads, or other provision for vehicular travel within the river area."* Direction for roads within eligible or suitable scenic river corridors is less restrictive.	
Vegetation	**MA #15, pg. 173:** Timber management including harvesting is an applicable activity within the scenic corridor. However, timber management objectives for all projects within the corridor must have the objective of maintaining or enhancing the recreation opportunities. Examples of a recreation objective would be: (1) removal of over-mature and other hazardous trees in concentrated use areas, (2) removal of diseased or insect infested, as well as other susceptible trees to stop the spread that threatens the natural appearances (as perceived by the recreation users) of the corridor, and (3) silvicultural prescriptions aimed at expanding the vegetation diversity to prevent insect and disease epidemics from threatening the area.	**Replaced with:** **Lands Suitable for Timber Production, Chapter 4, Table 8**: *Eligible or suitable wild and scenic river corridors* are not suitable for timber production, but tree cutting is generally suitable for uses such as safety, firewood, and trail clearing where needed in association with a primitive recreation experience (FSH 1909.12 Ch.82.51). *General Forest MA*: Timber production and tree cutting are suitable. *Recommended Research Natural Area MA*: not suitable for timber production, but tree cutting for research purposes is allowed. **GDs for Landscape Scale Disturbance Events:** •Felling of hazard trees (either dead or alive) should be limited to those which could hit a road, recreation site, building, or other infrastructure to protect places where humans, vehicles, or developments would most likely be present. •Projects and activities should include both short and long term provisions for scenic integrity, especially in sensitive foreground areas (high and very high scenic integrity). **DC for All PNVTs:** The vegetative conditions and functions are resilient to the frequency, extent, and severity of disturbances (e.g., fire, insects and disease, flood, climate change, management activities). **ST for All PNVTs:** Vegetation treatments shall include measures to reduce the potential for introduction of invasive plants and animals and damage from nonnative insects and diseases. **DCs for Eligible and Suitable Wild and Scenic Rivers:** •Eligible and suitable wild river segments display unaltered	MA15 mapped in 1987 plan = East & West Forks of the Black River above Buffalo Crossing. This MA does not exist in the revised plan because most segments of these corridors are now mapped as Eligible Wild and Scenic Rivers. Portions not classified as such are located within the revised plan new MAs "General Forest" and "Recommended Research Natural Area" = *Three Forks*. Hazard trees may be removed along roads to meet guidance in FSM 2330 (publicly managed recreation opportunities) and FSM 7700 (travel management). The revised plan lists the east fork and west fork of the Black River as having eligible wild and scenic river segments totaling: 24.6 miles classified as "wild," 5.2 mile as "scenic," and 8.2 miles as "recreational," and some segments have no such classifications.

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		landscapes where generally only ecological changes occur (very high scenic integrity) and provide primitive and/or semi-primitive nonmotorized recreation opportunities. •Eligible and suitable scenic river segments display landscapes which vary from slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity) and provide semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **DCs for Developed Recreation:** •Forest vegetation in developed sites is healthy (species, size, and age) and complements recreational activities, scenery, and human safety. •Developed campgrounds are places where structures and human caused vegetation changes may be seen but they do not dominate the view or attract attention (low to moderate scenic integrity). Human activities in the areas visible from campgrounds (foreground to middle ground, 300 feet to 4 miles) should not attract attention or stand out, and the landscapes should appear natural (moderate to high scenic integrity). •Eligible and suitable recreational river segments display landscapes which vary from moderately altered where human activities are evident (low scenic integrity) to slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) and provide primitive, semi-primitive nonmotorized, semi-primitive motorized, and/or roaded natural recreation opportunities. **DC for Recommended Research Natural Area:** •The recommended *Three Forks,* Campbell Blue, Corduroy, and Sandrock RNAs, outside of any eligible or suitable wild and scenic river corridor, exhibit unaltered appearing landscapes where human activities do not stand out (high scenic integrity).	Developed campgrounds within the east fork include: Diamond Rock, Deer Creek, Aspen, Raccoon, Horse Spring, Buffalo Crossing; within the west fork is West Fork campground.

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Vegetation	3. Gambel oak is important for cover, and patches of oak near nesting areas are an important consideration when selecting areas for retaining slash. Other species such as New Mexico locust and current also can provide cover. Oak stands in the nesting areas should be evaluated for opportunities to manage for cover.	**DC Overall Ecosystem Health** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC All PNVTs** Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. **DC All PNVTs** Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth forests. **DC All PNVTs** Vegetation conditions allow for transition zones or ecotones between riparian areas, forests, woodlands, shrublands, and grasslands. **DC All PNVTs** Transition zones may shift in time and space due to changing site conditions from disturbances (e.g., fire, climate variability). **DC All PNVTs** Vegetation conditions provide hiding and thermal cover in contiguous blocks for wildlife. **DC All PNVTs** Native plant species are present in all age classes and are healthy, reproducing, and persisting. **DC All PNVTs** Herbaceous vegetation amount and structure (e.g., plant density, height, litter, seed heads) provides habitat to support wildlife and prey species. **OBJ All Forested PNVTs** Annually, treat 5,000 to	The 1987 Plan direction was modified to ensure that Gambel oak (and other species) were recognized as an integral component of the landscape and of a functional forested system where it occurs naturally. The cover and tree species needs were made broader to ensure that the needs of more species than turkey were addressed.

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		35,000 acres to reduce tree densities, restore natural fire regimes, promote species habitat and ecosystem health, reduce fire hazard, maintain desired conditions, initiate recovery from uncharacteristic disturbance, and provide forest products, leaving a desired mix of species with the range of desired densities that are resilient to changing climatic conditions. **GD All Forested PNVTs** Hiding cover, approach cover (by waters), and travel corridor cover should be provided where needed by wildlife. **DC Ponderosa Pine** Where it naturally occurs, Gambel oak is present with all age classes represented. It is reproducing to maintain or expand its presence on capable sites across the landscape. Large Gambel oak snags are typically 10 inches or larger in diameter and are well distributed. **DC Ponderosa Pine** Where Gambel oak occurs, the majority are single trunk trees over 8 inches in diameter with full crowns. **GD Ponderosa Pine** Where Gambel oak or other native hardwood trees and shrubs are desirable to retain for diversity, treatments should improve vigor and growth of these species. **DC Dry Mixed Conifer** The forest arrangement consists of small clumps and groups of trees interspersed within variably-sized openings of grass, forb, and shrub vegetation associations similar to reference conditions. Size, shape, number of trees per group, and number of groups per area are variable across the landscape. Where they naturally occur, groups of Gambel oak are healthy and maintained or increased. Tree density may be greater in some locations, such as north-facing slopes and canyon bottoms. **DC Dry Mixed Conifer** Where Gambel oak occurs, the majority are single trunk trees over 8 inches in diameter with full crowns.	

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		GD Dry Mixed Conifer Where Gambel oak or other native hardwood trees and shrubs are desirable to retain for diversity, treatments should improve vigor and growth of these species.	

Wildlife and Fisheries

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Wildlife & Fisheries	Maintain habitat to maintain viable populations of wildlife and fish species and improve habitat for selected species. This is accomplished “directly” through habitat management and “indirectly” through coordination of habitat management in conjunction with other resource activities.	**DC Overall Ecosystem Health** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Water Resources** Vegetation and soil conditions above the floodplain protect downstream water quality, quantity, and aquatic habitat. **DC Water Resources** Streamflows provide connectivity among fish populations and provide unobstructed routes critical for fulfilling needs of aquatic, riparian dependent, and many upland species of plants and animals. **DC Water Resources** Water quality meets the needs of desirable aquatic species such as the California floater, northern and Chiricahua leopard frog, and invertebrates that support fish populations. **GD Water Resources** Streams, streambanks, shorelines, lakes, wetlands, seeps, springs and other bodies of water should be protected from detrimental changes [4] in water temperature and sediment to protect aquatic species and riparian habitat. **GD Water Resources** Aquatic management zones should be in place between streams and disturbed areas and/or road locations to maintain water quality and suitable stream temperatures for aquatic species. **GD Water Resources** To protect water quality and aquatic	The new plan language expands upon the language in the old plan. The new plan not only establishes desired conditions for wildlife and fish, it also specifies the conditions required for viability and what types of “direct” habitat management are necessary as well as the “indirect” types of coordination that are necessary. Where more general provisions are insufficient, the plan specifies the species to be considered during habitat management activities.

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		species, heavy equipment and vehicles driven into a water body to accomplish work should be completely clean of petroleum residue. Water levels should be below the gear boxes of the equipment in use. Lubricants and fuels should be sealed such that inundation by water should not result in leaks. **DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. **DC Aquatic Habitat and Species** Streamflows, habitat, and water quality support native aquatic and riparian-dependent species and habitat. **DC Aquatic Habitat and Species** Habitat and ecological conditions are capable of providing for self-sustaining populations of native, riparian dependent plant and animal species. **DC Aquatic Habitat and Species** Native fish, reptile, amphibian, and invertebrate populations are free from or minimally impacted by nonnative plants and animals. **DC Aquatic Habitat and Species** Aquatic species habitat conditions provide the resiliency and redundancy necessary to maintain species diversity and metapopulations. **DC Aquatic Habitat and Species** Desirable nonnative fish species provide recreational fishing in waters where those opportunities are not in conflict with the recovery of native species. **DC Aquatic Habitat and Species** Wetlands are hydrologically functioning and have sufficient (composing 50 percent of the wetland) emergent vegetation and macroinvertebrate populations to support resident and migratory wetland dependent species. **OBJ Aquatic Habitat and Species** Annually, enhance or restore 5 to 15 miles of stream and riparian habitat to restore structure, composition, and function of physical habitat for native fisheries and riparian-dependent species. **OBJ Aquatic Habitat and Species** During the planning period, complete at least five projects (e.g., remove barriers,	

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		restore dewatered stream segments, or connect fragmented habitat) to provide for aquatic and riparian associated species and migratory species. **ST Aquatic Habitat and Species** When drafting (withdrawing) water from streams or other water bodies, measures will be taken to prevent entrapment of fish and aquatic organisms and the spread of parasites or disease (e.g., Asian tapeworm, chytrid fungus, whirling disease). **GD Aquatic Habitat and Species** Management and activities should not contribute to a trend toward the Federal listing of a species. **GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans. **GD Aquatic Habitat and Species** To prevent degradation of native species habitat and the incidental or accidental introduction of diseases or nonnative species, aquatic species should not be transferred through management activities from one 6th level HUC watershed to another. **GD Aquatic Habitat and Species** Sufficient water should be left in streams to provide for aquatic species and riparian vegetation. **GD Aquatic Habitat and Species** Projects and activities should avoid damming or impounding free-flowing waters to provide streamflows needed for aquatic and riparian-dependent species. **GD Aquatic Habitat and Species** The needs of rare and unique species associated with wetlands, fens, bogs, and springs should be given priority consideration when developing these areas for waterfowl habitat and other uses. **GD Aquatic Habitat and Species** When new water diversions are created or existing water diversions are reanalyzed, measures should be taken to prevent entrapment of fish and aquatic organisms. **DC All PNVTs** Native plant communities dominate the	

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		landscape. **DC All PNVTs** The range of species genetic diversity remains within native vegetation and animal populations, thus enabling species to adapt to changing environmental and climatic conditions. **DC All PNVTs** Vegetative connectivity provides for species dispersal, genetic exchange, and daily and seasonal movements across multiple spatial scales. **DC All PNVTs** Organic soil cover and herbaceous vegetation protect soil, facilitate moisture infiltration, and contribute to plant and animal diversity and ecosystem function. **DC All PNVTs** Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth forests. **DC All PNVTs** Herbivory is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). **DC All PNVTs** Shrub components contain a diverse array of native vegetation that is well distributed across the landscape to provide nutritional needs for browsers. **DC All PNVTs** Shrub components contain a diverse array of native vegetation that is well distributed across the landscape to provide nutritional needs for browsers. **DC All PNVTs** Rare or unique plant communities (e.g., agaves, Chihuahuan pine) are intact and persisting. **DC All PNVTs** Herbaceous vegetation amount and structure (e.g., plant density, height, litter, seed heads) provides habitat to support wildlife and prey species. **ST All PNVTs** Vegetation treatments shall include	

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		measures to reduce the potential for introduction of invasive plants and animals and damage from nonnative insects and diseases. **GD All PNVTs** Restoration methods, such as thinning or prescribed fire, should leave a mosaic of untreated areas within the larger treated project area to allow recolonization of treated areas by plants, small mammals and insects (e.g., long-tailed voles, fritillary butterflies). **DC Wildlife and Rare Plants** Habitat conditions contribute to the recovery of federally listed species. **DC Wildlife and Rare Plants** Habitat is well distributed and connected. Wildlife are free from harassment and disturbance at a scale that impacts vital functions (e.g., breeding, rearing young) that could affect persistence of the species. **DC Wildlife and Rare Plants** Collection of animals and plants does not negatively impact species abundance. **DC Wildlife and Rare Plants** Localized rare plant and animal communities are intact and functioning. **GL Wildlife and Rare Plants** Management and activities should not contribute to a trend toward the Federal listing of a species. **GL Wildlife and Rare Plants** Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans. **GL Wildlife and Rare Plants** Modifications, mitigations, or other measures should be incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives. **GL Wildlife and Rare Plants** Cool and/or dense vegetation cover should be provided for species needing these habitat components (e.g., Goodding's onion, black bear, White Mountains chipmunk, western yellow-billed cuckoo).	

