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**Southwestern
Region**

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Public Comments and Responses

Appendix C, Final Environmental Impact Statement for Deep Lake Allotment

**Mormon Lake Ranger District, Coconino National
Forest, Coconino County, Arizona**



Cover photo: Deep Lake wetland on the Deep Lake Allotment, Coconino National Forest (USDA 2005).

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Mr. Gene Waldrip, District Ranger
Mormon Lake Ranger District
Coconino National Forest
5075 N. U.S. Highway 89
Flagstaff, AZ 86004

Dear Mr. Waldrip,

I am writing to submit comments on your draft Environmental Impact Statement (EIS) of livestock management alternatives for the Deep Lake grazing allotment.

I was pleased to discover upon reading the EIS that your new preferred alternative, Alternative 4, proposes to include stronger wetland protection measures than were included in Alternative 3, your original proposal. I still have some questions, however, that I hope you will address in the final EIS.

Comment 1-1

To start with, Table 1 on page 3 of the EIS shows the actual use of this allotment by cattle since 1990. It reveals that only three times in these last 15 years were the number of cattle grazing the allotment as many as were allowed on the permit. The EIS also explains that during this same time period the actual livestock forage use rates were below the proposed 35% annual limit. Despite this fact, you are proposing to maintain cattle numbers at the currently permitted 105 head from May through October. Since the conservative forage utilization rates of the last 15 years were achieved mostly by grazing fewer cattle than were permitted, isn't there a danger that keeping the permitted number as high as 105 head could lead to excessive use in the future?

Comment 1-2

Furthermore, on page 25 of the EIS there's a discussion of the merits of totally excluding livestock from the allotment's wetlands. It says, "The permittee and Forest Service both have a water claim for stock watering at Deep Lake and Horse Tank. By not allowing cattle to access the stock tank via a lane, the water claim would need to be relocated." Why would the Forest Service feel obliged to retain a water rights claim for a stock tank? More importantly, does the Forest Service have a legal obligation to provide an alternative source of livestock water to a grazing permittee if an allotment management plan excludes cattle from a watering site located on public land for the purpose of protecting riparian resources?

Comment 1-3

Finally, I appreciate the extensive discussion beginning on page 44 of the EIS about the impacts of livestock grazing upon the allotment's wetlands. But I'm still curious about the hydrological relationship between Horse Lake and the adjacent Horse Tank. It appears from the aerial photograph in the EIS that Horse Tank was somehow carved out of the original Horse Lake by using a bulldozer to erect an earthen berm. Is

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this correct? If so, could the overall riparian ecology of this site be improved by removing the berm, allowing a single wetland to form again?

In conclusion, I think that your new preferred alternative, Alternative 4, is an improvement over your original proposal, Alternative 3, because it offers better riparian resource protection.

Thank you for this opportunity to participate and please keep me updated on the status of this project.

Sincerely,



Jeff Burgess
Ph 602-417-4486 (day)

Forest Service Response to Comments by Jeff Burgess

Forest Service Response to 1-1

This comment is considered not significant; it is a request for more information.

Annually, the Coconino National Forest works with grazing permittees to match livestock use with forage production of an allotment (up to the permitted number of livestock). The permittees also have the ability to take “nonuse for personal convenience.” Over the last 16 years, “use has varied primarily because of drought and grazing management” (DEIS, p. 3). Grazing management refers to the decisions related to grazing management made on an annual basis through the annual operating instructions.

Alternatives 1, 3, and 4 would permit up to 105 cattle from May 1 through October 31. This value is based on carrying capacity of the allotment (DEIS, p. 63). Table 1 of the DEIS (p. 3) displays that actual head months (the month of use by one cow) were near the maximum number of permitted head months in 1992, 1993, 1998 and 2001. During these years, yearend utilization did not exceed the 35 percent utilization standard (DEIS, p. 65). With this use, satisfactory rangeland conditions exist with static trends (DEIS pp. 64-65). Continued monitoring of the allotment (DEIS, pp. 141-143) will help the Forest Service evaluate conditions regularly to ensure cattle grazing does not lead to a decline in rangeland trends.

Forest Service Response to 1-2

This comment is considered not significant; it is a request for more information.

Without the use of Deep Lake and Horse Tank stock tanks, no other livestock water would exist in this area and this area would be removed from the carrying capacity of the allotment. If the Forest Service removes access to a permittee’s water right, the Agency would have a legal obligation to provide an alternative water source to replace that water right, even if removal of the use of the water is for protection of a riparian resource. An explanation of this is given on page 25 of the DEIS, “Wetland Fencing without Lanes.” The environmental effects of lanes and stock tanks are discussed in the “wetland” section of the DEIS (pp. 44-62).

Additional information about our position on handling water rights is given on page 23 of the DEIS under the “Water Rights” heading.

Forest Service Response to 1-3

This comment is considered not significant; it is a request for more information.

It appears to the Forest Service that the berm between the two wetlands is natural. The Forest Service has no records that it was constructed by a bulldozer. When the water is high enough, the water crests the berm to form one wetland.



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**Re: Public Comment On The U.S. Forest Service's Draft
Environmental Impact Statement For The Deep Lake Allotment**

Dear Responsible Official:

Thank you for providing this opportunity to comment on the U.S. Forest Service's (USFS's) Draft Environmental Impact Statement for the Deep Lake Allotment (hereinafter "DEIS").

These substantive comments are submitted during the requisite comment period by Matthew Bishop of the Western Environmental Law Center (WELC) *on behalf of* Don Farmer, Rick Erman, and the Arizona Wildlife Federation (AWF). Additional comments may also be submitted separately by AWF members, AWF's officers, and other interested citizens associated with AWF. AWF is a nonprofit organization with approximately 4,700 members that is committed to educate, inspire, and assist individuals and organizations to conserve, enhance, manage, and protect wildlife and other natural resources of Arizona. These comments are submitted in furtherance of these commitments.

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For the purposes of these comments, any and all references to various attachments (“Attach.”) refers to the attachments submitted with AWF’s June 14, 2005 comments on the DEIS for the neighboring Pickett Lake and Padre Canyon Allotments which now on file with the Mormon Lake Ranger District. These attachments should be incorporated by reference into the project record for the Deep Lake Allotment. If you disagree, or if you’d like an additional copy of such attachments, please do not hesitate to contact me – Matthew Bishop – at the name and number provided.

1. The DEIS Fails To Adequately Assess the Direct Impacts

Pursuant to the National Environmental Policy Act (NEPA), the USFS is required to assess the direct impacts of its proposed action – in this case its decision to authorize grazing on the Deep Lake Allotment – on the environment. Direct impacts are caused by the action and occur at the same time and place. See 40 C.F.R. §1508.8. Under NEPA, the direct impacts of an action must be analyzed based on the affected interests, the affected region, and the locality in which they will occur. 40 C.F.R. § 1508.27 (a).

Comment 2-1

Here, the DESI fails to properly assess the direct impacts of its decision to authorize grazing on the region’s wetlands, native grasses, wildlife, and wildlife habitat in a number of significant respects. Each of these are discussed below.

A. The trampling and removal of vegetation

Cattle grazing results in the trampling and removal of important riparian vegetation and soil compaction. In 1993, the USFS, Region 3 prepared a report on the “Management of Wetlands at High Altitudes in the Southwest” (hereinafter “1993 Report”) See Attachment No. 1. This comprehensive report on wetland formation, classification, use and management, ecology, wildlife, and on effective approaches to wetland management in the Southwest, and in particular Anderson Mesa, is extremely informative and highly relevant to the impacts analysis in the EIS.

Comment 2-1a

With respect to grazing, the 1993 Report recognizes that areas adjacent to wetlands and areas within wetlands “tend to attract high densities of grazers” and that impacts from such grazing to the wetlands “can be particularly severe.” Attach No. 1 at 29. Grazing “impacts the vegetation within watersheds by influencing the volume and quality of runoff water. Heavily grazed systems that lack residual cover often have higher, more rapid runoff that carries more sediments. Rapid water inflows might flood the nests of marsh nesting species.” Attach No. 1 at 30. Increased “sedimentation reduces the light penetration into the wetland water column influencing submerged plant germination and growth.” Id. Heavy grazing “also results in a reduction of plant diversity, often favoring species with little wildlife value.” Id. Also, “soils in high use

PAGE 2 DEEP LAKE COMMENTS

Comment 2-1a

areas will suffer from trampling. Soil compaction from trampling can reach a point where it reduces or prevents plan germination, even after grazing is stopped." Id.; see also Attachment No. 2. "Man-induced Changes in the Hydrology of Ephemeral and Seasonal Wetlands of Anderson Mesa" at 3 ("overgrazing of wetland watersheds, the construction of stock tanks in the wetlands themselves, compaction of soil by trampling as well as removal of vegetation in the wetlands by grazing, have all combined to significantly alter the hydrologic regime of the wetlands [on Anderson Mesa] in a negative fashion."); Attachment No. 21 ("Importance of Anderson Mesa, With Its Complex Of Wetlands, Grasslands, and Forests, To Wildlife").

B. The destruction of waterfowl and wildlife habitat

For waterfowl and native wildlife, the impacts of livestock grazing are particularly severe. As recognized by the USFS, if "grazing coincides with laying and incubation periods [for nesting ducks] livestock may reduce nest success by trampling, increasing disturbance that causes abandonment, or increasing predation rates by reducing protective cover." Id. at 30; see also Attachment No. 5 (Literature Review on Habitat Requirements for Ground Nesting Waterfowl and Effect of Grazing and Other Cover Removal Activities on Nesting); Attachment No. 6 (Waterfowl Production in Relation to Rest-Rotation Grazing); Attachment No. 7 (Waterfowl Production In Relation To Grazing).

Comment 2-1b

These findings are consistent with Terry Myers' 1982 report entitled the "Ecology of Nesting Waterfowl On Anderson Mesa, In North Central Arizona." See Attach. No. 35. Myers concluded that "[t]he amount of residual vegetation in the basin-upland wheatgrass was significantly reduced by grazing." Id. at 51. "Ungrazed wheatgrass provided 41% and 40% more residual vegetation (by dry weight) than grazed wheatgrass in 1979 and 1980, respectively. Visual obstruction measurements indicate that the height-density of basin upland cover was significantly lower on grazed plots in 1980. Likewise, upland cover outside of the basin area provided lower height-density values when grazed than when ungrazed." Id.; see also Attach. No. 31 (Photo of Perry Lake pasture fence showing difference between grazed and ungrazed wetland).

At the time Myers conducted his study, he noted that "[c]attle frequently waded into water to drink and to graze on emergent vegetation." Id. However, he noted that movement of cattle in the wetlands was restricted "by water depths over about 0.7m." Id. "High water levels prevented the cattle from feeding or trampling the bulrush during the 1980 grazing season and through most of the 1979 grazing season." Id. Conversely, during dryer years, the cows are able to gain access to the wetlands and the wetland vegetation (i.e., the bulrush and spikerush that provides the necessary migratory bird habitat). This is noted in an earlier draft EA completed by the USFS for the Pickett Lake

PAGE 3 DEEP LAKE COMMENTS

and Padre Canyon Allotments. The USFS states that “[c]attle do not graze within water, so cattle do not generally affect emergent vegetation. As the water recedes, cattle graze the vegetation at the edge of the pool. Different timing and levels of precipitation and different grazing rotations cause this effect to be greater in some years and less in others.” EA at 22.

This is precisely why continued grazing in the wetlands during dryer years or during the late summer/early fall season is so detrimental. During these dryer times, as the water in the wetlands recedes, the cows move in -- trampling and eating all the vegetation, congregating around a small water hole and turning a once pristine, natural wetland basin into nothing more than a feedlot. See Attach No. 13 (Photo of cows at Mud Spring); Attach. No. 17 (Photo of Horse Lake with dead cow); Attach No. 30. (Photo of cows at Indian Lake); Attach No. 19 (Photo of wetland near Ashurst Spring); Attach No. 20 (Photo of Prime Lake). Indeed, Myers reported that by September of 1979, as the water began to recede on Anderson Mesa’s wetlands, “cattle were able to gain access to and feed on small areas of peripheral hardstem bulrush. Shoreline spikerush, which was grazed in 1979, provided 86% less residual vegetation (by dry weight) than ungrazed spikerush.” Attach. No. 35 at 51 (emphasis added). In short, it is clear that if cattle are able to gain access to the wetlands, significant adverse impacts to the natural function of the wetland and its ability to provide adequate nesting habitat for waterfowl will follow.

The effects of cattle grazing on nesting cover in Arizona’s wetlands was also studied by Theresa Hoff in 1993. See Attach. No. 3. Ms. Hoff noted that cattle grazing significantly decreased vegetation height density of the wetlands and thus the wetlands’ ability to provide adequate nesting habitat for waterfowl. The study noted that “vegetation height-densities were significantly higher at nests on ungrazed sites compared to grazed sites.” Attach No. 3 at iii. Of all the nests surveyed, the study noted that 68% occurred “at the wetland that had been protected for over fifty years” from livestock grazing. Id. The study noted that the overall “nest success rate was 36.8%” and that “*all of the nests in the grazed areas were unsuccessful*, whereas, 50% of the nests in the ungrazed areas were successful.” Id.

To improve nesting cover in Arizona’s wetlands, Ms. Hoff recommended: (1) delaying grazing until the nest season is completed on and around wetlands that are not fenced; (2) maintaining existing fences to exclude cattle from the wetland areas; and (3) installing more fences around wetlands. Id. at 74; see also Attachment No. 4 (study entitled “The Relationship of Grazing Practices To Waterfowl Breeding Populations And Production On Stock Ponds In Western South Dakota”).

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Comment 2-1b

C. Stock tanks – transforming wetlands into watering holes

The digging of the stock tanks or ponds in the middle of every wetland in the Deep Lake allotment as a means of providing water for cattle has had, and continues to have, a significant impact on the wetlands' function and habitat. See Attach. No. 2, 9, and 38. According to one well-respected hydrologist who visited Anderson Mesa in May of 2003, the introduction of the stock ponds "obviously alters the soil moisture-vegetative regime in the pond area." Attach. No. 2 at 4.

During the dryer years, when there is less water in the wetland basin, "standing water would only be found in the stock pond due to the movement of surface water toward the pond as drying conditions progressed. This movement would cause the surrounding area to lose standing water more rapidly than it would under natural conditions. This in turn would cause the area of the wetland that lost standing water to the pond to lose soil moisture to evaporation more rapidly than under natural conditions." Id.

