## AGENCY RESPONSE TO COMMENTS ENVIRONMENTAL ASSESSMENT MANILA, LYLE CANYON AND CANELO ALLOTMENTS February 6,2003

An environmental assessment was mailed for public comment on December 11, 2000. A Notice of Availability was published on December 21, 2000. The EA comment period ran from 12/11/2000 to 1/22/2001. Eleven letters were received by the date of this response document. Comments are paraphrased below and are coupled with an agency response.

Letter Number	Commenter/Organization
1.	Jeff Burgess
2.	Steve and Naomi Lindsey
3.	Gene E. Davison
4.	Robert A. Witzeman, M.D., Maricopa Audubon Society
5.	Jerry D. Thorson
6.	Jeff Servoss, Arizona Department of Environmental Quality
7.	Doug Haynes, Western Gamebird Alliance
8.	Jeraldine Ligon
9.	John Stephenson, Federal Liaison Director, Arizona Wildlife
	Federation
10.	Martin Taylor, Ph. D., Coordinator, Grazing Reform Program,
	Center for Biological Diversity
11.	John Kennedy, Habitat Branch Chief, Arizona Game and Fish
	Department
12.	Leigh Kuwanwisiwma, Director, Cultural Preservation Office,
	Hopi Tribe

Responses are organized by letter number and by comment number (e.g., the coded 1-1 came from Jeff Burgess and was the first comment).

**Comment 1-1**: [Comment specific to the Manila Allotment] Can you please explain why you are proposing a 45% allowable forage use rate when research shows it is not sustainable in the long run?

Response 1-1: The proposed action is consistent with recommendations and findings made in the Range Management literature for sustainable use of the forage resource (Holechek et. al. 1998, Holechek and Galt 2000, Holechek 2000, Reed et. al. 1999). A 45 percent average allowable forage use level led to observed improvement in native grass density over a 43 year period on the nearby Santa Rita Experimental Range (Angell and McClaren 2001, McClaren and Angell 2002). The proposed management requires monitoring relative utilization in key areas on key species, and moving cattle if relative utilization levels approach 45 percent. Overall average utilization of the forage resource in these allotments will be below 45 percent. Although the analysis shows that further improvement of the resource is needed in some areas, it also shows

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that conditions are mostly stable and in some cases improving (Doc 67). Therefore, forage use is sustainable under current management. The proposed action will result in further improvement.

**Comment 1-2:** [*Comment specific to the Manila Allotment*] Throughout the EA there are references to increasing the amount of rest time between grazing periods to allow the vegetation more time to recover before it's grazed again. These arguments sound too much like theories of short-duration, or time controlled, grazing advocates like Allan Savory. But years of research have shown that Mr. Savory's theories are seriously flawed (Holechek [sic] 2000).

Response 1-2: Allowing periods of rest is considered to be beneficial to forage plants (Reed et. al. 1999). The proposed action is not a short-duration, high intensity grazing system and is not similar to any system described as such by Holechek et al. (2000). The proposed level of grazing is conservative, as indicated by 45 percent use on key forage species in key areas.

**Comment 1-3**: [*Comment specific to the Manila Allotment*] Why are you proposing a 45% allowable use rate when it would exceed the regional grazing guidelines that were designed to protect the quality of wildlife habitat?

Response 1-3: The grazing utilization table in the Regional amendment (Forest Plan, page 22) provided guidance that could be used if site-specific information was not available. Site-specific information considered in setting utilization levels included current range condition, soil condition, riparian area condition, apparent trend, wildlife habitat, historic conditions and the presence of Threatened, Endangered or Sensitive species. Also, see response 1-1.

**Comment 1-4**: [*Comment specific to the Manila Allotment*] Why are you proposing a 45% allowable use rate when it would also violate the forage utilization limits in your forest plan designed to protect Mearns' quail habitat?

Response 1-4: Guidance in the Forest Plan regarding Mearns' quail habitat is found on page 34: "Utilization by livestock will not exceed 45% by weight." Please also see the response to comment 1-5.

**Comment 1-5:** [Comment specific to the Manila Allotment] What your forest plan really says is that, "Stubble height will be used as the primary indicator for meeting Mearns' quail herbaceous cover needs. Provide for an average minimum standard of six inches within key habitat areas of high quality Mearns' quail habitat." It does say that maximum forage use in these areas should not be allowed to exceed 45%, but points out that this shouldn't be the target. And besides that, a forage use rate of 45% will leave less than six inches of stubble.

Response 1-5. The guidance that you refer to in this comment is found in the Forest Service Manual, Coronado NF Supplement No. 2600-94-1. In accordance with this guidance, key habitat areas have been identified within the project area (Doc. 107). These areas will be monitored to target forage utilization to 35-40 percent with a goal of providing at least a six-inch stubble height of herbaceous vegetation. We are confident that current and proposed management of the project area is consistent with providing for the habitat needs of this important game species. Our confidence is supported by a recent study conducted by the

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Arizona Department of Game and Fish (AGFD Bulletin No. 4, [Doc. 112]), which resulted in a conclusion that the Coronado National Forest public-land grazing program was not significantly affecting the Mearns' quail population. Also, see response 1-4.

**Comment 1-6**: [*Comment specific to the Manila Allotment*] Can you please provide the actual forage use rates on the allotment from 1998 to 2000?

Response 1-6: Actual relative utilization of key species in key areas within the Manila Allotment under current management in was between 45 and 65 percent in 1999 (Doc. 52), and 35 percent in 2000 (Doc. 41). In 2001, forage use in key areas ranged from 20 to 60 percent (Docs. 105, 113). In 2002 forage utilization in North pasture was 40 percent (Doc. 113). Utilization data was not available for 1998. Proposed management will improve distribution, so it is reasonable to conclude that a 45 percent utilization rate on key species in key areas can be met.

**Comment 1-7**: [*Comment specific to the Manila Allotment*] The table on page 41 shows that the cost of building the proposed 3.75 miles of fence would be about \$34,000 and the permittee would bear "all the costs". Is this correct?

Response 1-7: Yes, that is correct.

**Comment 1-8**: [Comment specific to the Lyle Canyon and Canelo Allotments] Next I will address your proposed actions for the Lyle Canyon and Canelo grazing allotments. As with the Manila allotment, I am concerned that your proposed maximum allowable forage use rate of 45% is too high. Again, can you please explain why you are proposing a maximum forage use rate that years of research have shown is not sustainable, that violates your forest plan by exceeding the regional grazing guidelines designed to protect wildlife habitat quality, and also the forage use limitation designed to protect Mearn's habitat?

Response 1-8: Please see the responses to comments 1-1 through 1-5.

**Comment 1-9:** [*Comment specific to the Lyle Canyon and Canelo Allotments*] The EA leaves the reader with the impression that you are relying solely on the permittee and the U of A's Cooperative Extension for an assessment of the condition trends on the allotment. Is this true?

Response 1-9: No. In accordance with the Southwestern Region Rangeland Analysis and Management Training Guide (6/97), opportunities for cooperating with other agencies and individuals in collecting information on the health of rangeland ecosystems will be captured.

**Comment 1-10:** [Comment specific to the Lyle Canyon and Canelo Allotments] The information presented in the EA about the trends in the allotment's condition does not appear to have been collected by standard Forest Service practices. On the uplands, the EA says "the past three years indicate a significant increase in litter, and a significant decrease in bare ground at all transect locations." If these are the only things being measured, then the monitoring methods being used are inadequate. High intensity grazing can result in most of the vegetation being

knocked to the ground. Is everything, including standing plant material being included in the ground cover measurements?

Response 1-10: The methods used to collect data for the assessment of condition and trends in the allotment are all approved methodologies (Interagency Technical Reference on Sampling Vegetation Attributes, 1996) which have been incorporated into the Southwestern Region Rangeland Analysis and Management Training Guide (6/97). The proposed action is not a high-intensity grazing scheme (see Response 1-2). Ground cover measurements include bare ground, gravel, rock, litter and live vegetation (Doc. 67). We think that the increase in litter and decrease in bare ground is a good thing.

