CENTER for BIOLOGICAL DIVERSITY Because life is good.

Via Web

December 24, 2015

USDA Forest Service
Attn: Appeal Reviewing Officer
1400 Independence Ave., SW
EMC-JAR, Mailstop 1104
Washington, DC 20250
Email: appeals-chief@fs.fed.us

Notice of Appeal
Apache-Sitgreaves National Forests Land and Resource Management Plan

Pursuant to 36 C.F.R. § 219.35 Appendix A, the Center for Biological Diversity, the Grand Canyon Wildlands Council, the Sierra Club Grand Canyon Chapter, Western Watersheds Project, and the White Mountains Conservation League (collectively, "appellants") hereby file this notice of appeal regarding the Record of Decision ("ROD") and Final Environmental Impact Statement ("FEIS") for the Apache-Sitgreaves National Forests Land and Resource Management Plan ("Forest Plan") under the "Optional Appeal Procedures Available During the Planning Rule Transition Period." On September 25, 2015, legal notice of the ROD and opportunity to appeal published in *The White Mountain Independent* newspaper, making this notice of appeal timely. Appellants supplied the Forest Service with specific written comment at various stages of the planning process and may appeal.

DECISION DOCUMENT: *Record of Decision for the Apache-Sitgreaves National Forests Land and Resource Management Plan*.

DATE DECISION SIGNED: July 30, 2015.

RESPONSIBLE OFFICIAL: Calvin N. Joyner, Southwestern Regional Forester.

DATE DECISION PUBLISHED: September 25, 2015.

PUBLICATION VENUE: *The White Mountain Independent*, Show Low, Arizona.

LOCATION: The Apache-Sitgreaves National Forests comprise approximately 2.1 million acres in the White Mountains of east-central Arizona. *See* ROD at 1-2 (forest setting).

Alaska · Arizona · California · Florida · Minnesota · Nevada · New Mexico · New York · Oregon · Vermont · Washington, DC
P.O. Box 710 · Tucson, AZ 85702-0710 tel: (520) 623.5252 fax: (520) 623.9797 www.BiologicalDiversity.org

APPELLANTS

Center for Biological Diversity ***Lead Appellant***
Jay Lininger, Senior Scientist
P.O. Box 710
Tucson, AZ 85702-0710
Tel: (928) 853-9929
Email: jlininger@biologicaldiversity.org

Grand Canyon Wildlands Council
Kim Crumbo, Conservation Director
316 East Birch Street
Flagstaff, AZ 86002
Tel: (928) 556-9306

Sierra Club Grand Canyon Chapter
Sandy Bahr, Chapter Director
514 W. Roosevelt Street
Phoenix, AZ 85003
Tel: (602) 253-8633

Western Watersheds Project
Erik Ryberg, Legal Counsel
P.O. Box 1770
Hailey ID 83333
Tel: (208) 788-2290

White Mountain Conservation League
Thomas Hollender, President
P.O. Box 595
Pinetop, AZ 85935
Tel: (928) 339-4969

APPELLANTS' INTERESTS

The Center for Biological Diversity ("Center") is a non-profit public interest organization with offices in Tucson and Flagstaff, Arizona. Its mission is to conserve and recover imperiled fauna and flora and their habitats through science, education, policy and law. The Center has over 50,000 members, many of whom live in Arizona and maintain long-standing interests in management of the Apache-Sitgreaves National Forests. Members of the Center, including the undersigned, regularly use and enjoy, and will continue to use and enjoy the alpine, forest, woodland, shrubland, grassland and riparian environments found in those national forests for observation, research, aesthetic enjoyment and other recreational, scientific and educational activities. Members of the Center also have and shall continue to research, study, observe and

seek protection for at-risk species occurring in their natural habitats on the Apache-Sitgreaves National Forests for scientific, recreational, conservation and aesthetic benefits including appreciation of the existence of a full complement of native biological diversity found in wild places of Arizona. Forest Service violations of law and policy in its revision of the Forest Plan may indirectly or cumulatively cause significant adverse effects to species that are endangered, threatened or sensitive, and may contribute to the degradation of habitats, food resources and populations of species whose viability or recovery the Forest Service is obligated to realize. Effects to the environment that will result from implementation of management direction contained in the forest plan will harm the interests of the Center and its members in the conservation of nature and the recovery of imperiled biota. The Center demonstrated its interests with specific written comment at every opportunity in the plan revision process and may appeal.

The Grand Canyon Wildlands Council ("Council") is a non-profit regional conservation organization consisting of 500 supporters dedicated to protecting and preserving wild nature on the Colorado Plateau. The Council has a long history on involvement with the Apache-Sitgreaves National Forests plan revision process, and consistently advocates protection and restoration of the old growth ponderosa pine ecosystem its full spectrum of native species in natural patterns of abundance and distribution. The Council's supporters and staff routinely visit, and will continue to visit, the Apache-Sitgreaves National Forests in pursuit of their aesthetic, recreational and scientific interest in these forest resources. The Council supplied the Forest Service with specific written comments on this forest plan revision and may appeal.

The Sierra Club is one of the nation's oldest and most influential grassroots organizations in the United States. Its mission is "to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environments." The Sierra Club has more than 2.4 million members and supporters, including 35,000 members and supporters in Arizona as part of the Grand Canyon Chapter. Members of the Sierra Club have long been committed to protecting and enjoying our national forests, including the Apache-Sitgreaves National Forests, through various types of recreation including hiking, backpacking, wildlife viewing, and more. Members of the Sierra Club, including the undersigned, have a substantial interest in continuing to use the Apache-Sitgreaves National Forests, and are adversely affected and aggrieved by Forest Service failure to protect the land and comply with the law in the decision at appeal. The Sierra Club offered specific written comment in the forest plan revision process and may appeal.

Western Watersheds Project is a non-profit conservation organization dedicated to protecting wildlife habitat, soil productivity, range and water quality, riparian areas, and archaeological resources on the public lands of Arizona and the West. It supplied the Forest Service with specific written comment in response to the Draft Environmental Impact Statement for the Forest Plan and may appeal.

The White Mountain Conservation League ("League") is a local, regional and statewide action group with over 250 members dedicated to sustaining and enhancing Arizona's White Mountain ecosystems and communities. League members embrace and encourage sound stewardship of our diverse ecosystems, and recognize their value to our economic vitality and

quality of life. The League communicated its interests to the Forest Service with specific written comment regarding threatened and endangered species, indicator species, riparian habitat, old growth, livestock grazing and wilderness, and may appeal.

REASONS

I. Inadequate plan components to meet minimum management requirements for riparian areas, and failure to identify reasons for change of management approach.

The National Forest Management Act ("NFMA") states that the Secretary of Agriculture "shall … incorporate the standards and guidelines required by this section in plans for units of the National Forest System…" 16 U.S.C. § 1604(c). The 1982 planning regulations implementing the NFMA state, "Plans guide all natural resource management activities and establish management standards and guidelines for the National Forest System. They determine resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management." 36 C.F.R. § 219.1(b) (1982). Forest plans must establish "standards and requirements by which planning and management activities will be monitored and evaluated." *Id*. § 219.5(a)(7) (1982). Standards and guidelines must be "qualitative and quantitative." *Id*. at § 219.1(b)(12) (1982). Additionally, forest plans must define reasons for management practices chosen for each vegetation type and circumstance. *See id*. § 219.15 (1982).

Further, the NFMA implementing regulations establish "minimum specific requirements to be met" in forest management plans, including the Apache-Sitgreaves Forest Plan. 36 C.F.R. § 219.27 (1982). One of the requirements is, "Special attention shall be given to land and vegetation for approximately 100 feet from the edges of all perennial streams, lakes, and other bodies of water," otherwise known as riparian areas. *Id*. § 219.27(e) (1982). In order to establish management practices within riparian areas, the Forest Service must consider "[t]opography, vegetation type, soil, [and] climatic conditions." *Id.* Another requirement of the 1982 Planning Rule is that management prescriptions "preserve and enhance the diversity of plant and animal communities." *Id*. § 219.27(g) (1982). Additionally, the Forest Service must meet "[m]onitoring and evaluation requirements that will provide a basis for periodic determination and evaluation of the effects of management practices." *Id*. § 219.11(d) (1982).

Management direction contained in the prior Forest Plan (USDA 1987a) was not adequate to meet NFMA requirements for riparian areas. *See* USDA (2008b: 52) ("In many cases forest plan objectives for watershed and riparian areas are being met; nevertheless, many watershed and riparian areas still remain in unsatisfactory condition"); *id*. 75 (existing plan direction is not adequate to forestall widespread declines in riparian ecosystem health and aquatic species viability). Riparian habitats in the Apache-Sitgreaves National Forests are severely degraded from past conditions. *See* FEIS at 93 (Table 14 showing riparian vegetation and soil conditions trends "away" from desired conditions); 94 (Table 15 showing 68 percent of riparian areas along streams are "functioning at-risk," and eight percent (8%) are "nonfunctioning"); *id*. (riparian systems "may take decades to reach [properly functioning condition]"); 103 ("Most streams and aquatic and riparian habitats have experienced

considerable degradation and alteration from a variety of human and management related activities; their ability to recovery and improve has been affected, especially as ongoing and new impacts occur"); *also see* USDA (2008b: 75) ("Three species—the Chiricahua leopard frog, the Little Colorado spinedace, and the loach minnow—are currently in danger of being extirpated from the forests").

> Several sensitive species continue to decline on the landscape, such as the longfin dace, Sonora sucker, desert sucker, speckled dace, montane vole, New Mexican meadow jumping mouse, water shrew, northern leopard frog, Arizona toad, narrow-headed gartersnake, Mexican gartersnake, and many invertebrates, especially aquatic invertebrates. All fish species are declining in numbers and populations on the forests and throughout their respective ranges.

USDA (2008b: 75). The revised Forest Plan itself acknowledges the generally degraded condition of riparian areas in the Apache-Sitgreaves National Forests:

> All of the riparian PNVTs, 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.

Forest Plan at 33. However, the revised Forest Plan contains no new management direction to remedy the situation and assure viability of species associated with riparian areas. The only relevant standards would require preservation of "minimum levels of waterflow that maintain aquatic life," and that water withdrawals from streams prevent "entrapment of fish and aquatic organisms and the spread of parasites or disease." *Id*. 23, 26 (standards). Proposed standards for livestock grazing do not address the degraded condition of riparian areas. *See id*. 97. Water use standards may help to prevent further degradation of stream flow regimes, but would not restore them to proper functioning condition. *See id*. 104. Indeed, no standards apply to management of riparian areas that than what is recited here. That fact is highly significant because the desired conditions, objectives and guidelines in the revised Forest Plan are discretionary and may be ignored in project-level decisions.