Moreover, "[e]ven after the pond drained standing water from the surrounding area, evaporation from the pond would cause soil moisture in the surrounding area to move toward it, thereby exacerbating the loss in soil moisture experienced by the surrounding area. This would occur because evaporation from the pond's surface would lower the water level in the pond at a faster rate than the combined processes of evaporation and transpiration would deplete soil moisture in the area surrounding the pond, thereby causing water in the soil to move toward the pond." Id. at 5. This process "would not only cause the wetland to lose water faster than it naturally would during the drier part of the year; it would also make the wetland less viable during a period of sustained drought." Id.

As such, digging the stock ponds, though beneficial for cattle, significantly alters the natural function of the wetlands by effectively sucking the moisture from the basin – moisture that is needed to support the wetlands' vegetation and which in turn, allows for greater water retention during times of drought. Moisture, that once was spread out over a large area and shaded by dense vegetation is now confined in a small, deep, muddy, and exposed hole. See Attach. No. 20 (Photo of Prime Lake); see also a comparison of Attach. No. 13 (Photo of Mud Spring with cow and stock tank) with Attach. No. 14 (Photo of Navajo Spring with no cows or stock tank).

In fact, on numerous occasions, the USFS has expressed the position that the best and only way to restore the natural function of the wetlands is to remove the stock tanks as a means of redistributing the moisture. See e.g., Attach. No. 13 (best way to restore Mud Spring is to remove stock tank); see also Hay Lake, Wetland Restoration Plan/Environmental Assessment, Coconino County, Arizona, U.S. Dept. of Agriculture

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Comment 2-1c

(June, 2001) (on file with the Coconino National Forest); Pickett Lake DEIS at 33 (removal of stock tank to improve conditions at Little Boot Lake).

Comment 2-1c

Back in May, 2000 a study from the University of New Mexico was conducted to explore how physically modifying wetlands (i.e., digging stock ponds) impacts the water chemistry, species composition, and ecological function of wetlands. See Attachment No. 9. The study also explored restoration methods. In the end, the study found that, at least from an ecologists' point of view, digging stock ponds in the middle of wetlands degrades the wetland "by eliminating the unpredictable wet-dry cycle to which playa vegetation is adapted and reducing the area of inundation which limits wildlife habitat." Attach. No. 9 at 26. Wildlife habitat in wetlands "is enhanced with aquatic vegetation and when water spreads out over a wide area." Id.

Obviously, these impacts are more significant during the drought months when water is scarce and relatively minor during the wet periods when there is plenty of water in the wetland (i.e., the stock tank fills up and spills over into the rest of the basin). See Attach. No. 2 at 4; see also a comparison of Attach. No. 12 (photo of Boot Lake illustrating impact of stock tank during dry months/years) with Attach No. 11 (photo of Boot Lake illustrating no impact during wet months/years); a comparison of Attach. No. 17 (Horse Lake illustrating impact of stock tank during dry months/year) with Attach. No. 10 (Horse Lake during wet year).

D. Loss of an abundance and diversity of native grasses

Comment 2-1d

A recent evaluation of plant species diversity, relative abundance of species, and composition on Anderson Mesa reveals the impacts are severe and should not be overlooked. See Attach. No. 23 (Re-Evaluation of Grazing Allotment Analyses on Southern Portions of Anderson Mesa, 1960-1998); Attach. No. 25 (Range Analyses for the Pickett Lake and Anderson Springs allotments). The evaluation shows that over the last 38 years, there has been a "significant decrease in the number of species and individuals of forbs; a major increase in juniper and ponderosa pine; and an trend toward decreasing diversity of native grasses and increase in weedy, exotic, or seeded grass species" on Anderson Mesa. See Attach No. 23 at 12; Attach No. 25. The evaluation reported "[a]n overall decline in the condition of the habitat" by the "increase in rock and bare soil at the expense of plant and litter cover." Id. According to the author, Art Phillips, Ph.D., "[d]ecades of livestock grazing and management practices appear to have played an important role in the development of the present condition of the Anderson Mesa ecosystem." Id.

Another issue is plant height and cover. The EIS attributes variations in plant height and cover (i.e., the fact that there is no adequate plant height or cover on Anderson Mesa for pronghorn and other wildlife species) to seasonal moisture and temperatures. While seasonal moisture and temperatures clearly play a role, so too does continued livestock grazing.

Comment 2-1d

Indeed, the height of native grasses (i.e., Mountain Muhly, Arizona Fescue, Blue Grama, Little Bluestem, Squirrel-tail, and Pringle Needlegrass) that have never been subject to livestock grazing – in the same area with the same seasonal moisture and temperatures – suggest that grazing plays a significant role in decreases height and density of Arizona’s native grasses. See Attachment No. 24 (Art Phillips, Ph.D., photos of grasses on Anderson Mesa open to grazing vs. photos of native grasses that have never been grazed in the Dry Lake Hills just outside of Flagstaff, taken in September, 2001 after an extremely dry summer). The Mountain Muhly and Arizona Fescue grew in dense clumps to about 3 feet, and the Blue grama in dense patches upwards of 2 feet. These are grasses that would provide adequate wildlife habitat for pronghorn. These are also grasses that experienced the same drought conditions on Anderson Mesa and grasses that have been grazed by elk and deer. The key difference is that they have never been grazed by livestock.

Having discussed all of these impacts – the destruction and modification of waterfowl and wildlife habitat – we would like to point out that, as written, the DEIS fails to properly assess such direct impacts – the direct impacts to the regions’ wetlands (permanent, semipermanent, seasonal, temporary, and ephemeral), wildlife and waterfowl habitat, and native grasses.

Comment 2-1e

With respect to the wetlands, the direct and significant impacts associated with cattle grazing (i.e., trampling and eating the vegetation, soil compaction, stock tanks, erosion etc.) are glossed over in the DEIS.

In terms of “analyzing” the impacts of continued livestock grazing on Deep Lake’s unique riparian areas, the DEIS does so in only a cursory, piecemeal fashion, avoiding any real substantive discussion of the relevant scientific literature and effects. There is no discussion of the wetlands complex as a whole or even an assessment of the on-going impacts to the region’s temporary and ephemeral wetlands. The DEIS’ voluntary “adaptive management option” strategy for some wetlands and “no management strategy” for other wetlands is particularly troubling. According to the Forest Service, it will conduct “on-going” research to determine the impacts of cattle grazing on the wetlands. Doesn’t the scientific literature speak for itself? What more research needs to be done? Also if additional research is needed, shouldn’t it be done *before* sending the cows out?

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As written, the DEIS spends the majority of its impacts' analysis: (1) talking about how impacts will be mitigated via the implementation of water lanes in a few wetlands; and (2) downplaying the effects of grazing. The DEIS repeatedly states that the productivity of the wetlands is profoundly affected by the amount and timing of precipitation. While this may be true, the DEIS shouldn't (but does) underestimate the impact the livestock grazing has on these riparian areas and how such grazing – during extended periods of drought – exacerbates the problem. The DEIS also mentions future studies to that will be conducted to help study the effects of cattle grazing on wetlands. Again, shouldn't such studies be conducted *before* authorizing grazing in these sensitive areas?

Comment 2-1e

The real questions that need to be answered (but are not) are how cattle grazing in the sensitive wetlands (with or without water lanes) affects the vegetation, abundance and diversity of plant species, soil composition, and nesting habitat. What is the importance of having residual vegetation for waterfowl? Will authorizing grazing after July 15th have any adverse impacts on waterfowl habitat? What about the upland areas? How will cattle be excluded from the seasonal and semi-permanent wetlands before July 15th? Does the USFS realize that the permitted use in the DEIS will result in more intense grazing periods?

The current proposal is to graze slightly less cattle in a shorter period of time, i.e., more intense grazing periods. How are resource conditions on the uplands and within the wetlands supposed to "improve" under this more intense grazing strategy? Yes, a shorter grazing season will allow for more recovery time, but that's irrelevant unless there's reliable precipitation and there isn't. The DEIS states that the maximum forage utilization would be limited to 35 % (the current grazing system). How are you going to limit forage utilization to the same 35 % when you have more cattle and less time to graze? Also, forage utilization is measured on an annual basis. The DEIS mentions a "seasonal utilization" guideline. What does this mean?

Comment 2-1f

On the stock pond issue, does the bulldozing and continued existence and maintenance of stock ponds directly affect the hydrology of the wetlands and indirectly congregate cows in a smaller area thereby exacerbating the problem? Also, how much water do cows need/consume and how will this affect the wetlands/waterfowl habitat? The USFS estimates that cows drink 15 gallons a day. Other estimates are that an individual cow drinks 20 to 30 gallons of water per day. Where is the impacts analysis on these amounts of consumption? How will the "pumping" of thousands of gallons of water a day from the wetlands impact habitat and wetland function?

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Moreover, are the impacts from grazing magnified during drought years? What are the impacts (direct, indirect, and cumulative) of allowing continued grazing and stock tank maintenance in the wetlands during periods of drought? In response to comments, the USFS concedes that “[w]hen precipitation is below normal, water levels in wetlands are low and the wetland and riparian vegetation is heavily impacted by grazing herbivores such as cattle and elk.” Yet, having made this concession, the USFS does not actually analyze such impacts in the DEIS.

Comment 2-1f

The relevant scientific literature (Fredrickson and Dugger – Attach. No. 1) suggests a variety of wetlands (seasonal, semi-permanent, temporary, and ephemeral) are needed to maintain a healthy viable wetlands complex for waterfowl. “Different wetland types provide different resources at different times of the year to a variety of organisms.” Attach. No. 1 at 15. As such, “spatial relationships among wetlands become very important in determining the distribution of organisms in an area Thus, *successful management* for a diversity of waterbirds *requires both types of wetlands.*” Id.

Also, if wetlands are so important for wildlife, why not fence these areas *before* cattle are released? The DEIS’ “grazing until the soil and wetlands conditions improve” strategy makes no sense. Cattle need to be removed until the soil and wetland recovery process is complete. Once this is accomplished, the conditions of the wetlands and uplands can then be assessed to determine if and when cattle grazing should occur. The USFS doesn’t “need” to allow cattle grazing. Rather, the Agency needs to protect the soil, water, and wildlife of Anderson Mesa. These are just some of the very basic questions that should be, but are not, presented and analyzed in the DEIS.

Comment 2-1g

The DEIS also overstates the impacts associated with ungulates like deer and elk – asserting that the removal of grazing may not even improve conditions because of the elk. This conclusion, however, is contradicted by the relevant scientific literature. What impacts do elk really have? What data, studies, or reports is the USFS relying on? There is really no evidence in the DEIS or even listed in the bibliography to suggest that elk play a role in the tragedy of Anderson Mesa. Indeed, the evidence on the Mesa itself suggests just that the cows, not the elk are the problem.

Comment 2-1h

Take a look at the areas like Vail Lake or Navajo Spring – areas where cows are excluded but elk are allowed to graze. See Attach No. 14 (Riparian Photo Documentation of Navajo Spring – open to elk and deer but not livestock – looks great); Attach No. 24 (tall dense grasses – open to elk but not cows). These areas are doing fine. Most baffling, the DEIS even concludes, without any citations or references, that overall, the wetlands on Anderson Mesa “are still functioning.” One visit to Anderson Mesa will reveal just how off the mark this statement is. What does the USFS mean by “still functioning?” Yes, the wetlands may still function as feedlots – watering holes for the regions’ cattle.

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This, however, does not mean that they are functioning a wetlands. Is the USFS implying that the wetlands depicted in many of the Attachments (i.e, the photos of Prime Lake, Deep Lake, Boot Lake, and Horse Lake) still functioning as a wetlands?

In fact, to determine whether or not Anderson Mesa's wetlands are functioning as wetlands, the USFS is supposed to monitor the habitat and population numbers of cinnamon teal – the management indicator species for wetlands. Cinnamon teal were picked as the MIS for wetlands because their health and population numbers are "indicators" of the health of Anderson Mesa's wetland ecosystems. Today, there are little to no cinnamon teal on Anderson Mesa because there is no habitat. Cinnamon teal do not nest or breed in feedlots – they need cover. It doesn't take an ecologist to understand how severe the impacts are. A quick visit to Anderson Mesa will quickly reveal the significant, devastating impacts that cattle grazing is having on the unique wetlands. A comparison of areas where cattle have been and are allowed to graze with areas excluded from grazing paints a clear picture of the problem. Take Perry Lake for instance.

The first photo in Attachment No. 31 says it all. The right side of the fence line (the Pickett Lake Allotment side) is an area of Perry Lake that has been excluded from livestock grazing – at least as of July, 2003. The left side of the fence line is an area open to grazing (the Anderson Springs Allotment side). The difference could not be more extreme. On the left side, the grass is tall and dense and the wetlands are not simply muddy pits framed by bare soil. See Attach No. 32 (Photos of Perry Lake in July, 2003 before grazing). Tall native grasses dominate the landscape and enclose the wetlands. Id. Unfortunately, however, this area did not remain free from cows for long. Two weeks after the photos in Attachment No. 31 and Attachment No. 32 were taken, the cows were allowed to graze Perry Lake. The impacts were immediate and significant. See Attach No. 29 (Photo of Perry Lake taken in August, 2003, two weeks after the cows were put out).

The first photo in Attachment No. 29 is taken from the same angle as the photo in Attachment No. 31 – the only difference being the existence of cows on the right side for about a two week period. See Attach. No. 29. The remaining photos in Attachment No. 29 are also of Perry Lake after the cows were out for only a few weeks. Compare Attach. No. 31 and Attach No. 32 (no cows in Perry Lake) with Attach. No. 29 (cows in Perry Lake for only two weeks). After only a few weeks the tall, dense native grasses (i.e., the bulrush, spikedeace, squirreltail) that provide important habitat for the areas wildlife and waterfowl was gone –trampled and Eaten by the cows. The grazing in Perry Lake continues today.

