

Appendix 1. Changes to the Kaibab Land and Resource Management Plan

This appendix provides detail of changes that have been made to the Kaibab Land and Resource Management Plan. Strikethrough text indicates deletion and underlined text indicates addition.

These changes are in response to the three appeals filed and informal resolution agreement and/or instructions provided by the Forest Service Chief's Reviewing Officer following administrative review ((Keeler # 14-13-00-0175-219A (Keller); Ryberg et al. #14-13-00-0176-219A (Ryberg); and Center for Biological Diversity et al. #14-13-00-0177 (CBD)). These changes to the Forest Plan are being made in accordance with the 2012 Planning Rule (36 CFR 219.13(c)(2)) whereby changes to content that are not plan amendments or revisions may be made following public notice. These changes highlight cave, karst, and hydrogeological resource management, clarify the relationship between grazing capability and suitability, and better explain the role of allotment management plans and annual operating instructions in making adjustments to livestock grazing using the adaptive management framework.

The complete documents containing changes, the original appeals, and the Chief's Appeal Decision are available on the Kaibab National Forest website at <http://www.fs.usda.gov/detail/kaibab/landmanagement/planning/?cid=STELPRDB5106605>.

p. 31. In response to Keeler resolution, added the words "Caves, Karst, and Mines" to the Vegetation Management section referencing other relevant direction in the plan so that it now reads, "See also "Recreation and Scenery," "Nonnative Invasive Species," "Wildlife", "Threatened, Endangered, and Sensitive Species", "Caves, Karst and Mines", and relevant major vegetation communities."

p. 57. In response to Keeler resolution, added the following language to the introduction for Caves, Karst, and Mines, "Karst features are geological landforms that predominantly result from shaping process controlled by soluble bedrock, usually calceric in nature. Karst landscape is characterized by closed depressions, disappearing streams, and solutional shaping. Karst features create unique microhabitats and are important areas for rapid subsurface drainage and aquifer recharge."

p. 57. In response to Keeler resolution, added the word "hydrogeology" to a guideline in the Caves, Karst, and Mines section so that it now reads, "Project design should include protections for subsurface geologic features to minimize disruptions to hydrogeology, cave microbiology and other aspects of cave ecology."

p. 57. In response to Keeler resolution, added the following paragraph to the Management Approach for Caves, Karst, and Mines, "Strategies to protect cave and karst resources include use of best management practices and site specific design features such as activity buffers that prevent silt, sediment and debris from flowing into karst features where they occur. The Kaibab NF references the Arizona National Forest Cave and Karst Management Plan, Appendix J - Karst Management, current literature, and the best available science when making site specific decisions relevant to project planning."

p. 57. In response to Keeler resolution, added "the National Speleological Society" to the list of groups that the Kaibab National Forest collaborates with for the conservation of bat species.

p. 58. In response to Keeler resolution, modified a sentence in the section Management Approach for Caves, Karst, and Mines that added the words "and karst" and deleted the words "cave and karst" so that it now reads, "Cave and karst management plans will be developed as needed to address ~~cave and karst~~ resource concerns."

p. 70. In response to appeal resolution instructions related to management direction pertaining to Annual Operating Instructions (page 7 of the Appeal Resolution decision letter), reorganized and added language to the Management Approach for Livestock Grazing.

~~Deleted the original section “Adaptive management is being used by the Kaibab NF’s recent rangeland management projects. Monitoring is used to adjust management to maintain and improve the rangeland resources. In general, the Kaibab NF continues to keep grazing at conservative use levels (30 to 40 percent). This grazing intensity, based on percent use of forage by weight, should provide for plant integrity, density, diversity, and regeneration over time.~~

~~To make adjustments for changing conditions, the annual operating instructions are reviewed. Numbers may go up and down annually, but do not exceed the number set in the grazing permit. The annual operating instructions are the means by which adjustments of livestock numbers, change of season of use, and pasture rest periods are made in response to monitoring information such as frequency plots, canopy cover, pace frequency transects, and allotment inspections. Grazing intensity (measured before the end of the growing season) in combination with other factors such as weather patterns, likelihood of plant regrowth, and previous years’ utilization levels, is used in determinations. Projects involving new or modified fences, corrals, salt stations, and artificial water sources promote healthy wildlife interaction and movement. Deferred rotation grazing with a special emphasis of deferment during the spring may be necessary to manage toward desired conditions. Projects involving new or modified fences, corrals, salt stations, and artificial water sources promote healthy wildlife interaction and movement.”~~

The replacement language reads, “The Kaibab NF uses an adaptive management strategy to manage the rangeland resources. Allotment management plans and associated grazing authorization decisions are made about every ten years following an environmental analysis in conformance with the National Environmental Policy Act (NEPA). In general, the Kaibab NF manages grazing at conservative use levels (30 to 40 percent). This grazing intensity (based on percent use of forage by weight) should provide for plant integrity, density, diversity, and regeneration over time. Grazing decisions involving new or modified fences, corrals, salt locations, and artificial water sources are designed to make progress towards the desired conditions in the plan and promote healthy soil and watershed conditions, wildlife interactions, and wildlife movement.