Indeed, the revised Forest Plan repeals, deletes and weakens many standards and guidelines that governed management of riparian areas under the 1987 Forest Plan (USDA 1987a). The Center listed those standards and guidelines in comments, and repeats them here because the Forest Service has systematically disregarded the comment:

- Riparian areas will be mapped as separate areas when they are at least 10 acres; otherwise, they will be considered as areas which require special consideration even though they are part of a larger stand. 1987 Forest Plan at 80.

- Implement best management practices to prevent water quality degradation. *Id*. 81.

- 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. *Id*.

- Provide adequate drainage to prevent concentrated flow and sediment laden runoff from entering water courses. *Id*.

- Designate stream courses to receive protection during projects. Those streams shown on 7.5' quads as a stream course should be considered for designated stream courses. *Id*.

- Roads will be located away from stream bottoms to minimize sediment delivery to the streamcourse whenever possible. *Id*.

- Maintain suitable filter/buffer strips between stream courses and disturbed areas and/or road locations to: (a) Maintain suitable stream temperature, and (b) Maintain water quality standards. *Id*. 83.

- Maintain and enhance riparian vegetation along streams to maintain suitable water temperature and other conditions for streamflow. *Id*.

- Effectively close or obliterate roads causing intolerable resource damage (relocate roads as needed). *Id*.

- 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. Limit the use of certain facilities in floodplains to nonflood seasons or daylight hours only. *Id*.

- Maintain water resource improvement projects where improvement and downstream values will be jeopardized if work is not accomplished. *Id*.

- Control surface uses in mineral operations through plans of operations and permits which provide for: preservation of water quality, protection of watershed values, reforestation or revegetation to attain soil stability and protect threatened, endangered, and sensitive species. *Id*. 88.

- No streambed alteration or removal of material is allowed if it significantly affects riparian-dependent resources, channel morphology, or streambank stability. *Id*. 90.

- Road Maintenance and Management - Erosion control measures will be included in road plans. Construct roads to keep sediment out of riparian and aquatic habitats. Minimize clearing widths and vegetative clearing. *Id*. 104-05.

- 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. *Id*. 106.

- Total road density should average 3.5 miles/sq. mile or less. Open road densities should average 2.0 miles/sq. mile or less. *Id*. 106.

The planning record contains no explanation why the Forest Service abandoned the standards and guidelines of the 1987 Forest Plan listed above. The agency does not revise its Forest Plan on a blank slate. Rather, it has significantly departed from the prior Forest Plan (USDA 1987a) which was in effect for almost three decades based on a Record of Decision that passed through notice, comment and appeal procedures.

The Forest Service is required to explain why it changed course by deleting standards and guidelines of the 1987 Forest Plan, and to give a hard look at effects of those changes to the environment. *See* USDA (2008c: 57) ("Riparian areas with a [functioning at-risk] rating will remain static or show downward trend where activities are not managed to existing forest plan standards …") [emphasis added]. The agency may not defer the required hard look to project-level analysis. *See Citizens for Better Forestry v. U.S. Dept. of Agriculture*, 341 F.3d 961, 973 (9th Cir. 2003) (forest plans have actual, physical effects on the environment). Reducing or repealing environmental standards in a forest plan will result in lesser or no environmental standards at the site-specific level. *Id*. at 975. "[A]n agency changing its course must supply a reasoned analysis." *Motor Vehicles Manufacturers Assoc. v. State Farm*, 463 U.S. 29, 57 (1983); also see *Lands Council v. Martin*¸ 529 F.3d 1219, 1225 (9th Cir. 2008) (agency action is arbitrary and capricious when an agency provides "no explanation at all" for a change in policy).

Evidence in the record plainly shows that failure to implement the 1987 Forest Plan standards and guidelines listed above will result in continued degradation of aquatic ecosystems with attendant – and as yet unquantified – risks to viability of species associated with riparian areas in the Apache-Sitgreaves National Forests. See USDA (2015: 13) ("The current trend of areas functioning at risk will remain static or show downward trend in areas where activities are not managed to existing forest plan standards"). Assertions in the record that revised Forest Plan will "improve" riparian conditions and species viability are not supported by evidence, and therefore are arbitrary, capricious, and in violation of the APA.

In comment dated March 8, 2010, the Center proposed a detailed strategy to maintain and restore degraded riparian areas and aquatic habitats in the Apache-Sitgreaves National Forests, which the Forest Service summarily ignored. The Center stated on page 18 of its comment,

> An ecosystem approach is warranted to stop habitat degradation, maintain habitat and ecosystems that are currently in good condition, and to aid recovery of at-risk aquatic species and their habitat. Although federal land management cannot arrest all sources of fisheries decline and degradation of aquatic habitat, such as artificial stocking and non-native species invasions, the Forest Service can implement standards and guidelines to

> maintain and restore aquatic and riparian habitats on ASNF lands. This approach is both prudent and necessary given the current perilous state of most native fish populations and other aquatic organisms, such as Chiricahua leopard frog.

The Center further noted on page 19 of its comment letter that the Forest Service had previously amended land management plans in the Pacific Northwest Region (Oregon and Washington) to enact an aquatic conservation strategy ("ACS"), and the comment discussed elements of the ACS in detail. On May 30, 2013, the Center reiterated its comment in response to the programmatic draft environmental impact statement ("DEIS") for revision of the Apache-Sitgreaves Forest Plan because "riparian areas present a significant issue for analysis because they are severely degraded on the Apache-Sitgreaves National Forests, and the Forest Service is required by NFMA to ensure viability of species that depend on aquatic habitats, including six fishes and an amphibian listed as threatened or endangered under the ESA." In the latter comment, the Center noted that the Forest Service failed to address the reasonable ACS planning alternative, and explained that the proposed ACS includes discrete land allocations and binding plan components including standards and guidelines for project-level management. Therefore, the ACS as proposed by the Center is entirely distinct from the alternatives advanced by the Forest Service because the latter are based almost exclusively on discretionary plan components that are effectively meaningless in project-level management.

In response to comment on the DEIS, the Forest Service offered ineffective defenses of its new and significantly less rigorous management approach to riparian areas. Indeed, only three responses to comment in the FEIS are remotely on point. The first relevant response states:

> **<u>Concern Statement:</u> The proposed plan acknowledges the generally degraded condition of riparian areas, explain why it proposes no new management direction to restore conditions. (26.60, 162.182)**
>
> **<u>Response</u>:** There are desired conditions, objectives, and guidelines within the "Riparian Areas" section of the plan that provide direction to protect and improve conditions. Specifically, an objective to move 200 to 500 acres per year towards desired riparian condition and removal of a minimum of 2 miles of unauthorized roads and trails can be found in this section.

FEIS at 629. As stated above, plan components in the revised Forest Plan effectively repeal standards and guidelines of the 1987 Forest Plan that presumably met the minimum management requirements for riparian areas under the NFMA, even if they failed to maintain or improve riparian habitats in the national forests or provide for species viability. The response contains no explanation for the change of management approach or its environmental effect. Moreover, the response names two objectives that address improvement of <u>currently degraded</u> riparian areas, and fails to identify components in the revised Forest Plan that would maintain, or "protect," intact and functional riparian habitats from degradation in the future – this fact alone demonstrates failure of the plan to meet the minimum management requirements of the NFMA.

Furthermore, the plan objectives specified by the Forest Service in the response to comment cited above are not binding on the agency, and they <u>may or may not</u> be implemented

depending on agency funding and priorities from year to year. On May 13, 2013, the Center explained in comment on the DEIS that the Forest Plan itself defines "objectives" in a way that does not carry the same force and effect on decision-making as plan standards.[1] *See* FEIS at 46 (Table 4); *also see* Forest Plan at 6-7 ("The objectives represent just some of the expected outcomes or actions required to accomplish movement toward desired conditions. Not every action the Apache-Sitgreaves NFs may initiate is identified in the plan, just the primary ones. Objectives are strongly influenced by recent trends, past experiences and anticipated staffing levels, and short-term budgets"). Given the conditional nature of the plan objectives, the Forest Service's reliance on them in response to comment only highlights the need for explanation of its change in management approach from the 1987 Forest Plan with regard to riparian areas.

In addition, even if the revised plan objectives cited by the Forest Service in response to comment were assured of implementation, the riparian areas that may be affected by action to move "200 to 500 acres per year towards desired riparian condition and removal of a minimum of 2 miles of unauthorized roads and trails," is miniscule compared to the forest-wide need to maintain and improve ecosystem health. Potential natural vegetation types comprising "riparian areas" exist on approximately 47,281 acres on the Apache-Sitgreaves National Forests (USDA 2014: 52, 56, 59, 63) (wetland/cienega (17,900 acres), cottonwood willow riparian (15,876), mixed broadleaf deciduous (8,697), montane willow riparian (4,808)). That includes riparian areas along approximately 2,822 linear miles of lotic streams, and 7,000 acres of lentic wetlands (USDA 2015: 13). Current vegetation and soil conditions are "away" from desired conditions in all riparian area types on the national forests (USDA 2015: 13) (Table 1). Among the lotic stream riparian forests (~40,281 acres), just 24 percent are in "proper functioning condition," 68 percent are "functioning-at-risk," and 8 percent are "non-functioning." *Id*. The revised Forest Plan contains no specific objectives or other plan components that address maintenance or improvement of the 68 percent of lotic stream riparian forests that are "functioning at-risk." That fact is significant because, according to Forest Service analysis, riparian areas attained impaired or degraded conditions due, in part, to past forest management:

> Past effects of grazing, logging and roads, flooding and periods of drought have degraded riparian conditions (US Forest Service 2008). In general, the current trend (actual and apparent) of areas that are properly functioning are expected to remain in that condition based on BMP implementation for road, timber, and grazing management. The current trend of areas functioning at risk will remain static or show downward trend in areas where activities are not managed to existing forest plan standards, or upward, where BMPs and other mitigations are effectively protecting riparian values.

USDA (2015: 13) [emphasis added]. The agency specialist recognized that riparian areas functioning at-risk will trend "downward" if "existing forest plan standards" are not implemented. The revised Forest Plan repeals the standards and guidelines of the 1987 Forest Plan without explanation of need or effect. The specialist holds out the possibility that "BMPs

[1] The NFMA implementing regulations applicable to this plan revision define "objective" as, "A concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals." 36 C.F.R. § 219.3 (1982).

and other mitigations" may help with an "upward" trend, but it does not identify any specific management practices or mitigation measures that will produce such a result where current riparian conditions are "functioning at-risk." Desired conditions and objectives in the revised Forest Plan are not themselves BMPs or mitigation measures, and no standards require their application in project-level management in any case. There is simply no mechanism in the revised plan that assures maintenance or improvement of riparian conditions on between 2,000 and 5,000 acres forest-wide over 10 years. *See* FEIS at 629 (citing "objective to move 200 to 500 acres per year towards desired riparian condition and removal of a minimum of 2 miles of unauthorized roads and trails"); *compare* USDA (2015: 13-15) (approximately 27,391 acres, or 1,808 miles of stream, or 68 percent of lotic streams are functioning at risk). More, evidence in the record strongly suggests that failure to implement standards in the 1987 Forest Plan may cause riparian conditions to trend downward, contrary to the need for change.