The contrast between Mud Spring – a wetland on Anderson Mesa open to cattle with a "high utilization" level, bare soil/mud, and no emergent vegetation – with Navajo

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Comment 2-11

Spring – another spring on Anderson Mesa excluded from cattle in a healthy condition – also speaks volumes. See and compare Attachment No. 13 (CNF Riparian Photo Documentation of Mud Spring) with Attachment No. 14 (CNF Riparian Photo Documentation of Navajo Spring). The one or two areas like Navajo Spring where cows have been excluded still hold clear, well distributed water, and have emergent vegetation even during times of drought. See Attach No. 18 (Art Phillips’ May, 2003 Photo of “Ashurst Run” pond in Pickett Lake allotment – natural depression near Ashurst Spring); see also Attach. No. 33 (Photos of small unnamed and ungrazed wetland in the Breezy Pasture just north of Breezy Lake with emergent vegetation).

In contrast, the overall majority of wetlands open to cattle grazing are defined by bare soil, mud, dirty water, no vegetation, and “extreme erosion.” See Attach. No. 19 (CNF Riparian Photo Documentation of “natural depression near Ashurst Spring on Pickett Lake allotment – possibly same area as Attach No.18 when exposed to livestock grazing); see also Attach No. 20 (Art Phillips’ May, 2003 Photo of Prime Lake – a wetland in the Walnut Canyon allotment exposed to cattle grazing); Attach. No. 34 (Photos of Ducknest Lake).

The impacts of continued grazing on Boot Lake in the Pickett Lake allotment also tells the story. Boot lake was once a “large intermittent lake scattered with stands of spikerush . . . [that] received heavy use by waterfowl in spring and fall.” See Attach No. 11 (Boot Lake Management Unit from the Coconino N.F.’s Multiple Use Guide). Today, Boot Lake has been transformed into a series of three deep muddy wholes (i.e., stock ponds for cattle) framed by bare, exposed soil. See Attachment No. 12 (photos of Boot Lake taken in October and December of 2002). The same can also be said for Pickett, Post (area not excluded from cattle), and Potato Lakes on the Pickett Lake allotment. See Attach No. 15 (CNF’s Riparian Photo Documentation of Pickett, Post, and Potato).

With respect to these three lakes, the Forest Service reported a “high” utilization level, “lots of cow pies in lake flats,” “lots of dirt showing between grasses,” “much trampling, water is muddy,” and even “evidence of cars driving right out to the source” of the wetland. Id.

Indeed, cattle were once excluded from Horse Lake in the Deep Lake allotment. As a result, the wetland was allowed to function as a wetland should – providing shallow water and tall, dense stands of vegetation for the areas birds and waterfowl. See Attachment No. 10 (Horse Lake Management Unit from the Coconino N.F.’s Multiple Use Guide). The USFS Reported that “Horse Lake is one of the more dependable waters

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on Anderson Mesa and offers excellent waterfowl habitat.” Id. The USFS even took a number of proactive steps to improve waterfowl habitat.

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Back in 1975, the USFS reported that “[p]rojects to increase the potential of the waterfowl habitat are currently underway . . . a variety of vegetative species were planted to provide more shoreline nesting cover . . . including reed canary grass, western wheatgrass, yellow sweetclover, and Russian wild rye.” Id. “Horse lake is one of the most heavily used lakes by waterfowl due to its excellent interspersed of open water and emergent vegetation and the availability of preferred waterfowl foods such a sago-pondweed.” Id. Even during the recent drought years, Horse Lake still thrived as a wetland due to the exclusion of cattle. See Attachment No. 16 (October 2001 Photo of Horse Lake with fence and sign excluding cattle).

The USFS’s “Horse Lake Waterfowl Habitat Improvement Project” fenced the cattle out and allowed to bulrush and spikerush to remain as important residual vegetation during the important fall migration even after a severe drought. Id. One year later, however, the “Horse Lake Waterfowl Habitat Improvement Project” sign (see Attachment No. 16) was taken down, the fence was knocked over, and the cows were allowed return. See Attach No. 17 (October 2002 Photo of Horse Lake once the cows were allowed to return). The impacts that followed were severe. Id. Muddy water, erosion, bare soil, and a dead cow now define Horse Lake – an area that once provided outstanding habitat for Arizona’s nesting waterfowl. Id.

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With respect to stock tanks, the EIS fails to discuss how reducing the amount of water throughout the wetland (i.e., taking water from the soil and emergent vegetation) and confining it all in a small pool in the middle of the basin disrupts the function of the wetlands. In fact, the USFS *has never* adequately assessed the impacts of bulldozing stock tanks in the middle of Anderson Mesa’s wetlands – not even in the DEIS – a document that is specifically designed to discuss such impacts. The DEIS states only that the location of stock tanks in the wetlands may affect where water will go in relation to the wetland . . . water may collect in a tank, reducing the amount of water in the rest of the closed basin. This is the extent of the impacts analysis on stock tanks in the DEIS. More is needed.

Specifically, how does the existence of a stock tank and removal of water from the tank (cattle consumption) affect the wetlands’ ability to function naturally – the natural wet and dry cycles that are so important to plant growth, cover, and habitat? Also, in many instances, the stock tank “diverts” water from the wetland. What are the effects of this, i.e., keeping water from dispersing throughout the wetland? What about past actions, i.e., the impacts of the stock tanks that the USFS previously authorized to be bulldozed in the wetlands? Such an impacts analysis will also need to be part of the

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DEIS' cumulative impacts analysis (past actions). Moreover, there is little to no discussion on how maintenance work on existing stock tanks in the temporary and ephemeral wetlands will impact wetland function and waterfowl habitat.

Also, keep in mind, that *before* digging any new stock tanks or conducting any maintenance work, the USFS and/or the permittee must obtain a 404 dredge and fill permit under the Clean Water Act (CWA).

On the issue of native grasses, the DEIS' "impacts analysis" reads more like a general overview of what the Forest Service believes to be the carrying capacity of the allotments, a statement that conditions are satisfactory, and a reference to a few documents in the "project file." This vague approach is clearly inadequate because it does not assess the impacts that livestock grazing is having on the area's abundance and diversity of native grasses.

Comment 2-1i

The DEIS' assessment of wildlife impacts – including impacts to management indicator species (MIS), sensitive species, and threatened and endangered (T & E) species is equally unavailing. With respect to T & E species, the DEIS repeatedly refers to documents in the "project file" and a Biological Assessment but provides no meaningful impacts analysis in the DEIS itself. For MIS, the DEIS acknowledges that population trends for MIS need to be monitored as the Forest Plan is implemented, and relationships to habitat changes over time are determined. Having made this statement, the DEIS then concedes, that for most MIS, it doesn't have the requisite population trend data. By way of example, for cinnamon teal, the DEIS relies on two studies that are both *over 10 years old*.

Thus, on the one hand the DEIS concedes that it doesn't have the requisite data to properly determine the impacts on MIS – and that it will monitor for population trends at a later date – and on the other hand, it is concluding that there will be no impacts to population trends. How can the DEIS make this conclusion and properly assess impacts to wildlife including MIS without the data? What data on MIS is the Forest Service relying on and shouldn't it be included in the DEIS? Is the data current and accurate or is the Forest Service relying on roadside BBS surveys for bird species and outdated data on wildlife? How is allowing grazing after July 15th directly affected residual vegetation growth and water distribution/retention and indirectly affect cinnamon teal? The relevant scientific literature reveals that these wetlands are extremely important to various birds' fall migration, yet the DEIS fails to take this into account. Also, what is the current population trend for cinnamon teal and other migratory birds? Relying on outdated, roadside BBS surveys is not sufficient.

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On the neighboring Kaibab NF, the MIS Specialist’s Report documents a significant declining trend. It should also be highlighted, that Anderson Mesa’s wetlands – including the wetlands located within the Deep Lake Allotment – are vital to over a 100 bird species (not just cinnamon teal). Where is the DEIS’ impacts analysis on these other bird species that use and inhabit the wetlands?

Comment 2-1j

With respect to pronghorn, the DEIS significantly downplays the adverse impacts that livestock grazing and its associated activities have on pronghorn numbers. See Attach. No. 27 (An Assessment of Pronghorn Populations and Habitat Status for Anderson Mesa, Arizona: 2001-2002). For example, the DEIS fails to adequately discuss how livestock grazing on herbaceous vegetation directly effects the height and density of plant communities on Anderson Mesa which in turn decreases the amount of vegetation providing concealment cover for neonates, thus increasing vulnerability of fawns to ground and aerial predators. See *Id.*; see also Attach. No. 24 (photos showing difference in cover between grazed area to ungrazed area).

At the Hart Mountain National Antelope Refuge in Oregon, the U.S. Fish and Wildlife Service’s decision to remove cattle resulted in dramatic increase in pronghorn numbers. As Dr. Yoakum states in his report (see Attach. No. 27), the lessons of Hart Mountain should be explored for Anderson Mesa. Finally, the USFS mentions that it is adopting Game and Fish’s Anderson Mesa Pronghorn Plan to solve the antelope issues. It should be pointed out that this vague “Pronghorn Plan” – which never underwent NEPA – fails to adopt and implement any tough (but necessary) measures to actually improve the plight of antelope on Anderson Mesa. Shouldn’t the USFS take charge and adopt its own “Pronghorn Plan” for the Mesa?

Comment 2-2

2. The DEIS Fails To Adequately Assess The Indirect Impacts

Under NEPA, an DEIS must consider the “indirect effects” of a proposed action. Indirect effects of a proposed action are effects that are caused by the action but occur later in time or are further removed in distance. 40 C.F.R. § 1508 (b). Indirect effects “may include growth inducing effects or other effects related to induced changes in pattern of land use; population density or growth rate; and related effects on air, water, and other natural resources.” *Id.*

Here, the DEIS fails to properly address the indirect impacts of allowing livestock grazing in the Deep Lake Allotment. There is no indirect impacts analysis on how stringing barbed wire across the range and in the riparian areas will indirectly impact the area’s wildlife habitat, migration corridors, and MIS species. The stock tank “analysis” provides a good illustration of the problem. The DEIS is void of any analysis on how digging stock ponds in the middle of the wetlands and confining the water to one small

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area, indirectly attracts more livestock to the center of the wetlands thereby increasing and magnifying the impacts (i.e., trampling, erosion, soil compaction, residual growth).

On this issue, the DEIS states only that cattle are attracted to the stock tanks in the wetlands because they are a water source. This is true, but what about the impacts analysis? How does altering the hydrology of a wetland impact its function? How does providing more dependable water in a small, deep hole in the middle of the wetlands directly and indirectly impact the wetlands function/vegetation? The DEIS ignores even the most basic analysis of the indirect impacts (and as mentioned above direct impacts) of the stock tanks. Moreover, referring to some earlier "analysis" in the project record does not suffice. At the very least, the analysis needs to be in the DEIS.

The same can be said for all of the USFS's other authorized activities on Anderson Mesa – how the stringing of barbed wire across the range indirectly impacts pronghorn, how the maintaining of roads and allowing vehicular access throughout the Mesa indirectly impacts the areas native species and wildlife habitat, how the authorization of livestock grazing during the drought and even wet years indirectly impacts plant growth and waterfowl habitat. How does allowing grazing from June 1st to September 30th indirectly affect residual plant growth and waterfowl habitat?

Comment 2-3

3. The DEIS Fails To Adequately Assess Cumulative Impacts

Cumulative impacts are "the impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.7. Cumulative impacts can result from "individually minor but collectively significant actions taking place over a period of time." Id.; see also Attach No. 26 (CEQ's "Considering Cumulative Effects Under the National Environmental Policy Act" (January 1997)).

Analyzing cumulative effects includes: (1) identifying the significant cumulative effects issues associated with the proposed action; (2) establishing the proper geographic scope for the analysis; (3) establishing an appropriate time frame for the analysis; and (4) identifying other actions affecting the resources, ecosystems, and/or human communities of concern. See Attach. No. 26 at 11. It is not enough to simply list other actions which are cumulatively affecting the resources at issue – an actual analysis of the cumulative impacts is required.

A. The DEIS fails to engage in a cumulative impacts analysis at the proper geographical scope

The DEIS states that to analyze cumulative effects, activities and natural events that occur within an area much larger than the Deep Lake Allotment (project area) were considered. This *larger area* is referred to as the *cumulative effects area*. The cumulative effects area includes Anderson Mesa. There are two problems with this approach.

First, the relevant scientific literature cited in the DEIS and attached by AWF suggests that the proper geographic scope for the DEIS' impacts analysis extends beyond Anderson Mesa to include the high elevation wetlands complex extending along Arizona's Mogollon Rim – from the San Francisco Plateau Region, along Anderson Mesa, and to the White Mountains. See Attach. 1 at 3 (Fredrickson and Dugger). This high elevation wetlands complex should not be artificially segmented (for NEPA purposes) by barbed wire pasture and allotment fences or by National Forest boundaries (the wetlands complex extends into the Kaibab, Coconino, and Apach-Sitgreaves National Forests). Rather, it is one large wetlands complex upon which the region's wildlife and waterfowl depend. It is therefore the proper geographic area upon which an cumulative impacts analysis must be based. See Attach. 26 (Considering Cumulative Impacts).

Second, even if one assumes, arguendo, that Anderson Mesa is the proper geographic scope, the DEIS fails to actually analyze the cumulative impacts at this scale. After recognizing that Anderson Mesa is the proper scope, the cumulative effects analysis for the "significant issues" (i.e., the wetlands, cinnamon teal, utilization, and pronghorn) fails to analyze the impacts at that level. There is no analysis of the cumulative effect that livestock grazing is having on Anderson Mesa's wetlands as a whole. No cumulative effects analysis on how the stringing of barbed wire or bulldozing of stock ponds impacts Anderson Mesa's wildlife as a whole.

What are the cumulative effects of having stock ponds in every wetland and allowing cows to graze directly within the wetlands, even during the drought years, on the cinnamon teal and their nesting habitat? What are the cumulative impacts on cinnamon teal and pronghorn antelope? How many cows have been and are currently allowed to graze on Anderson Mesa? How many AUMs? How many of the wetlands are open to grazing and how does this cumulatively impact cinnamon teal – the MIS for the wetlands?

As written, there is absolutely no cumulative effects *analysis* in the DEIS on these salient issues. Instead, the DEIS simply provides a laundry list naming the

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wetlands on Anderson Mesa (not even all of them), the size and type of the wetland, grazing status, PFC class, and whether or not a stock tank is present. While this information is useful and will help inform a cumulative impacts analysis – it does not suffice as an actual cumulative impacts analysis.