**Comment 1-11:** [Comment specific to the Lyle Canyon and Canelo Allotments] Focusing on the percent of bare ground can produce misleading information too. High intensity grazing can give a competitive advantage to plants that grow and reproduce horizontally, by runners. More of these types of plants may help reduce the amount of bare ground, but it also reduces the area's vegetative diversity. The EA says "Plant frequency data is also being recorded yearly." Does it show any trends in the diversity of the allotment's plant species?

Response 1-11: Again, neither the proposed action nor current management is considered high intensity grazing (see Response 1-2). Plant frequency data describe the abundance and distribution of species, and is one method for measuring species diversity. If measured over a period of years, it is useful for detecting changes in a plant community over time (trend). The data collected for native grasses over several years (1998-2001) in the Lyle Canyon Allotment (Doc. 67) show significant increases in desirable plants at the Weaner and Upper Lyle Upland key areas. The Algerita Upland showed a static trend in frequency. No conclusions have been made yet at the Mathews, Harkey and Korn Upland key areas because more data is needed from these sites.

**Comment 1-12:** [Comment specific to the Lyle Canyon and Canelo Allotments] I also question the methods being used to assess the condition of the allotment's riparian habitat. The EA claims their conditions are improving because "deergrass density" has showed some increase over the past three years. But there are certainly more factors to be considered when assessing the condition of riparian habitat. Are cattle, for instance, mechanically damaging the stream banks with their hooves? What are the conditions using the standard "Proper Functioning Condition" riparian habitat assessment method?

Response 1-12: One of the management goals is to improve riparian area condition where possible. Deergrass density is one indicator of channel stability because deergrass increases sediment trapping. Riparian areas were assessed for meeting Forest Plan standards in 1999 (EA, pages 26-28). This assessment considered other indicators of condition including age class and diversity of riparian species, bank protection and cover. The Proper Functioning Condition (PFC) method is an accepted method of assessment, but is not a required standard for the Forest Service. A PFC assessment was made in four canyons in the Lyle Canyon Allotment by the University of Arizona Extension Service in 1999 to provide baseline information against which to measure trend (Doc. 9). Mathews and Korn riparian areas were rated as non-functional with

no apparent trend, Harkey riparian area was rated as non-functional with an upward trend, and Merit riparian area was rated as functional-at-risk with a static trend.

**Comment 1-13:** [Comment specific to the Lyle Canyon and Canelo Allotments] The point is, this allotment has ongoing grazing related resource problems and I suspect the permittee's high intensity grazing system is one of the contributing factors. But instead of questioning its efficacy, your strategy appears to be to allow this ranching operation to distribute more cattle over a wider area.

Response 1-13: Please see the response to comments 1-1 and 1-2. The proposed action is not a high intensity grazing system. The analysis shows that grazing related resource problems in the allotment were caused by past over-grazing (Doc. 44). Conditions are improving under current management (Docs. 44, 67), and are projected to continue to improve with the proposed action.

**Comment 1-14:** [*Comment specific to the Lyle Canyon and Canelo Allotments*] The EA explains that two temporary grazing permits were recently issued, without any NEPA review, to increase the number of livestock on the allotment. When the current permittee obtained the grazing permit in 1996 it was for only 50 head of cattle yearlong. In 1998, when the high intensity grazing system was implemented, you issued two temporary permits to increase the overall total to 106 head yearlong. This included a 50 head temporary permit for the Lyle Canyon allotment and a 6 head temporary permit for an adjacent, ungrazed, piece of Forest Service land called the Becker Parcel. This is less than the 140 head yearlong that were permitted on the allotment from 1990 through 1995. But what was the actual use on the allotments during those years?

Response 1-14: Actual use for the Lyle Canyon allotment during those years is presented in the EA, page 21. Actual use from 1990 to 1994 was 140 head yearlong. In 1995 the herd was reduced to 50 head for permittee convenience (Doc 44).

**Comment 1-15:** [*Comment specific to the Lyle Canyon and Canelo Allotments*] Furthermore, according to your agency's Range Management Handbook (2233.1) there are only four purposes for which you may issue a temporary grazing permit. It doesn't appear to me that any of these situations would have applied to the Lyle Canyon allotment. Can you please describe the legal authority you used to issue the two temporary permits in 1998?

Response 1-15: The authority to issue temporary grazing permits is found in 36 CFR 222, subparts A and C. Policy is described in Forest Service Manual 2233.1 and Forest Service Handbook 2209.13, 30. The purpose of the temporary permits is to make use of available forage. The term permit for 140 head yearlong was waived in 1998 based on the purchase of cattle (FSM 2231.8, FSH 2209.13). At the time, there were 50 head of cattle on the allotment, with the remaining 90 head of permitted numbers in personal convenience nonuse status (EA pages 5 and 21). The portion of a permit under nonuse status should not be renewed unless in connection with sale of base property (FSM 2231.8), and so the new term permit was issued for only the 50 head of cattle that were purchased. Because analysis of the term permit issuance under NEPA was pending, the District Ranger decided to issue temporary permits to allocate the additional available forage in the interim.

**Comment 1-16:** [*Comment specific to the Lyle Canyon and Canelo Allotments*] Alternative 3, your proposed action, would add even more cattle and more Forest Service land to this permittee's operation by incorporating three pastures from an adjacent vacant allotment, the Collins Canyon allotment. The addition of these three pastures, the EA explains, would justify raising the total permitted number of cattle to about 150 head yearlong. While the current condition of these allotments is good, probably because they haven't been grazed since 1992, I question the strategy of extending a ranching operation that uses a controversial grazing system, with ongoing resource problems, to more of our national forest lands.

Response 1-16: We reiterate that the proposed grazing system is not similar to the high intensity grazing systems that you have referenced. Research has shown that the proposed grazing system will not cause resource problems on the Collin's Canyon Allotment (see Response 1-2).

**Comment 1-17:** [*Comment specific to the Lyle Canyon and Canelo Allotments*] Besides that, the EA explains that when the former permittee for the Collins Canyon allotment gave up his permit, he felt that he had a verbal commitment from the Forest Service that the allotment would not be grazed again.

Response 1-17: Please see page 37 in the EA for a description of the situation involving the former Collin's Canyon permittee's understanding regarding the future use of the allotment. Additional information can be found on pages 7, 11, 12, 13, 15, 25, 26, 28, 35 and 36. Note that any such verbal commitment would be a suitability determination that could only be made via a Forest Plan amendment, and hence would be outside the authority of the District Ranger.

**Comment 1-18:** [*Comment specific to the Lyle Canyon and Canelo Allotments*] Your ranch expansion strategy is especially troubling because the taxpayers would be paying for it. In order to use these three new pastures, the EA explains, some livestock watering sites and fences would have to be constructed. On page 42 it shows that the total cost of the necessary livestock management devices is estimated at \$50,613. (By the way, why is the \$7,570 expense to fence off the spring in Merritt Canyon in the Oso Negro pasture listed under Alternative 4 in Table 12.b when that pasture wouldn't be grazed if that alternative were implemented?)

Response 1-18: The economic analysis for the proposal and alternatives is presented in the EA on pages 39-46. We note the error you point out, a revised analysis was not completed because it would not change the relative rankings of alternatives. There are several potential sources of funds for these projects, for example Forest Service Range Betterment Funds, or grants available through the Arizona Water Protection Fund or the Natural Resources Conservation Service. These funds have been established for specific purposes through the legislative process. Range Betterment funds are derived from grazing fees, to be used for structural improvements on grazing allotments, and are distributed at the discretion of the Forest Supervisor. Arizona Water Protection Fund money is largely derived from fees for use of Central Arizona Project water and from donations as well as from tax dollars. In the case of grants from other agencies or entities, the Forest Service supports proposals that will lead to improve conditions on Forest Service lands, and the permittee agrees to maintain any improvements funded by the grant. It is up to the granting agency to determine appropriate uses of these funds.