The second relevant response of the Forest Service to public comment in defense regarding the adequacy of the revised Forest Plan components in meeting minimum management requirements of the NFMA for riparian areas states:

> **Concern Statement: There should be a standard(s) to manage riparian areas for proper functioning condition. (112.43, 127.42)**
>
> **Response:** The Forest Service has chosen not to frame riparian condition as a standard, but it has described many elements of properly functioning condition (PFC) as desired conditions in the plan. (BLM, 1998; BLM, 1999). Chapter 1 of the plan explains that desired conditions and guidelines are not discretionary; projects must either maintain resources in desired conditions or move them toward desired conditions. Any project documentation should explain how the project is consistent with desired conditions and describe any short or negligible long term effects the project may have concerning the maintenance or attainment of any desired condition.

FEIS at 630. The response is notable because it admits that no management standards in the revised Forest Plan address the maintenance or improvement of riparian conditions where they are impaired or degraded by past management. *See* USDA (2015: 13) (riparian conditions will trend downward if "existing forest plan standards" are not implemented). More importantly, the response to comment distorts —to the point of gross misrepresentation—the effect of desired condition statements in the revised Forest Plan on project-level management. *See* FEIS at 630 ("desired conditions and guidelines are not discretionary; projects must either maintain resources in desired conditions or move them toward desired conditions"). The response is factually incorrect and it is contradicted by agency analysis. As the Center explained in DEIS comment on May 13, 2013, the Forest Service itself defines "desired conditions" as, "goals." FEIS at 9.[2] *Also see* Forest Plan at 6 ("Desired conditions may only be achievable over a long timeframe (in some cases, several hundred years […] Desired conditions are aspirations and are not

[2] The NFMA implementing regulations define a "goal" as, "A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principal basis from which objectives are developed." 36 C.F.R. § 219.3 (1982).

commitments or final decisions approving projects"); *compare id.* 7 (standards are constraints upon project and activity decision making). As explained *infra*, the Forest Service enjoys infinite discretion to interpret the meaning and force of plan components (*e.g.*, desired conditions and objectives) that are cast in suggestive language, and it is only accountable to implement standards framed in mandatory language (*e.g.*, "will" or "shall"). Therefore, the response to comment quoted above errs—and, in fact, misleads—regarding the effect of desired conditions for riparian areas under the revised Forest Plan. Again, no mechanism in the plan assures that riparian conditions will be maintained or improved, contrary to the need for change.

Finally, in response to public comment regarding the adequacy of plan components to meet minimum management requirements for riparian areas under the NFMA, the Forest Service addresses the "aquatic conservation strategy" alternative proposed by the Center as follows:

> **<u>Concern Statement:</u> The Forest Service should adopt an ecosystem-scale aquatic conservation strategy for management of aquatic habitat and at-risk fisheries similar to the one adopted in the Pacific Northwest: (1) Designate "key watersheds" in large drainage basins that offer the highest quality aquatic habitat, (2) establish "riparian reserves" to maintain and restore aquatic habitat, (3) enacts standards and guidelines for management in riparian reserves that require project-level actions to meet objectives related to physical, chemical and biological aspects of aquatic ecosystems, (4) require watershed analysis at the scale of large drainage basins to account for such factors as road density, vegetation cover and ecological processes that contribute to aquatic habitat quality, (5) compel active restoration of aquatic ecosystems in compliance with standards and guidelines for riparian reserves, and (6) prohibits use of site specific mitigation measures or planned restoration activities as a substitute for preventing degradation of existing high-quality aquatic habitat. (26.181, 162.183, 26.18, 26.73, 26.130)**
>
> **<u>Response</u>:** The plan recognizes the need to maintain, improve, and restore watersheds, riparian areas, and aquatic habitat and their associated species on the Apache-Sitgreaves NFs. The primary approaches of the plan to address these issues are through ecosystem restoration of the various PNVTs across the landscape, addressing degraded watershed conditions, and improving conditions within riparian areas and their associated aquatic habitats and species. Numerous objectives, desired conditions, standards, and guidelines have been developed for each of these for improving conditions by reducing historical, ongoing, and potential impacts through restoration activities and moving towards desired conditions through project implementation. Two examples of specific plan decisions (objectives) are:
>
> > *(1) "During the planning period improve the condition class on at least 10 priority 6th level HUC watersheds by removing or mitigating degrading factors."*
> >
> > *(2) "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."*

FEIS at 636. Once again, the Forest Service points to objectives, not standards, to support its claim that the revised Forest Plan meets the minimum requirements of the NFMA. The agency itself admits elsewhere in the record that plan objectives are not binding on project-level activities because they are subject to uncertainty regarding agency funding, staffing and other priorities.

Moreover, the last response to comment quoted above contradicts a prior response to comment, also quoted above, stating that the Forest Service elected not to apply binding standards to management of riparian conditions. *See id*. at 630 ("The Forest Service has chosen not to frame riparian condition as a standard, but it has described many elements of properly functioning condition (PFC) as desired conditions in the plan"). All components of the revised Forest Plan affecting management of riparian conditions are discretionary and fail to meet the minimum requirements under the NFMA. *See* 36 C.F.R. § 219.5(a)(7) (1982) (forest plans must establish "standards and requirements by which planning and management activities will be monitored and evaluated"). Additionally, forest plans must define reasons for management practices chosen for each vegetation type and circumstance. *See id*. § 219.15 (1982). In response to comment, the Forest Service merely asserts that it chose specific plan components regarding management of riparian areas; it does not supply any reason for repeal of standards adopted by the 1987 Forest Plan.

The Forest Service failed to advance plan components (*i.e.*, standards) to assure maintenance and improvement of riparian conditions and to constrain project-level management in riparian areas. The revised Forest Plan repeals prior standards and guidelines that presumably met the minimum requirements of the NFMA, insofar as they were approved in a Record of Decision, even if evidence in the record shows that those standards and guidelines did not maintain riparian conditions in the national forests or ensure species viability. The Ninth Circuit has held that an agency decision is arbitrary and capricious under the APA if it "entirely failed to consider an important aspect of [a] problem." *Lands Council v. McNair*, 537 F.3d 981, 987 (9th Cir. 2008 *en banc*). Further, "when an agency provides no explanation at all for a change in policy," its action is arbitrary and capricious. *Lands Council v. Martin*¸ 529 F.3d 1219, 1225 (9th Cir. 2008). Nowhere in the planning record does the Forest Service provide a rationale for eliminating the standards and guidelines affecting riparian areas that were contained in the 1987 Forest Plan. Therefore, the Forest Service's planning decision is arbitrary and capricious, and in violation of the NFMA and the APA.

Changes Sought:

- Withdraw the ROD and remand the EIS for further analysis of management direction and plan components applicable to riparian areas.

- Ensure that the revised Forest Plan contains adequate management direction and plan components to meet minimum management requirements of the NFMA.

II. Failure to consider or adequately respond to reasonable planning alternatives.

The National Environmental Policy Act ("NEPA") requires the Forest Service to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(2)(E). Regulations implementing the NEPA obligate the agency to "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." 40 C.F.R. § 1502.14(a). The alternatives considered are the "heart" of an environmental impact statement. 40 C.F.R. § 1502.14. Even as it considers and analyzes foreseeable impacts of the proposed action, the Forest Service must "[r]igorously explore and objectively evaluate all reasonable alternatives." *Id*. at § 1502.14(a); *see also* 36 C.F.R § 219.12(f) (1982). The EIS must present environmental impacts of the proposed action and reasonable alternatives "in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public." 40 C.F.R. § 1502.14. The NEPA process must "identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment." *Id*. at § 1500.2(f).

Additionally, regulations implementing the NFMA require the Forest Service to consider planning alternatives during the NEPA process that are "distributed between the minimum resource potential and the maximum resource potential to reflect . . . the full range of . . . environmental resource uses and values." 36 C.F.R. § 219.2(f)(1) (1982). The alternatives considered must "facilitate analysis of opportunity costs and of resource use and environmental trade-offs among alternatives." *Id.*

Standards of the APA control review of agency compliance with requirements of the NEPA and the NFMA. *Southeast Alaska Conservation Council v. Fed. Highway Admin.*, 649 F.3d 1050, 1056 (9th Cir. 2011). An agency's decision will be set aside if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). Review under the "arbitrary and capricious" standard is based on "a consideration of the relevant factors and whether there has been a clear error of judgment." *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416 (1971).

On March 18, 2010, the Center supplied the Forest Service with specific written comment asking the agency to fully consider and compare impacts of an action alternative that would <u>increase</u> protection of forest resources, including species viability, in response to climate change. On page 18 of that comment, the Center stated,

> An ecosystem approach is warranted to stop habitat degradation, maintain habitat and ecosystems that are currently in good condition, and to aid recovery of at-risk aquatic species and their habitat. Although federal land management cannot arrest all sources of fisheries decline and degradation of aquatic habitat, such as artificial stocking and non-native species invasions, the Forest Service can implement standards and guidelines to

maintain and restore aquatic and riparian habitats on ASNF lands. This approach is both prudent and necessary given the current perilous state of most native fish populations and other aquatic organisms, such as Chiricahua leopard frog.

Further, on page 19 of its March 18, 2010 comment, the Center noted that the Forest Service previously amended land management plans in the Pacific Northwest Region to enact an aquatic conservation strategy ("ACS") that:

- Designates "key watersheds" in large drainage basins that offer the highest quality aquatic habitat, which tend to be free of dams or host large areas of upland terrestrial habitat without roads, where recovery of at-risk aquatic organisms has the greatest likelihood of success. Key watersheds are withdrawn from programmed timber harvest and increases of road density are prohibited.

- Establishes "riparian reserves" as discrete land management areas on lands generally parallel to streams, in proximity to wetlands, and including high-risk landslide terrain where the emphasis is to maintain and restore aquatic habitat.

- Enacts standards and guidelines for management in riparian reserves that require project-level actions to meet objectives related to physical, chemical and biological aspects of aquatic ecosystems.

- Requires watershed analysis at the scale of large drainage basins to account for such factors as road density, vegetation cover and ecological processes that contribute to aquatic habitat quality. Land management in key watersheds and riparian reserves must be preceded and informed by watershed analysis.

- Compels active restoration of aquatic ecosystems in compliance with standards and guidelines for riparian reserves. Examples of restoration activities include road density reduction, removal of developments and grazing from floodplains and wetlands.

- Prohibits use of site-specific mitigation measures or planned restoration activities as a substitute for preventing degradation of existing high-quality aquatic habitat.