Again, it is not enough to simply state the proper scope and list various activities – the DEIS must actually analyze the impacts at that level. This means looking at and analyzing how any and all activities occurring on Anderson Mesa (i.e., recreational use, the total number of cattle, the amount of fencing, stock ponds, location of pastures, etc.) are impacting the Mesa’s wetlands, native grasses, and wildlife habitat. The whole point of doing a cumulative impacts analysis is to get a big picture perspective – to avoid a piecemeal approach. The individual grazing allotments may have an individually minor impact on Anderson Mesa’s wetlands and wildlife habitat, when viewed in isolation and within in the confines of the pasture fences. However, when viewed in the broader context of Anderson Mesa as a whole, the impacts could collectively be significant. This is why a cumulative impacts analysis is required in an DEIS.

Before approving livestock grazing on Anderson Mesa, therefore, the USFS needs to get this broader, more accurate, perspective on the impacts of its proposed action. The DEIS fails in this respect. After merely stating the proper scope for an impacts analysis, the DEIS simply summarizes in very general, vague terms the various activities occurring on the Mesa. This is not a cumulative impacts analysis. See Attach No. 26.

B. The DEIS’ cumulative impacts analysis fails to establish the proper time frame

As mentioned earlier, cumulative impacts are “the impacts on the environment which result from the incremental impact of the action when added to other *past*, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” 40 C.F.R. § 1508.7 (emphasis added).

The DEIS fails to properly take into account the impacts of its own “past” actions by failing to establish the proper baseline and failing to conduct the requisite “trends analysis” – an assessment of the environmental impacts of continued livestock grazing over an extended period of time – preferably from the earlier, pre-grazing or early grazing days to the present. See Attach. No. 26 at A-24. Only by engaging in this trends analysis can the USFS get a real sense for the changes that have occurred to Anderson Mesa’s resources overtime (i.e., the Mesa’s native grasses, wetlands, and wildlife). Id. According to the CEQ, “trends in the abundance and distribution of habitats are one of the most important indicators of cumulative effects problems.” Id. at A-26.

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With respect to the impacts of “past actions” the DEIS fails to provide any supporting documentation, trends analysis, or data to support its conclusion that conditions on Anderson Mesa have improved. What about the stringing of the barbed wire, the bulldozing of stock ponds in every wetland, the increased and continued grazing during the drought years, the steady decline in wildlife numbers, and the alarming trend for cinnamon teal? If the USFS did a proper cumulative impacts analysis – one that looks at these trends and how its actions over the past 50 years (as opposed to a 10 year analysis proposed by the USFS) alone have resulted in a steady decline in native grasses, wildlife habitat, and wildlife species and numbers – then and only then could the USFS properly assess the impacts of its current decision. In sum, the DEIS needs a new baseline and a trends analysis.

The DEIS also fails to take into account other, “reasonably foreseeable” future action occurring in the cumulative effects area (and along the Mogollon Rim). For instance, other grazing decisions on the Mesa and in the neighboring Kaibab and Apache National Forests are in the planning stages. These need to be taken into account. Likewise, there are other activities that impact both pronghorn and cinnamon teal currently in the planning stages on the Coconino National Forest that need to be, but are not, considered in the DEIS. Again, merely listing a few activities and their general affects is not enough.

C. The DEIS needs to consider the impacts of all authorized activities associated with livestock grazing in conjunction with other activities taking place in the area

There are a number of activities (i.e., grazing, water development, hunting, recreational use, etc.) that are having an impact on Anderson Mesa’s wildlife and waterfowl habitat. As such, all of these activities need to be analyzed in the DEIS’ cumulative impacts analysis. See e.g., Save the Yaak Comm. v. Block, 840 F.2d 714, 721 (9th Cir.1988) (Forest Service cannot consider environmental impacts of logging in isolation but must address cumulative effects of past and reasonably foreseeable logging in watershed); Neighbors of Cuddy Mountain v. U.S. Forest Service, 137 F.3d 1372 (9th Cir.1998) (Forest Service must address impacts of future timber sales); Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208 (9th Cir. 1998) (impacts of project must be viewed in conjunction with other past, present and reasonably foreseeable future actions.); Sierra Club v. U.S. Forest Service, 46 F.3d 835 (S.D. 1991) (EA must recognize impacts of activities reasonably expected to occur on private lands); Resources Ltd., Inc., v. Robertson, 35 F.3d 1300 (9th Cir.1993) (cumulative impacts from non-Federal actions needs to be analyzed by the Forest Service).

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In terms of cumulative impacts therefore, the USFS needs to take a hard look at how all activities taking place on Anderson Mesa (the “region of influence”) are impacting its resources. The DEIS fails to undertake such an analysis. With respect to the wetlands, cinnamon teal, utilization, pronghorn, and other MIS species, the DEIS simply adopts a laundry list approach – merely listing and then describing, in very general terms, the various activities taking place on the Mesa. Though this easy approach is convenient for the USFS, it does not qualify as a cumulative impacts analysis under NEPA.

4. The DEIS Fails To Analyze A Reasonable Range of Alternatives

The DEIS fails to consider a reasonable range of alternatives. Under NEPA, federal agencies must “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); 40 C.F.R. § 1508.9(b). The discussion of reasonable alternatives section is the “heart” of any environmental analysis under NEPA. 40 C.F.R. § 1502.14. It is well understood, that the “purpose and need” of the action helps define the reasonable range of alternatives.

Here, the purpose and need of the action is appropriately defined as a determination “whether or not to continue cattle grazing on the Deep Lake Allotment.” However, having made this statement, the DEIS also suggests that the purpose and need is to maintain the permittee’s access to their water right and consider current water claims within the allotments. This is too narrow of a purpose and need – one that artificially and illegally restricts the analysis of a reasonable range of alternatives to ones that allow cattle access to the wetlands (see below).

Pursuant to NEPA, therefore, the USFS needs to amend and broaden its purpose and need and then explore a reasonable range of alternatives that satisfy this purpose and need. At the very least, this would include alternatives that explore providing water for cattle *and* whether to allow livestock grazing directly within, or even access to, the wetlands. The DEIS should consider a number of alternatives proffered by AWF that explore creative ways to improve and restore the natural function of the wetlands and improve range conditions and ways to control the movement of cattle in the allotment.

At a minimum, the USFS should have included, or at the very least explored, alternatives that investigate: (1) removing all the cows from the wetlands and taking restoration steps to improve/return the natural wetland functions (i.e., filling in the stock ponds); (2) prohibiting cattle entry to entire areas of the allotments that link a number of the wetlands and will effectively cut down the number of fences; (3) an alternative that

Comment 2-4

allows cattle grazing in only small parts of the wetlands – perhaps water lanes and provides new water sources, but prohibits cattle grazing directly in the wetlands area; and (4) an alternative that allows cattle grazing only during the wet years and prohibits grazing if certain drought conditions exist.

Comment 2-2

Of note is the DEIS’s failure to include any alternative that actually explores ways to remove or fill in the stock tanks – something the USFS concedes may be needed to properly restore the natural function of the wetlands. See Attach No. 13 (“suggest removing tank to restore wet meadow”); see also Attach. No. 2 and Attach. No. 9. Also conspicuously missing from the DEIS is an alternative that includes monitoring of the wetlands – be it plant or animal.

In response to comments on the neighboring Pickett Lake allotment, the USFS states that “restoring wetlands, creating wetland complexes and filling in stock tanks is outside the scope of this analysis.” Yet, in its own “purpose and need” statement in the DEIS, the USFS explicitly states that in addition to determining whether to authorize grazing in the Deep Lake Allotment there is a need to “maintain and protect seasonal and semipermanent wetlands with emergent vegetation on the two allotments.” Exploring ways to protect and restore wetlands, create wetland complexes, and filling in stock tanks are specific ways to achieve this need and, as such, should be analyzed in the DEIS.

5. **The USFS’s Political Decision to Maintain Any Purported Water Rights and/or Claims Does Not Relief the Agency of its NEPA or Other Statutory Obligations**

Comment 2-5

In the DEIS, the FS eliminates various alternatives and refuses to adequately protect Anderson Mesa’s wetlands (as required by law) because of purported “water right/claim restrictions.” This position is entirely inappropriate and illegal.

First, AWF has reviewed the entire administrative record for grazing on Anderson Mesa (as part of earlier litigation) and has yet to see any evidence of a purported water right and/or water claim. AWF is not convinced that the permittee actually owns a valid right and/or claims to water within the wetlands (the website address provided in the DEIS to access these purported claims was inaccessible).

Second, even if one assumes, arguendo, that such rights and claims do exist and are valid, the Forest Service has both the discretion and authority in this case to restrict and even revoke access to such rights. According to the USFS, the Agency is well within its authority to cancel or deny the permittee’s grazing permit on National Forest land regardless of the existence of a water right.

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In other words, the existence of the permittee's water right doesn't affect the USFS' right to terminate or restrict the grazing permit (whether or not such action constitutes a regulatory taking is still an open question). Whether the Forest Service would need to compensate the permittee when restricting or terminating such rights and claims is an entirely separate and distinct issue. The current legal precedent suggests that there is no cognizable property interests in maintaining cattle on public lands in order to make use of their water rights. Simply put, the use of a public resource, such as the wetlands on the Coconino National Forest at issue here, is not a "stick in the bundle" of a private property right such as a water right. Therefore, the government's denial of the use of a public resource is not a taking of any private property right, regardless of the impact of the denial on the use of the private property. See American Pelagic Fishing Co. v. United States, 2004 WL 1812709; Conti v. United States, 291 F.3d 1334 (Fed. Cir. 2002).

Federal courts, applying the law of various western states, have found that a water right confers no right to graze on federal public lands. See Diamond Bar Cattle Co. v. United States, 168 F.3d 1209, 1214 (10th Cir. 1999) (a New Mexico water right does not include a right to graze on federal lands, and that, if it did, it would be contrary to federal law); Hunter v. United States, 388 F.2d 148 (9th Cir. 1967) (a California water right does not include an appurtenant right to graze cattle on public lands). Indeed, this is the current position taken by the USFS in the Hage v. U.S. of America case currently pending in the U.S. Court of Federal Claims.

Moreover, the existence of a private water right in no way overrides the USFS' obligation to comply with federal environmental laws such as NEPA on federal land. The USFS must still assess the direct, indirect, and cumulative impacts of its actions pursuant to NEPA and comply with other substantive, environmental laws. In fact, it is well-understood that federal laws trump any state asserted water rights or claims. See e.g., County of Okanogan v. NMFS, 347 F. 3d 1081 (9th Cir. 2003).

In response to comments on the DEIS for Pickett Lake, the USFS states that "[w]e agree with your comment that the Forest Service has both the discretion and authority . . . to restrict and even revoke access to such rights, or maintain the current right/claim. The key item is the discretion allowed by the Forest Service to assess the effects of the stock tanks and subsequently disclose those effects in the DIES." We are confused by this response. Yes, the USFS does have discretion to restrict or revoke the permittees' access to its water rights as explained above. However, such discretion does not mean the USFS has the discretion to avoid complying with all applicable laws and regulations in this case. It does not mean that the USFS has the discretion: (1) to avoid assessing the effects of such water rights/claims on the areas wetlands as required by NEPA; (2) to ignore its obligation to manage the areas wetlands in accordance with the standards and guidelines

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enumerated in the Forest Plan (MA 12) and NFMA's regulations; or (3) turn a blind eye to its duty to comply with Executive Order 11990 (protection of wetlands).

6. The DEIS Fails To Include Sufficient Information Necessary For Meaningful Public Comment

Comment 2-2

NEPA procedures are designed to ensure that "environmental information is available to public officials and citizens before decisions are made and before actions are taken." 40 C.F.R. § 1500.1. The very goal of NEPA, and purpose of preparing documents like the DDEIS, are to "encourage and facilitate public involvement in decisions which affect the quality of the human environment" – to "provide a full and fair discussion of significant environmental impacts [of a proposed action]" and to "inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." 40 C.F.R. §§ 1500.2; 1502.1; see also *Anderson v. Evans*, 314 F.3d 1006, 1016 (9th Cir. 2002) (interpreting NEPA's public notice requirement to mean that the public must be given an opportunity to comment on proposed action); *Citizens for Better Forestry v. U.S. Dep't of Agric.*, 341 F.3d 961 (9th Cir. 2003) (failure "to involve or even inform the public" about proposed action violates NEPA). In furtherance of this goal, the USFS's own implementing regulations mandate that any and all proposed actions for which a DEIS is prepared must be submitted for public notice and comment. See 36 C.F.R. § 215.3.

As written, the DEIS fails to provide enough information, and even accurate information, necessary to provide the public with an opportunity to submit meaningful public comment. Most of the DEIS's analyses are in the "project record" and not included in the DEIS. As such, the public is left guessing as to what is actually included in a particular "analysis."

7. The USFS Needs to Prepare One, Comprehensive EIS for Anderson Mesa

Comment 2-2

Pursuant to CEQ's NEPA regulations, actions that: (1) are closely related, i.e., are interdependent parts of a larger action and depend on the larger action for their justification; or (2) are cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts; or (3) are similar actions that have similarities that provide a basis for evaluating their environmental consequences together, such as common timing and geography, need to be considered in one DEIS. 40 C.F.R. § 1508.25.

The USFS's authorization of livestock grazing on Anderson Mesa – and more broadly along the Mogollon Rim as a whole – is precisely the type of action that needs to

Comment 2-2

be included in one, programmatic EIS. The USFS's authorization of livestock grazing is an action that has similar impacts to the region's resources, is closely related, and has a cumulative impact on the region's wildlife and waterfowl habitat (in particular, the high-elevation wetlands complex). The action therefore belongs in one EIS. If need be, the USFS could then issue much smaller, less demanding individual environmental assessments (EAs) when making decisions involving individual allotments. The individual EAs would incorporate by reference the general discussions in the EIS and concentrate solely on the issues specific to the individual allotment. Indeed, by adopting this comprehensive approach, the USFS would avoid the inconsistencies that we're now seeing on the Mesa.