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		GL Wildlife and Rare Plants Active raptor nests should be protected from treatments and disturbance during the nesting season to provide for successful reproduction. Specifically for northern goshawk nest areas, human presence should be minimized during nesting season of March 1 through September 30. **GL Wildlife and Rare Plants** Any action likely to cause a disturbance and take to bald and golden eagles in nesting and young rearing areas should be avoided per the Bald and Golden Eagle Protection Act. **GL Wildlife and Rare Plants** Prairie dog controls [18] should not be authorized except when consistent with approved State of Arizona Gunnison's prairie dog conservation strategies. **GL Wildlife and Rare Plants** Rare and unique features (e.g., talus slopes, cliffs, canyon slopes, caves, fens, bogs, sinkholes) should be protected from damage or loss to retain their distinctive ecological functions and maintain viability of associated species. **GL Wildlife and Rare Plants** The needs of localized species (e.g., New Mexico meadow jumping mouse, Bebb willow, White Mountains paintbrush) should be considered and provided for during project activities to ensure their limited or specialized habitats are not lost or degraded.	
Wildlife & Fisheries	Increase opportunities for wildlife and fish oriented recreation opportunities.	**DC Dispersed Recreation** Dispersed recreation opportunities (e.g., hunting, fishing, hiking, camping) are available and dispersed recreation sites (e.g., campsites, trailheads, vistas, parking areas) occur in a variety of ROS classes throughout the forests. **DC Dispersed Recreation** Water-based settings are available and the associated recreation opportunities (e.g., canoeing, fishing, waterfowl hunting) do not degrade aquatic resources. **DC Wildlife Quiet Areas** WQAs provide undisturbed, nonmotorized hunting opportunities	The plan language has been modified but retains the same intent as the old plan.

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Wildlife & Fisheries	Manage threatened and endangered animal, fish, and plant habitat to achieve declassifying in a manner consistent with the goals established by the U.S. Fish and Wildlife Service and the Arizona Game and Fish Department.	**DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC Aquatic Habitat and Species** Habitat conditions contribute to the recovery of federally listed species. **GD Aquatic Habitat and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans. **DC Wildlife and Rare Plants** Habitat conditions contribute to the recovery of federally listed species. **GD Wildlife and Rare Plants** Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans. **GD Livestock Grazing** To prevent resource damage (e.g., streambanks) and disturbance to federally listed and sensitive wildlife species, trailing of livestock should not occur along riparian areas. Where no alternative route is available, approval may be granted where effective mitigation measures are implemented (e.g., timing of trailing, number of livestock trailed at one time).	The language in the new plan specifies “recovery” rather than “declassify.” This is more appropriate. The new plan language meets the same intent and provides more specificity for some resources.
Wildlife & Fisheries	Implement threatened and endangered species recovery plans.	**DC Aquatic Habitats and Species** Habitat conditions contribute to the recovery of federally listed species. **GD Aquatic Habitats and Species** Activities occurring within federally listed species habitat should apply habitat management direction and species protection measures from recovery plans. **DC Wildlife and Rare Plants** Habitat conditions contribute to the recovery of federally listed species. **GD Wildlife and Rare Plants** Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans.	The new plan language is different but provides the same direction as the old plan.

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Wildlife & Fisheries	Develop structural wildlife improvements. a) Build all new fences in accordance with wildlife standards. (FSH 2609.11) b) Make livestock water available to wildlife.	**GD Grasslands** New fence construction or reconstruction where pronghorn antelope may be present should have a barbless bottom wire which is 18 inches from the ground to facilitate movement between pastures and other fenced areas. Pole and other types of fences should also provide for pronghorn antelope passage where they are present. **GD Grasslands** Pronghorn antelope fence and other crossings should be installed along known movement corridors to prevent habitat fragmentation. **ST Livestock Grazing** New or reconstructed fencing shall allow for wildlife passage, except where specifically intended to exclude wildlife (e.g., elk fencing). **ST Livestock Grazing** New livestock watering facilities shall be designed to allow wildlife access and escape. **GD Livestock Grazing** During maintenance of existing watering facilities, escape ramps that are ineffective or missing should be replaced. **GD Wildlife Quiet Areas** Fences surrounding and within WQAs should be inspected and improved to allow wildlife movement within and outside of the areas. Fences should be removed if no longer needed. **DC Water Uses** Water developments contribute to fish, wildlife, and riparian habitat as well as scenic and aesthetic values. **OBJ Water Uses** Annually, prepare at least one instream flow water rights application until water acquisition needs are complete to sustain riparian areas, fish, wildlife, and water-based recreation. **ST Water Uses** Special uses for water diversions shall maintain fish, wildlife, and aesthetic values and otherwise protect the environment.	The guidance in the new plan for both fences and livestock water meets the same intent and is also more specific.
Wildlife & Fisheries	Maintain habitat capability through direct treatments of vegetation, soil, and water. c) Retain vegetation screening at known game crossings.	Vegetation Screening: **DC All PNVTs** Vegetative connectivity provides for species dispersal, genetic exchange, and daily and seasonal movements across multiple spatial scales.	Direction in the new plan meets the same intent of previous direction for vegetation screening at game crossings and provides more

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	d) Avoid placement of roads in meadows whenever feasible and obliterate or relocate roads in key meadows presenting conflicts.	**DC All PNVTs** Vegetation conditions provide hiding and thermal cover in contiguous blocks for wildlife. Native plant species are present in all age classes and are healthy, reproducing, and persisting. **GD All Forested PNVTs** Hiding cover, approach cover (by waters), and travel corridor cover should be provided where needed by wildlife. **DC Wildlife and Rare Plants** Modifications, mitigations, or other measures should be incorporated to reduce negative impacts to plants, animals, and their habitats and to help provide for species needs, consistent with project or activity objectives. **GD Motorized Opportunities** New roads, motorized trails, or designated motorized areas should be located to avoid meadows, wetlands, seeps, springs, riparian areas, stream bottoms, sacred sites, and areas with high concentrations of significant archaeological sites. The number of stream crossings should be minimized or mitigated to reduce impacts to aquatic species. **GD Motorized Opportunities** As projects occur, redundant roads or motorized trails should be removed to reduce degradation of natural resources. **GD Motorized Opportunities** Roads and motorized trails should be designed and located so as to not impede terrestrial and aquatic species movement and connectivity. **GD Nonmotorized Opportunities** New trails and trail relocations should be designed and located so as to not impede terrestrial and aquatic species movement and connectivity. **DC Wildlife Quiet Areas** WQAs lack disturbance from motorized vehicles, resulting in less stress to wildlife. **GD Wildlife Quiet Areas** Hiding cover and travelways for wildlife should be maintained to provide for security and connectivity of habitat.	direction for roads in meadows.
Wildlife &	Special consideration will be given to critical big game winter ranges in areas	**DC All PNVTs** Herbivory is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild	The new plan direction broadens previous direction to consider all

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Fisheries	where big game winter range has been determined to be a limiting factor in achieving big game objectives. In those areas, no new year round grazing or new winter grazing by domestic livestock will be allowed unless their inclusion in a grazing system better meets big game objectives. New land acquisitions in these critical winter range areas will not be used for domestic livestock grazing unless their inclusion in a grazing system better meets big game objectives.	horses, and wildlife do not exceed available forage production within established use levels). **DC All PNVTs** Shrub components contain a diverse array of native vegetation that is well distributed across the landscape to provide nutritional needs for browsers. **DC All PNVTs** Vegetation provides products—such as wood fiber or forage—to help meet local and regional needs in a manner that is consistent with other desired conditions on a sustainable basis within the capacity of the land. **GD Livestock Grazing** Forage, browse, and cover needs of wildlife, authorized livestock, and wild horses should be managed in balance with available forage so that providing for these needs remain at or move toward a healthy, persistent state.	wildlife needs and habitat, not exclusively big game winter range. Big game winter range is to be considered under new plan direction; other potential wildlife and game needs are also to be considered.
Wildlife & Fisheries	Install antelope passes, let down fences, electric fences, or elk jumps wherever necessary to reduce wildlife/fence conflicts.	**GD Grasslands** New fence construction or reconstruction where pronghorn antelope may be present should have a barbless bottom wire which is 18 inches from the ground to facilitate movement between pastures and other fenced areas. Pole and other types of fences should also provide for pronghorn antelope passage where they are present. **GD Grasslands** Pronghorn antelope fence and other crossings should be installed along known movement corridors to prevent habitat fragmentation. **ST Livestock Grazing** New or reconstructed fencing shall allow for wildlife passage, except where specifically intended to exclude wildlife (e.g., elk fencing). **GD Wildlife Quiet Areas** Fences surrounding and within WQAs should be inspected and improved to allow wildlife movement within and outside of the areas. Fences should be removed if no longer needed.	New plan direction is more extensive and specific.
Wildlife & Fisheries	b) Implement the Forest snag policy. Provide at least 55% of a diversity unit with at least 180 snags per 100 acres. In high priority areas, including both edge habitats adjacent to meadows or water,	**DC All PNVTs** Old or large trees, multistoried canopies, large coarse woody debris, and snags provide the structure, function, and associated vegetation composition as appropriate for each forested and woodland PNVTs. **DC Riparian Areas** Vegetation is structurally diverse, often	New plan direction provides snag densities that are specific to vegetation types; average snag densities are to be applied to the entire vegetation type, not just 55%

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	manage for an average of 280 snags per 100 acres.	dense, providing for high bird species diversity and abundance, especially neotropical migratory birds. It includes large trees and snags in the cottonwood-willow and mixed broadleaf deciduous riparian forests to support species such as beaver, yellow-billed cuckoo, bald eagles, Arizona gray squirrel, and various bat species. **GD All Forested PNVTs** Trees, snags, and logs immediately adjacent to active red squirrel cone caches, Abert's squirrel nests, and raptor nests should be retained to maintain needed habitat components and provide tree groupings. **DC Ponderosa Pine** The ponderosa pine forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. Ponderosa pine snags are typically 18 inches or greater in diameter and average 1 to 2 per acre. **DC Ponderosa Pine** Where it naturally occurs, Gambel oak is present with all age classes represented. It is reproducing to maintain or expand its presence on capable sites across the landscape. Large Gambel oak snags are typically 10 inches or larger in diameter and are well distributed. **DC Ponderosa Pine** Old growth occurs throughout the landscape, in small, discontinuous areas consisting of clumps of old trees, or occasionally individual old trees. Other old growth components are also present including dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). **DC Dry Mixed Conifer** The dry mixed conifer forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. Snags are typically 18 inches in diameter or greater and average 3	of the area as under the previous plan. Snag densities under the new plan are therefore as high or higher than those required under the old plan.

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		per acre. **DC Dry Mixed Conifer** Old growth occurs throughout the landscape, in small, discontinuous areas consisting of clumps of old trees, or occasionally individual old trees. Other old growth components are also present including dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). **DC Dry Mixed Conifer** Openings surrounding tree groups are composed of a grass, forb, and shrub mix. Some openings may contain individual trees or snags. **DC Wet Mixed conifer** The wet mixed conifer forest is composed predominantly of vigorous trees, but declining, top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. The number of snags and logs and amount of coarse woody debris varies by seral state ranging from 8 to more than 16 tons per acre. **DC Wet Mixed conifer** Old growth occurs over large, continuous areas. Old growth components include old trees, dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). **DC Wet Mixed conifer** There are 20 or more snags greater than 8 inches in diameter per acre and 1 to 5 of those snags are 18 inches or greater in diameter. **DC Spruce-Fir** The spruce-fir forest is composed predominantly of vigorous trees, but declining top-killed, lightning-scarred, and fire-scarred trees provide snags and coarse woody debris. Snags and coarse woody debris are well distributed throughout the landscape. **DC Spruce-Fir** Old growth occurs over large, continuous areas. Old growth components include old trees, dead trees	

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		(snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). **DC Spruce-Fir** In general, there are 13 to 30 snags greater than 8 inches in diameter per acre and 1 to 3 of those snags are 18 inches or greater in diameter. **DC Madrean Pine-Oak** Snags, averaging 1 to 2 per acre, and older trees are scattered across the landscape. Coarse woody debris averages 1 to 5 tons per acre. **DC Madrean Pine-Oak** Some large patches in the Madrean pine-oak woodland are closed canopy, have multiple age classes, large trees, and old growth-like characteristics (e.g., numerous snags, large coarse woody debris) in order to provide for wildlife such as Mexican spotted owl and black bear that need denser habitat. **DC Pinon-Juniper Savanna** Old growth occurs in isolated locations scattered throughout the landscape, as individual old trees or as clumps of old trees. Other old growth components may also be present including dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. **DC Pinon-Juniper-Persistent Woodland** Snags, averaging one to two per acre, and older trees with dead limbs and tops are scattered across the landscape. Coarse woody debris averages 2 to 5 tons per acre. **DC Pinon-Juniper-Persistent Woodland** Old growth includes old trees, dead trees (snags), downed wood (coarse woody debris), and/or structural diversity. The location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). **GD Wildlife and Rare Plants** During treatments, snags should be retained in the largest diameter classes available as needed to meet wildlife or other resource needs. **GD Landscape Scale Disturbance Events** An adequate	

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		number and size of snags and logs, appropriate for the affected PNVT, should be retained individually and in clumps to provide benefits for wildlife and coarse woody debris for soil and other resource benefits.	
Wildlife & Fisheries	Provide big game, non-game, and upland game habitat in aspen.	**DC Overall Ecosystem Health** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population fluctuations of the species within the capability of the landscape. **DC Overall Ecosystem Health** Habitat quality, distribution, and abundance exist to support the recovery of federally listed species and the continued existence of all native and desirable nonnative species. **DC All PNVTs** Diverse vegetation structure, species composition, densities, and seral states provide quality habitat for native and desirable nonnative plant and animal species throughout their life cycle and at multiple spatial scales. Landscapes provide for the full range of ecosystem diversity at multiple scales, including habitats for those species associated with late seral states and old growth forests. **DC All PNVTs** Vegetation conditions provide hiding and thermal cover in contiguous blocks for wildlife. Native plant species are present in all age classes and are healthy, reproducing, and persisting. **GD All Forested PNVTs** Hiding cover, approach cover (by waters), and travel corridor cover should be provided where needed by wildlife. **DC Aspen** Areas of aspen occur across the forested landscape and are successfully regenerating and being recruited into older and larger size classes. Size classes have a natural distribution, with the greatest number of stems in the smaller size classes.	The plan components for Aspen will provide for the desired conditions for wildlife species which use the Aspen vegetation type since this will provide a good distribution of Aspen across the landscape as well as a distribution of different stages of Aspen development across the forests. The new plan thus provides greater specificity as to how habitat for wildlife is provided in the Aspen vegetation type.