Within the scope of the NEPA grazing decisions, fine-tune adjustments are made annually through the annual operating instructions. Information from monitoring such as frequency plots, canopy cover, pace frequency transects, and allotment inspections inform appropriate adjustments. Grazing intensity (measured before the end of the growing season) in combination with other factors such as weather patterns, likelihood of plant regrowth, and previous years’ utilization levels, is used in determinations. Authorized numbers may go up and down, but do not exceed the number set in the grazing decision, implemented through the term grazing permit. The annual operating instructions may also change season of use, salt locations, and pasture rest periods. Deferred-rotation grazing with deferment in the spring may be necessary to favor the development of native cool season grasses and make progress toward desired conditions.”

p. 70. In response to Keeler resolution, the words “Caves, Karst, and Mines” were added to the Livestock Grazing section referencing other relevant direction in the plan so that it now reads, “See also the desired conditions for the relevant vegetation types, “Natural Waters,” “Constructed Waters”, “Caves, Karst and Mines” and “Wetland/Cienega.”

p. 78. In response to the Keeler resolution, added the words “potentially affected resource areas”, “is”, and “Best Management practices are used in project design” to a sentence in the Management Approach for Transportation section. The section now reads, “The transportation and facility management on the Kaibab NF is integrated with potentially affected resource areas and is coordinated with Federal, State, county, and other local transportation authorities. Best Management practices are used in project design.”

p. 111. In response to appeal resolution instructions related to Grazing capability and suitability on page 6 of the Appeal Resolution decision letter, add the words “for livestock grazing”, “consistent with the National Environmental Policy Act (NEPA)”, and “grazing” to the “Grazing Suitability and Capability” section. The section now reads,

“As a result, this revised plan shows these areas as suitable for livestock grazing.” “Since the original plan was approved, each allotment on the Kaibab NF has received site-specific environmental review for the authorization of grazing consistent with the National Environmental Policy Act (NEPA). The grazing decisions for those site-specific analyses were reviewed for areas where livestock grazing was not authorized.

p.111. In response to appeal resolution instructions related to Grazing capability and suitability on page 6 of the Appeal Resolution decision letter, delete the words “describe areas on the Kaibab NF that are unsuitable for livestock grazing.” And replace them with “show the areas on the Kaibab NF where livestock grazing is not authorized due to incompatibility with desired conditions. Of the approximately 1.13 million acres identified as tentatively capable for livestock grazing, about 14 thousand acres are not suitable. The total area that is both capable and suitable is about 1.1 million acres.”

The sentence now reads, “Table 3 and Figure 5 ~~describe areas on the Kaibab NF that are unsuitable for livestock grazing.~~ show the areas on the Kaibab NF where livestock grazing is not authorized due to incompatibility with desired conditions. Of the approximately 1.13 million acres identified as tentatively capable for livestock grazing, about 14 thousand acres are not suitable. The total area that is both capable and suitable is about 1.1 million acres.”

p.112. In response to appeal resolution instructions, updated acres in table 3 and added explanations. The section now reads:

Table 1. Areas unsuitable for grazing on the Kaibab NF

Feature	Acres	Note
Arizona Bugbane Botanical Area	490	Management areas closed to grazing in the original Kaibab Forest Plan (1988).
Garland Prairie	328 340	
Franks Lake Geologic-Botanic Area	145	
Existing Developed Recreation Sites	1,397	
Kanab Creek Allotment	39,280	Closed to grazing: site-specific NEPA decision, March 2001.
Jump-up Pasture, Central Winter Allotment	15,745	
Bill Williams Mountain, Hat Allotment	2,862 2,500	Closed to grazing: site-specific NEPA decision, September 2010.
Total unsuitable area <u>withdrawn from livestock grazing through previous site-specific decisions</u>	60,247 60,256	<u>The withdrawn area includes 14,274 capable acres and 45,973 acres not capable due to steep slope, erodable soils, and low productivity.</u>
<u>Tentatively capable, but not suitable for livestock grazing</u>	<u>14,274</u>	<u>Total capable acres withdrawn from grazing due to incompatibility with desired conditions.</u>

p. 112. In response to appeal resolution instructions related to Grazing capability and suitability on page 6 of the Appeal Resolution decision letter, the following changes were made:

The decisions ~~to authorize grazing and under what conditions is~~ are made following consideration site-specific environmental analysis and review analysis consistent with the National Environmental Policy Act (NEPA). ~~review, under which~~ As part of the NEPA analysis, ~~site specific conditions can be assessed and addressed through project design. During site specific NEPA review, the conditions and trend of each~~ of the Kaibab NF’s allotments was assessed to ensure availability of forage for all species. A summary of these evaluations was prepared and reviewed during the plan revision process and can be found in the Kaibab NF Plan Revision project record. ~~and Appendix D of the EIS.~~

p. 189. In response to Keeler resolution, add “Memorandum of Understanding between the National Speleological Society and the USDA Forest Service, (2011)” to the Programmatic Agreements listed in Appendix B. Relevant Laws, Regulation, and Policy.

p.190. In response to Keeler resolution, delete the word “draft” and update the weblink in the reference to the “Central Arizona Grotto 2013. Arizona National Forest Cave and Karst Management Plan-~~(draft)~~

http://centralarizonagrotto-cavemanagement.webstarts.com/cave_management_plans.html
<https://docs.google.com/file/d/0B6ltDV4wi2eQZDFyUGJXZGIUY3M/edit?usp=sharing&pli=1>”