Comment 2-2

8. The DEIS Fails To Consider the Best Available Scientific Data

Pursuant to NEPA, information included in NEPA documents "must be of high quality" because "accurate scientific analysis [is] essential to implementing NEPA." 40 C.F.R. § 1500.1 (b). While an DEIS may not be expected to reference or rely on every study or opinion, the state of scientific knowledge on a particular subject must be fairly represented in a balanced manner. Moreover, an DEIS must contain a reasoned analysis in response to conflicting data or opinions on environmental issues.

For the past 10 years, AWF and others have expended a substantial amount of time, energy, and money to provide the USFS with an enormous amount of peer-reviewed scientific literature regarding critical wildlife needs and habitat requirements in the area – particularly those most relevant to the pronghorn, wetlands, and cinnamon teal. It nonetheless appears in the DEIS that the USFS has not, and will not, avail itself to such data or even other studies, guidelines, or reports prepared by the Agency and other agencies (state and federal) working in the field – choosing instead to adopt a planning alternative that will facilitate the continuing demise of the region's native wildlife natural. This is a clear violation of NEPA. The USFS simply cannot turn a blind eye towards the relevant scientific literature. The DEIS must properly address and/or meaningfully evaluate the relevant scientific literature – including the studies submitted by AWF and others.

Comment 2-9

9. The USFS's Failure to Manage for Viable Populations of MIS

The USFS is failing to comply with its procedural and substantive obligations under the National Forest Management Act (NFMA) and implementing regulations to manage for viable populations of pronghorn antelope (the MIS for grasslands), cinnamon teal (the MIS for wetlands), mule deer, and macroinvertebrates.

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Under NFMA and the implementing regulations, the USFS is required to manage wildlife habitat on the Coconino National Forest to maintain viable populations of management indicator species (MIS). See Idaho Sporting Congress v. Rittenhouse, 2002 WL 31056605 (9th Cir. 2002). MIS are animals or plants that are selected by the USFS to represent the needs of various types of wildlife throughout the Forest.

In this way, an MIS acts as a “indicator” - a proxy – for many other species. While the USFS retains some flexibility with respect to the appropriate methodology used to achieve and comply with this viability mandate (i.e., using population data on MIS and/or habitat data as a proxy for MIS population data) the mandate to maintain viable populations of MIS cannot be ignored.

In terms of methodology, the plain language of the NFMA regulations as well as Ninth Circuit law suggest that the USFS must obtain and analyze population numbers of MIS (both actual and trend) as a means of ensuring viability. NFMA’s implementing regulations state that the USFS is required to evaluate site-specific projects (i.e., the authorization of livestock grazing in the DEIS) that affect MIS species “in terms of both the amount and quality of habitat and of animal population trends of the management indicator species.” 36 C.F.R. § 219.19 (a)(2). The USFS must also analyze and monitor the population trends of MIS and determine how those changes relate to changes in habitat that result from site-specific projects. 36 C.F.R. § 219.19 (a)(6); see also Forest Guardians v. U.S. Forest Service, 180 F.Supp.2d 1273 (D.N.M. 2001) (population data on MIS required).

In the Ninth Circuit, of which Arizona is a part, the courts have “encouraged” the use of population data (actual and trend) as a means of ensuring viability but have not gone so far as to require such analysis. Rather, in the Ninth Circuit, the USFS can rely solely on habitat data as a proxy for population numbers (i.e., the “proxy on proxy approach”). Instead of actually monitoring the population of each MIS to determine if viable populations are being maintained, the USFS can designate certain types and quantities of habitat as sufficient to maintain viable populations. This habitat can then be monitored to determine what population changes, if any, are induced by management activities. By adopting this “habitat trends analysis” or “proxy on proxy” approach, the USFS avoids having to acquire and analyze population data (actual and trend) on MIS species. This limited exception, however, is only allowed if the habitat methodology employed by the USFS “reasonably ensures” that viable populations of MIS are being maintained.

Before relying on this approach therefore, the USFS needs to: (1) determine the amount and distribution of habitat in the National Forest needed to maintain viable

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populations of the MIS; and (2) accurately document the actual existence and trend of the habitat within the National Forest. Accurate habitat data (both actual and trend) is imperative to using this proxy on proxy approach. Indeed, without such data, the USFS cannot reasonably ensure that is managing for viable populations of MIS. The cinnamon teal on the Coconino National Forest is the perfect case in point.

Cinnamon teal are (or at least were) common nesting waterfowl in Arizona and in particular, are (or at least were) attracted to the high elevation wetlands complex on the Rim of the Colorado Plateau in Arizona. See Attach. No. 1 at 56; Attach. 27 (most nesting is “above the Mogollon Rim on the San Francisco Plateau and in the White Mountains”); Attach. No. 35. Cinnamon teal prefer shallow seasonal wetland areas surrounded by grasses and low herbaceous cover about 2 feet tall. Most cinnamon teal nest sites are located in dense, matted vegetation located within 75 yards of water. Id. The structure of the nesting vegetation is more important than the presence of specific plant species. Females will often build their nests under layed over residual vegetation, entering via an entrance tunnel. Nest are typically lines with dense grasses and other plant stems. In terms of food habits, cinnamon teal consume bulrush seeds, pondweed seeds and leaves, and salt grass seeds, as well as small amounts of animal life – mostly insects and mollusks. Id. The cinnamon teal’s favored feeding habitat is along the edge of tall marsh growth bordering the open water. Id.

Cinnamon teal use Arizona’s montane wetlands as breeding grounds in the summer and typically depart in late summer/early fall for wintering grounds in Mexico and South America. Myers (Attach. 35) found that the last week in June consistently to be the peak of the onset of nesting on Arizona’s montane wetlands, with most broods hatching between early July and mid-August. Attach. No. 35. Cinnamon teal that breed north of Arizona, i.e., Washington, Oregon, Idaho, and western Montana are also known to use Arizona’s wetlands in the fall and spring.

Based on the cinnamon teal’s nesting and dietary needs they were the natural/ideal candidate to become a management indicator species (MIS) for the health of wetlands on the Coconino and other National Forests that are home to similar, high elevation montane wetlands, i.e, the Coconino and Apach-Sitgreaves National Forests. In the USFS’s own words, “[c]innamon teal were selected to represent species using late-seral wetlands (ponds, marshes, and ephemeral wetlands) with the Forest. A diversity of aquatic plants and macroinvertebrates is an indication of a healthy wetland.” Attach. No. 37 at 11.

As an MIS, therefore, the cinnamon teal is the indicator or proxy for a myriad of plants, animals, and macroinvertebrates that use and rely on a healthy, functioning wetland. The cinnamon teal is the overall representative for the health of the wetlands. If

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cinnamon teal numbers are healthy and viable it means the waterfowl have a enough and well distributed nesting cover/habitat along the edges of the wetlands and that there are enough plant species and insects to feed on.

The historic data on cinnamon teal numbers using Arizona's high elevation wetlands complex is spotty at best. We do know that from the mid-1970s to the early 1990s, cinnamon teal were relatively common to the wetlands' complex extending along Arizona's Mogollon Rim.

In the mid-1970s, the USFS's "Multiple Use Plan" for the region documented "numerous cinnamon teal" and "heavy" waterfowl use in the wetlands located on nearby Anderson Mesa. In April of 1980, Myers (see Attach. No. 35) documented 79 individual cinnamon teal on 13 wetlands in the region. In May, 1980 56 cinnamon teal were documented on these same 13 wetlands and in June, 1980, the numbers jumped to 60. During that same year, Myers documented 108 cinnamon teal using the wetlands on Anderson Mesa and 257 cinnamon teal using the wetlands in the White Mountains. See Attach. No. 35. In 1982, Myers stated that cinnamon teal were "abundant" on Anderson Mesa and harvest records from hunters revealed that cinnamon teal were among the most harvested waterfowl in the State. See Attach. No. 35.

The USFS's 1986 "Analysis of the Management Situation" on the neighboring Kaibab National Forest reported a healthy total of 1,500 cinnamon teal in the Williams Ranger District alone. This figure is apparently from 1982 population estimates. See Attach. No. 37. Between 1982 and 1991, little to no population data on cinnamon teal exists.

Gammonly, in a 1996 report (see Attach. No. 27) conducted extensive field observations for cinnamon teal and other waterfowl in the region from 1991-1993. Gammonly determined that – at the time – cinnamon teal represented the "second most abundant and widely distributed dabbling duck (other than the mallard) breeding in the Mogollon Rim region of Arizona." Attach. No. 37. At least 48% of the wetlands surveyed during this time were home to more than one breeding pair of cinnamon teal. 80% of the semi-permanent wetlands in the region were occupied by cinnamon teal. In the late summer of 1993, Gammonly reported 1,243 cinnamon teal along the Mogollon Rim region. This is the last, accurate estimate of cinnamon teal populations in the region.

Current numbers of cinnamon teal along the rim of the Colorado Plateau – including numbers of teal in the Kaibab, Coconino, and Apach-Sitgreaves National Forest do not exist. Based on the current condition of the wetlands complex (no nesting habitat, no vegetation – just heavily grazed feedlots with small watering holes in the middle) it is

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likely that no cinnamon teal currently inhabit the region. Without the data, however, no one really knows for sure.

As mentioned earlier, the cause of the dramatic decline in cinnamon teal numbers on the Coconino and the other National Forests along the Mogollon Rim can be attributed to the USFS's authorization of cattle grazing in the uplands and wetlands during and extended drought. See Section 1. C. above (describing impacts associated with cattle grazing). Myers' 1982 study describes the problem. See Attach. No. 35.

Myers noted that "[c]attle frequently waded into water to drink and to graze on emergent vegetation." *Id.* However, he noted that movement of cattle in the wetlands was restricted "by water depths over about 0.7m." *Id.* "High water levels prevented the cattle from feeding or trampling the bulrush during the 1980 grazing season and through most of the 1979 grazing season." *Id.* Conversely, during dryer years, the cows are able to gain access to the wetlands and the wetland vegetation (i.e., the bulrush and spikerush that provides the necessary migratory bird habitat).

This is precisely why continued grazing in the wetlands during drought years is so detrimental. During the dryer years, as the water in the wetlands recedes, the cows move in -- trampling and eating all the vegetation, congregating around a small water hole and turning a once pristine, natural wetland basin into nothing more than a feedlot. See Attach No. 13 (Photo of cows at Mud Spring); Attach. No. 17 (Photo of Horse Lake with dead cow); Attach No. 30 (Photo of cows at Indian Lake); Attach No. 19 (Photo of wetland near Ashurst Spring); Attach No. 20 (Photo of Prime Lake).

Indeed, Myers reported back in 1982 that by September of 1979, as the water began to recede on nearby Anderson Mesa's wetlands, "cattle were able to gain access to and feed on small areas of peripheral hardstem bulrush. Shoreline spikerush, which was grazed in 1979, provided 86% less residual vegetation (by dry weight) than ungrazed spikerush." Attach. 35 at 51 (emphasis added). In short, it is clear that if cattle are able to gain access to the wetlands, significant adverse impacts to the natural function of the wetland and its ability to provide adequate nesting habitat for waterfowl will follow.

Given all of this information, i.e., the habitat (nesting and feeding) requirements for cinnamon teal, their selection as MIS for wetlands, the historical numbers and dramatic decline over the last 10 years, and the USFS's continued authorization of grazing in the uplands and wetlands during the drought years, it is clear that the USFS has failed, and continues to fail, to comply with its MIS obligations with respect to cinnamon teal. Specifically, the USFS has failed to: (1) comply with its procedural obligation to monitor population trends for cinnamon teal by either monitoring the

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population directly or indirectly via the proxy on proxy approach; and (2) comply with its substantive obligation to manage wildlife habitat to maintain viable populations of cinnamon teal.

Relying on 10 year old data, a Breeding Bird Survey (BBS), and a "NatureServe" conservation rank for its population data for cinnamon teal is wholly inadequate and unreliable. The BBS survey reported a significant negative trend of -10.1 percent per year from 1980-2000 for cinnamon teal. Conversely, the Nature Serve 2001 "status rankings" for cinnamon teal in Arizona shows that cinnamon teal are "demonstrably widespread, abundant, and secure globally, nationally, and statewide." See Attach. No. 37 at 12. Neither of these contradictory sources for population data are even remotely accurate and neither should be used as a means to assess population trends for MIS.

The BBS – by its own admission – is not an accurate survey upon which to base population trends for particular species. In the BBS's own words, "although the BBS provides a huge amount of information . . . there are a variety of possible problems with estimates of population change from BBS data. Small sample sizes, low relative abundances of survey routes, imprecise trends, and missing data all can compromise BBS results." Indeed, with respect to surveys conducted in Arizona, the BBS states that the data is "deficient" because: (1) the regional abundance is less than 1.0 birds/route; (2) the sample is based on less than 14 routes for the long term; (3) the results are so imprecise that a 3%/year change would not be detected over the long term (quite imprecise); or (4) the sub-interval trends are significantly different from each other (P less than 0.05, based on a z-test). This suggests inconsistency in trend over time.

In fact, the BBS is simply a "roadside" survey of North American Birds. Volunteers pull off the side of the road and try and count birds. In the Coconino National Forest region, there are only 4 "BBS survey" routes that were used and none of these included the wetlands in question. Relying on a BBS survey, therefore, to document MIS population trends is ridiculous.

The NatureServe 2001 status ranking is equally inaccurate and unreliable. NatureServe makes no "warranty as to the completeness or accuracy of any specific data." Notably, in determining that cinnamon teal populations are "demonstrably widespread, abundant, and secure" in the State of Arizona, the NatureServe status ranking does not cite to or reference any studies on cinnamon teal populations along the rim of the Colorado Plateau in Arizona – the region at issue here. The NatureServe does mention, albeit in a cursory fashion, Gammonely's findings with respect to food habitats of cinnamon teal (not numbers just habits -- see Attach. No. 27) but as mentioned earlier, his findings are from field observations in 1991 to 1993 – over ten years ago and before the drastic decline in population numbers.

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Indeed, the USFS's own wildlife biologist states that NatureServe's conclusion (upon which the USFS relied) that cinnamon teal populations in Arizona and on the neighboring Kaibab National Forest are "stable" was made "before I started on the Forest . . . [a]lthough the work was done in good faith, upon review of the documents upon which the conclusions were based and field visits to most of the key riparian areas and many of the stock tanks on the Kaibab National Forest, I do not agree with the current conclusions and will be addressing the inaccuracies in the individual species assessments as time and workload allow." These findings apply equally to the Coconino.