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		DC Aspen Aspen may comprise 10 to 100 percent of the area depending on disturbance (e.g., fire, insects, silvicultural treatments) in multistoried patches. **DC Aspen** As an early seral species, aspen reproduction and recruitment benefit from low severity surface fires in association with ponderosa pine and dry mixed conifer PNVTs, and mixed-severity fires in association with wet mixed conifer and spruce-fir PNVTs. **OBJ Aspen** Aspen dominated and codominated acres within forested PNVTs, representing a range of age classes, are maintained on at least 50,000 acres during the planning period. **GD Aspen** To preclude concentrated herbivore impacts, new surface water development should not be constructed within proximity to aspen stands (approximately a quarter of a mile). Restoration of aspen clones should occur where aspen is over mature or in decline to maintain a sustainable presence of this species at the landscape level. **GD Aspen** When managing for early seral states, competing conifers should be removed from aspen stands when needed to increase aspen longevity and increase diversity of aspen age classes. **GD Aspen** Aspen restoration and retention efforts should include measures to ensure viability of the aspen stand.	
Wildlife & Fisheries	Protect active raptor nest tree groups and advise Wildlife biologist of location. Manage raptor nest tree groups as stands, if possible. Nest group consists of nest tree and adjacent trees and is maintained as follows: - Other raptors – An area extending to 200 feet from active nests is left uncut. - Protect bald eagle winter roosts with a 300 foot uncut buffer zone around the	**GD All Forested PNVTs** Trees, snags, and logs immediately adjacent to active red squirrel cone caches, Abert's squirrel nests, and raptor nests should be retained to maintain needed habitat components and provide tree groupings. **DC Ponderosa Pine** Northern goshawk nest areas have forest conditions that are multi-aged and dominated by large trees with relatively denser canopies than the surrounding forest. **DC Dry Mixed Conifer** Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by	The new direction in the plan provides the same level of protection for raptor nests without specifying arbitrary buffers. The new direction provides protection from disturbance and provides guidance on the habitat elements needed to provide and maintain raptor habitat.

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	roost. Prohibit road development in the roost and buffer zone.	large trees with relatively denser canopies than the surrounding forest. **DC Wet Mixed Conifer** Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest. **DC Spruce-Fir** Northern goshawk nest areas have forest conditions that are multi-aged but are dominated by large trees with relatively denser canopies than the surrounding forest. **GD Wildlife and Rare Plants** A minimum of six nest areas (known and replacement) should be located per northern goshawk territory. Northern goshawk nest and replacement nest areas should be located around active nests, in drainages, at the base of slopes, and on northerly (northwest to northeast) aspects. Nest areas should be 25 to 30 acres each in size. **GD Wildlife and Rare Plants** Northern goshawk post-fledging family areas (PFAs) of approximately 420 acres in size should be designated around the nest sites. **GD Wildlife and Rare Plants** Active raptor nests should be protected from treatments and disturbance during the nesting season to provide for successful reproduction. Specifically for northern goshawk nest areas, human presence should be minimized during nesting season of March 1 through September 30. **GD Wildlife and Rare Plants** Any action likely to cause a disturbance and take to bald and golden eagles in nesting and young rearing areas should be avoided per the Bald and Golden Eagle Protection Act.	
Wildlife & Fisheries	Cover corridors are laid out to connect treated areas, or breaks in terrain to provide interconnecting cover corridors. Known or suspected routes of game travel are used to lay out cover corridors.	**DC Overall Ecosystem Health** Ecological conditions for habitat quality, distribution, and abundance contribute to self-sustaining populations of native and desirable nonnative plants and animals that are healthy, well distributed, connected, and genetically diverse. Conditions provide for the life history, distribution, and natural population	The new plan direction is both more extensive and provides for wildlife species other than game species.

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		fluctuations of the species within the capability of the landscape. **DC Overall Ecosystem Health** Large blocks of habitat are interconnected, allowing for behavioral and predator-prey interactions, and the persistence of metapopulations and highly interactive wildlife species across the landscape. Ecological connectivity extends through all plant communities. **DC All PNVTs** Vegetative connectivity provides for species dispersal, genetic exchange, and daily and seasonal movements across multiple spatial scales **GD All Forested PNVTs** Hiding cover, approach cover (by waters), and travel corridor cover should be provided where needed by wildlife. **GD All Woodland PNVTs** Hiding cover, approach cover (by waters), and travel corridor cover should be provided where needed by wildlife. **DC Wildlife and Rare Plants** Habitat is well distributed and connected. **GD Wildlife Quiet Areas** Hiding cover and travelways for wildlife should be maintained to provide for security and connectivity of habitat. **DC Natural Landscape** These areas contribute to ecosystem and species diversity and sustainability; serve as habitat for plants and animals; and offer wildlife corridors, reference areas, primitive and semi-primitive nonmotorized recreation opportunities, and places for people seeking natural scenery and solitude.	
Wildlife & Fisheries	Wildlife use will be controlled in areas in unsatisfactory condition where wildlife use is a significant causative factor affecting condition.	**DC All PNVTs** Herbivory is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). **DC Riparian Areas:** The ecological function of riparian areas is resilient to animal and human use. **DC Livestock Grazing:** Livestock grazing is in balance with	The new plan direction meets the intent of the previous direction with out mandating wildlife control. Where resource concerns occur and wildlife is a contributing factor, control is not precluded (as demonstrated by the Standard in the Livestock Grazing section).

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		available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). **ST Livestock Grazing** New or reconstructed fencing shall allow for wildlife passage, except where specifically intended to exclude wildlife (e.g., elk fencing). **GD Livestock Grazing** Critical areas should be managed to address the inherent or unique site factors, conditions, values, or potential conflicts associated with them. **GD Livestock Grazing** Forage, browse, and cover needs of wildlife, authorized livestock, and wild horses should be managed in balance with available forage so that providing for these needs remain at or move toward a healthy, persistent state.	
Wildlife & Fisheries	Evaluate need, maintain and improve meadows by eliminating competing conifers, stabilizing gullies to restore water tables, and reseeding with species desirable to wildlife.	**DC Soil** Soils are stable within their natural capability. Vegetation and litter limit accelerated erosion (e.g., rills, gullies, root exposure, topsoil loss) and contribute to soil deposition and development. **GD Soil** Severely disturbed sites should be revegetated with native plant species when loss of long term soil productivity is predicted. **GD Soil** Locally collected seed should be used where available and cost effective. Seeds should be tested to ensure they are free from noxious weeds and invasive nonnative plants at a State certified seed testing laboratory before acceptance and mixing. **DC Grasslands** Woody (tree and shrub) canopy cover is less than 10 percent. **OBJ Grasslands** Decrease or maintain the woody canopy cover at less than 10 percent by treating up to 25,000 acres annually. **GD Grasslands** Restoration treatment of grasslands should result in a woody canopy cover of less than 10 percent; more than one treatment may be required. **GD Grasslands** Mechanical restoration of grasslands	All aspects of the previous direction are retained under new plan direction. The new plan also sets desired conditions for when action is needed to remove encroaching conifers.

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		should emphasize individual tree removal to limit soil disturbance.	
Wildlife & Fisheries	Evaluate need and construct fences where necessary to protect key meadows from grazing.	**DC All PNVTs** Herbivory is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). **DC Riparian Areas** The ecological function of riparian areas is resilient to animal and human use. **DC Livestock Grazing** Livestock grazing is in balance with available forage (i.e., grazing and browsing by authorized livestock, wild horses, and wildlife do not exceed available forage production within established use levels). **ST Livestock Grazing** New or reconstructed fencing shall allow for wildlife passage, except where specifically intended to exclude wildlife (e.g., elk fencing). **GD Livestock Grazing** Critical areas should be managed to address the inherent or unique site factors, conditions, values, or potential conflicts associated with them. **GD Livestock Grazing** Forage, browse, and cover needs of wildlife, authorized livestock, and wild horses should be managed in balance with available forage so that providing for these needs remain at or move toward a healthy, persistent state.	The new plan direction meets the intent of the previous direction with out mandating fencing. Where resource concerns occur fencing is not precluded (as demonstrated by the Standard in the Livestock Grazing section).
Wildlife & Fisheries	Maintain existing antelope range.	**DC Grasslands** During the critical pronghorn fawning period (May through June [12]), cool season grasses and forbs provide nutritional forage; while shrubs and standing grass growth from the previous year provide adequate hiding cover (10 to 18 inches) to protect fawns from predation. **OBJ Grasslands** Decrease or maintain the woody canopy cover at less than 10 percent by treating up to 25,000 acres annually. **GD Grasslands** Restoration treatment of grasslands should result in a woody canopy cover of less than 10 percent; more than one treatment may be required.	The new plan direction is more specific about requirements for maintaining existing antelope range.

Resource	1987 Plan Content (as amended). Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
		GD Grasslands New fence construction or reconstruction where pronghorn antelope may be present should have a barbless bottom wire which is 18 inches from the ground to facilitate movement between pastures and other fenced areas. Pole and other types of fences should also provide for pronghorn antelope passage where they are present. **GD Grasslands** Pronghorn antelope fence and other crossings should be installed along known movement corridors to prevent habitat fragmentation. **DC Wildlife Quiet Areas** Woolhouse WQA on the Lakeside Ranger District provides high quality winter range for pronghorn antelope and elk within a busy and heavily used wildland-urban interface.	
Wildlife & Fisheries	Manage waters capable of supporting fish to maintain a fishery.	**DC Aquatic Habitat and Species** Desirable nonnative fish species provide recreational fishing in waters where those opportunities are not in conflict with the recovery of native species. **DC Dispersed Recreation** Dispersed recreation opportunities (e.g., hunting, fishing, hiking, camping) are available and dispersed recreation sites (e.g., campsites, trailheads, vistas, parking areas) occur in a variety of ROS classes throughout the forests. **DC Dispersed Recreation** Water-based settings are available and the associated recreation opportunities (e.g., canoeing, fishing, waterfowl hunting) do not degrade aquatic resources.	New plan direction maintains the intent of the old plan direction while clarifying the need to balance desirable nonnative fish with native fish.
Wildlife & Fisheries	Manage waters to perpetuate Apache Trout in order that this species can be delisted from the endangered category.	**DC Aquatic Habitats and Species** Streams and aquatic habitats support native fish and/or other aquatic species providing the quantity and quality of aquatic habitat within reference conditions [8]. **DC Aquatic Habitats and Species** Native fish, reptile, amphibian, and invertebrate populations are free from or minimally impacted by nonnative plants and animals.	New plan direction is broadened to cover more than Apache Trout.
Wildlife & Fisheries	Manage for or maintain habitat capability for Arizona trout, rainbow trout, brook	**DC Aquatic Habitats and Species** Desirable nonnative fish species provide recreational fishing	New plan direction maintains the intent of the old plan direction while

Resource	1987 Plan Content (as amended). Page numbers refer to electronic version.	New Plan Direction (and or retained/modified direction)	Rationale for Deleting or Modifying 1987 Plan Direction
	trout, brown trout, loach minnow, and spinedace at least 60% of potential.	in waters where those opportunities are not in conflict with the recovery of native species.	clarifying the need to balance desirable nonnative fish with native fish.

Footnotes for Appendix I

[1] Degrading factors include, but are not limited to, actions that cause or maintain high departure from historic vegetation conditions, unsatisfactory or impaired soil condition, nonfunctioning riparian areas, impaired species habitat, occurrence of invasive species, and unstable road and trail conditions.

[2] Satisfactory soil condition exists when indicators signify that soil function is being sustained and soil is functioning properly and normally. The ability of soil to maintain resource values and sustain outputs is high.

[3] Tolerance soil loss rates are the maximum rates that soil can erode and not reduce long term soil productivity. These were established for each terrestrial ecosystem mapping unit component and are described in the "Terrestrial Ecosystem Survey for the Apache-Sitgreaves National Forests" (Laing et al., 1987, as amended).

[4] Detrimental changes are described in species-specific literature (e.g., recovery plans, listing and critical habitat designations, conservation strategies).

[5] Based on the site capability as defined by the specific map unit under consideration in the "Terrestrial Ecosystem Survey for the Apache-Sitgreaves National Forests" (Laing et al., 1987 as amended).

[6] The spatial extent of wetlands is delineated in the 2011 RMAP (Regional Riparian Mapping Project) found in the forests' GIS database.

[7] Plant height source material: Vine 1960; Hermann 1970, 1975; Hitchcock and Chase 1971; McDougall 1973; Correll and Correll 1975; Gould 1977; Martin and Hutchins 1980; Benson and Darrow 1981; Hickman 1993; Cronquist et al., 1997; Ruyle and Young 1997; Welsh et al., 1997; Hurd et al., 1998; Barkworth et al., 2003, 2007; Flora of North America 2008; and Springer et al., 2009.