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**Comment 1-19:** [*Comment specific to the Lyle Canyon and Canelo Allotments*] The EA, however is unclear about how much (sic) this would be paid by the taxpayers. The allotment's grazing permittee has been awarded a \$212,660 Arizona Water Protection Fund (AWPF) grant (#99-070) for this project. But that includes monies earmarked for livestock watering devices, fences, and erosion control devices on the Lyle Canyon and Canelo allotments. The difference in expected AWPF expenditures between your proposed action and Alternative 4, which would not include the three new pastures, is \$34,004. I assume this is the estimated amount of AWPF monies that would be expended to add the Collins Canyon allotment's pastures to the Lyle Canyon allotment. Is this correct?

Response 1-19: Yes. Also see the previous response regarding the origin of AWPF funds.

**Comment 1-20:** [*Comment specific to the Lyle Canyon and Canelo Allotments*] Also, if you add this \$34,004 in AWPF monies to the \$9,030 in additional expenditures the permittee would make under your proposed action, it only totals \$43,043. This is still \$7,570 short of this alternative's extra cost of \$50,613. Will the Forest Service be expected to kick in the \$7,570 balance?

Response 1-20: Based on the correction mentioned in the response to Comment 10-18, our calculations show that the additional permittee cost for Alternative 3 is \$16,609. The Forest Service will not be contributing to these improvements.

**Comment 1-21:** [*Comment specific to the Lyle Canyon and Canelo Allotments*] If so, that means the extra cost to the taxpayers of implementing Alternative 3, versus Alternative 4, would be about \$41,574. To me, this seems like a lot of money so about 40 more head of cattle can be grazed, particularly when the ongoing ranching operation already has resource problems to deal with.

Response 1-21: Please see response 1-18 regarding the sources of potential funding. In any case, existing legislative policy does allow taxpayer funding, and changes in policy are beyond the scope of the proposed action. Our analysis shows that the ongoing ranching operation is leading to improved conditions, and existing resource problems are related to historic overgrazing.

**Comment 1-22:** [*Comment specific to the Lyle Canyon and Canelo Allotments*] I also think the manner in which the EA describes this project's proposed range "improvements' is inadequate. Instead of being described in narrative form, they should be itemized, like they are in this project's AWPF award description. There, it explains that 3 new wells would be drilled, 28 miles of pipeline would be laid, and 39 livestock watering troughs would be built, plus a 3,000 gallon water tank and three 12,000 gallon water tanks. This detailed description, I think, gives the reader a better idea of the extent of the public investment you are proposing for this allotment.

Response 1-22: Ultimately, "investment" is a matter of dollars, especially given that no disagreement has been expressed regarding effects of specific improvements. (Your

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disagreement concerning other specific effects are noted, however.) The range improvement projects that would be authorized by a decision to implement the Forest Service proposed action and alternatives are summarized in narrative form and displayed on Map 8 in the EA. Lists of improvements for the Forest Service proposal and alternatives do not include any improvements funded by AWPF that would be constructed on private land.

**Comment 1-23:** [Comment specific to the Lyle Canyon and Canelo Allotments] At any rate, it's clear that to a significant degree the taxpayers would be subsidizing the expansion of this ranching operation onto the three adjacent pastures of the vacant Collins Canyon allotment with the implementation of your proposed action. I think this permittee has already been subsidized enough.

Response 1-23: Please see responses 1-18 and 1-21. Note that funding sources include fees as well as taxes.

**Comment 1-24:** [*Comment specific to the Lyle Canyon and Canelo Allotments*] In conclusion, I do not support you proposed action, Alternative 3, for the Lyle Canyon allotment as it would add three new, currently ungrazed, pastures at the expense of the taxpayers.

Response 1-23: Please see responses 1-18 and 1-21.

**Comment 1-25:** [Comment specific to the Lyle Canyon and Canelo Allotments] That's not to say that I fully support implementation of Alternative 4 either. Of the grazing alternatives in the EA, it's the best. But I don't think you considered a reasonable range of alternatives in the EA. The no grazing alternative, Alternative1, and the current management alternative, Alternative2, were required by regulations. The only difference between Alternative 3, your proposed action, and Alternative 4 is that your proposed action would add the three vacant Collins Canyon pastures to the Lyle Canyon allotment. Moreover, the livestock management system described in Alternatives 3 and 4 is largely already in place, with implementation begun without any NEPA review in 1998. It would be more accurate to describe your proposed action as the current management situation, and Alternative 2 the historical situation. This means the only livestock management situation you are seriously considering is the one that's already being implemented.

Response 1-25: The primary purpose for developing an EA is to determine if significant effects are present, thus triggering the need to disclose these effects in an environmental impact statement (EIS). The current grazing situation on these allotments (actual use within known capacity, not likely to jeopardize listed species, etc.) lends itself to an analysis of narrow scope. Comparison of the No Action/No Grazing alternative with the grazing alternatives (EA, Section 3) does not indicate that additional alternatives (varying grazing seasons, utilization levels, permitted numbers, etc.) would be substantially more effective in achieving desired resource conditions over the analysis period.

**Comment 1-26:** I suggest you should seriously consider implementing a conventional livestock management alternative wherein the stocking rate and pasture moves are dictated by compliance with a maximum forage use rate of 35% or less, and the remaining plant stubble is no less than 6 inches, as required by your forest plan.

Response 1-26: Please see Responses 1-1 through 1-5. The action alternatives implement conventional livestock management systems.

**Comment 1-27:** Finally, I submitted scoping comments on this project to you by a letter dated 3/1/99. It's not, however, documented in the EA's Project Record. Why is that?

Response 1-27: We received your letter of 3/1/99 on March 8, 1999. That it was not documented in the project record index was an oversight that has been corrected. Thank you very much for sending us comments on the scoping report and the EA. We appreciate your participation in the process.

**Comment 2-1**: [*Comment specific to the Manila Allotment*] I know that the improvements mentioned in Alternative 3 would best suit the Manila allotment. Giving more flexibility to the permittee will allow for the needs of the forage and for the permittee to maintain a viable ranching operation. The Manila allotment permittee has been approached in the past about selling off his private land for subdivision purposes. I am impressed by the fact that the permittee is willing to bear all the cost for the improvements on his allotment instead of selling the private land. The rancher needs to be applauded for his desire to maintain a way of life that in turn maintains wide-open spaces.

Response 2-1: Thank you for your comment.

**Comment 2-2**: [*Comment specific to the Lyle Canyon and Canelo Allotments*] The same persons hold both permits and the proposed actions in Alternative 3 will do nothing but help improve the allotments.

Response 2-2: Thank you for your comment.

**Comment 2-3**: [Comment specific to the Lyle Canyon and Canelo Allotments] Although the 45% utilization levels that the Forest Service has set are a good tool to manage with politically, the science behind them may be a little flawed (Burkhardt 1997). The utilization levels are set to get a quick look at a pasture, but it won't result in effective grazing management.

Response 2-3: We are aware with the drawbacks associated with using utilization measurements as an indication of effective grazing management. However, use of forage utilization limits as a guide to management is established in the Forest Plan, and Forest Plan guidance limits forage utilization in high density Mearns' quail habitat to 45 percent (FLMP page 34). Additional guidance in the Forest Service Manual, FSM Coronado NF Supplement No. 2600-94-1 limits forage utilization to a maximum of 45 percent, with a target of 35-40 percent in high density/high quality Mearns' quail habitat.

**Comment 2-4**: [*Comment specific to the Lyle Canyon and Canelo Allotments*] According to the EA there is a significant upward trend for most of the allotment. This has come about because the permittees have worked hard to find resources needed to make improvements and implemented a rigorous rest rotation and deferred grazing management practice. This upward

trend is not just hearsay, it is documented. Because they have taken the initiative to cooperate with the University of Arizona Cooperative Extension and set up monitoring sites in both upland watersheds and riparian areas, the permittees are able to manage the ranch for what the land needs. The Cooperative Extension has also worked closely with the Forest Service when they set up the monitoring sites and methods of monitoring. With both the agencies working together, the level of professionalism is assured to be of the highest quality.