On May 13, 2013, the Center commented in response to the DEIS that the Forest Service never considered the reasonable planning alternative to increase protective management standards for aquatic ecosystems in the Apache-Sitgreaves National Forests. On pages 27-28 of that comment letter, the Center reiterated its request for consideration of the ACS alternative noting, "It is the only proposal that meets NFMA requirements for management of riparian areas, and it is consistent with the need for change (Revision Topic 1 – *see* PDEIS at 4-5)." Further, on page 38, the Center cited the Forest Service planning record stating,

> Existing direction is not adequate to forestall widespread declines in riparian ecosystem health and aquatic species viability (USDA 2008b: 52, 75). A no-regrets alternative would implement the aquatic conservation strategy ("ACS") described above to maintain and restore riparian areas and ensure aquatic species viability. On March 18, 2010, the

> Center asked the Forest Service in scoping comments to fully consider and compare impacts of an action alternative that would increase protection of forest resources, including species viability, in response to climate change. The agency has not considered such an alternative, and the range presented in the PDEIS is unreasonably narrow.

Further, on pages 48-49 of its DEIS comment letter, the Center presented reasons why aquatic ecosystems in the Apache-Sitgreaves National Forests require specific planning attention, and it developed the "no-regrets" ACS alternative with reference to planning documents prepared by the Forest Service. On page 49 of that comment, the Center stated that it "strongly recommends that the Forest Service adopt an ecosystem approach to management of aquatic habitats in this forest plan revision. It is clear that existing standards and guidelines and best management practices, even if fully funded, implemented and monitored, are inadequate to meet statutory and regulatory requirements to provide for viable fish and wildlife populations that depend on aquatic habitats."

Center comments on the forest plan revision advanced a consistent and plainly reasonable planning alternative that the Forest Service failed to consider in detail, or to reasonably eliminate from detailed study, in violation of the NEPA, the NFMA and the APA. Responses to comment do not address the detailed and reasonable ACS alternative proposed by the Center in specific written comment at all stages of the planning process. *See* FEIS at 601-608 (alternatives). The alternatives considered but eliminated from study in the FEIS speak for themselves. *See id.* at 16-22. None of them consider an increase of management protection for aquatic ecosystems to address the revision topic of maintaining and improving ecosystem health.

The only remotely relevant alternative that the Forest Service considered but eliminated is cast as, "Alternative to Manage Forests as a Refuge for Fish and Wildlife." That alternative glances upon general concerns stated in public comments, and clearly ignores specific and reasonable policy proposals that were advanced in comment:

> Comments received on the proposed plan and DEIS recommended an alternative that focuses on managing for biological diversity and at-risk species to address scientific uncertainty and controversy regarding climate change impacts and creates a safe harbor and refuge for fish and wildlife, even at the expense of competing multiple use activities, such as livestock grazing, timber production, and motorized recreation.
>
> The alternative was not considered in detail because, by focusing solely on fish and wildlife habitat over other uses, it would not meet the legal direction of the National Forest Management Act or Multiple Use-Sustained Yield Act, which direct that forests will be managed using multiple use, sustained yield principles. Also, in light of changes predicted by current climate models (e.g., increased wildfires, greater vulnerability to invasive species, changes in timing of precipitation), there is a need to reduce vulnerability by maintaining and restoring resilient native ecosystems which would be an outcome in alternatives B, D, C, and A (in order from greatest resilience to least). Management practices that sustain healthy plant and animal communities (e.g., thinning for age class diversity and structure, reclaiming and restoring native grasslands) promote resilience and reduce opportunities for disturbance and damage.

FEIS at 21; *also see id*. 607 (same). The Forest Service set up a straw man and knocked it down claiming that it is contrary to the statutes governing national forest management because it excludes multiple uses. The eliminated alternative does not address the ACS concept or its specific proposals for discrete land allocations and management standards for riparian areas to ensure species viability.

At a different location in the record, the Forest Service makes one attempt to directly address the ACS alternative proposed by the Center. *See* FEIS at 636 (quoted above). That response asserts that components of the revised Forest Plan meet "the need to maintain, improve, and restore watersheds, riparian areas, and aquatic habitat and their associated species…" *Id*. However, it clearly fails to articulate a reason why the ACS alternative itself is not reasonable and did not merit detailed study. The alternative is reasonable and plainly distinguishable from those advanced by the Forest Service because it is based on: (1) a similar planning decision of the same agency at a different location; (2) discrete land allocations including key watersheds and riparian reserve that were not considered in the analysis; and (3) binding standards to constrain project-level management in those land allocations.

If an alternative meets the purpose and need then it is reasonable, and it must be considered in an environmental impact statement. *Native Ecosystems Council*, 428 F.3d at 1247-48 ("In judging whether the Forest Service considered appropriate and reasonable alternatives, [the] focus [is] on the stated purpose"); *also see* 40 C.F.R. § 1502.14(a) ("Rigorously explore and objectively evaluate all reasonable alternatives…"). The Center's proposed ACS alternative is reasonable because it provides a framework for management of riparian areas that would meet the revision topic of maintaining and improving ecosystem health. Moreover, because the Forest Plan does not meet minimum management requirements for riparian habitats, as explained *infra*, the ACS alternative reasonably tests the "minimal resource potential" of aquatic ecosystems for comparison of environmental trade-offs in management planning, per the requirements of the NFMA. The agency's failure to state a reason for eliminating the reasonable alternative from detailed consideration is arbitrary and capricious, and violates the NEPA, the NFMA and the APA.

Change Sought:

- Withdraw the ROD and remand the EIS for detailed study of an action alternative that incorporates an aquatic conservation strategy, as described in the planning record.

III. Failure to ensure viability and recovery of threatened Mexican spotted owl, and failure to explain change of management approach.

The NFMA planning regulations state, "Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area." 36 C.F.R. § 219.19 (1982). "For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. In order to insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area." *Id*.

Threatened Mexican spotted owl ("MSO") and its designated critical habitat exist in the Apache-Sitgreaves National Forests. *See* USDI (2015: 28). Management of MSO habitat and populations is centrally important in forest planning in the Southwestern Region (USDA 1995, 1996) and it was the subject of a "jeopardy" biological opinion of the U.S. Fish and Wildlife Service ("FWS") regarding implementation of forest plans, including the Apache-Sitgreaves Forest Plan (USDI 1996).

There is a long history of Forest Service negligence regarding MSO populations and tracking of management effects to the bird and its critical habitat. In October 2008, the Southwestern Regional Office of the Forest Service produced an "Annual Report" to the FWS regarding implementation of forest management plans, including the Apache-Sitgreaves Forest Plan (USDA 1987a), as amended (USDA 1996), and effects to MSO and other species listed as threatened or endangered under the ESA, for the period of June 10, 2005, through June 10, 2007.[3] In it, the Forest Service acknowledged failure to comply with mandatory terms and conditions established in the June 10, 2005, biological opinion and incidental take statement of the FWS that required monitoring of MSO populations and habitat trends (USDI 2005). The Forest Service admitted that it monitored only 20-to-25 percent of protected activity centers ("PAC") for owl occupancy, and it monitored no PAC for owl reproduction or juvenile dispersal. In addition, the Forest Service stated in the Annual Report that it "likely" exceeded the permitted number of incidental takes of MSO resulting in harassment and harm to the species.

On April 17, 2009, the Forest Service asked the FWS to reinitiate consultation regarding effects of continued implementation of forest plans in the Southwestern Region, including the Apache-Sitgreaves Forest Plan, to federally listed species, as required by the ESA. In that letter, the Southwestern Regional Forester stated, "It has now become apparent that the Forest Service will likely soon exceed the amount of take issued for at least one species, the Mexican spotted owl."[4] More, "[I]t has become apparent that the Forest Service is unable to fully implement and

[3] USDA Forest Service. 2008. *Annual Report Covering the Period June 10, 2005 – June 10, 2007, Programmatic Biological Opinion on the Land and Resource Management Plans for the 11 National Forests in the USDA Forest Service Southwestern Region*. Albuquerque, NM. October. 110 pages.

[4] Corbin Newman, Southwestern Regional Forester, letter to Benjamin Tuggle, Director, FWS Southwestern Region, requesting re-initiation of Consultation #2-22-03-F-366. April 17, 2009. 2 pages. Attached for convenience.

comply with the monitoring requirements associated with the Reasonable and Prudent Measures for several species (including MSO) in the [biological opinion]."

According to the Forest Service and the FWS, there is no reliable information about the population status of MSO in the Apache-Sitgreaves National Forests. *See* FEIS at 260; USDI (2015). Moreover, the 2011 Wallow fire affected nearly half of the ~150 PAC in the national forests with unknown results to MSO habitat use, fecundity or population trend. *Id*.; *also see* FEIS at 252 ("All MSO protected and restricted habitat on the forests is considered occupied or potentially occupied, especially after the Wallow Fire because it is unknown how MSO would adjust habitat use after this landscape scale fire").

A. Plan components are inadequate to ensure MSO viability and recovery

Regulations implementing the NFMA state, "Plans guide all natural resource management activities and establish management standards and guidelines for the National Forest System. They determine resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management." 36 C.F.R. § 219.1(b) (1982). Standards and guidelines in forest plans must be "qualitative and quantitative." *Id*. at § 219.1(b)(12) (1982). Plans must establish "standards and requirements by which planning and management activities will be monitored and evaluated." *Id*. § 219.5(a)(7) (1982). Additionally, plans must define reasons for management practices chosen for each vegetation type and circumstance. *See id*. § 219.15 (1982). The Forest Service has a mandatory duty to ensure that "[f]ish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area." *Id*. § 219.19. A "viable" wildlife population is defined by the 1982 Planning Rule as one "which has the estimated numbers and distribution of *reproductive* individuals to insure its continued existence is well distributed in the planning area." *Id*.

Forest planning decisions, such as the Apache-Sitgreaves Forest Plan, directly affect the design and implementation of project-level activities. *See* 36 C.F.R. § 219.3(b) (1982); Forest Service Handbook ("FSH") 1909.12.11.13 and 1909.12.11.16 (W.O. Interim Directive No. 1909.12-2008-2, Nov. 17, 2008). Forest management plans result in actual, physical effects to the environment. *See Citizens for Better Forestry*, 341 F.3d 961, 973 (9th Cir. 2003). Repeal of environmental standards in a forest plan results in lesser or no environmental standards at the site-specific project level. *Id*. at 975. Plans governing subsequent forest management actions are environmentally meaningful decisions and result in effects that must be considered and disclosed under the NEPA. *See Idaho Conservation*, 956 F.2d at 1516; *Salmon River Concerned Citizens v. Robertson*, 32 F.3d 1346, 1355 (9th Cir. 1994); *Resources Ltd. v. Robertson*, 35 F.3d 1300, 1303 (9th Cir. 1994).