[8] Reference conditions are described in species-specific literature and research.

[9] Species composition and cover amounts and the amount of vegetation and litter needed for soil protection are described by ecological unit in the "Terrestrial Ecosystem Survey for the Apache-Sitgreaves National Forests" (Laing et al., 1987, as amended).

[10] Based on site capability as defined by the specific ecological unit under consideration in the "Terrestrial Ecosystem Survey for the Apache-Sitgreaves National Forests" (Laing et al., 1987, as amended).

[11] See the Nationwide Aerial Application of Fire Retardant on National Forest System Land. Final Environmental Impact Statement. USDA Forest Service for species-specific information.

[12] Fawning may extend through mid-July in the high elevation montane/subalpine grasslands.

[13] Sacred sites as defined in E.O. 13007, traditional cultural properties as defined in National Register Bulletin 38, traditional cultural purposes as defined in the 2008 Farm Bill Section 8102, Subtitle B.

[14] The amount of woody material varies by PNVT; see vegetation desired conditions.

[15] Measured on ungrazed plants as an indicator of vigor.

[16] The system of NFS roads and motorized trails is identified in the I-WEB database.

[17] In 2012, there are no areas designated for motorized cross-country travel.

[18] Controls do not include State authorized hunting.

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Appendix J. Maps

The maps in appendix J address management areas and the recreation opportunity spectrum (ROS) for the alternatives. Maps of the potential natural vegetation types found on the forests are also included.