Response 2-4: Thank you for your comment. The monitoring records you refer to have been incorporated into the analysis and are part of the project record (Doc. 67).

**Comment 2-5**: [Comment specific to the Lyle Canyon and Canelo Allotments] The "Proper Functioning Condition" (PFC) assessment is not able to show a clear picture in just a short time. PFC is a qualitative assessment based on quantitative science performed by an interdisciplinary team with local on the ground experience in the kind of quantitative sampling techniques that support the PFC checklist. One should never use the PFC by itself, it should be combined with quantitative techniques, in this case the assessment of key species (deergrass), in order to gather the information over a long range time frame.

Response 2-5: The PFC assessment is one of several riparian area assessment methods used by the Forest Service. We appreciate the permittee cooperation in conducting PFC assessments and monitoring deergrass density in riparian areas on the Lyle Canyon allotment.

**Comment 2-6**: [Comment specific to the Lyle Canyon and Canelo Allotments] The permittees are very grateful to the Arizona Water Protection Fund (AWPF) to help in funding the improvements for the grazing allotments. The AWPF was established in 1994 by the Arizona State Legislature to help fund restoration and enhancement projects for Arizona's waterways. The title of the permittees projects are "Lyle Canyon Allotment Riparian Area Restoration Project 1 & 2". The permittees have applied for and received two grants from the AWPF just for the enhancement and restoration of the riparian areas and obligate riparian species. Most of the funding for the AWPF comes from the sale of interstate CAP water so it is not a burden to the taxpayers. Anyone can apply for the funding of these grants and both the ranching community and the environmental community have benefited from the AWPF.

Response 2-6: Thank you for your comment.

**Comment 2-7:** [Comment specific to the Lyle Canyon and Canelo Allotments] The environmental community has of late decided that water developments are not advantageous to wildlife species enhancement. I am not sure that I would be able to disprove their theory with science even if I wanted to, but personal observation of wildlife and personal monitoring of riparian areas has shown artificial water developments to be a great asset to wildlife, and riparian plant species. Not only have I observed deergrass bunches to be more abundant and vigorous in riparian areas after developing an upland watering source, I have also seen an increase in sycamore trees. And the fact that our neighbor had a small bear drinking from their chicken waterer in their chicken coop before the rains last summer shows me that wildlife will drink from artificial water storage systems. Response 2-7: Your observation is noted.

**Comment 2-8**: [Comment specific to the Lyle Canyon and Canelo Allotments] On page 37 paragraph G of the EA it states that, "In 1992, the permit for the Collins Canyon Allotment was waived to the Forest Service, following the elimination of several pastures from the allotment and a verbal understanding that the allotment might be retired from grazing because the balance of the allotment was to rough to run an economically viable grazing operation". As stated also in the EA, the Lyle Canyon Allotment permittees have expressed an interest in obtaining the grazing rights to these pastures, "...and is in the best position to estimate his own costs and benefits". While the permittees understand the importance of "verbal agreements", they also understand that under the Taylor Grazing Act all land that is suitable to be grazed should be grazed. They feel that they will be able to incorporate these pastures into their rest rotation schedule and make the best use of the land. Also, taking into consideration that there was no scientific data to support the removal of cattle, the Lyle Canyon permittees feel that until that data has been produced, they will pursue this option.

Response 2-8: This option is analyzed in the EA as Alternative 3. Also, please see the response to Comment 1-17.

**Comment 2-9:** [Comment specific to the Lyle Canyon and Canelo Allotments] In conclusion I fully support Alternative 3. This will be the best use for the land, and the permittees have already produced a good track record. They have been in southern Arizona for 5 generations, and on the Canelo Allotment since 1910. They too have been approached by land developers who want to buy and subdivide their private land, but have turned them down. They also want to keep the wide-open spaces that they have been so fond of for generations.

Response 2-9: Thank you for your comments. Your participation in the process is important.

**Comment 3-1**: I recommend alternative number 1. All of these allotments have been over grazed for the almost 40 years I have lived around here. The Manila allotment has especially been over grazed and damaged during this time. I suggest allowing no grazing for at least 5 years. Then have some controlled burns in 3 years after the fuel load builds up. This should improve the soil conditions and help bring back some of the native vegetation. The wildlife would benefit greatly from this action. The county, state and federal revenues would increase due to more money being spent on hunting and other outdoor activities. The grazing of cattle on this land has very little benefit to the taxpayer (ref. Table 14 & 15). Alternatives #3 & #4 both would cost the taxpayers a lot of money which would not give them any financial benefit in return.

Response 3-1: Thank you for your comment. Please note that in the summer of 2002, the Ryan Fire burned approximately 665 acres within the Manila allotment (Doc. 109). Also, please see the responses to comments 1-18, 10-18 and 10-21 regarding funding of allotments and socio-economic benefits and costs.

**Comment 3-2**: If any wells or waterlines are put in by the grazing permit holder then a bond of at least one million dollars should be required to be posted. This would assure the maintenance of this equipment if the permittee does not keep them up.

Response 3-2: Grazing permittees on the Coronado National Forest are required by the terms of their permits to maintain any improvements in the grazing allotments. There is no legal authority for requiring the suggested bonds.

**Comment 3-3**: The benefits of hunting and other outdoor recreation on the public land has a far greater value to the tax payers than using the land to graze cattle.

Response 3-3: Use of Forest Service lands for the grazing of livestock does not preclude providing opportunities for hunting and other outdoor recreation. There are no data that can be applied at the site-specific level to assess the costs and benefits of recreation (for example, use data; please see the response to Comments 10-18 and 10-21). At the Forest level, visitors are generally satisfied with the condition of the natural environment and attractiveness of the landscape (Doc. 115, Table 18).

**Comment 4-1**: We urge the no grazing Alternative. Opening ungrazed land and spending \$50,000 of taxpayers money to do so makes no sense. The \$1.35 AUM rate for the few cows it adds makes it cost ineffective. It is an unwarranted expenditure of federal dollars.

Response 4-1: Although the area that is proposed to be added to the Lyle Canyon allotment under Alternative 3 has not had any permitted grazing since 1992, it may be misleading to call it ungrazed. The area was consistently grazed at some level since before the establishment of the Forest Reserve (1909) until 1992. In the summer of 1998, trespass cattle from a neighboring ranch grazed the Horse pasture to a forage use level of 65% (Docs. 118-119). Financing of the proposed improvements would come from state funds that have been legislatively set-aside for these purposes (see Responses 1-18 and 1-21). Whether the expenditure is warranted is a policy matter (EA, pages 1-2) beyond the scope of the current decision.

**Comment 4-2**: Let us summarize what has become the single most pervasive and damaging activity on Western public lands, namely livestock grazing.

- 1. Grazing has severely damaged western seeps, springs, creeks, rivers and lakes, the organisms in them and the vegetation around them.
- 2. Grazing has caused massive losses of western soils.
- 3. Public lands grazing promotes the replacement of native plants by invasive exotics and noxious weeds.
- 4. Public lands grazing is the single greatest contributor to the loss of biodiversity and the imperilment of threatened and endangered species in the West.
- 5. Livestock on public lands directly compete with wildlife, which is of far greater economic, ecological, and aesthetic value than domestic livestock.
- 6. Public lands grazing involves the killing, at taxpayer expense, of large numbers of wild animals every year, such as prairie dogs, coyotes, wolves, mountain lions, bears and bison, disrupting the ecologically crucial predator/prey relations.