The revised Apache-Sitgreaves Forest Plan repeals environmental safeguards affecting management of forest resources including wildlife habitat and populations. It replaces prior standards and guidelines in the 1987 Forest Plan, as amended (USDA 1996), with vaguely worded "desired conditions" and "objectives" that are designed to maximize agency discretion

and evade accountability in project-level management activities. The Forest Service clearly intends that desired conditions will drive site-specific project development and decision-making, even if they have no force or effect. *See* FEIS at 630 ("projects must either maintain resources in desired conditions or move them toward desired conditions"); Forest Plan at 6 ("Desired conditions are aspirations and are not commitments or final decisions approving projects"). Only standards are enforceable in project-level decisions. *See* Forest Plan at 7. Guidelines afford some level of accountability insofar as they require acknowledgement in project decisions, even if the Forest Service is not required to follow guidelines to the letter, and may amend them at any time. *Id*.

"Fine filter" plan decisions, including standards and guidelines, are essential to the continued viability of MSO precisely because its viability is in doubt. *See* FEIS at 116-117 ("For those species at some risk to their viability, additional 'fine filter' plan decisions were developed (e.g., standards and guidelines) to contribute and provide for viability to a low risk"). To this end, the Forest Plan advances guidelines that forest managers "should" consider in project-level decisions affecting MSO and its critical habitat. *See* Forest Plan at 62-63 ("Guidelines for Wildlife and Rare Plants"); FEIS at 286-287 (plan components relevant to MSO habitat). In other words, the Forest Service stakes the viability of MSO in the Apache-Sitgreaves National Forests on discretionary plan components that may be altered at any time with a little paperwork.

Reliance on guidelines in lieu of binding standards is inadequate to ensure MSO viability and recovery because only the Forest Service can interpret the "original intent" of guidelines. *See* Forest Plan at 7 ("Guidelines must be followed, but they may be modified for a specific project if the intent of the guideline is followed and the deviation is addressed in a decision document with supporting rationale"). The Forest Service is "entitled to deference to their interpretation of their own regulations, including Forest Plans." *Hapner v. Tidwell*, 621 F.3d 1239, 1251 (9th Cir. 2010) (internal quotation omitted). All proposed guidelines contain the discretionary word "should," not mandatory terms such as "will" or "shall." *See U.S. v. UPS Customhouse Brokerage, Inc.*, 575 F.3d 1376, 1382 (Fed. Cir. 2009) ("'Will' is a mandatory term, not a discretionary one."); *New England Tank Indus. of N.H., Inc. v. United States*, 861 F.2d 685, 694 (Fed. Cir. 1988) (noting difference between mandatory term "will" and discretionary term "should"). The Ninth Circuit has held that forest plan guidelines are not equivalent to mandatory standards, and that forest plan language stating that old growth forest stands "should" be at least 25 acres in size was "a guide for planning purposes, but does not prohibit counting stands less than 25-acres as old growth." *Lands Council v. McNair* (537 F.3d 981 (9th Cir. 2010 *en banc*). More, in *Ecology Center v. Castaneda*, 574 F.3d 652, 660-61 (9th Cir. 2009), the Ninth Circuit held that the language of guidelines incorporated into a forest plan did not "create a mandatory standard." The guidelines were not enforceable under NFMA because they were cast in "suggestive" language using the word "should," and "merely recommended" a particular practice "when possible." *Id.* at 661 (internal quotation omitted).

Courts have invalidated Forest Service reliance on non-binding and hopeful statements of desired conditions, objectives and guidelines in lieu of enforceable standards that constrain project-level decisions and site-specific management to meet NFMA requirements including species viability. *See, e.g., Citizens for Better Forestry v. U.S. Department of Agriculture*, 632 F.Supp.2d 980-81 (N.D. Cal., 2009). The absence of enforceable standards in the revised Forest

Plan affecting management of MSO habitat contradicts NFMA and its planning regulations. *See* 16 U.S.C. §§ 1604(c) and (g); 36 C.F.R. §§§§ 219.1(b), 219.11(c), 219.12(f)(9)(iii) and 219.15 (1982).

Furthermore, the "Guidelines for Wildlife and Rare Plants" in the revised Forest Plan do not ensure compliance with NFMA requirements to ensure MSO viability or the ESA requirement to avoid jeopardy. The relevant guideline states, "Activities occurring within federally listed species habitat should apply habitat management objectives and species protection measures from recovery plans." Forest Plan at 62 [emphasis added]. The analysis conclusion that the revised plan will ensure MSO viability is arbitrary and capricious, in violation of the APA, for at least four reasons:

(1) It ignores the criteria prescribed by NFMA for viability determinations, including "changes in vegetation type, timber age classes, community composition, rotation age, and year-long suitability of habitat related to mobility of management indicator species." 36 C.F.R. § 219.19(a)(1) (1982). MSO is a management indicator species under the revised Forest Plan. The Forest Service admits uncertainty regarding MSO habitat and population trends on the Apache-Sitgreaves National Forests.

(2) It relies on plan components (*i.e.*, desired conditions, objectives and guidelines) as the sole basis for viability findings, and asserts that projects "would incorporate" applicable recovery plans for federally listed species including MSO. The only relevant proposed guideline would not constrain project-level decisions because guidelines "may be modified for a specific project," and "the forest supervisor may amend the plan at any time."

(3) The MSO Recovery Plan (USDI 2012b) is not enforceable in project-level management decisions, and the Forest Service is well aware of this fact. Merely referencing it in a plan guideline fails to ensure viability. *See* USDI (1996a: 39) (concluding jeopardy to MSO and adverse modification of critical habitat where forest management plans "lack the management direction to prevent the development of forest project-level activities that are likely to adversely affect the Mexican spotted owl," and stating, "The definition of standards and guidelines [in the 1996 forest plan amendment] states that standards and guidelines are, 'the bounds or constraints within which all management activities are to be carried out in achieving forest plan objectives'"); *also see* USDI (1996b: 29) (concluding no jeopardy to MSO and no adverse modification of critical habitat because the Forest Service formally adopted recommendations of the MSO Recovery Plan (USDI 1995) as "standards and guidelines" in forest management plans, including the Apache-Sitgreaves Forest Plan, with a Record of Decision).

(4) The efficacy of management direction, as described in desired conditions and objectives for ponderosa pine and mixed conifer vegetation types, in promoting MSO viability and recovery is uncertain (USDI 2012b). The Forest Service is required to disclose controversy and uncertainty regarding effects to MSO and its critical habitat, but it has not done so here, in violation of the NEPA and APA.

B. Failure to explain change of management approach regarding MSO viability.

The revised Forest Plan repeals or deletes many standards and guidelines for management of MSO critical habitat that previously governed project-level activities under the 1987 Forest Plan, as amended (USDA 1996). Those include "standards and guidelines," as defined by the 1996 Forest Plan Amendments and accepted by the FWS no-jeopardy biological opinion as reasonable and prudent measures, that: (1) required survey of suitable MSO habitat and designation of PAC where owls are found; (2) forbade vegetation treatments in MSO nest cores and allow only limited treatments in PAC; (3) required selection of an equal number of PAC as untreated control areas when treatments are done; (4) prohibited harvest of trees larger than 9-inches diameter in PAC; (5) maintained a portion of "target/threshold" habitat suitable for nesting/roosting behaviors and retain at least 150-170 ft^2/acre basal area and 20 trees/acre larger than 18-inches diameter at breast height; (6) retained trees larger than 24-inches diameter at breast height in suitable nesting/roosting habitat (*i.e.*, "restricted areas"); and (7) required monitoring of MSO habitat and population trends. *See* USDA (1996: 87-91). No such requirements occur in the revised Forest Plan, and no explanation is given why they should not carry forward from the prior plan to the new one.

Repeal of those standards and guidelines affecting MSO habitat is a significant adverse effect of the revised Forest Plan, which will result in an actual physical effect on the environment. *See Citizens for Better Forestry*, 341 F.3d 961, 973 (9th Cir. 2003). Repealing environmental standards in a forest plan results in lesser or no environmental standards at the site-specific level. *Id*. at 975. "[A]n agency changing its course must supply a reasoned analysis." *Motor Vehicles Manufacturers Assoc. v. State Farm*, 463 U.S. 29, 57 (1983). The Center repeatedly commented throughout the planning process that the Forest Service must explain the effect of its change of course by deleting or weakening standards and guidelines.

Changes Sought:

- Withdraw the ROD and remand the EIS for further analysis of management direction and plan components applicable to MSO viability and recovery.

- Ensure that the revised Forest Plan contains adequate management direction and plan components to meet minimum management requirements of the NFMA.

IV. Failure to ensure viability of sensitive northern goshawk and 14 vertebrate prey species.

In 1996, the Forest Service amended forest management plans in the Southwestern Region, including the Apache-Sitgreaves Forest Plan, with standards and guidelines affecting management of habitat for northern goshawk and its 14 vertebrate prey species associated with ponderosa pine forest habitat. Those standards and guidelines, now repealed by the revised Forest Plan at appeal, originated from scientific recommendations of Reynolds and others

(1992). *See* USDA (1995: 24) ("Currently, the best guidelines we have for desired conditions for the distribution of structural stages are the goshawk guidelines. These guidelines recommend for a foraging area a vegetation structural stage distribution of 20% in early, 40% in mid and 40% in late structural stage"). The Forest Service explained in the 1995 FEIS supporting the 1996 Forest Plan Amendments that the "goshawk guidelines" provided for the viability of wildlife species associated with herbaceous and shrub-dominated vegetation communities within a matrix of interspersed forest patches:

> Some species totally depend on one or more of these cover types and respective vegetation structural stages (VSS), while others are casual uses. Regardless of the degree of use, it is important to maintain a diversity of cover types and vegetation structural stages across landscapes to sustain healthy wildlife populations and communities.
>
> This programmatic analysis of the alternatives is primarily based on three broad habitat characteristics that can be evaluated at the programmatic EIS level. These three wildlife habitat characteristics are cover type, vegetation structural stages (VSS), and forage production. Cover type and VSS represent the overstory characteristics of the habitat and forage production represents the understory. The structural stages are grouped by early, mid and late stages (VSS 1&2, VSS 3&4, and VSS 5&6, respectively).

USDA (1995: 28-29). It accounted for environmental effects of implementing forest plans, including the Apache-Sitgreaves Forest Plan, on wildlife species that require "forage production" as an essential habitat element. *See id.* 30 ("The alternatives that would produce the most forage, in decreasing order, are E, A, F, C, D and G. Since understory habitat is important for many of the non-TES wildlife species and there is a need to increase understory habitats"). The Forest Service adopted the goshawk guidelines in a Record of Decision (USDA 1996a) with the following management standard: "Sustain a mosaic of vegetation densities (overstory and understory), age classes and species composition across the landscape. Provide foods and cover for goshawk prey." In support of that standard, the 1996 ROD explicitly incorporated the *Management Recommendations for the Northern Goshawk in the Southwestern United States* (Reynolds et al. 1992), which state on page 15:

> We designed foraging areas consisting of forest conditions that would provide a high overall diversity and abundance of prey […] Sufficient prey habitats are provided so there is food to support goshawks in all seasons, especially during winter when fewer prey are available, and in years when prey populations are low due to factors such as drought or deep snow cover. Because no single species will be abundant enough to support goshawks, especially during the winter, habitats for all 14 prey species are provided.