Without question, therefore, the USFS has failed to comply with its monitoring plan in the LRMP with respect to cinnamon teal. Compounding the problem is the USFS's arbitrary and capricious reliance on the BBS and NatureServe for its population data. The USFS's habitat trend data for cinnamon teal is also inadequate. In fact, the USFS has no habitat trend data for cinnamon teal on the Coconino National Forest.

When the LRMP for the Coconino was first completed, the USFS had little to no quantitative data on wetlands habitat in the Coconino. As such, there is no data upon which to base a trends analysis – no starting point. Later on, the USFS did create a number of sampling sites throughout the forest which were to be resampled to give at least a 13 year, relatively recent "trends analysis." However, without knowing the precise location of these sites and whether any wetlands (uplands and basins) were included, it is hard to know if the USFS has any data on wetland habitat. Even if one assumes wetlands were included, starting the habitat analysis as late as 1990 wouldn't be of much use. This is because the USFS has never determined and mapped how much cinnamon teal habitat exists on the Coconino, how much is needed to support a viable population of cinnamon teal, and how much has been altered and/or impacted by its management prescriptions.

Clearly, the USFS is not properly managing its wetlands habitat on Anderson Mesa or within the Deep Lake allotment to maintain viable populations of cinnamon teal – the MIS or proxy for the health of all plant and animal species that are dependent on the wetlands.

According to the Arizona Game and Fish Department "we support upland buffers that are proposed around wetlands, but would like them to be at least one hundred yards from the high water mark where possible instead of 100 yards from the emergent vegetation . . . [o]therwise little nesting cover will be protected in wet years, such as 2005, when lakes are full." Here, the USFS will install water lanes in the wetlands. With respect to such lanes, the Game and Fish Department states that they are concerned that such lanes "may prove difficult to maintain."

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Similar failures exist for pronghorn antelope – the MIS for early and late seral grasslands – and mule deer. The USFS relies on outdated and incomplete population data on pronghorn and mule deer and fails to possess the requisite habitat data to make an informed/accurate habitat trends analysis for these species.

10. The USFS's Failure to Analyze the Suitability and Capability of Grazing

The USFS must identify "the suitability of lands for resource management." 16 U.S.C. § 1604 (g)(2)(A). In "forest planning, the suitability [i.e., should grazing occur] and potential capability [i.e., can grazing occur] of National Forest System lands for producing forage for grazing animals and for providing habitat for management indicator species shall be determined." 36 C.F.R. § 219.20 (emphasis added). Lands "suitable for grazing and browsing shall be identified and their condition and trend shall be determined." 36 C.F.R. § 219.20 (a) (emphasis added). Lands in "less than satisfactory condition shall be identified and appropriate action planned for their restoration." Id.

In authorizing grazing to occur in the Deep Lake Allotment and in particular directly within the region's wetlands, the USFS has failed to comply with these important mandates. As written, the DEIS talks a lot about grazing utilization, forage production, and grazing capacities. However, the USFS has not taken the next step and analyzed the suitability of allowing such grazing on the allotments – in particular the suitability of allowing cattle to graze directly within and throughout the region's wetlands which is MIS (cinnamon teal) habitat and needs to be managed for wildlife. In addition, the USFS concedes that the allotments are in "less than satisfactory condition" but is not taking appropriate action to remedy the problem as required by law.

In response, the USFS simply states that is considered the suitability (the USFS does not mention capability) of the area for grazing at the forest plan level. Yet, the suitability of grazing the wetlands is not addressed in the forest plan. Nor does the USFS provide any citation to the forest plan to back up its claim. Moreover, the NFMA regulations speak to conducting suitability and capability analyses during "forest planning." As the USFS is well-aware, forest planning occurs at both the site-specific and forest plan level.

11. The USFS's Failure to Comply with Executive Order 11990 and NFMA Implementing Regulations

The USFS is required to adopt "measures, as directed in applicable Executive Orders," "protect" wetlands, and "give special attention . . . to land and vegetation approximately 100 feet from the edges" of wetlands. 36 C.F.R. § 219. The USFS

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concedes that the wetlands located in the Pickett Lake allotment conform to the definition of wetlands issued in Executive Order 11990 (EO). That said, the USFS maintains that its decision to authorize livestock grazing and its associated impacts (i.e., maintenance of stock ponds) directly within and throughout the wetlands does not violate EO 11990 or its own implementing regulations. The USFS is mistaken.

Executive Order 11990 was specifically enacted to “avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands *and* to avoid direct or indirect support for new construction in wetlands wherever there is a practicable alternative.” EO 11990. The goal is two fold: (1) avoid the destruction and modification of wetlands; and (2) avoid new construction in wetlands.

In order to meet these two goals, EO 11990 mandates that the USFS: (1) “take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency’s responsibilities”; and (2) “avoid undertaking or providing assistance for new construction in wetlands” unless there is no practicable alternative and the action includes “all practicable measures to minimize harm to wetlands which may result.” EO 11990 §§ 1, 2. This mandate applies to all wetlands (i.e., ephemeral, temporary, seasonal, and semipermanent) not just the seasonable and above wetlands as suggested in the DEIS.

By allowing stock ponds to be dug out and maintained in the wetlands (effectively draining the wetlands, altering the hydrology of the wetlands, and congregating cattle in the middle of the wetlands) and by allowing livestock to water and graze directly within the wetlands located within the Deep Lake Allotment, even during the drought years, the USFS has violated, and continues to violate the mandates of EO 11990. Indeed, the USFS’s proposed action is the antithesis of taking action to enhance the natural and beneficial values of wetlands. Allowing grazing and the continued existence and maintenance of stock ponds in the region’s wetlands is destroying their natural function and the wildlife habitat they provide for the region’s native waterfowl. In sum, the wetlands are being transformed into glorified feedlots and watering holes. In no sense of the word can this be considered action that “protects” wetlands.

12. The Proposed Action is a Violation of Settlement Agreement and Inconsistent With the Coconino National Forest Plan

The USFS’s proposed action in the DEIS is inconsistent with the Coconino National Forest’s Land and Resource Management Plan (hereinafter “Forest Plan”) and the settlement agreement reached in *AWF v. Golden*, CIV-02-997-PHX-RCB.

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Under NFMA, all site-specific actions must be consistent with the standards and guidelines outlined in the Coconino National Forest Plan. 16 U.S.C. § 1604 (g), (i). The USFS’s continued authorization of livestock grazing on Anderson Mesa, and in particular within the Deep Lake Allotment, is inconsistent with MA 12 and, in particular, the Forest Plan’s requirement: (1) that all wetlands and open water maintain at least 80% of their emergent vegetation and be protected from disturbing uses that will harass nesting birds from May 1st to July 15th; (2) that wetlands be protected by providing water for livestock away from the area; and (3) that MIS habitat, population, and distribution be monitored pursuant to the schedules laid out in the Forest Plan.

At present, there are a number of “key” wetlands (i.e., wetlands that are important to the region’s wildlife and waterfowl) in the Deep Lake allotment. These wetlands are not being managed in accordance with MA 12. Indeed, the USFS is only proposing to “protect” the wetlands with water lanes for cattle. Recognizing this fact, the USFS simply states that not all desired conditions or emphasis in the Forest Plan can be achieved with a single, on-the-ground action. While this may be true, it does not alleviate the need – when issuing site specific decisions such as this – to comply with MA 12. Site specific decisions must be consistent with specific standards and guidelines in the Forest Plan. And, at the very least, such decisions must be a step in the right direction – a step towards achieving the desired conditions in the Forest Plan.

The USFS has also failed to comply with the NFMA regulations mandate: (1) that the USFS identify lands on Anderson Mesa that are “in less than satisfactory condition” and take the “appropriate” restorative action; (3) that the USFS adopt “measures, as directed in applicable Executive Orders . . . to protect wetlands”; and (4) that the USFS “protect” wetlands and “give special attention . . . to land and vegetation approximately 100 feet from the edges” of wetlands.”

Finally, the proposed action violates the settlement agreement reached in AWF v. Golden, specifically the provisions outlined in paragraphs 2 (A), 2 (B), and 2 (C). The USFS is not managing all the wetlands on the Deep Lake Allotment for cinnamon teal as promised in the agreement.

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13. Preparation of a DEIS Over Six Years After The Action Has Already Been Approved and Implemented Defeats the Very Purpose, and is a Violation, of NEPA

To put these comments in their proper context, AWF would like to point out that the USFS has already authorized livestock grazing to occur on the Deep Lake Allotment. The USFS issued a 10 year grazing permit for the Deep Lake Allotment on May 3, 1999.

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NEPA compliance for this permit was to be completed in 1998 (*before* issuance of the 10 year permit).

Now, hundreds of miles of barbed wired fence criss-cross the area, stock ponds have been bulldozed in the middle of every wetland, and cattle have been given free range – allowed to graze throughout and within the riparian areas. Continued livestock grazing during the recent drought years has only magnified the problem. As a limited water supply in the wetlands receded, the cows moved in, trampling and eating the native vegetation, compacting the soil, and transforming what were once dense stands of bulrush and spikerush into bare soil. At times, parts of the allotments more closely resembles a feedlot than a unique ecological setting. Cows, mud, flies and barbed wire fences now dominate the landscape – leaving little, if anything, for the native wildlife and waterfowl.

Livestock grazing has, and continues, to occur on Anderson Mesa without the benefit of *first* completing an environmental analysis mandated by NEPA. Now, the USFS is preparing an DEIS on the impacts of livestock grazing. The preparation of this DEIS, therefore, though a welcomed event, is long-overdue and clearly after-the-fact.

As such, it needs to be emphasized that the DEIS is not a forward looking document – not an environmental impact statement that evaluates the impacts and alternatives to the action *before* the action occurs – as contemplated and required by the National Environmental Policy Act (“NEPA”). See 40 C.F.R. § 1500.1; see e.g., Metcalf v. Daley, 214 F. 3d 1135, 1144 (9th Cir. 2000) (entering into agreements before preparing EA biases the entire process); Save the Yaak Committee v. Block, 840 F.2d 714, 718-719 (9th Cir. 1988) (same); Alaska Wilderness Recreation v. Morrison, 67 F. 3d 723 (9th Cir. 1995) (same). NEPA procedure are designed to insure that “environmental information is available to public officials and citizens *before decisions are made and before actions are taken.*” Id. Ultimately, of course, “it is not better documents but better decisions that count.” Id. NEPA’s “purpose is not to generate paperwork – even excellent paperwork – but to foster excellent action – to help public officials make decisions that are based on an understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.” Id.

This very purpose appears to have been lost on the Forest Service. Given this fact, it is no surprise that the DEIS, as written, reads more like a post hoc justification for the continuation of the status quo (i.e., a continuation of livestock grazing on the Mesa) with a few changes than an objective environmental analysis of a *proposed* action.

In closing, thank you for taking the time to consider these comments. We sincerely hope that it is not too late to reverse the USFS’s important decision on this

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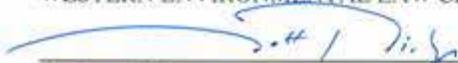
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issue. The USFS needs to keep the cows out of the wetlands and surrounding uplands. It is time to do what is right for Anderson Mesa's wildlife and waterfowl – to protect these unique and sensitive wetland areas. We are confident that this can be achieved while simultaneously allowing livestock grazing to occur in the Coconino National Forest. The important thing is to get the livestock out of the wetlands and uplands by providing alternative sources of water. We are optimistic that resolution of the outstanding issues can be accomplished without having to resort to litigation.

If you have any questions or comments, or wish to discuss the issues raised in these comments in greater detail, please do not hesitate to contact myself, AWF, or the individuals listed below. Thank you for your attention to this matter.

Sincerely,

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Forest Service Response to Comments by Matthew K. Bishop on behalf of the Arizona Wildlife Federation (AWF)

Forest Service Response to 2-1

This comment is considered not significant because it is an opinion.

The DEIS (pp. 29-128) contains the summary of environmental effects on wetlands, grasslands, and wildlife and associated habitat (threatened and endangered species/critical habitat, Forest Service sensitive species, management indicator species as tied to Forest Plan management areas applicable to the allotment, and migratory birds). Specialist reports [PRD 49, 53, and 61] contain additional information and analyses of effects in addition to the summary provided in the DEIS.

Wetlands: The DEIS describes the effects on wetlands for each alternative on pages 44-62. Supporting this analysis is the watershed specialist report [PRD 53].

Native Grasses: The DEIS describes the effects on grasslands for each alternative on pages 62-71. Supporting this analysis is the range specialist report [PRD 49].

Wildlife and Habitat: The DEIS describes the effects on wildlife and associated habitat for each alternative on pages 78-128. Supporting this analysis is the wildlife specialist report [PRD 61].

Forest Service Response to 2-1a

This comment is considered not significant because it is a general comment.

The DEIS (pp. 44-62) addresses the impacts of cattle grazing on the trampling and removal of wetland vegetation. The DEIS and watershed specialist report [PRD 53] reviewed and incorporated information and analysis from the “Management of Wetlands at High Altitudes in the Southwest” report. As noted in the DEIS (p. 44), there are no permanent, temporary, or ephemeral wetlands on this allotment.

Forest Service Response to 2-1b

This comment is considered not significant because it is a general comment.

The DEIS (pp. 78-128) addresses effects to waterfowl and wildlife habitat as applicable through threatened and endangered species/critical habitat, sensitive species, MIS, and migratory birds found in the area. The DEIS discusses and analyzes applicable MIS for this project, including cinnamon teal (duck), an MIS for riparian areas. Existing conditions and effects to waterfowl and wildlife are derived from the wildlife specialist report [PRD 61]. Hoff’s recommendations are outlined in the DEIS (p. 47) and the preferred alternative (Alt. 4) follows these recommendations.

Horse Lake has been excluded from livestock grazing since the late 1980s. This lake was dry from 2003 through 2004. No hardstem bulrush was produced during this time and was primarily bare soil. In 2005, the wetland filled back up and bulrush returned but only with scattered plants throughout the wetland [PRD 4 and 54]. Alternative 4 will fence the other two wetlands on this allotment—Horse Tank and Deep Lake—to further protect them from the effects of cattle grazing.

In reference to grazing during dryer years or late in the season, see response 2-1i.

Forest Service Response to 2-1c

This comment is considered not significant because it is a general comment.