- 7. The Bureau of Land Management, the U.S. Forest Service, the National Park Service and the U.S. Fish and Wildlife Service too often mismanage public lands to serve the livestock industry.
- 8. The continuance of public lands grazing requires massive subsidies from American taxpayers, who thereby finance the degradation or destruction of their own public lands. This project is such an example.

For these reasons, this entire allotment should be closed to grazing.

Response 4-2: Your preference of Alternative is noted. However, these comments reflect a general disagreement with public lands management policy rather than with site-specific conditions or effects analyzed in the EA. Please see the response to the preceding comment in regard to policy issues.

**Comment 5-1**: The population explosion in the great southwest has greatly increased the need for public land recreation opportunities. Public land grazing ends up being a single use of public land by destroying wildlife habitat for quail, deer, and the endangered Sonoran pronghorn antelope. The public is left with a stockyard for camping, hunting, and fishing on public grazing land. It is time to return public land to multiple use by eliminating livestock grazing. The forest service should buy hay for the public land ranchers if need be to get livestock off of public land.

Response 5-1: Please see Response 4-2. The analysis shows that the alternatives would not jeopardize the continued existence of any threatened or endangered species, and that there would be no adverse effects to wildlife species (DN, page 12, EA pages 33-37, Doc. 100, Doc. 110). The area offers world-class quail hunting opportunities under current management (Doc. 112). Use of the project area for livestock grazing does not preclude other uses. At the Forest level, visitors are generally satisfied with the condition of the natural environment and attractiveness of the landscape (Doc.115, Table 18).

Comments 5-2 through 5-27: These comments are identical to comments 1-1 through 1-26.

Responses 5-1 through 5-27: Please see Responses 1-1 through 1-26.

**Comment 5-28:** Finally, [Jeff Burgess] submitted scoping comments on this project to you by a letter dated 3/1/99. It's not, however, documented in the EA's Project Record. Why is that?

Response 5-28: We received Jeff Burgess' letter of 3/1/99 on March 8, 1999. That it was not documented in the project record index was an oversight that has been corrected. Thank you very much for sending us comments on the scoping report and the EA. We appreciate your participation in the process.

**Comment 6-1**: Arizona Department of Environmental Quality recommends that following "best management practices" (BMPs ) be implemented to minimize possible cumulative pollutant loadings which could adversely effect local water resources and the designated uses they support.

- 1. Construct fencing to exclude cattle from vulnerable riparian habitat;
- 2. Apply rotational scheme in grazing management;

- 3. Provide water diversions and alternate water sources to attract cattle away from waterbodies and associated riparian habitat;
- 4. Periodically herd cattle to redistribute livestock;
- 5. Place salt, food supplements, or shade away from waterbodies and associated riparian habitat; and
- 6. Implement rangeland improvement strategies like revegetation, prescribed burns, etc. to help restore grazed areas.

Response 6-1: Thank you for your input. The proposed action and all alternatives are consistent with these BMPs (EA pages 8-10, 13-16, Figures 1-3). We will continue to provide you with information about these allotments in accordance with our Intergovernmental Agreement, ADEQ Contract No. HH-1037 16-R3-91-033.

**Comment 7-1:** CONCERN #1: Misinterpretation of CNF Supplement 2600-94-1: Your EA states "Guidance in the Forest Plan calls for 45% maximum allowable utilization in areas of High Density Mearns Quail Habitat as a surrogate for six inches of stubble height." This is very clearly NOT what the plan either says or "guides" to. The reason this is a misinterpretation is that the 6 inches of stubble height is, as noted in the supplement "...the primary indicator for meeting Mearns quail herbaceous cover needs." It is the standing cover that the birds require, NOT some calculated utilization level based on forage weight. Therefore, to comply with the Forest Plan supplement which very clearly states "Provide for an average minimum standard of six inches within key areas of high quality Mearns quail habitat", you should not only correct your misinterpretation but add provisions to meet this minimum standard.

Response 7-1: The CNF Supplement 2600-94-1 is a supplement to the Forest Service Manual (FSM). The Forest Plan refers to forage utilization in Mearns Quail habitat on page 34. You are correct that the plan does not specify that maximum forage utilization of 45% be used as a surrogate for six inches of stubble height. The plan does not refer to stubble height requirements for Mearns quail habitat at all. The approach for following the policy from FSM CNF Supplement 2600-94-1 is clarified in the Decision Notice. In accordance with this policy, key habitat areas have been identified within the project area (Doc. 107). These areas will be monitored to target forage utilization to 35-40% with a goal of providing at least a six-inch stubble height. We are confident that current and proposed management of the project area is consistent with providing for the habitat needs of this important game species.

**Comment 7-2:** CONCERN #2: Non-compliance with CNF Supplement 2600-94-1. Supplement 2631.7 #4 says, in part, "Key habitat areas will be determined on an allotment by allotment basis in the allotment management planning process by the district biologist and range conservationist, with input from AZ Game and Fish Dept., the grazing permittee, and ofher interested parties." Establishing these "key areas" on each allotment is distinctly different than determining the general forest-wide areas outlined as "high density" at the forest planning tier. The WGA is on record with the CNF as an interested party on all Mearns issues and have never been contacted for determining key areas. We have also submitted multiple FOIAs requesting maps, field notes, file entries, etc. of these determinations which have consistently been returned with no information. We therefore conclude that the CNF is not in compliance with this directive on any allotments, including the ones in this EA. Given the explicit and clear direction that these areas should be determined as part of the EA/AMP process, the total lack of mention of these "key habitat areas" in the EA is particularly disturbing. Therefore, to comply with the Forest Plan supplement which very clearly states key habitat areas will be determined on an allotment by allotment basis in the AMP process, you should actual establish these areas in the EA. Please include a map of these areas and the reason for their selection. Please include the WGA as an interested party in meetings and field trips to select these areas.

Response 7-2: Key habitat areas for Mearns' quail have been identified as part of the current allotment management planning process (Doc 107).

**Comment 7-3:** CONCERN #3: Non-Compliance with CNF Supplement 2600-94-1. Supplement 2631.7 #4 says, in part, "Stubble height will be used as the primary indicator for meeting Mearns quail herbaceous cover needs". It would seem logical that if something is a primary indicator, that it should be measured. While you sight [sic] "recent research" in your EA, a call to the AZ Game and Fish Dept. revealed that this research is not available to the public as of this writing.

Response 7-3: The recent research referred to in the EA is now available to the public (Bristow, K. D., and R. A. Ockenfels. 2000. Effects of human activity and habitat conditions on Mearns' quail populations. Arizona Game and Fish Department Research Branch Technical Bulletin No. 4) (Doc. 112). This intensive research led to a conclusion that livestock grazing, as was currently administered across the study area, was not significantly affecting the Mearns' quail population. In fact, the study found that Mearns' quail were more abundant in grazed areas than in ungrazed areas. The study area included parts of the allotments analyzed in the EA, as well as adjacent ungrazed areas.

**Comment 7-4:** ...and therefore, using the current FS regulations as our best guide, the AMP should include some monitoring of stubble height. Claims in the EA that "Funding would not be available for such monitoring..." simply cannot be tolerated due to the complete lack of accountability that this excuse provides in meeting ANY Forest Service rules or regulations. If proper monitoring is uneconomical considering the grazing permit payments, then in order to assure meeting minimum habitat requirements and compliance with forest habitat regulations, the allotment should not be utilized until such time as funding does become "available". In reality, stubble height monitoring is actually less complex and time consuming than the other forms of monitoring that the CNF already utilizes. Therefore, to comply with the Forest Plan, please include stubble height monitoring in "key habitat areas" which, in our opinion, could easily be added to the current monitoring efforts with a negligible increase in expense.

Response 7-4: The Forest Plan standards and guidelines call for a maximum of 45% utilization by weight of forage species in high density Mearns' quail habitat, and this is monitored on a regular basis (DN page 5). Monitoring policy provided in FSM CNF Supplement 2600-94-1 is found under 2631.07, 6:

"Monitoring will be conducted to evaluate effectiveness and to better correlate stubble height and percent utilization by weight within key habitat areas. Monitoring information will be used to determine the needs for modification of this manual supplement and/or amendment of the Forest Plan Standards and Guidelines."