In goshawk post-fledging areas ("PFA"), "prey habitat should be intermixed with dense hiding cover," and features of prey habitat in PFA include "small (<2 acre) openings in the tree canopy to produce herbaceous and shrubby foods for the herbivorous prey" (Reynolds et al. 1992: 15-16). Those "openings" constitute Vegetation Structural Stage One ("VSS 1"). *See* USDA (1996: 92) (defining VSS 1 as "grass/forb/shrub" habitat). In forage areas outside of PFA, the Forest Service (USDA 1996) applied the recommendations of Reynolds and others (1992) to provide

for a diversity of habitat conditions required by goshawk prey species. *See* Reynolds and others (1992: 16-17) (summarizing "the importance of snags, downed logs, openings, large trees, herbaceous and shrubby understories, and interspersion of VSS to the selected prey species of the goshawk"). Those recommendations and the 1996 ROD amending forest plans, including the Apache-Sitgreaves Forest Plan, assumed that "Openings, and associated herbaceous and shrubby vegetation, provide important food and cover for a number of goshawk prey species." *Id.* at 17. The recommendations also acknowledged that "Interspersion measures the degree of intermixing of vegetation structural stages. Only the red squirrel responds negatively to interspersion of structural stages; its populations reach a maximum in unbroken old forests." *Id.* at 18. Recognizing the importance of "closed forests" to red squirrel and six other goshawk prey species, the management recommendations further state:

> [G]oshawk foraging habitat in the three forest types consists of forests with relatively open understories and large trees. Large trees are required for hunting perches, and openness provides opportunity for detection and capture of prey by goshawks. These forests have small to medium openings (<4 acres) and patches of dense mid-aged forests. Openings are scattered to:
>
> 1) enhance the availability of food and habitat resources of prey that use them, and
> 2) limit the effect of large openings on the distribution and abundance of prey species that use interior forests.

Id. According to the Forest Service, "Alternative G incorporates the needs of the Mexican spotted owl and northern goshawk. The science behind the needs are contained in two publications, 'Mexican Spotted Owl Recovery Plan' and 'Management Recommendations for the Northern Goshawk in the Southwestern United States' (GTR RM-217, 1992)" (USDA 1995: 27). Therefore, the amended forest plans, including the former Apache-Sitgreaves Forest Plan now repealed, incorporated the scientific recommendations discussed above to ensure the viability of goshawk prey species with an assumption that approximately 20 percent of forest lands will consist of relatively open, early-seral vegetation, including grass/forb/shrub openings. The Forest Service stated in NEPA analysis (USDA 1995) that intermixing of six VSS classes, as prescribed by the standards and guidelines adopted in a ROD (USDA 1996), would maintain viable populations of the goshawk and its 14 prey species.

The FEIS supporting the revised Apache-Sitgreaves Forest Plan does not address <u>any</u> of the scientific analysis or management recommendations relevant to viability of northern goshawk or prey species discussed above. It abandons the former standards and guidelines for management of goshawk habitat without explanation of need to change management approach, or environmental effects of the change, in violation of the NEPA and APA. Notably, the FEIS also does not mention that one goshawk prey species, red squirrel, exclusively uses closed-canopy forest habitat, and that six of the 14 vertebrate prey species of goshawk exhibit life histories indicating preferences for "closed forest" habitat (Reynolds et al. 1992: 18).

Indeed, the guidelines for canopy cover in goshawk habitat adopted in the former Forest Plan, now repealed, provided for the viability of "all 14 prey species" associated with "medium/large tree vegetative structural stages," as well as the goshawk:

> PFAs provide the young hawks with cover from predators, and sufficient prey to develop hunting skills and feed themselves in the weeks before juvenile dispersal. Thus, forests in the PFAs should contain overstories with a canopy cover greater than 50% and well-developed understories and habitat attributes (e.g., snags, nest trees, foods) critical in the life-histories of goshawk prey species.

Reynolds et al. (1992: 14). The FEIS ignores relevant science in its assessment of viability for goshawk and its prey, and arbitrarily concludes without evidentiary support that reduced canopy cover will benefit those species, in violation of the APA.

Furthermore, the FEIS does not explain its expectation that additional nesting habitat for the goshawk would result from increases in the abundance and distribution of medium to large trees under the revised planning direction.[5] Even if vegetation treatments successfully reduce tree density and improve growing conditions in ponderosa pine forest, evidence in the planning record strongly indicates that large tree recruitment will be more limiting over time as chronic drought imposes widespread tree mortality (Seager et al. 2007, Seager and Vecchi 2010, Williams et al. 2012). The revised Forest Plan is not specific about proposed treatments in ponderosa pine forest habitat; it merely proposes managed fire, mechanical thinning and "habitat improvement" over 10 years, and fails to consider foreseeable effects of chronic drought to vegetation growth.

In addition, the FEIS fails to explain how repeal of standards and guidelines affecting ponderosa pine habitat would "improve" the viability of northern goshawk or its prey. The Forest Service stated in prior NEPA analysis that the 1987 Forest Plan, as amended by the scientific recommendations of Reynolds and others (1992), discussed above, would maintain viable populations of goshawk and its 14 prey species by interspersing the six VSS classes with approximately 20 percent of ponderosa pine forest consisting of relatively open, early-seral vegetation including grass/forb/shrub openings (USDA 1995). The FEIS contains no explanation why the revised Forest Plan will accomplish viability better than the 1987 Forest Plan, as amended (USDA 1996). In fact, it completely fails to consider effects that may result from reduction of forest habitat for goshawk or prey species that prefer closed-canopy or old forest structure.

By repealing former standards and guidelines that controlled management of goshawk habitat, the revised Forest Plan disregards the scientific basis for ensuring viability of the goshawk and its prey, as established by prior NEPA analysis (USDA 1995). Indeed, the Forest Service based two environmental impact statements on the repealed standards and guidelines (USDA 1995, 2006). In doing so, it established a habitat-proxy relation of ponderosa pine forest structure to goshawk viability, and a proxy-on-proxy relation of goshawk habitat to viability of 14 prey species using the best available science.

[5] The FEIS likewise fails to explain similar statements regarding effects to habitat of Mexican spotted owl resulting from new management direction under the revised Forest Plan.

Notably, the only mention of "mid-aged to old" ponderosa pine forest in the revised Forest Plan isolates it to small groups ("2 to 40 trees per group") generally one acre or less in area. The desired condition for "interlocking or nearly interlocking" tree crowns occurs within small groups of trees surrounded by open "interspaces" consisting of "a native grass/forb/shrub mix" (*i.e.*, early-seral vegetation). The desired condition does not specify whether the ponderosa forest type should be dominated by tree groups or by interspace, or what spatial spread of vegetation stages might be considered appropriate—the 10/10/20/20/20/20 formula of VSS distribution advanced by Reynolds and others (1992) is lost. Further, there is no requirement in the revised Forest Plan for retention of existing old forest, nor is any specific level of canopy cover desired in "mid-aged to old" ponderosa forest. Land managers are invited but not required to consider locating nest areas and family areas with no particular expectation of management within them other than desired conditions that are common to each area, and may not be achieved for decades or centuries. In sum, the revised Forest Plan is a significant retraction of previous standards and guidelines established using the best available science. At minimum, an explanation for such drastic change of management approach is required.

Nowhere in the planning record does the Forest Service provide a rationale for eliminating the standards and guidelines that ensured viability of goshawk and its prey. Therefore, the decision to adopt the revised Forest Plan is arbitrary and capricious and in violation of the NEPA, the NFMA and the APA. Moreover, the lack of binding standards affecting project-level effects to goshawk habitat fails to ensure viability, and thereby violates the NFMA and the APA.

Changes Sought:

- Withdraw the ROD and remand the EIS for further analysis of management direction and plan components applicable to sensitive wildlife species and habitats.

- Ensure that the revised Forest Plan contains adequate management direction and plan components to meet minimum management requirements of the NFMA.

V. Arbitrary and capricious selection of management indicator species.

Regulations implementing the NFMA require the Forest Service to determine "the suitability and potential capability of National Forest System lands for […] providing habitat for management indicator species." 36 C.F.R. § 219.20 (1982); *also see* FEIS at 232 ("NFMA regulations also direct the identification of management indicator species (MIS) to assess how plan alternatives may affect wildlife populations (1982 Planning Rule section 219.19 (a)(1)) and as a monitoring tool upon plan implementation (219.19(a)(6))"); *id*. 260 (MIS "have habitats influenced by forest management and activities. They are selected so that the effects of each alternative on wildlife populations can be estimated").

The revised Forest Plan's identification of MIS: (1) fails to capture the range of potential natural vegetation types ("PNVT") that host threatened and endangered species whose viability is of planning concern; and (2) significantly changes course from the 1987 Forest Plan (USDA 1987a), which designated 17 MIS that better represented the range of habitats found on the Apache-Sitgreaves National Forests.

The revised plan identifies three MIS: Mexican spotted owl, northern goshawk and pronghorn antelope. Together, those species are assumed to indicate management effects on other species associated with dry mixed conifer, wet mixed conifer, ponderosa pine, Great Basin grassland and montane-subalpine grassland PNVT. *See* FEIS at 260-263 (MIS and indicator habitat). Those PNVT comprise 1.16 million acres (~55 percent) of the approximately 2.1 million-acre planning area. *Id*. at 261-262 (Table 74 (MSO) and Table 75 (goshawk)). The MIS identified by the revised Forest Plan are not reasonably likely to indicate management effects to species viability in any <u>other</u> PNVT, including spruce-fir, Madrean pine-oak, piñon-juniper, semi-desert grassland, interior chaparral and riparian habitats that comprise approximately 45 percent of the national forests. *See* FEIS at 145-146 (Tables 22 and 23). Therefore, the revised plan ensures that habitat and population trends for species associated with PNVT where no MIS is designated, including riparian areas, will be unknown to the Forest Service and the public, in violation of the NFMA and the APA.