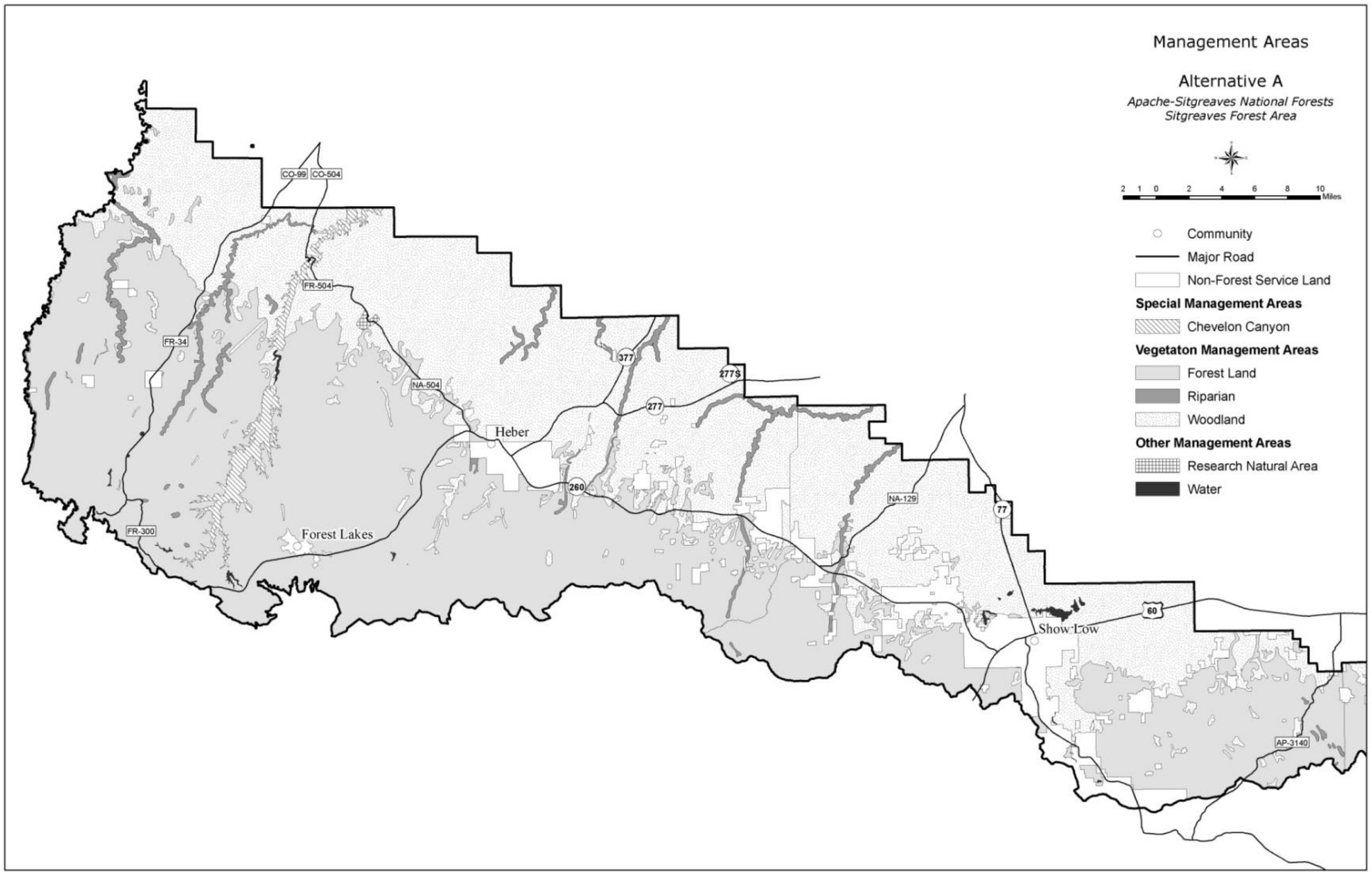


Figure 86. Map of management areas, alternative A – Sitgreaves NF

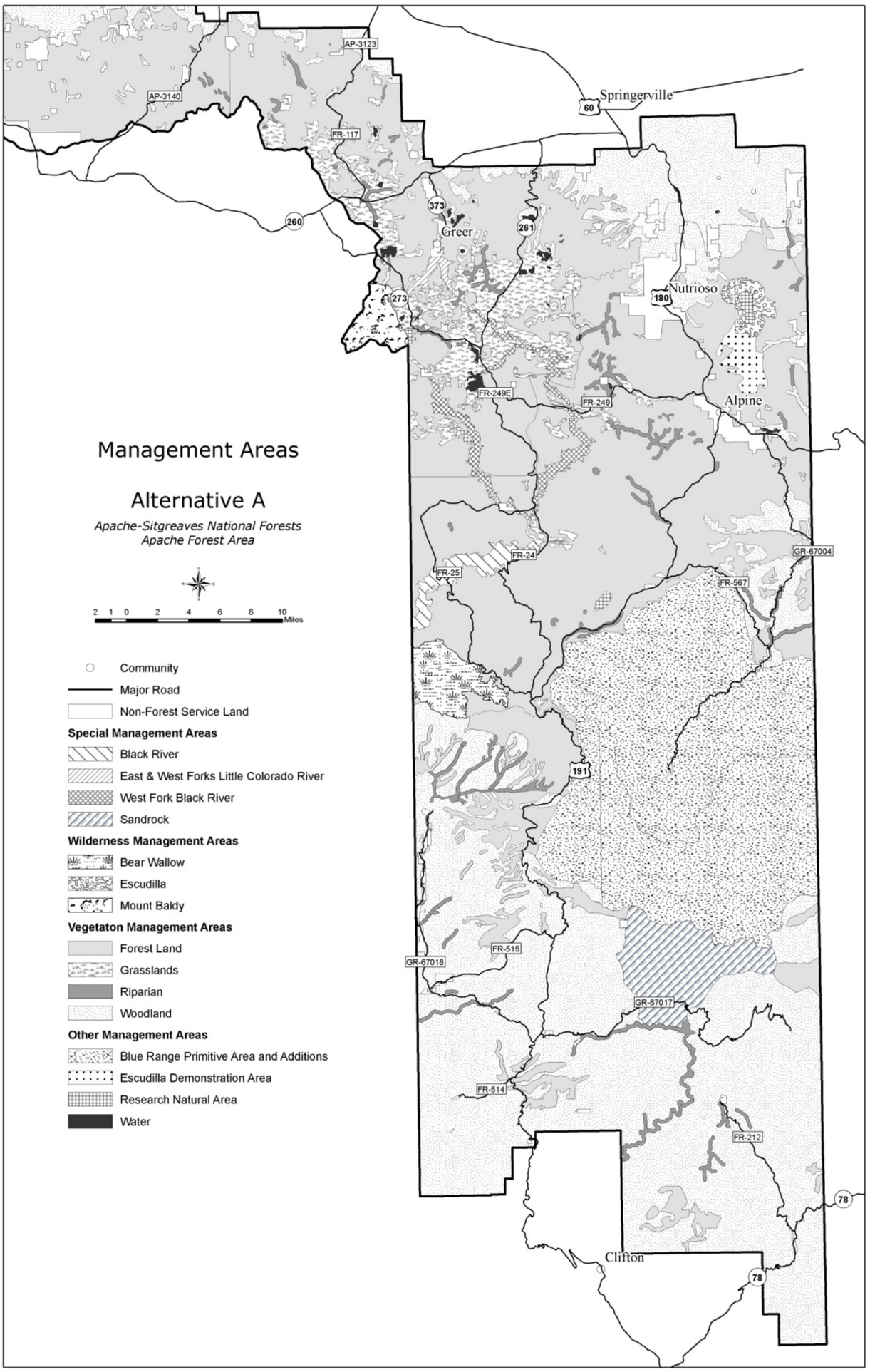


Figure 87. Map of management areas, alternative A – Apache NF

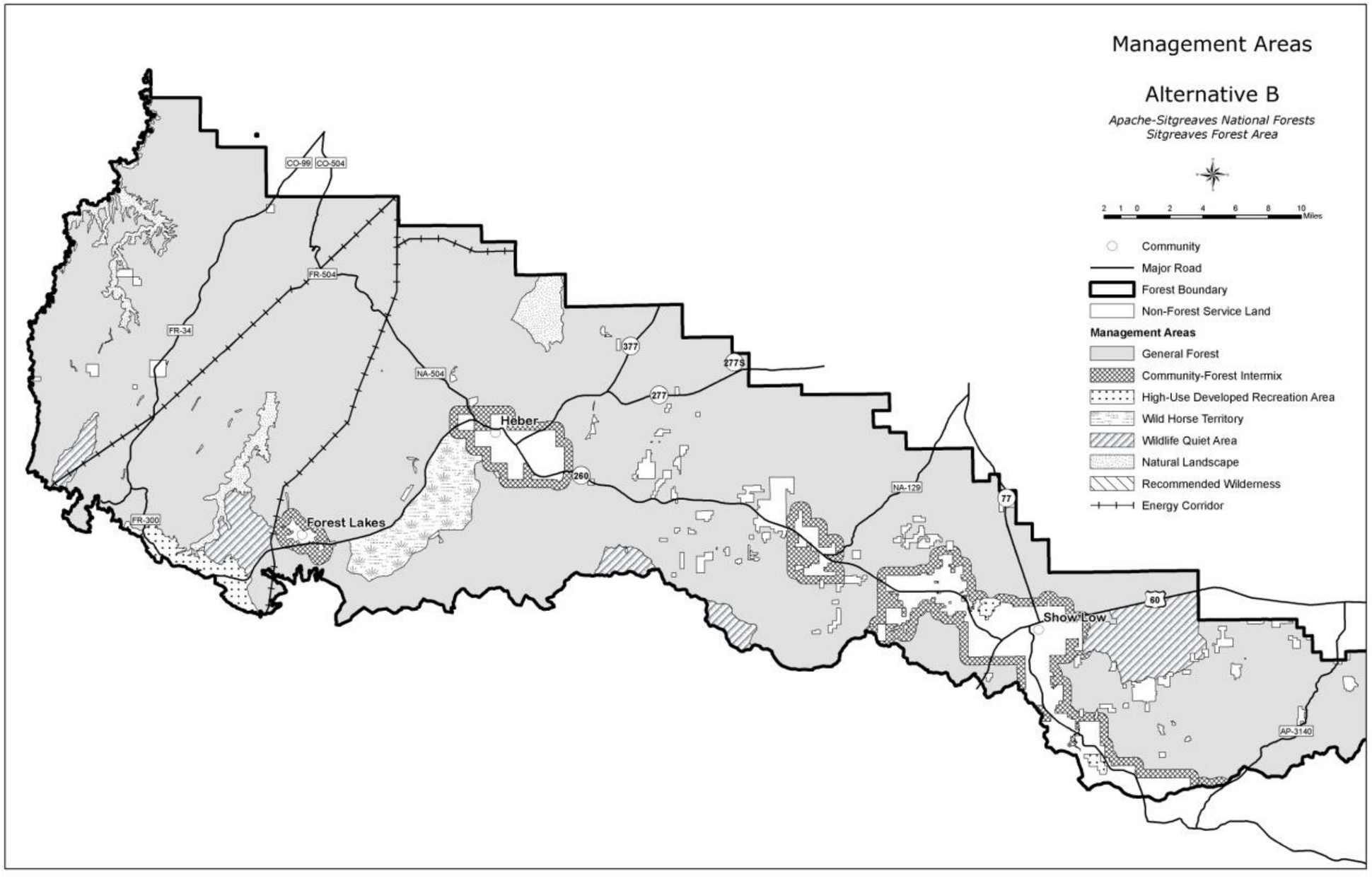


Figure 88. Map of management areas, alternative B – Sitgreaves NF



Figure 89. Map of management areas, alternative B – Apache NF

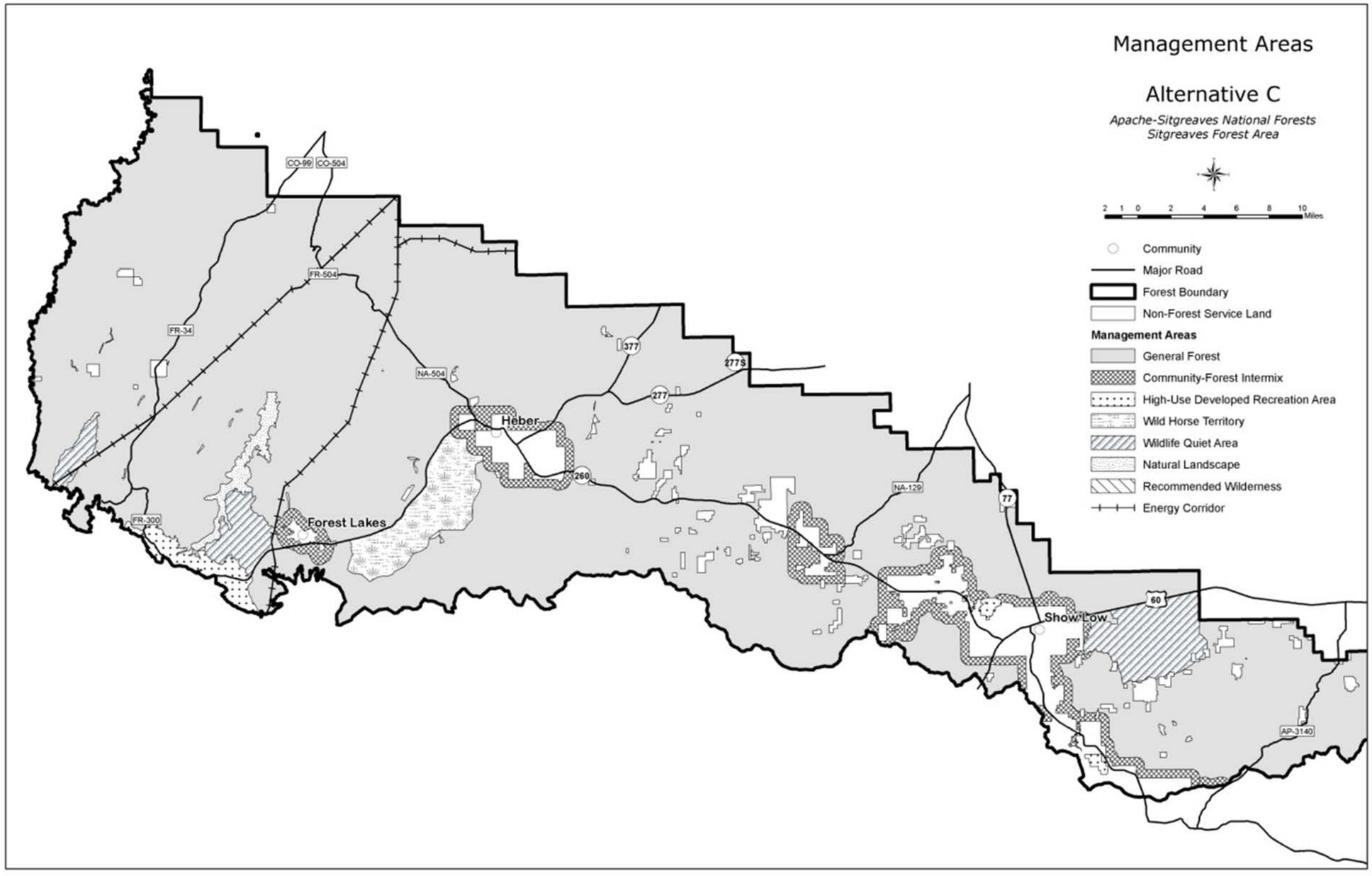