It is our intent to follow this policy, and our approach is described in the Decision Notice. Also, see Responses 7-1 and 7-2.

**Comment 7-5:** CONCERN #4: Many years of research have shown that livestock forage utilization must be limited to conservative levels, defined as about 35% or less, in order to ensure sustainability (Holecheck [sic] 1999). You rate 32% of the Manila allotment's capable acres and 48% of the Lyle Canyon alloment's capable acres as <u>already</u> being in poor condition. By our reading of the Forest Plan guidelines (Forest Plan Amendment No. 8, Grazing Management, Allowable Use Guide, Replacement Page 22, June 1996) the utilization on these allotments should not exceed 25% unless "better information" is generated at the site-specific level in consultation with the US Fish and Wildlife Service. We can't find any such information in the EA.

Response 7-5: Please see Response 1-1 and 1-3. Consultation with the U.S. Fish and Wildlife Service has been accomplished (Doc. 116). Please note that the guidelines presented on page 22 of the LRMP (Doc. 117) are purposefully conservative to assure protection in the event that sitespecific data is not available, they do not cover allowable use in the dormant season, and are to be used only in the absence of more specific guidelines currently established through site specific NEPA analysis. This analysis showed that utilization levels of 45% by weight of key species in key areas in a deferred rest-rotation grazing system with adequate control structures would result in improved conditions.

**Comment 8-1:** The best management for the resources without negative impact to the economic, historic and cultural resources appears in Alternative 3.

Response 8-1: Thank you for your comment.

**Comment 8-2:** This EA does not comply with the published rules from the CEQ published in the 1981 Federal Register. The EA shows the No Action Alternative is No Grazing rather than being the current management practice that includes grazing. Since this No Action Alternative is not in compliance with the CEQ Regulation, it should be removed from the EA.

Response 8-2: Both the No Grazing (Alternative 1) and Current Management (Alternative 2) alternatives are fully considered in the analysis. It makes no material difference which one is considered a No Action alternative.

**Comment 8-3:** CEQ Regulation Paragraph 1502.19 (states that) The lead agency and list of all cooperating agencies should be identified on the cover sheet. Is this a draft or final document? The title does not identify what this document is.

Response 8-3: The regulation you refer to applies to Environmental Impact Statements. The document in question is an Environmental Assessment.

**Comment 8-4:** CEQ Regulation Paragraph 1502.19 (states that) Organizations, agencies and persons who received that EA was not provided.

Response 8-4: Please see Response 8-3.

Comment 8-5: The EA did not identify what/who the interdisciplinary team is/are.

Response 8-5: The list of people and agencies that were involved in the preparation of the EA is found on page 47 of that document.

**Comment 9-1:** It is obvious that a full interdisciplinary team was not used in preparation of this document.

Response 9-1: Please see page 47 in the EA. The disciplines represented on the analysis team are range management, soil science, watershed management, wildlife biology, planning, and archeology. This range of expertise constitutes a full interdisciplinary team.

**Comment 9-2:** The Arizona Wildlife Federation strongly objects to the calculation of livestock stocking levels based on a maximum utilization rate of 45% of key species. The 45% utilization rate is obsolete and has proven to be detrimental to rangeland health. The 45% rate has been one of the key factors contributing to the <u>decline</u> of rangeland health, biodiversity, and wildlife habitat conditions on National Forest lands. Rangeland plant vigor, soil quality and biodiversity cannot be maintained over the 10 year permit period with a 45% utilization rate. Therefore, the AWF hereby requests that Mr. Stephen Gunzel, District Ranger, redirect his range staff to recompute livestock stocking levels for all allotments based on a 20% utilization rate. Current research studies reveal that a maximum utilization rate of 20% is required to maintain healthy rangeland ecosystems.

Response 9-2: Relevant current research and our management experience show that a livestock forage utilization rate of 45 percent is sustainable on southeastern Arizona rangeland (Angell and McClaran, 2001). Also, realize that the utilization rates recommended in the research literature refer to pasture wide averages, averaged over time (Holechek 2000, Holechek and Galt 2000). By limiting forage use to 45 percent of current years growth on key species in key areas, our proposed management will result in overall pasture use and overall forage use of less than that. This level of use will not adversely effect wildlife habitat (Holechek 2000, Arizona Game and Fish Department Bulletin No. 4). Also see Response 1-1.

**Comment 9-3:** The AWF requests that 50% of the available forage than be allocated to wildlife habitat restoration requirements, and non-game species.

Response 9-3: Our analysis shows that wildlife habitat requirements will be met under the Preferred Alternative. Note that the proposed utilization guideline and monitoring (45 percent) will account for the combined use of both livestock and wildlife on key forage plants.

**Comment 9-4:** In addition, the AWF requests that all viable riparian areas be fenced so they can be restored in a timely manner. A comprehensive riparian inventory is required to evaluate

proper functioning condition and determine those riparian areas that would benefit from fencing. The riparian areas should then be set aside for restoration of proper functioning condition and be intensively monitored to assess recovery progress.

Response 9-4: Inventory of riparian areas in the project area is referenced on pages 2, 3, 4, and 5 and Map 3 in the EA. Assessment of riparian areas is referenced on pages 26, 27, and 28 of the EA. Actions that will be taken to protect riparian areas are described on pages 9, 10 and 15 of the EA. Please also see the response to comment 1-12.

**Comment 9-5:** In summary, the EA documents as written is a "livestock grazing justification document" and does not meet NEPA legal requirements. We hereby request that a full interdisciplinary team approach be used to prepare a revised EA addressing the impacts, issues, and concerns for wildlife, recreation, watershed and riparian resources including a cumulative impact analysis. We also request a member of the Arizona Game and Fish Department be directly involved in the preparation and review of the revised EA.

Response 9-4: Please see Responses 9-1 and 9-3. The impacts, issues, and concerns for wildlife, recreation, watershed and riparian resources, including a cumulative impact analysis, have been analyzed and are presented in the EA. Joan Scott, Non-game Branch Manager for the Arizona Game and Fish Department, and John Millican, Arizona Game and Fish Department Wildlife Manager both participated in the analysis phase of this project (Docs. 27, 28, 36, ??).

**Comment 10-1:** Grazing is an allowable, not obligatory use. There is Congressional intent to allow grazing in suitable areas. However, there is no law that <u>obligates</u> the Forest Service to permit livestock grazing. The central purpose of the NEPA process is to examine grazing alternatives against the alternative of no grazing, in other words to determine if grazing is an appropriate use of an allotment (40 CFR 1502.14(d)).

Response 10-1: The central purpose of NEPA is to disclose the environmental effects of a proposed action, comparing it to No Action, and to other alternative actions that may better address issues raised by the proposal. The objective of NEPA is not to evaluate the suitability of the action. Grazing suitability analyses are conducted in accordance with the National, Forest Management Act and implementing regulations; that is, at the Forest Plan level. All of the lands within the allotments have been designated as suitable for grazing in the Coronado Forest Plan.

**Comment 10-2:** An EIS must be done. Controversy is a determinant of "significance" under NEPA (40 CFR 1508.27b(4)). The ongoing history of conflict and litigation over public lands grazing particularly in habitat for threatened and endangered species such as the Huachuca Water Umbel and Lesser Long Nosed Bat, is patently controversial.

Response 10-2: CEQ guidelines suggesting that an EIS should be prepared in cases of controversy refer not to the amount of public opposition, but to substantial disputes over impact. Existing and potential impacts to threatened and endangered species are well understood, through the analysis of on-going grazing (Doc ??) and the site-specific analysis documented in the EA and project record.

**Comment 10-3:** Another determinant of significance triggered is the establishment of a precedent for future actions (40 CFR 1508.27b(6)). By permitting grazing to continue, as proposed, the Forest Service will continue a land use that will bias the decision concerning that land use to be made for the subsequent 10 year period.