There are no new stock tanks or removal of existing stock tanks proposed. No stock tank maintenance would occur in Horse Tank or Deep Lake over the next 10 years (DEIS, p. 23) and the other stock tanks on the allotment are not located within any classified wetlands. The DEIS (pp. 41, 44-62) summarizes the effects of stock tanks and cattle grazing (congregating cattle at stock tanks) on the Deep Lake Allotment. The DEIS (Tables 3 and Appendix A) summarizes the number of existing stock tanks on the allotment. The DEIS (pp. 44-47, 57-61, 161) discloses the effects on wetlands considering stock tanks under the proper functioning condition class. The range specialist report [PRD 49] specifically analyzes the effects stock tanks play on hydrology by examining the effects of stock tanks on movement of water within the wetland basin, and the effects of tank capacity in relation to wetland size.

Forest Service Response to 2-1d

This comment is considered not significant because it is in part an opinion and in part misinterpretation of data.

See response to 2-1 re: native grasses. The DEIS (page 33-39, 64-76) discloses the effects of cattle grazing on plant cover and plant height, which is derived from the range specialist report [PRD 49].

We disagree with your conclusion across Anderson Mesa related to the interpretation of our condition and trend data (1960-1998; which included data on the Deep Lake Allotment) as stated by Art Phillips, PhD (district files). In 2001 and 2002, during conversations (telephone and in person) with Dr. Phillips related to this condition and trend data, he did not receive the necessary information from us on the collection methods. We asked Dr. Phillips to review his findings (as concluded in your comment) since we believe he misinterpreted our condition and trend data. To date, he has never responded. The DEIS (pp. 63-65) summarizes our conclusion on range conditions related to ponderosa pine and pinyon/juniper grassland areas. The range specialist report [PRD 49] displays the complete review of this data and the data is located in files at the Peaks Ranger District.

The DEIS (p. 62) lists native grasses found within the project area. Mountain muhly, Arizona fescue, and little bluestem only occur in isolated areas on the allotment. The Dry Lake Hills are not on the Deep Lake Allotment nor on Anderson Mesa for that matter and are located in an area with higher precipitation and different soils (Coconino National Forest TES Survey Report 1991). Therefore, the information and photos that Dr. Phillips relates to native grasses on Dry Lake Hills to Anderson Mesa is not appropriate for comparison and analysis in this project.

Forest Service Response to 2-1e

These comments are considered not significant either because they are an opinion, outside the scope of the project (pertain to other grazing allotments), or are requests for more information or clarification.

Cumulative effects to wetlands are analyzed on pages 57-62 of the DEIS and includes a discussion of the wetlands on six allotments across Anderson Mesa.

The DEIS (pp. 42-62, 78-128) discloses the effects of cattle grazing on wetlands as it pertains to vegetation, abundance and diversity of plant species, soil composition and nesting habitat. The DEIS (pp. 113-117) discloses the effects of grazing on residual wetland vegetation for nesting birds. The DEIS (pp. 42-62) discloses the effects of grazing wetlands after July 15 as well as within lanes prior to July 15.

The DEIS (p. 52-56, 113-117) explains the wetland enclosure (fencing) parameters applicable to Alternatives 3, 4 and 5. According to research conducted by Terry Myers (1982), 98.1 percent of cinnamon teal nests lie within 100 meters of water. Hardstem bulrush is strongly associated with open water and is found growing in open water or saturated soils immediately adjacent to open water. All wetlands proposed for enclosures were evaluated from 2003-2005 during wet and dry periods.

All action alternatives (DEIS, Chapter 2) describe how cattle grazing will be managed in wetlands either through herding or enclosures (fences). This encompasses cattle grazing before and after July 15.

Permit numbers, as noted by alternative, are the maximum number of cattle that can be run on the allotment. The permittee and Forest Service determine cattle numbers in a given year to match forage production based on climate (precipitation, temperature, wind, etc.). The permittee has the ability to run fewer livestock or for less time for personal convenience or resource protection in any given year. The permit numbers for all action alternatives in the DEIS fall within the carrying capacity estimates of the allotment [PRD 49].

It is not necessary to discontinue cattle grazing before additional monitoring is completed. Existing resource conditions and effects of the cattle grazing alternatives are provided in Chapter 3 of the DEIS, which is based upon past Forest Service monitoring of Anderson Mesa combined with research from other sources in this and like areas. The action alternatives are designed to be adaptive in order to respond to variable climate or other changing resource conditions. Therefore, continual monitoring is necessary so that the Forest Service can make the right grazing management decisions throughout the timeframe of the decision. If future monitoring shows the need to change grazing management outside the parameters of this decision, a new analysis will need to be completed.

Table 5 of the DEIS summarizes the differences between alternatives as it relates to cattle grazing. Pasture grazing schedules will be designed to match forage production and utilization regardless of number of cattle. Utilization and seasonal utilization are fully described in the DEIS (pp. 22, 141-142).

Forest Service Response to 2-1f

This comment is considered not significant because it is a request for more information.

An analysis of the consumption of water by cattle by alternative was completed [PRD 50] and the effects are summarized in the DEIS (pp. 50, 52-56, 61, and 115).

Rangeland cattle drink 15 gallons of water per day [PRD 50]. Not all this water consumption comes from seasonal and semipermanent wetlands; water comes from a variety of other sources including reservoirs, upland stock tanks, pipelines, and water hauls. In the case of the Deep Lake Allotment, other non-wetland water sources come from 11 upland stock tanks (DEIS, Table 3).

Grazing impacts by cattle and elk have been observed and documented by Forest Service personnel on Anderson Mesa for many years [PRD 4 (wetland grazing history) and PRD 49 (utilization monitoring)]. Preliminary observations from elk and cattle enclosures within grazing allotments on Anderson Mesa reveal no long-term difference between the areas grazed by elk only and areas grazed by both cattle and elk. Three years of preliminary data exist, but again the data relates to climate, rather than cattle or elk. Longer term data will hopefully lead to more specific causes [PRD 59].

The description of action alternatives (DEIS, Chapter 2) and Tables 10-14 discuss and show how the two wetlands will be grazed and/or receiving year-round protection (except for the lanes) and receiving protection through July 15. The reference “Fredrickson and Dugger, 1993” was used as a reference throughout our wetland analysis (DEIS pages 41, 44, 47, and 49). As noted on page 44, there are no permanent, temporary, or ephemeral wetlands on the allotment.

The DEIS (pp. 30-34 and 47-48) describes the main source of wetland impaired soil condition. The static trend of wetlands is disclosed on page 46. The DEIS (pp. 47-62) describes the effects cattle grazing has on wetlands during varying climatic conditions, including drought. As described in the DEIS (pp. 8, 13, 15, 23, and 51), stock tanks in semipermanent or seasonal wetlands would not be maintained for the next 10 years.

Forest Service Response to 2-1g

This comment is considered not significant because it is a request for more information or clarification.

The DEIS (Table 27, p. 173) acknowledges the cumulative effect of elk grazing and discloses information about the elk population and their impacts (pp. 95-96). Much of this information is tiered to the “Management Indicator Species Status Report for the Coconino National Forest” (USDA 2002c) and information provided by the Arizona Game and Fish Department. See response 2-1f regarding observations of elk and cattle grazing on Anderson Mesa.

Neither Vail Lake nor Navajo Springs are on this allotment. These locations, including their site-specific conditions, vary from conditions on the Deep Lake Allotment. Therefore, these photos do not provide complete resource information or effects applicable to this analysis.

Forest Service Response to 2-1h

This comment is considered not significant because it is a request for clarification.

The DEIS (pp. 47-62) summarizes the effects of the alternatives of cattle grazing on wetlands based upon analyses contained in both the watershed and range specialist reports [PRD 49 and 53]. Wetlands and springs on Anderson Mesa were inventoried and evaluated by the Forest Service from 2002-2005 to determine current conditions [PRD 54]. Table 25 in Appendix A summarizes this inventory and includes the current functioning condition of each wetland based on the BLM’s “Process for Assessing Proper Functioning Condition for Lentic Riparian-Wetland Areas” (Pritchard et al., 1994). Proper functioning condition is explained in the DEIS (pp. 48-49 and 163). Prime, Deep, Boot and Horse Lake are rated as “proper functioning condition” or PFC (DEIS, Appendix A) based upon the determination that after cattle graze after July 15 “enough residual vegetation is left to promote nutrient recycling” (DEIS, pp. 48 and 163). Prime and Boot Lakes are not on the Deep Lake Allotment. Horse Lake is excluded from cattle grazing. The new action alternatives in this analysis propose to exclude a large portion of Deep Lake from cattle grazing.

Forest Service Response to 2-1i

These comments are considered not significant because they are general comments or questions for clarification.

The DEIS (pp. 113-117) addresses the current condition and effects of cattle grazing on cinnamon teal as a management indicator species. Refer to response 2-1h re: determining wetland functioning.

As discussed throughout the DEIS, wetland conditions on Anderson Mesa including the Deep Lake Allotment are tied to climatic conditions. When sufficient precipitation occurs, wetlands produce abundant amounts of emergent vegetation and shoreline riparian vegetation. In turn, these conditions provide nesting habitat for wetland species. When precipitation is below normal, water levels in wetlands are low, and the wetland and riparian vegetation is heavily impacted by grazing herbivores such as cattle and elk. This is why Alternatives 4 and 5 propose to fence Deep Lake and Horse Tank, except for lanes for cattle to access water associated with the permittee's and Forest Service's water rights. This fencing significantly reduces cattle grazing effects on these wetlands and associated upland habitat except for the lane (DEIS, Table 12). Alternative 3 proposes partial fencing of Deep Lake and no grazing in Horse Tank until after July 15. Alternative 1 proposes not to graze either wetland until after July 15 which still meets Forest Plan direction for wetlands [PRD 54] but provides less protection than Alternatives 3, 4 and 5.

The referenced photos at Perry Lake are not within the Deep Lake Allotment; it is located on the Pickett Lake and Anderson Springs Allotments. The photos visually show vegetation effects from cattle grazing. These effects are consistent with effects described in the EIS. The photos reflect the vegetation effect (primarily height) at one point in time. The difference between ungrazed to grazed by cattle is noted. The photo is described as not grazed by cattle as "grass is tall and dense and the wetlands are not simply muddy pits framed by bare soil." These photos support our effects analysis that when cattle graze, there are immediate effects to vegetation and wetlands but once they are moved from that pasture, the vegetation regrows and the wetlands move from functioning at-risk to proper functioning condition (DEIS, Chapter 3, "Wetland" section). Thus, this ungrazed photo demonstrates the recovery of these areas from recurrent cattle grazing.

The other photos and locations referenced (Ashurst Run, Mud Springs, Prime Lake, Boot Lake) are not located on the Deep Lake Allotment. These photos reflect one point (day) in time. The DEIS discloses cattle grazing effects and monitoring summaries which represent the season of use and cumulative effects.

Horse Lake has been excluded from livestock grazing since the late 1980s. This lake was dry from 2003 through 2004. No hardstem bulrush was produced during this time and was primarily bare soil. In 2005 (after a record-setting water year), the wetland filled back up and bulrush returned but only with scattered plants throughout the wetland [PRD 4 and 54].

The DEIS (p. 91) outlines requirements for MIS monitoring under the new planning regulations and states "MIS monitoring is appropriate at the times and places appropriate to the specific species and is not required within individual project or activity areas (70 Fed. Reg. 1021-1091)." However, an analysis of effects for each of the proposed alternatives is provided for each relevant MIS within the Deep Lake Allotment project area. This analysis includes a determination of how each of the alternatives will affect the forest-wide habitat trend the species is chosen to represent or the forest-wide population trend for the species, as directed in 36 CFR 219.14(f).

The Forest Service uses a wide variety of data sources including but not limited to models, BBS, Arizona Game and Fish Department survey information, published research and surveys, as well as Forest Service survey data. Citations are provided in the DEIS.

The DEIS (pp. 113-117) discloses the direct and indirect effects of cattle grazing on cinnamon teal, including grazing after July 15, wetland vegetation, and water availability. Also, the DEIS (pp. 82-84, 117-125, 125-128) discloses cattle grazing effects to peregrine falcon, migratory birds, and important bird areas. Population trends for cinnamon teal and other migratory birds are not required for this analysis (36 CFR 219.14(f)).

Forest Service Response to 2-1j

This comment is considered not significant because it is a general comment or outside the scope.

The DEIS discloses cattle grazing effects on vegetation, including those on pronghorn fawning cover based upon analysis in the wildlife specialist report [PRD 61]. The DEIS (pp. 22-23, 65, 105-113) discusses the context of how the “Anderson Mesa Pronghorn Plan” (AGFD 2002) was considered and used in the analysis of Deep Lake Allotment.

Forest Service Response to 2-2

This comment is considered not significant because it is an opinion.

The DEIS (Chapter 3) contains the direct and indirect effects of Alternatives 1-5. This includes effects of fencing on pronghorn (DEIS, pp. 105-112). Any new and existing fences in known migration corridors will contain goat bars to ensure wildlife can pass under these fences. See responses 2-1c and 2-1f for stock tanks. See response 2-1 under wetlands. The DEIS (Tables 26-28, pp. 170-178) discloses past, present, and future activities (including fencing, roads, and cross-country motorized travel) that was used in the cumulative effects analysis applicable to each resource. The DEIS discusses grazing effects after July 15 on vegetation (i.e. residual plant growth) and the indirect effect it has on pronghorn cover and waterfowl habitat (pp. 111 and 116).

The DEIS (pp. 3, 21, 37, 43, 52-53, 57-61, and 70-71) discusses the status of roads and effects of cross-country travel. Designating motorized travel access is outside the scope of this analysis. Road maintenance is outside the scope of this analysis unless tied specifically to grazing management activities. Little to no road maintenance occurs within the allotment, except for the possible need for cattle guards (DEIS, p. 21).

Forest Service Response to 2-3

This comment is considered not significant because it is a misinterpretation of facts.

The DEIS (Chapter 3) discloses cumulative effects under each resource area. The analysis of these effects is based upon resource specialist reports [PRD 49 (range), PRD 53 (watershed), and PRD 61 (wildlife)]. This includes the display of past, present and reasonably foreseeable future activities considered for cumulative effects (DEIS Tables 25-29 in Appendix A and B).