Furthermore, the revised Forest Plan proposes a change of management direction from the 1987 Forest Plan (USDA 1987a) by scrapping MIS designations of pygmy nuthatch (old growth ponderosa pine), red squirrel (old growth spruce-fir and mixed conifer), Abert squirrel (mid-mature ponderosa pine), hairy woodpecker (primary cavity excavator in mid-mature aspen, mixed conifer, ponderosa pine and riparian), plain titmouse (late seral piñon-juniper), cinnamon teal (wetlands), and other species including yellow-breasted chat, Lincoln's sparrow, Lucy's warbler, turkey and mule deer. *See* USDA (1987b: 69-71); *also see id*. 198 ("Management indicator species [] were used to measure effects of management activities on habitat. Primary factors in selection of MIS's were to indicate the condition of habitat necessary to maintain viable populations of all vertebrates, and to provide species diversity"). The FEIS contains no explanation or reason why those former MIS no longer are important to monitor effects of forest plan decisions on the affected PNVT and associated species assemblages, in violation of the NEPA and APA.

Notably, the revised Forest Plan does not designate any MIS for snag habitat. "Snags are an integral component of the Forest ecosystem and fulfill all or part of the habitat requirements for approximately 35 species of wildlife in the Apache-Sitgreaves" (USDA 1987b: 200). "There exists a direct relationship between the breeding density of secondary cavity nesting species and the number of quality snags in the ecosystem. Lack of suitable nesting cavities is the primary factor limiting [] secondary nesting species." *Id*. 201 (*see* Tables 84 and 85 pasted below). "A minimum of 80 snags per 100 acres is needed to support primary cavity nesters. An average of 221 snags per 100 acres [is] recommended for secondary cavity nesters such as the pygmy nuthatch." *Id*. "Maintaining 60 snags per 100 acres will maintain a 40% population level of primary cavity nesters. However, approximately 200 snags per 100 acres are needed for secondary cavity nesters." *Id*. The Forest Service acknowledges in the present analysis the importance of snags to primary and secondary cavity nesting species. However, the FEIS does

Table 84. Snag Numbers Needed to Maintain Woodpeckers at Designated Levels.

Species	Snags Required/100 Acres to Support Percentage of Population % of Maximum Potential 100	70	40 1/
Yellow Bellied Sapsucker	150	105	60
Hairy Woodpecker	150	155	60
Average	150	130	60

1/ The 40% level is considered the minimum that will support a self-sustaining population.

Table 85. Snag Numbers Needed to Maintain Both Average and Maximum Breeding Densities.

Species	Nesting Pairs/100 Acres at 173 Snags per 100 Acres Average Density	at 288 Snags per 100 acres Maximum Density
Pygmy Nuthatch	28	43

not consider, nor does the revised Forest Plan provide for, viability of snag-dependent species, in contrast to the 1987 Forest Plan (USDA 1987a). There is no explanation for this omission, in violation of the NEPA, the NFMA and the APA.

Furthermore, the failure of the revised Forest Plan to designate MIS for riparian habitat is inexplicable. *See* FEIS at 92 ("Even though they make up less than 3 percent of the forests' land [riparian areas] comprise the most potentially productive and diverse components of forest and range ecosystems. Fish, wildlife, and many plant species depend on riparian areas for their existence"); *also see id*. 93 (Table 14 showing riparian vegetation and soil conditions trends "away" from desired conditions); 94-95 (Table 15 showing most riparian habitats in the national forests are "functioning at risk," or "not properly functioning"); 101 (Table 16 listing native fish species and their occupied habitats); 103 ("Most streams and aquatic and riparian habitats have experienced considerable degradation and alteration from a variety of human and management related activities; their ability to recovery and improve has been affected, especially as ongoing and new impacts occur."); *id*. ("All the native [fish] species have lost much of the population redundancy within and outside the forests."); 107 ("The native fish species and populations

analyzed here (especially federally listed) lack the resiliency to survive environmental disturbances from either natural or anthropogenic actions (e.g., fire and suppression of fire, climate variation, degraded watersheds and aquatic habitat, altered hydrologic conditions, loss of riparian and aquatic habitat, recreation demands, nonnative species introductions, roads). The watersheds and ecosystems these aquatic species and their habitats depend on are also altered and departed from historical conditions; and while most of these impacts have occurred slowly over many decades, the individual and collective impacts still remain"); *also see* USDA (2008b: 75) ("Three species—the Chiricahua leopard frog, the Little Colorado spinedace, and the loach minnow,—are currently in danger of being extirpated from the forests"). In addition,

> Several sensitive species continue to decline on the landscape, such as the longfin dace, Sonora sucker, desert sucker, speckled dace, montane vole, New Mexican meadow jumping mouse, water shrew, northern leopard frog, Arizona toad, narrow-headed gartersnake, Mexican gartersnake, and many invertebrates, especially aquatic invertebrates. All fish species are declining in numbers and populations on the forests and throughout their respective ranges.

USDA (2008b: 75). The revised Forest Plan is "likely to adversely affect," and in some cases incidentally take, six federally-listed fish species and their critical habitat (USDI 2015). Native fishes, amphibians, reptiles and macrointertebrates that rely on riparian areas are ideal candidates for designation as MIS due to the potential ubiquity of aquatic habitat disturbances resulting from planned management activities, yet the revised Forest Plan unreasonably declines to so designate them. More, as noted above, the new plan changes course from the 1987 Forest Plan by omitting hairy woodpecker, cinnamon teal and aquatic macroinvertebrates from the MIS designation as riparian associates, and it does so without explanation. *See* USDA (1987a: 61); (1987b: 70-71).

The absence of reason in the planning record for failing to carry forward prior MIS designations is arbitrary and capricious, and violates the NEPA and the APA. Moreover, failure of the Forest Service to designate MIS for snag and riparian habitats is inexplicable in light of prior NEPA analysis and information in the record, and violates the NFMA and APA.

Changes Sought:

- Withdraw the ROD and remand the EIS for further analysis of MIS selection to include reasons for not selecting species previously determined by the Forest Service to be important indicators of management effects.

VI. Arbitrary and capricious determinations of grazing capability and suitability.

Regulations implementing the NFMA require the Forest Service to determine "the suitability and potential capability of National Forest System lands for producing forage for grazing animals and for providing habitat for management indicator species." 36 C.F.R. §

219.20 (1982). "The present and potential supply of forage for livestock, wild and free-roaming horses and burros, and the capability of these lands to produce suitable food and cover selected wildlife species shall be estimated." *Id*. § 219.20(a). Where the agency identifies lands that are "in less than satisfactory condition," it "shall" plan for their restoration. *Id*. The agency must consider, among other things, "possible conflict or beneficial interactions among livestock, wild free-roaming horses and burros and wild animal populations, and […] direction for rehabilitation of ranges in unsatisfactory condition…" *Id*. § 219.20(b).

Ecological costs of livestock grazing exceed those of any other use of national forest lands in the American Southwest. In this arid region subject to chronic and intensifying drought (Seager et al. 2007, Seager and Vecchi 2010, Williams et al. 2012), livestock grazing is the most widespread cause of species endangerment, lost soil productivity, and degradation of the human environment (Beschta et al. 2012, Fleischner 1994). Grazing destroys vegetation, displaces soil, and consumes enormous quantities of water to the detriment of native species and the ecosystems on which they depend (Belsky et al. 1999, Belsky and Blumenthal 1997). According to the planning record, "Livestock grazing has been identified as one of the primary threats to ecological sustainability for the majority of the vegetation types that occur on the ASNFs; spruce-fir forest is the only exception. Without appropriate range management, environmental conditions will not improve and may even decline" (USDA 2008b: 59).

To inform analysis of grazing capability and suitability, as required by the NFMA, the Center requested in comment on the DEIS that the Forest Service consider and analyze the following criteria for designating lands as <u>unsuitable</u> for grazing:

- High or severe soil erosion hazard identified by Terrestrial Ecosystem Survey.
- Slopes steeper than 30 percent.
- Lands within 200 feet of perennial or intermittent streams or wetlands.
- Occupied and/or critical habitat of threatened or endangered species or species proposed for listing.
- Designated conservation areas for sensitive or management indicator species.
- Occupied locations of endemic species.
- Lands impacted by high-severity fire effects to vegetation or soil.

However, the Forest Service applied only two factors to determine which lands are generally capable of supporting livestock grazing. *See* FEIS at 147 (footnote 22) (capability factors include soil stability and forage productivity). For this purpose, it relied on analysis completed nearly 30 years ago. *See id*. 480 ("The capability of the lands on the Apache-Sitgreaves NFs to produce forage for grazing animals was determined in the 1980s during the first round of forest planning. Landscape scale conditions that determine capability have not changed significantly since the first evaluation"). On the basis of that antiquated capability analysis, the basis of which does not appear in the planning record, all of the action alternatives designate the same 1,901,512 acres in the national forests as suitable for grazing. *See* FEIS at 480 (Table 152).

The grazing capability determination based on old and undisclosed information, and the suitability determination that flowed from it, are arbitrary and capricious, and violate the NEPA,

the NFMA and the APA, for two reasons. First, the planning record demonstrates that range capability diminished over the life of the 1987 Forest Plan:

> The [1987 Forest Plan] EIS identified a maximum permitted use of 219,510 AUMs. In 2008 – the total authorized 200,259 AUMs. Note: A review of forage production and estimated available AUMs was completed in 2000. Based on this data (see attached) the grazing capacity is estimated at 78,984 AUMs. According to the 2000 analysis, the lower level of grazing demonstrates availability of vegetation primarily for the protection of watersheds, soils, and streams (riparian areas), as well as providing for wildlife needs (habitat, hiding cover, fawning cover, and forage).

(USDA 2009: 5). The Forest Service determined in 2009 that range capability was just 36 percent of the maximum use authorized in the Forest Plan (USDA 1987a). That analysis followed a similar one in 2000, when:

> [A] forest plan supplemental monitoring report detailed adjustments to the expected output of livestock grazing from 204,000 animal unit months (AUMs) in the 1987 forest plan to roughly 79,000 AUMs. This adjustment reflected the numerous changes to individual grazing allotments from 1995 to 2000. These changes were based on the following:
>
> - Allowable use levels in the 1987 forest plan were closer to 50 percent of forage production. This factor was reduced in recent AMPs.
> - Allowable use by range condition class reduces the amount of forage committed to livestock grazing.
> - A portion of forage in some allotments is specifically allocated to wild ungulates.
> - More vegetation is committed to achieve watershed protection.
> - Provision for more forage available to wildlife; directly to herbivores and indirectly to predators, such as northern goshawks.
> - Production estimates in the 1987 forest plan included a substantial emphasis on timber harvest with grass seeding to increase forage for wildlife and livestock.
> - Lack of forage production projects such as piñon-juniper treatments with grass seeding.
> - Continued in-growth of forest and woodland canopies which suppress herbaceous species.