Figure 90. Map of management areas, alternative C – Sitgreaves NF

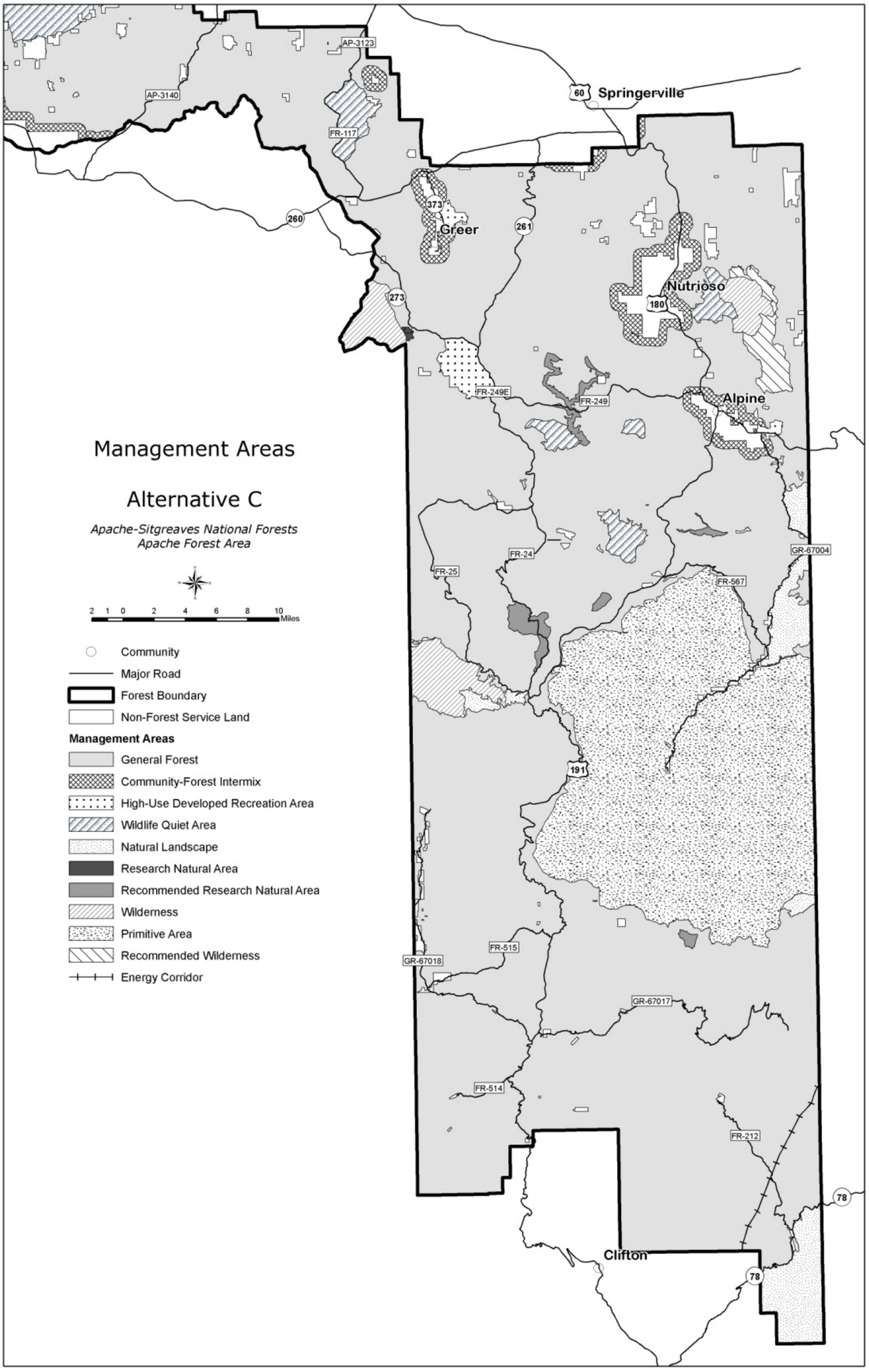


Figure 91. Map of management areas, alternative C – Apache NF

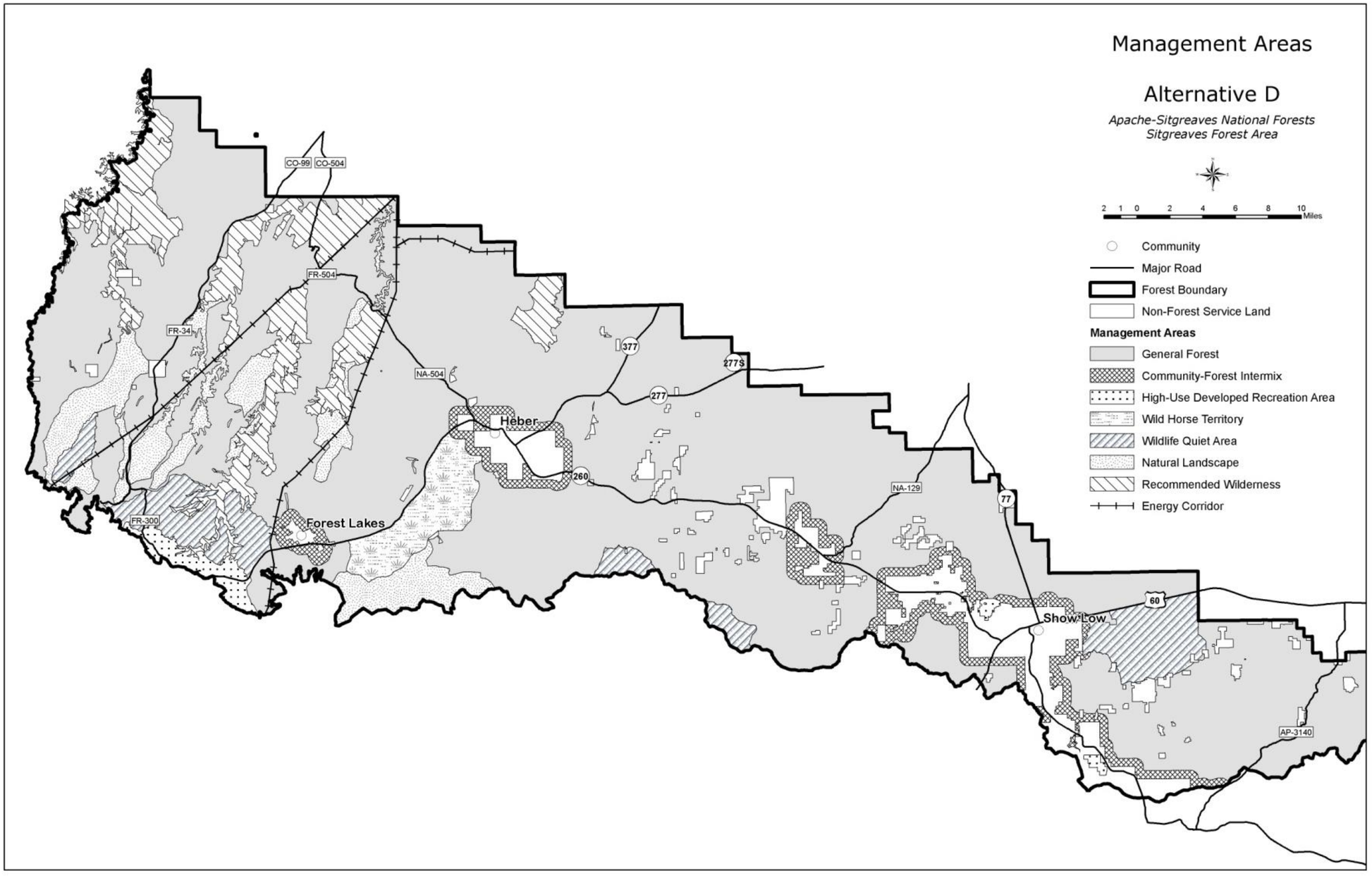


Figure 92. Map of management areas, alternative D – Sitgreaves NF

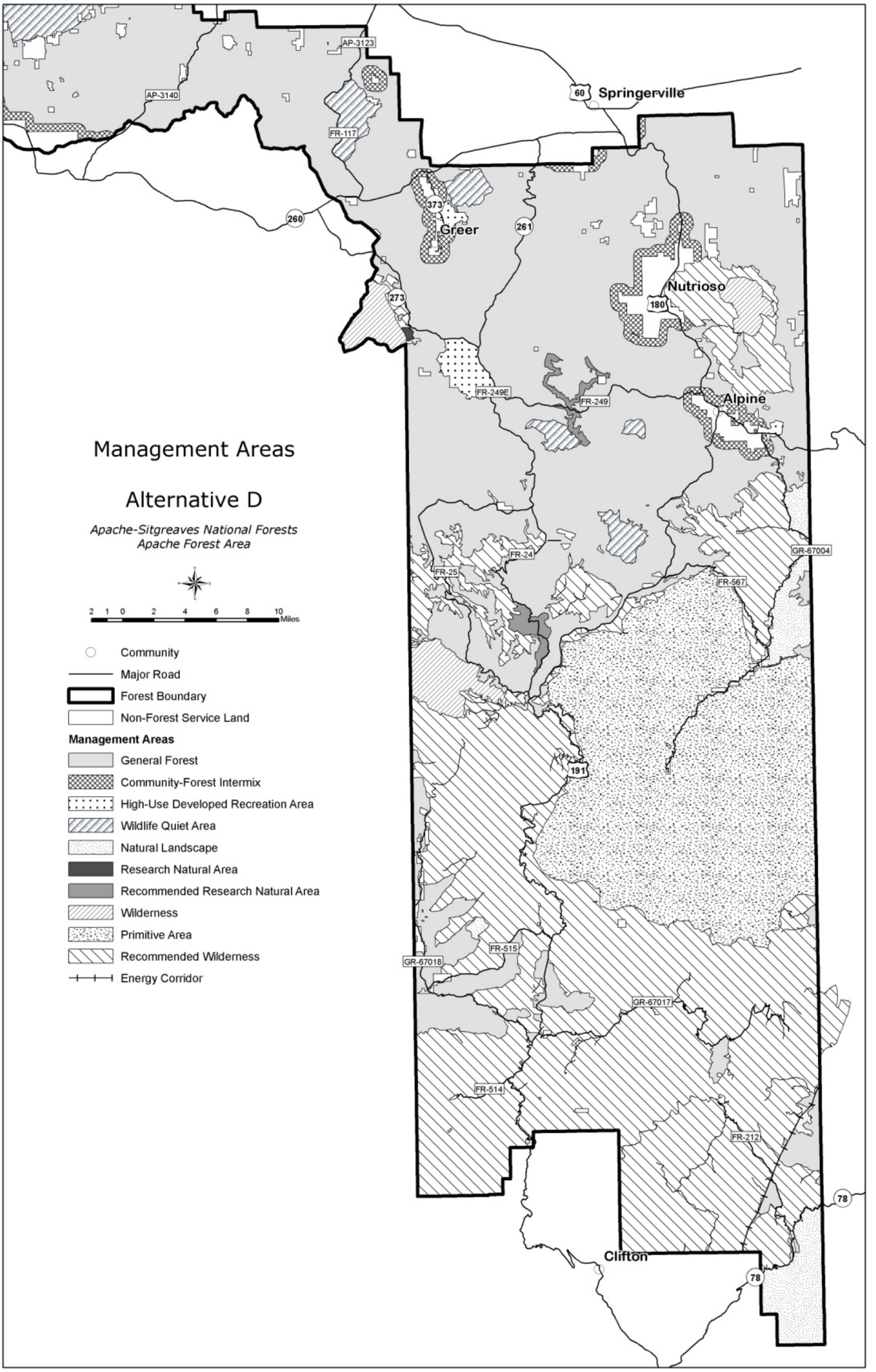


Figure 93. Map of management areas, alternative D – Apache NF

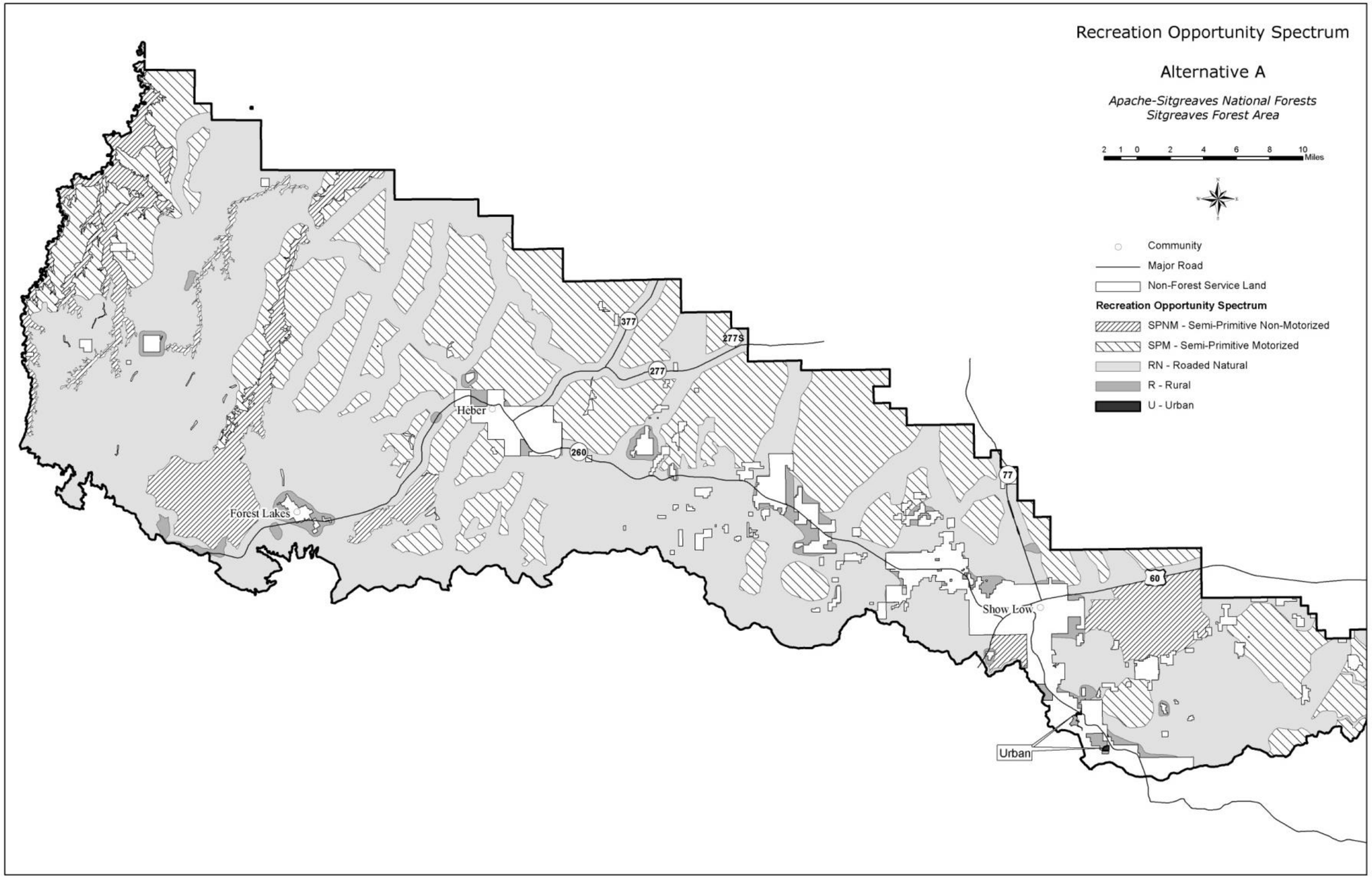