Response 10-3: Effects for the immediate 10-year period (that is, the period of the proposed Allotment Management Plans and permits) are the focus of the analysis in the EA. The Proposed Action makes no commitment of land use beyond that period; that is, neither the EA nor the selection of a grazing alternative create a presumption that grazing will continue beyond the 10-year period that is analyzed.

**Comment 10-4:** Significance is triggered by cumulative effects. "Whether the action is related to other actions with individually insignificant but cumulatively significant" (40 CFR 1508.27b(7)). The Biological Opinion of 1999 for Ongoing Grazing on the Coronado NF lists 152 allotments on the Coronado National Forest, including these allotments, on which continued grazing was found to be "likely to adversely affect" Lesser-Long Nosed Bat. Therefore this action is clearly "related to other actions with individually insignificant but cumulatively significant". [sic]

Response 10-4: The most recent opinion concerning the bat is contained in the 2002 Biological Opinion regarding long-term grazing on the Coronado (Doc ??). It was a non-jeopardy opinion, and contained no take statement or terms and conditions. Also note that cumulative effects in the context of the Endangered Species Act include only state or private actions in the analysis area that have occurred or are reasonably certain to occur in the future. Other federal actions are not included in cumulative effects under the ESA (Doc ??).

**Comment 10-5:** Significance is triggered by adverse effects to listed species: "The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973." (40 CFR 1508.27b(9)). The 1998 Biological Assessment for Ongoing Grazing on the Coronado NF, as well as the subsequent Biological Opinion of 1999 found that grazing was likely to adversely affect Lesser-Long Nosed Bat, Huachuca Water Umbel and Sonoran Tiger Salamander. This is another determinant of significance. Failure to find a significant impact and conduct an EIS may be deemed a violation of NEPA and implementing regulations.

Response 10-5: The Biological Opinion for on-going grazing (Doc. ??) was a non-jeopardy opinion, terms and conditions were rendered where appropriate, and the proposal had met Section 7 compliance (Doc ??).

**Comment 10-6:** The proposed utilization levels of 45% may violate the Coronado Forest Plan as amended 1996, which in turn constitutes a violation of NFMA. The proposed utilization level also exceed recommended maximum 35% utilization levels set by range scientists (Holechek, J.L. et al. 1998. Range Management: Principles and practices. Prentice Hall, New Jersey; Holechek, J.L. et al. 1999. Grazing studies: what we've learned. Rangelands 21:12-16.) Response 10-6: The proposed utilization levels do no violate the Coronado Forest Plan, as amended in 1996. Please see Responses 1-3, 1-4 and 7-5. Please note that utilization limits recommended by Holechek et al. 1998 and Holechek et al. 1999 are pasture-wide averages for all forage species, averaged across years. By limiting forage use in on key forage plants in key areas to 45% of annual growth, the overall pasture utilization will be below that. Also, site specific research on the nearby Santa Rita Experimental Range (McClaran and Angell 2001) has shown that an average utilization rate of 45% allowed for improvement in range condition. Please see Responses 1-1 and 9-3.

**Comment 10-7:** The grazing schedule for Manila allows for grazing in each pasture for a minimum of one month every year. No pastures are rested (EA Fig. 3). The maximum grazing utilization permitted by the Plan ranges from 0-30% depending on range condition, unless site specific analyses are done.

Response 10-7: The Environmental Assessment documents a site-specific analysis. Also, please note that three pastures are rested for the whole growing season each year, and three pastures are rested for part of the growing season each year, with yearly variation in the rest period. The maximum use period in any year for any pasture is three and one half months (Anderson Pasture, winter use only; EA Fig. 3). This is not considered continuous season-long grazing.

**Comment 10-8:** The grazing schedule for Lyle Canyon and Canelo allows for grazing in each pasture except two for a minimum of one month each year. No pastures except Harkey and Merrit are rested (EA Fig. 2). The maximum grazing utilization permitted by the Plan ranges from 0-30% depending on range condition, unless site specific analyses are done.

Response 10-8: Please see the response to the previous comment. The proposed grazing schedule is not considered continuous season-long grazing.

**Comment 10-9:** The Plan amendment (sic) 1996 exhorts the Forest to "develop site specific forage use levels" in "consultation with US Fish and Wildlife Service" if the Allowable Use Guide is not to be followed. The required consultation that might set alternative site-specific standards is not cited in the Project Record.

Response 10-9: The consultation for the decision is based on the most recent consultation regarding on-going grazing on the Coronado (Doc ??). Also, please see the response to comment 10-5.

**Comment 10-10:** That the proposals differ dramatically in acres of capable range per animal month is unexplained. Including the Collins Canyons pastures, the net proportion of capable acres in low range condition on the Lyle Canyon would be 37%. Manila has a similar figure of 32% of area in low condition. However, the preferred alternative would permit up to 7.3 acres per AM on Lyle Canyon but only 3.8 acres per AM on Manila. How is it possible for such drastic differences to be arrived at by presumably the same methods of capacity analysis?

Response 10-10: The stocking rates are set based on the "stock and monitor" method, per Forest Service Handbook 2209.21, and incorporate accumulated on-the-ground experience with the

allotments. Many factors, including vegetation type, water supply and slope can contribute to variation in appropriate stocking when this method is used.

**Comment 10-11:** The Biological Opinion on ongoing grazing in the Coronado NF (July 29,1999 AESO/SE 2-21-98-F399) expires in 2002 for these allotments. The Coronado NF has apparently decided to reverse the "likely to adversely affect calls" (LAA) for Lesser Long-Nosed Bat, Huachuca Water Umbel and Sonoran Tiger Salamander that were arrived at under the Regional Guidance Criteria and the Biological Opinion, in favor of a supposed site-specific analysis that finds "no effect" (NE) or "not likely to adversely effect" (NLAA) for these species. The Forest is required therefore, by the Sept. 18, 1998 concurrence to the RCG (sic) by the USFWS to:

- detail the "site-specific information...[that] indicates that the criteria are not applicable" (p 1) and
- 2. reinitiate consultation with the FWS on the site specific analysis of effects on T&E species (p 1).

The EA states that a new Biological Assessment and Evaluation (BAE), is currently in process. However, it is not possible for the commenting public to make sense of the Environmental Assessment without this crucial information. This may constitute a NEPA violation.

Response 10-11: A wildlife specialist report was completed for the analysis (Doc. 43), and contained the data on which the EA conclusions were based. A BAE was subsequently completed (Doc. 100). In any case, the consultation for the decision is based on the most recent consultation regarding on-going grazing on the Coronado (Doc ??).

**Comment 10-12:** Another NEPA violation appears to result from the temporary permit number 05-00613 that has been issued for 50 cattle on Lyle Canyon allotment since 1998. According to a personal communication with the District Range Specialist Bill Edwards (Mar 16, 2001) no NEPA analysis has been done for this permit. The Forest Service Environmental Policy and Procedures Handbook (FSH 1909.15) does not allow for a Categorical Exclusion for temporary permit issuances, especially when endangered species issues are involved. Furthermore, the Recissions Act 1995 allows permit reissuance without NEPA only for term grazing permits, not temporary permits. The Forest is in violation of NEPA by continuing to allow grazing, under this temporary permit, and the Center hereby asks the Coronado National Forest To suspend grazing under that permit until NEPA analysis is completed, or face possible legal action.

Response 10-12: The authority for issuing temporary permits for available forage is found in FSM 2233.1. Also, see Response 1-15.

**Comment 10-13:** The Center is concerned that grazing on the Lyle Cyn (sic) and Manila allotments will continue to adversely affect Lesser Long Nosed Bat, because no provision has been made to exclude cattle from areas with "large numbers of agaves" during flowering season.