USDA (2008b: 53-54). As recently as 2011, range capability was significantly reduced from what was assumed in the prior round of forest planning:

> In 2011, permitted livestock Animal Unit Months (AUMs) totaled 130,000 of which 8,912 were from sheep and the rest was mostly cattle with incidental amounts from work horses and burros. In the same year, authorized livestock AUMS totaled 81,433 before the Wallow Fire disrupted grazing on all or part of 45 grazing allotments. In most years, the numbers of livestock permitted under the term grazing permits is more than what is authorized (actually allowed to graze and billed for by the forests).

Evans (2012: 6). The Forest Service does not explain why it considers range capability determinations from the mid-1980s to have "not changed significantly," nor does it address the significance of newer information that it created and is available in the planning record. This is a clear case of failure to consider an important aspect of the issue, in violation of the APA.

Second, the best available science provided to the Forest Service with public comment demonstrates that the planning assumption that rangeland capability has "not significantly changed" since the mid-1980s is erroneous. Prior estimates of range capability did not account for synergistic effects of livestock grazing and climate change on soil, water, vegetation and fire regime (Beschta et al. 2012). It is unlikely that rangelands in the planning area ever will return to "historical norms" that supported forage production capacity over the past century:

> Despite ample uncertainties in model projections of hydroclimate change, and the continuation of natural climate variability on all timescales, it seems very probable that [South Western North America – "SWNA"] will be drier in the current century than in the one just past. Skillful prediction of the magnitude and timing of this drying will require prediction of the rate of anthropogenic change and prediction of the evolving natural variability for which currently there is scant evidence of any predictability beyond the interannual timescale. Another likely outcome is a continuing decline in winter snowpack and earlier onset of snow melt that will add to the stress on regional water resources.

Seager and Vecchi (2010: 21282). Historically, "interglacial climates in the southwestern US can experience prolonged periods of aridity, lasting centuries to millennia, with profound effects on water availability and ecosystem composition. The risk of prolonged aridity is likely to be heightened by anthropogenic forcing" (Fawcett et al. 2011: 520). Williams and others (2012) noted that while average winter precipitation totals in the Southwest have not been exceptionally low in the recent past, average summer-fall evaporative demand since 2000 is the highest in the past 1,000 years. Forest drought stress over much of the past 13 years, including in 2011 and 2012, matched or exceeded the recorded "megadroughts" of the 13th and 16th centuries. The only other 13-year periods when similar conditions occurred with such frequencies in the past 1,000 years were during the megadroughts themselves. The strongest megadrought occurred during the second half of the 1200s and is believed to have played an important role in the abandonment of ancient Puebloan cultural centers throughout the Southwest. The observed trends in drought stress on forest conditions coincide with strong climate model agreement on anthropogenic greenhouse warming. Model projections indicate that megadrought-level stresses on water availability and vegetation production will be regularly exceeded by the mid-21st century, and even the wettest and coolest years of the late-21st century will be more severe than the driest, warmest years of the past millennium (Williams et al. 2012). The Forest Service does not

account for this information in the FEIS, even though it was repeatedly cited by the public and is available in the planning record.

Drought will continue to impact range capacity and suitability for the duration of the revised Forest Plan (Fawcett et al. 2011, Seager et al. 2007, Seager and Vecchi 2010). It is likely to transform resource availability by stressing water supplies and net productivity, which in turn will produce novel environments (Williams et al. 2012). Water and forage resources already are over-allocated on the Apache-Sitgreaves National Forests, and overutilization of available forage by livestock is common (Evans 2012, USDA 2009). Excessive livestock grazing, even outside of riparian areas, is a significant threat to aquatic species viability (USDA 2008b: 59).

The Forest Service failed to consider foreseeable effects of chronic drought to range capability and suitability, and failed to candidly disclose past instances when livestock grazing has exceeded capability. The Forest Service violated the NEPA, the NFMA and the APA with its clearly outdated, arbitrary and capricious assumptions of range capability and suitability.

Changes Sought:

- Withdraw the ROD and remand the EIS for further analysis of grazing capability and suitability to account for chronic and deepening foreseeable drought conditions affecting forage production, prior withdrawal of forest lands from grazing suitability by site-specific NEPA decisions, and worsening soil and watershed conditions that are caused, in part, by livestock grazing.

- Ensure that the revised Forest Plan contains adequate management direction to restore and rehabilitate forest lands degraded by livestock grazing, as required by the NFMA.

Conclusion

Contact information for each of the appellants is provided on page two of this notice of appeal. Please direct all communication regarding this notice to the undersigned lead appellant, and timely notify all of us regarding developments in your review including an appeal decision.

Sincerely,

Jay Lininger, Senior Scientist
Center for Biological Diversity (Lead Appellant)
P.O. Box 710
Tucson, AZ 85702-0710
Tel: (928) 853-9929
Email: jlininger@biologicaldiversity.org

FOR ALL APPELLANTS
[Signature confirmation available upon request]

References

Belsky, A.J., A. Matzke and S. Uselman. 1999. Survey of livestock influences on stream and riparian ecosystems in the western United States. *Journal of Soil and Water Conservation* 54: 419-31.

Belsky, J. and D.M. Blumenthal. 1997. Effects of livestock grazing on stand dynamics in upland forests of the Interior West. *Conservation Biology* 11: 315-27.

Beschta, R.L., D.L. Donahue, D.A. DellaSala, J.J. Rhodes, J.R. Karr, M.H. O'Brien, T.L. Fleischner and C.D. Williams. 2012. Adapting to climate change on western public lands: addressing the ecological effects of domestic, wild, and feral ungulates. *Environmental Management* 52 (Nov.). DOI 10.1007/s00267-012-9964-9.

Evans, D. 2012. *Range Specialist Report, Forest Plan Revision DEIS*. Apache-Sitgreaves National Forests Range Management Program: Springerville, AZ. December 12. 21 pp.

Fawcett, P.J., J.P. Werne, R.S. Anderson, et al. 2011. Extended megadroughts in the southwestern United States during Pleistocene interglacials. *Nature* 470: 518-21.

Fleischner, T.L. 1994. Ecological costs of livestock grazing in western North America. *Conservation Biology* 8: 629-44.

Reynolds, R.T., R.T. Graham, M.H. Reiser, R.L. Bassett, P.L. Kennedy, D.A. Boyce, G. Goodwin, R. Smith, and E.L. Fisher. 1992. *Management Recommendations for the Northern Goshawk in the Southwestern United States*. USDA For. Serv. Rocky Mtn. Res. Sta. Gen. Tech. Rep. RM-GTR-217. Fort Collins, CO.

Seager, R. and G.A. Vecchi. 2010. Greenhouse warming and the 21st century hydroclimate of southwestern North America. *PNAS* 107: 21277-82

Seager, R., M. Ting, I. Held, Y. Kushnir, J. Lu, G. Vecchi, H. Huang, N. Harnik, A. Leetmaa, N. Lau, C. Li, J. Velez, and N. Naik. 2007. Model projections of an imminent transition to a more arid climate in southwestern North America. *Science* 316: 1181-84.

USDA Forest Service. 2015. *Riparian Specialist Report, Forest Plan Revision EIS.* Apache-Sitgreaves National Forests: Springerville, AZ. May 14. 24 pp.

_____. 2014. *Final Vegetation Specialist Report, Forest Plan Revision Final Environmental Impact Statement*. Apache-Sitgreaves National Forests: Springerville, AZ. October. 672 pp.

_____. 2009. *CER Supplement to meet AMS Requirements*. Apache-Sitgreaves National Forests: Springerville, AZ. December. 14 pp.

_____. 2008a. *Comprehensive Evaluation Report.* Apache-Sitgreaves National Forests: Springerville, AZ. December. 48 pp.

_____. 2008b. *Forest Plan Revision Resource Evaluations*. Apache-Sitgreaves National Forests: Springerville, AZ. July. 109 pp.

_____. 2008c. *Ecological Sustainability Report.* Apache-Sitgreaves National Forests: Springerville, AZ. December. 134 pp.

_____. 2007. Forest Inventory and Analysis National Program—Forest Inventory Data Online. http://www.fia.fs.fed.us/tools-data/

_____. 2006. *Final Supplement to the Final Environmental Impact Statement for Amendment of Forest Plans in Arizona and New Mexico*. Southwestern Region: Albuquerque, NM. http://www.fs.usda.gov/detail/r3/landmanagement/planning/?cid=stelprdb5211559

_____. 1999. Forest Inventory and Analysis National Program—Forest Inventory Data Online. http://www.fia.fs.fed.us/tools-data/

_____. 1996. *Record of Decision for Amendment of Forest Plans in Arizona and New Mexico*. Southwestern Region: Albuquerque, NM. May. http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_021447.pdf

_____. 1995. *Final Environmental Impact Statement for Amendment of Forest Plans.* Southwestern Region: Albuquerque, NM. October.

_____ 1993. *Report of the Forest Ecosystem Management Assessment Team.* Portland, OR. http://www.blm.gov/or/plans/nwfpnepa/index.htm#1993%20FEMAT%20Report

_____. 1987a. *Apache-Sitgreaves National Forests Plan*. Springerville, AZ. August. 236 pp.

_____. 1987b. *Environmental Impact Statement for the Apache-Sitgreaves National Forests Plan*. Springerville, AZ. 362 pp.

USDI Fish and Wildlife Service. 2015. *Biological and Conference Opinion – Land and Resource Management Plan for the Apache-Sitgreaves National Forests.* AESO/SE 02EAAZ00-2013-F-0363. Arizona Ecological Services Field Office: Phoenix. May 13.

_____. 2012a. *Biological Opinion on the Continued Implementation of the Land and Resource Management Plan for the Apache-Sitgreaves National Forests of the Southwestern Region, USDA Forest Service*. Region 2: Albuquerque, NM. April 30. http://www.fws.gov/southwest/es/arizona/Documents/Biol_Opin/120001_A_SNFs_Final_LRMPBO.pdf

_____. 2012b. *Mexican Spotted Owl Recovery Plan, First Revision*. Region 2: Albuquerque, NM. September.

_____. 2005. *Programmatic Biological and Conference Opinion, Continued Implementation of Land and Resource Management Plans for the Eleven National Forests and National Grasslands of the Southwestern Region*. Cons. #2-22-03-F-366. Region 2: Albuquerque, NM. June 10. 1,010 pages. http://www.fws.gov/southwest/es/arizona/Documents/Biol_Opin/FS%20LRMP%20BO%20FINAL%206-10-05.pdf

_____. 1996a. *Biological Opinion on Implementation of Forest Plans*. Region 2: Albuquerque, NM. November 26.

_____. 1996b. *Biological Opinion on Amended Forest Plans*. Region 2: Albuquerque, NM. November 26.

_____. 1995. *Recovery Plan for the Mexican Spotted Owl*. Region 2: Albuquerque, NM. December.

Williams, A.P., C.D. Allen, A.K. Macalady, et al. 2012. Temperature as a potent driver of regional forest drought stress and tree mortality. *Nature Climate Change* (30 Sept.). DOI: 10.1038/NCLIMATE1693