Figure 94. Map of ROS, alternative A – Sitgreaves NF

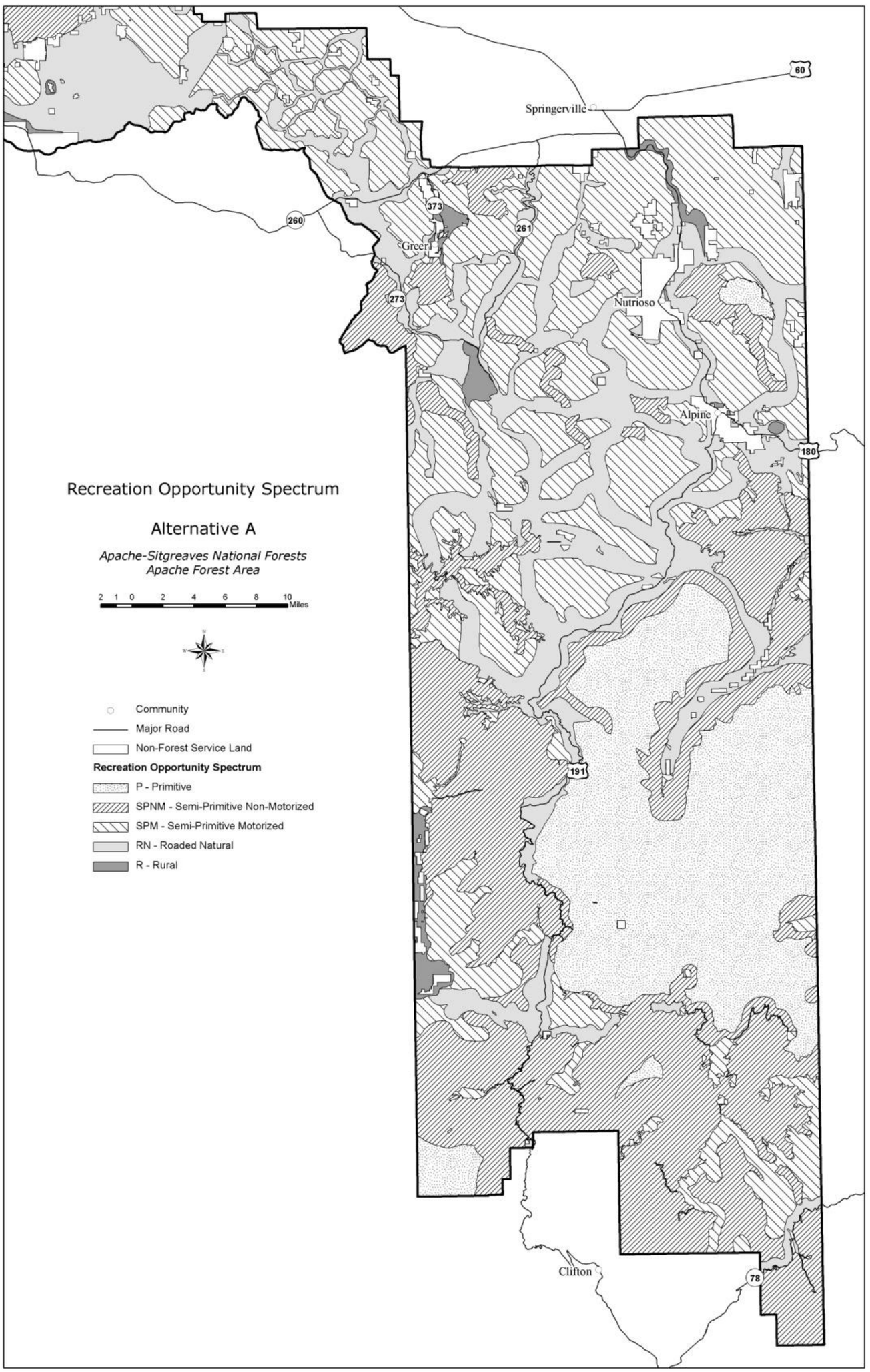


Figure 95. Map of ROS, alternative A – Apache NF

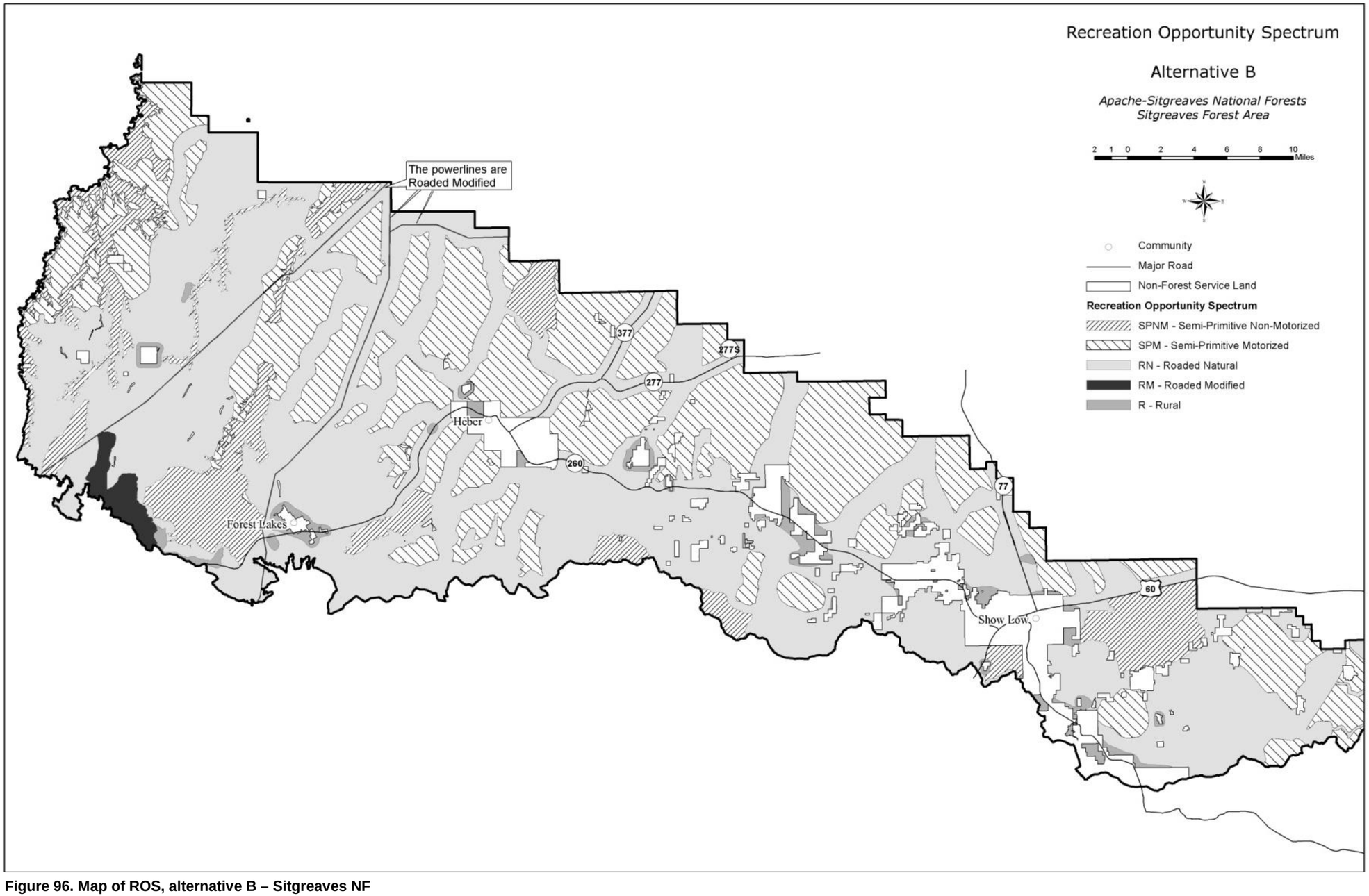


Figure 96. Map of ROS, alternative B – Sitgreaves NF

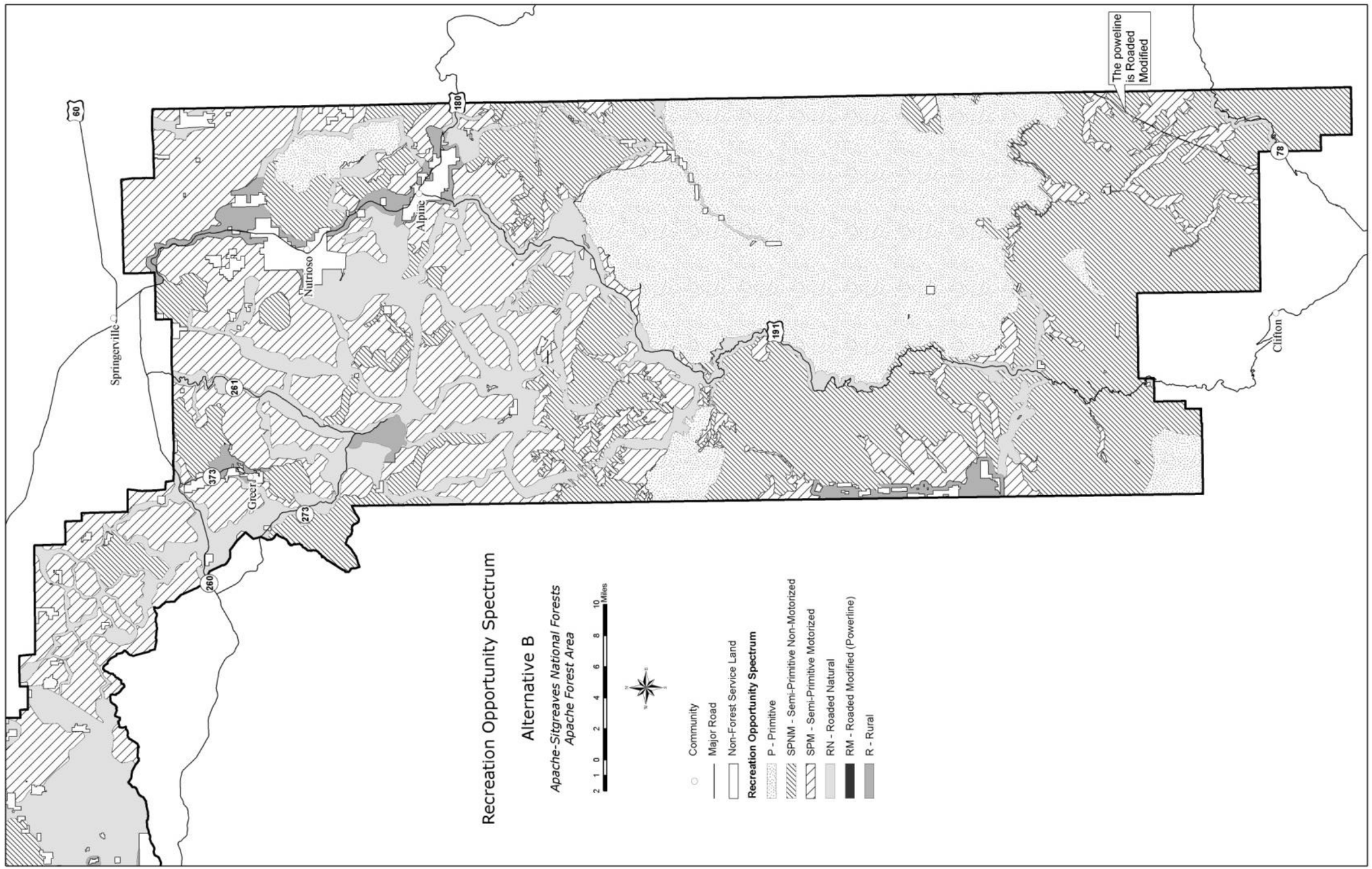


Figure 97. Map of ROS, alternative B – Apache NF

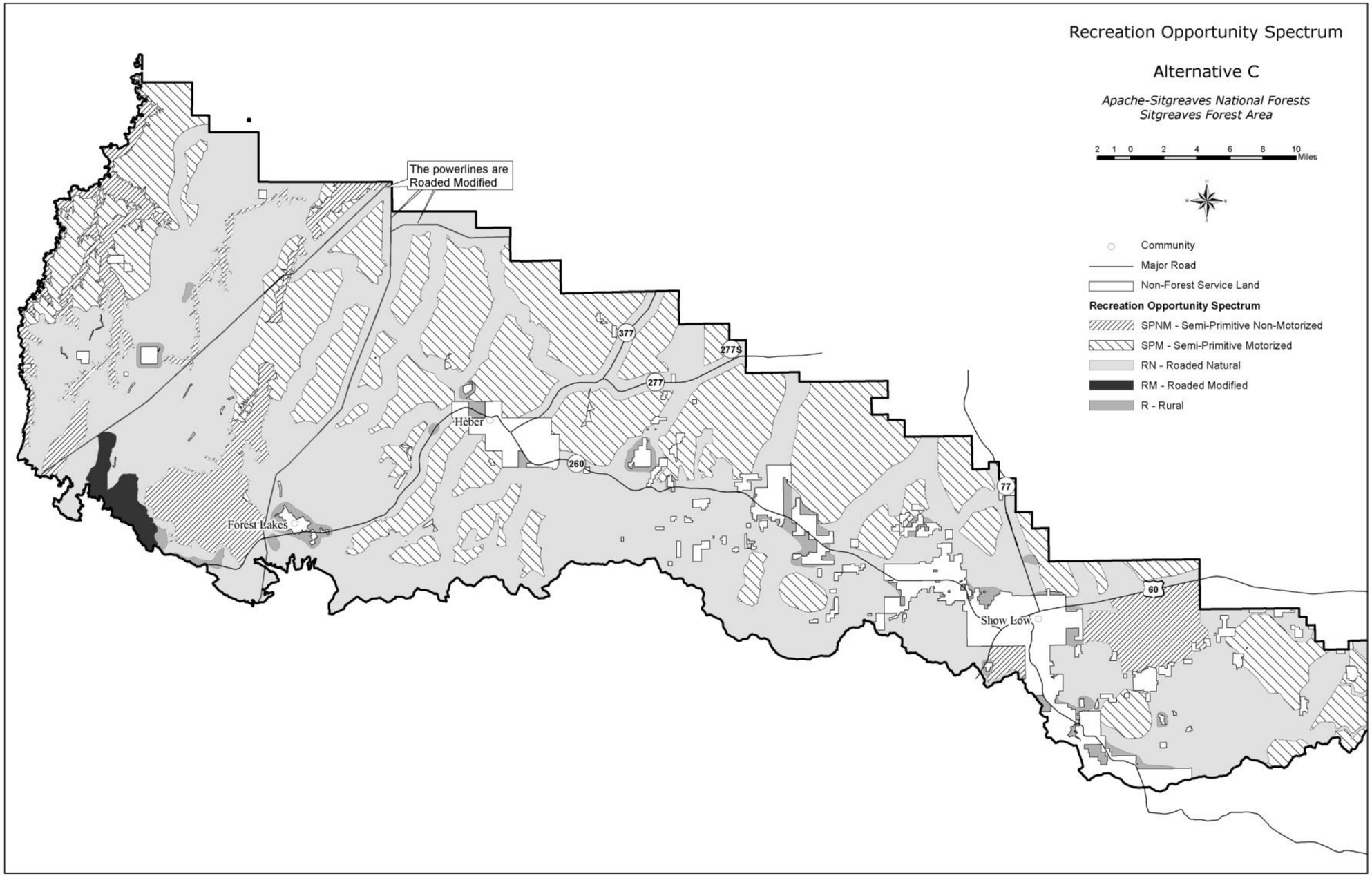


Figure 98. Map of ROS, alternative C – Sitgreaves NF