The DEIS (p. 29) states: “To analyze cumulative effects, activities and natural events that overlap in time and space with the proposed activities and project area were considered. The cumulative effects area varies by resource type and is defined under each resource area analyzed.” Therefore, Anderson Mesa was not used as a blanket cumulative effects area for every resource; it is distinctly defined under each resource heading. The activities considered in these analyses are also distinctly defined. Refer to each “cumulative effects” headings in the DEIS (pp. 36-136).

The timeframe for considering cumulative effects is also defined by each functional resource area because it varies spatially and temporally by resource type. In many cases, it is 20 years (10 years in the past and 10 years in the future) based upon the timeframe for observing effects and changes on the landscape or particular resource.

It is not feasible to look at cumulative effects prior to livestock grazing associated with the beginning of European settlement of the area. Data is not available for that timeframe, and the variables are limitless. The climate has changed. European descendants have affected resources and most aspects of the environment. The DEIS (p. 29) acknowledges several historic activities which have altered natural conditions so much that trends cannot be reversed and a new environmental baseline exists.

Reasonably foreseeable future activities that would overlap in time and space with the proposed project are detailed in Table 29, p. 177.

Forest Service Response to 2-4

This comment is considered not significant because it is in part an opinion and in part is outside the scope.

The DEIS Chapter 2 (pp. 13-28) discloses a reasonable range of alternatives that meet this project's purpose and need (DEIS, p. 4). This range includes no action/no grazing (Alternative 2) and one alternative considered but eliminated from detailed study (DEIS, p. 25).

The range of alternatives is driven by significant issues identified during public scoping and the EIS comment period (DEIS, pp. 10-11). The range of alternatives is also influenced by proposed mitigation measures (DEIS, pp. 24-25) which address resource concerns identified by the public. The DEIS in Tables 4-7 shows that the alternatives created reflect a reasonable range.

Your request for consideration of four other alternatives are addressed as follows:

No. 1 is addressed through Alternative 2 (no action/no grazing), though improving/returning the natural wetland function is outside the scope of this analysis (our purpose and need does not state this need);

No. 2 was considered in our response to comments on the Proposed Action. Specifically, we looked at the area around Deep Lake, Horse Lake, and Horse Tank. Horse Lake is adjacent to the allotment to the southeast and is currently fenced from cattle. Deep Lake is proposed to be fenced in the Proposed Action. Horse and Deep Lakes are over 2 miles from each other. Horse Tank has been reclassified and is proposed for fencing in two alternatives. The enclosure at Horse Lake would be expanded to include Horse Tank. All other wetlands in the area are farther than 1 mile from these three wetlands. Since the wetland enclosures are designed to protect waterfowl nesting habitat, grouping other distant wetlands with these two adds a lot of fence with little to no measurable benefit to waterfowl nesting habitat and, thus, was not considered to be a viable alternative.

No. 3 (allowing cattle grazing in lanes or small parts of wetlands) has already been addressed by the proposed wetland enclosures with lanes in Alternatives 3, 4 and 5 and by the alternative considered but eliminated from detailed study; and

No. 4 (prohibit grazing during drought) is addressed through implementing the annual operating instructions (AOI) for any action alternative. AOIs are the mechanism which provides our Agency flexibility to manage cattle grazing during drought conditions or to respond to other changing resource conditions. As an example, Table 1 (DEIS, p. 5) demonstrates that permit numbers can fluctuate annually or by season. The use and intent of AOIs are explained in detail in the DEIS (p. 21).

Restoring wetlands, creating wetland complexes, and filling in stock tanks is outside the scope of this analysis (DEIS, p. 4) and the wetlands are being protected as analyzed in the action alternatives.

Forest Service Response to 2-5

This comment is considered not significant because it is a general comment.

The DEIS (p. 23) discloses permittee water rights and claim information. This information has been obtained from the Water Claims Registry maintained by the Arizona Department of Water Resources. A query of all water rights and claims within the Deep Lake Allotment is

supplemented in Project Record Document 32. The permittee, as well as the Forest Service, have valid claims and, in some cases, valid water rights to stock tank improvements that occur within the wetlands on the Deep Lake Allotment [PRD 33].

At this time, as a part of working with the Deep Lake Allotment permittee, the Forest Service has decided to maintain permittee access to their water claims at Deep Lake and Horse Tank via the proposed lanes. The effects of these lanes have been disclosed in the EIS, meet Forest Plan standards and guidelines for MA 12, and are in compliance with E.O. 11990.

Forest Service Response to 2-6

This comment is considered not significant because it is an opinion.

The DEIS is a summary document that references data, studies, resource specialist reports [PRD 49, 53, and 61] and other information relevant to this project analysis. The DEIS contains sufficient information for the public to differentiate between the various alternatives and understand the effects these alternatives would have upon the environment.

Forest Service Response to 2-7

This comment is considered not significant because a comprehensive DEIS for Anderson Mesa is outside the scope of this analysis.

Forest Service Response to 2-8

This comment is considered not significant because it is an opinion.

The Forest Service has read and used many of the references provided by AWF [PRD 22]. The Forest Service has also read and used other scientific literature and data for this analysis (DEIS pp. 157-161). Besides the references cited in the DEIS, each specialist report also used additional references.

Forest Service Response to 2-9

This comment is considered not significant because it is already decided by law, Forest Plan, or other higher level decision.

The DEIS (pp. 7-10, 91-117) describes compliance and/or consistency with applicable laws and regulations for this project along with effects disclosed in Chapter 3 for wetlands, migratory birds, and MIS. In addition, specialist reports also contain and support compliance and consistency findings. Applicable Forest Plan standards and guidelines were reviewed and analyzed to determine that the proposed activities were consistent with the Coconino Forest Plan [PRD 7].

The determination of range suitability is required under the NFMA that governs Forest Plans. Suitability was determined with the Coconino Forest Plan decision (1987, as amended). This project is a site-specific analysis under NEPA and not a Forest Plan level analysis under NFMA, and does not propose to amend the Forest Plan for range suitability. The carrying capacity report is found in the range and watershed specialist reports [PRD 49 and 53].

This project analysis is consistent with and meets the AWF v. Golden settlement agreement [PRD 71].

As described in the DEIS (pp. 14 and 52) the proposed fences around the wetlands will include an upland buffer and will be approximately 100 meters from emergent vegetation. Specific designs for fences in these wetlands will be used during their construction.

Forest Service Response to 2-10

The permit for the Deep Lake Allotment was issued without change under the authority of Section 504 of the Rescissions Act of 1995. On November 1, 2004 in the FY04 Appropriations Act, H.R. 2691, P.L.108-108, Sec. 320 provided relief to grazing permittees for NEPA decisions under the 1996 Rescissions Act. Also in 2003, the Omnibus Bill Appropriations Bill from Section 328 as well as the April 4, 2003 Emergency Wartime Supplemental Appropriations Bill from Section 2401 provided relief for grazing NEPA decisions under the 1996 Rescissions Act Schedule. Any Forest Service grazing permit issued to replace a permit that expired after the date for analysis of the allotment in the 1996 schedule is valid even though the allotment analysis may not have been completed by the due date in the 1996 schedule (Section 2401).

The DEIS (pp. 4) integrates applicable existing and desired conditions and possible management actions from the Anderson Mesa Landscape Scale Assessment Final Report (USDA 2004) into this project's Proposed Action. Alternatives 3, 4, and 5 and the one alternative considered but eliminated from detailed study (DEIS, pp. 14-21 and 25) reflect changes to cattle grazing management from the current permit (Alternative 1, DEIS, p. 13). One substantial change from past permit management reflected in this analysis (through the DEIS range of alternatives) is how wetlands will be managed on the Deep Lake Allotment (DEIS, pp. 52-56).



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Pacific Southwest Region
1111 Jackson Street, Suite 520
Oakland, California 94607

IN REPLY REFER TO
ER06/0209

Via Email

21 April 2006

Gene Waldrip, District Ranger
Mormon Lake Ranger District
Coconino National Forest
5075 N. U.S. Highway 89
Flagstaff, AZ 86004

Subject: Review of Draft Environmental Impact Statement (EIS) for the Deep Lake Allotment, Coconino National Forest, Coconino County, Arizona.

Dear Mr. Waldrip:

The Department of the Interior has reviewed the Draft Environmental Impact Statement (EIS) for the Deep Lake Allotment, Coconino National Forest, Coconino County, Arizona, and has no comments to offer.

Thank you for the opportunity to review this proposed action.

Sincerely,

A handwritten signature in cursive script that reads "Patricia Sanderson Port".

Patricia Sanderson Port
Regional Environmental Officer

cc:
Director, OEPC
Regional Director, FWS, Albuquerque

The Forest Service has no response to comments by the U.S. Department of the Interior.

PHONE LOG

Date: April 10, 2006

Time: 1130 hours

Recorder/Title: Katherine Sánchez Meador, Range Specialist

Phone call from: Frank Welsh, 5141 E Forge Circle, Mesa, AZ 85206

Topic: Comments on Deep Lake DEIS

Notes:

Generally a good job on the DEIS.

Comment 4-1



Alternative 2 is his preference
Alternative 5 is his next preference.

Comment 4-2



Cattle grazing does affect fawning habitat; he was last there this last fall.

Comment 4-3



Page 96 (2nd paragraph); he disagrees with us, that we should consider elk first then cattle if there is enough forage for cattle.

Forest Service Response to Comments by Frank Welsh

Forest Service Response to 4-1

This comment is considered not significant because it reflects a position statement.

The district ranger has the option to choose any of the three alternatives presented in the DEIS.

Forest Service Response to 4-2

This comment is considered not significant because it is a general comment.

The effects of the alternatives on pronghorn fawning habitat is presented in the DEIS on pages 105-113 and within the wildlife specialist report [PRD 39].

Forest Service Response to 4-3

This comment is considered not significant because it is a general comment.

The second paragraph on page 96 states, “Despite reduction in the elk population since 1993, impacts to meadows and riparian areas can be substantial and additive to that of cattle use. Elk reduce the cover and vigor of highly palatable plants and contribute to trampling and soil compaction.” We believe this paragraph is stated correctly with what is occurring on the Deep Lake Allotment.

The effects of the alternatives on elk habitat is presented in the DEIS on pages 95-97 and within the wildlife specialist report [PRD 39].

Alternatives 1 and 3 have a utilization rate of 35 percent. This moderate utilization level leaves residual cover for wildlife (including elk) and soils, and provides for long-term health of the grazed plants.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

April 21, 2006

Gene Waldrip
Mormon Lake Ranger District
5075 N. U.S. Highway 89
Flagstaff, AZ 86004

Subject: EPA Comments on the Draft Environmental Impact Statement (DEIS) for the Deep Lake Allotment (CEQ# 60074)

Dear Mr. Waldrip:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The proposed project would re-authorize grazing on the Deep Lake Allotment, which includes approximately 10,994 acres of land. The DEIS acknowledges that during scoping, concerns were raised regarding both the impacts to the unfenced portion of Deep Lake as well as the proposed cattle numbers, utilization levels, and season of use. The DEIS recognizes that within the Deep Lake Allotment, cattle have contributed to 213 acres of impaired soil conditions (p. 64). To reduce the impacts of grazing on wetlands in the allotment as well as address public scoping comments, the Forest Service has proposed the expansion of a wetland enclosure around Deep Lake as well as an expansion of the enclosure around Horse Lake. The proposed alternative, Alternative 4, will also prohibit salting in Unit 436, reducing the impacts to microphytic crusts. Therefore, we have rated the proposed action as Lack of Objections (LO) (see enclosed "Summary of Rating Definitions").

Comment 5-1

However, we note that Alternative 5, with a reduced utilization level, would further reduce some impacts to soils in the uplands (p. 36). The FEIS should evaluate the reasons that the Forest Service is unable to proceed with Alternative 5. The FEIS should estimate if selection of Alternative 5 is economically feasible for the allotment permittees. If it is feasible, EPA recommends selection of this alternative.

Comment 5-2

The FEIS should include information on funding for the proposed monitoring measures listed in Chapter 4. These measures will be especially important to address potentially substantial impacts as a result of drought (as referenced on p. 173 of the DEIS) and help avoid impacts of grazing on the overall system. In addition, environmental review for two large Allotment Management Plans (AMPs), the Walnut Canyon AMP and the Angell AMP, is

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Public Comments and Responses

upcoming in the next year. These plans will address grazing management on over 95,000 acres adjacent to Deep Lake. Funding commitments for monitoring associated with each of these plans should be included in the associated NEPA documents for these projects.

We appreciate the opportunity to review this DEIS. Please send one copy of the Final EIS to the address above (Mail Code: CED-2) at the same time it is officially filed with EPA Headquarters. If you have any questions, please call me at (415) 972-3988 or Summer Allen, the project reviewer, at (415) 972-3847.

Sincerely,



Duane James, Manager
Environmental Review Office

Main ID# 4511

Enclosures: Summary of Rating Definitions

U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements
Definitions and Follow-Up Action*

Environmental Impact of the Action

LO – Lack of Objections

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

Forest Service Response to Comments by U.S. Environmental Protection Agency

Forest Service Response to 5-1

This comment is considered not significant because it reflects a position statement.

Alternative 5 is an alternative that will be considered by the district ranger for selection.

One of many factors involved in the selection of an alternative is economics. An investment analysis (DEIS, p. 130, Table 24) shows the benefits and costs of each alternative, including Alternative 5. The 20 percent reduction in cattle numbers is factored in and the result is reflected in a reduction to the permittee's benefit. While economic feasibility is not the sole factor in whether or not to select an alternative, it is noted that based on the information provided in Table 24, Alternative 5 costs outweigh benefits for the permittee, thus making it a less economically feasible option.

Forest Service Response to 5-2

This comment is considered not significant; it is a request for more information.

The majority of the "Monitoring" section of the DEIS (pp. 141-143) specifies who will be doing the monitoring and, thus, who is paying for the monitoring. Forage production surveys and wetland monitoring would be completed by the Forest Service and/or research branches of various universities. Rangeland utilization is conducted by the Forest Service in conjunction with the permittee. Costs provided in the investment analysis (DEIS, p. 130, Table 24) include estimated monitoring costs [PRD 56]. The majority of this monitoring has been done for the last 10 years and the Forest Service is confident that this funding will be available in the future for this and adjacent allotments.