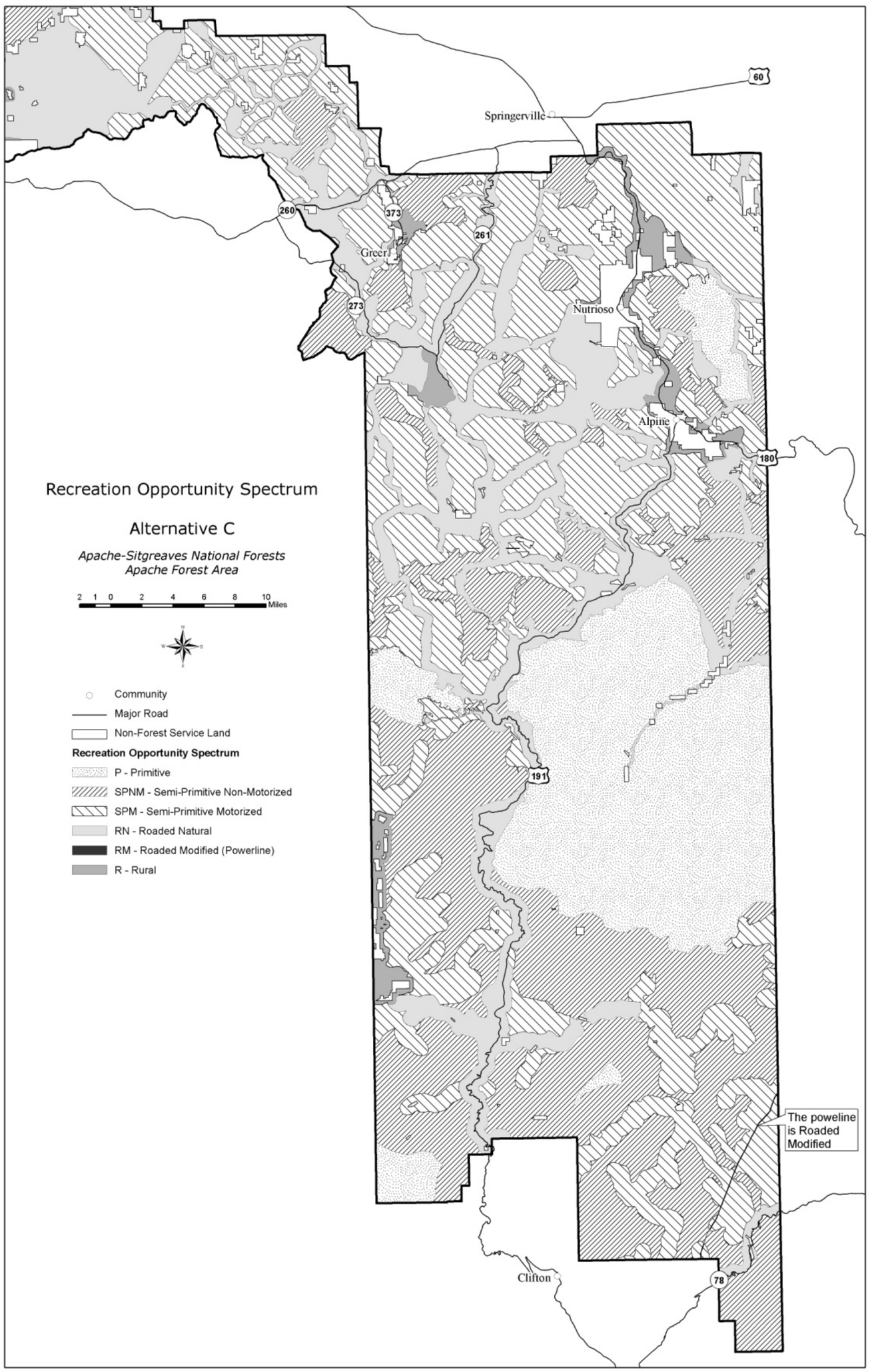


Figure 99. Map of ROS, alternative C – Apache NF

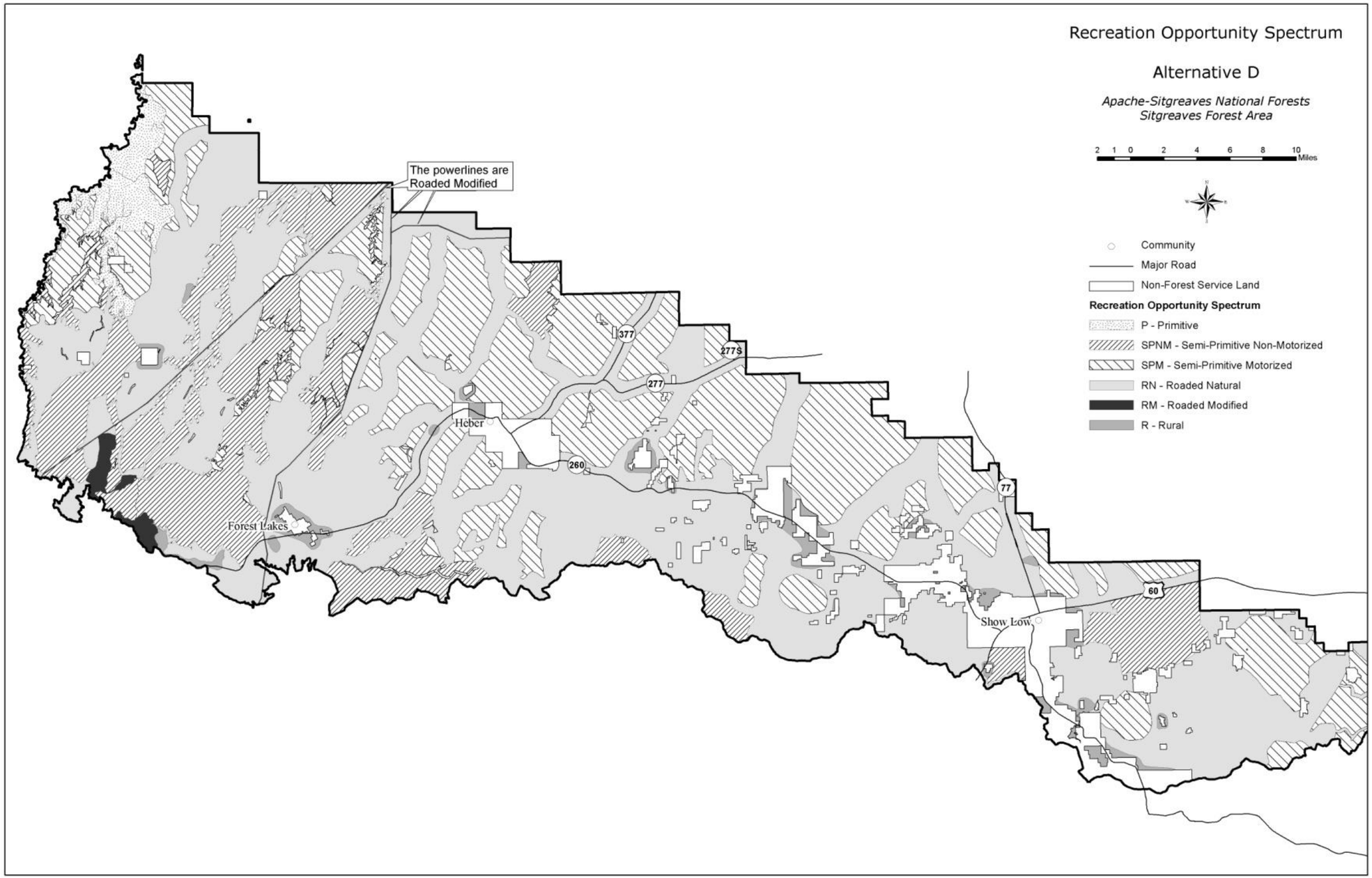


Figure 100. Map of ROS, alternative D – Sitgreaves NF

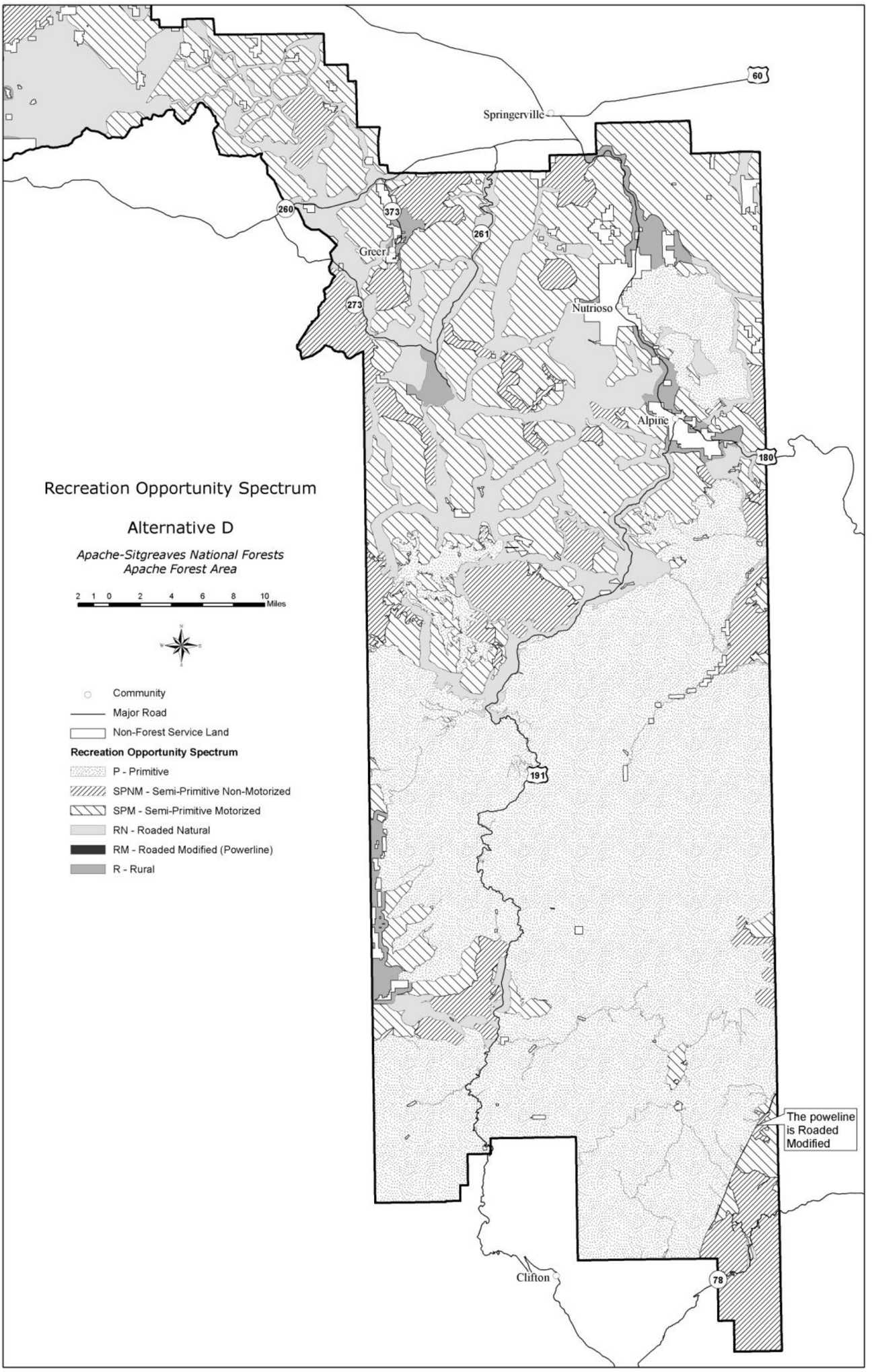


Figure 101. Map of ROS, alternative D – Apache NF

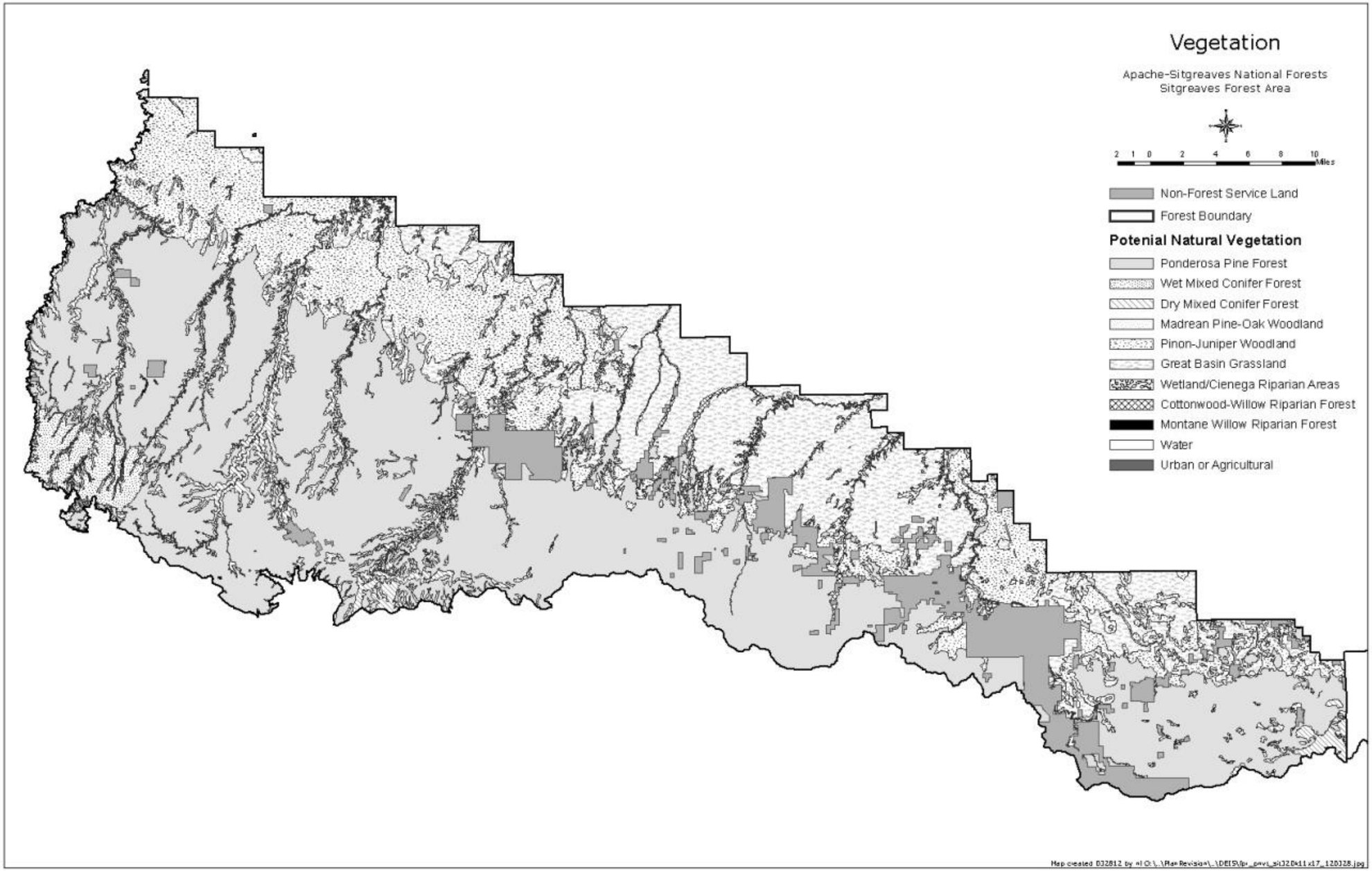


Figure 102. Map of PNVTs – Sitgreaves NF

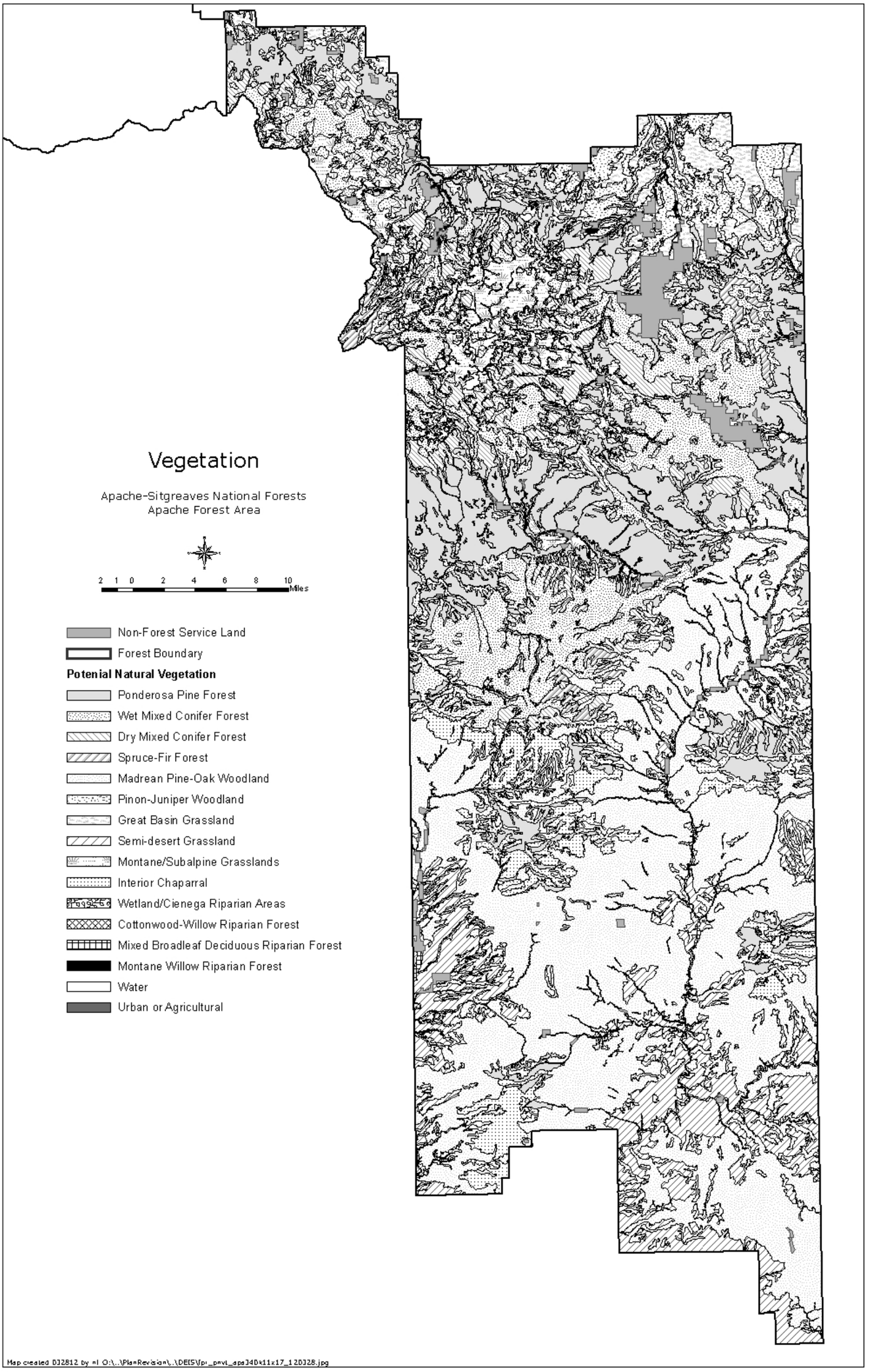


Figure 103. Map of PNVTs – Apache NF