Response 10-13: The most recent opinion concerning the bat is contained in the 2002 Biological Opinion regarding long-term grazing on the Coronado (Doc ??). It stated (pp. 131-132): "We do not anticipate the proposed action will result in incidental take of lesser long-nosed bats because

it is not known if the density of agave flowering stalks is a limiting factor for the bats, especially during drought years."

**Comment 10-14:** Center Staff visited these allotments on March 17, 2001 and obtained photographic evidence that numerous agave flowering stalks had been broken off, most probably by grazing cattle, as recognized in the 1999 Biological Opinion. A claim of "NLAA" requires "[a] monitoring/research plan...at the Forest level" according to Regional Guidance Criteria for species effects determination (p 29). The 1999 Biological Opinion made a conservation recommendation to restrict utilization to 40% or less. Both the Forest Plan and the Endangered Species Act require federal agencies to not merely protect but to achieve recovery of listed species. As already noted, the mandated monitoring/research plan is nowhere cited. The Forest has apprently (sic) decided to simply ignore the BO's conservation recommendation, which constitutes a failure to pursue recovery of this species.

Response 10-13: Please see the response to comment 10-13. Current conservation recommendations (Doc. ??, p. 132) do not make reference to specific utilization figures.

**Comment 10-14:** Although Hopi tribal representatives have made it quite clear that "grazing can cause adverse impacts to archaeological sites" the EA proposes to continue livestock grazing with well established damaging effects on vegetation, soils and archaeological resources (see for example Osborn, A. et at. 1987. Impacts of Domestic Livestock Grazing on the Archeological Resources of Capito; (sic) Reef National Park, Utah. Pp. 1-136. Midwest Archeological Center Occasional Studies in Anthropology.)

Response 10-14: Hopi and San Carlos Apache comments on the Scoping Report were more extensive than quoted in this comment (Docs. 37, 48, 89). The quoted Hopi comment prefaced a series of questions concerning management of grazing impacts on cultural resources. These questions were addressed in the EA (pages 38-39) and project record (Docs. 30, 45, 46, 47). The San Carlos Apache comments (Doc. 37) requested that vegetation impacts be minimized, particularly those on new Emory oak growth, and were also addressed in the EA (pages 38-39). The Hopi Tribe supported Alternative 3 (an action alternative; Doc. 89; also see comment 12-3) and the San Carlos Apache Tribe did not offer additional comments on the EA.

As you point out, livestock grazing can have a number of effects on archaeological resources, including trampling, artifact breakage, soil compaction, reduced ground cover, and destabilization of stream banks. Historic structures may be damaged by cattle crowding against them. The heritage investigation (Doc. 47, pages 6-7) concluded that "None of the sites are known to have erosion problems attributable to grazing activities. No standing structures or other potentially sensitive site types are known from project area. Grazing levels would be reduced from current levels on the Manila Allotment, and reduced from pre-1996 levels on the Lyle Canyon allotment. Accordingly, the amount of grazing and trampling on archaeological sites...can be expected to decline." The Arizona State Historic Preservation Officer concurred with a determination of "no adverse effect" for the proposal.

**Comment 10-15:** The no-grazing alternative (1) is clearly superior to the preferred grazing alternative (3) for the resources of Vegetation, Riparian, Soils & water quality and Listed and

sensitive species. Economically the proposed action is also clearly inferior to the no grazing alternative. Costs to the public are much higher, Present Net Value for all public and private parties combined is negative. Only miniscule payments to the County, and a tiny projected number of jobs (not estimated from empirical data) are identified as inferior (see Table 1 attached). No account is made of the net losses to the Treasury from below market grazing fees (identified by 1999 Arizona Agricultural Statistics as \$1.35 compared with \$11.90 westwide average). The income to the Forest Service from grazing fees is well established to be insufficient to meet the costs of the grazing program, falling short by some \$100 million at the National level. Costly "improvements" are proposed at the State and Federal taxpayers expense. Other less direct costs to the public of maintaining the ranching operations on these allotments are not estimated in the EA, such as:- hunting and fishing revenues foregone; degraded esthetic, recreational and cultural values; total costs of NEPA analysis and all stages of implementation of proposed action and all other likely future costs such as litigation; pest and predator control by APHIS; direct payments, tax subsidies and other public aid paid to permittee; publicly funded research and extension services enjoyed by the permittee.

Response 10-15: The EA (Doc. 61, Section 3) displayed relatively small differences in resource outcomes between the Proposed Action and No Action/No Grazing. Regarding economic effects, the disclosure of economic effects under NEPA is limited: socio-economic impacts by themselves are not intended to require preparation of an EIS (40 CFR 1508.14). A quantitative, monetary analysis on non-commodity resources, such as aesthetic and cultural values, is not required by NEPA. Further, the Multiple Use-Sustained Yield Act (16 USC 531) does not require the selection of uses that will give the greatest dollar return or greatest unit output. In any case, many of the cited effects (for example, hunting and fishing revenues foregone) are speculative, or (for example, grazing fees) reflect National policy considerations that are well beyond the scope of this site-specific analysis.

**Comment 10-16:** The no grazing alternative is therefore inferior to the grazing alternatives only for the income of the permittee and tiny receipts to the County from grazing fees. However, even this prediction is without empirical foundation. Abundant social research and official State statistics show that roughly 50% of ranchers do not obtain their major income from ranching. Ranching in many cases is effectively a recreational activity, albeit a very destructive one compared with the nature lovers that enjoy and visit these areas in a low impact manner, but whose interests are totally ignored in this EA.

Response 10-16: As you note, ranching income is often not derived solely from livestock operations, but the motives of ranchers may be more varied than implied by the comment (Ruyle and others 2000). Note that comment 2-9 includes a relevant statement from one of the permittees covered by the proposed action. The analysis documented in the EA indicates that grazing, as proposed, is not destructive of natural resources.

**Comment 10-17:** Contrary to the EA statement (p 46) that the ranch operation would likely discontinue if the no grazing alternative were adopted, social research shows that many ranchers will simply adapt and continue ranching regardless or find other better paid employment (reviewed by Donahue, D.L. 1999. The western range revisited: removing livestock from public

lands to conserve native biodiversity. University of Oklahoma Press, Norman OK). None of this empirical research is mentioned in the EA.

Response 10-17: The permittees whose grazing allotments are within the project area have indicated that if their ability to raise cattle on public land for income were eliminated, the sale of private lands currently used in grazing operations would be a logical, though less desirable, source of income (see Comments 2-1 and 2-9). This information is more directly relevant to the site-specific analysis than more general research. Please also see the response to comment 10-16. Also note that there is a substantial body of opinion that western ranch lands are risk of subdivision for residential use, with more serious impacts on ecosystems than properly managed grazing (Knight and others, 2002).

**Comment 10-18:** No analysis was done of the socio-economic benefits of the no-grazing alternative to the general public in terms of enhanced recreational, wildlife and hunting resources. Studies in other areas have shown that hunting and recreational revenues to rural communities typically exceed ranching revenue by many times, and are likely to increase with elimination of livestock from areas will endowed with recreational, game and wildlife resources. These possibilities are ignored in the EA. No economic comparison is done of benefits to recreation and hunting under the grazing and no grazing alternatives.

Response 10-18: No analysis was performed, because NEPA is proposed-action driven and the proposed action relates to livestock grazing. The comment poses a suitability question, which is decided at the Forest Plan level. Further, there are no site-specific data to show whether and to what degree hunting and recreation activities are foregone. Biological analyses indicate that one important hunted species, Mearns' quail, is doing relatively well in the analysis area under current grazing programs (see response to comment 7-3). Available recreation use data (National Visitor Use Monitoring project, Doc. ??) are collected at the Forest level and are not amenable to allotment-level analysis. At the Forest level, respondents were satisfied with both condition of the natural environment and attractiveness of the Forest landscape in general Forest areas (Doc. ??, Table 18). In this context, the postulated recreation and hunting benefits are speculative.

**Comment 10-19:** Despite the clear superiority of the no grazing alternative based solely on the findings of the EA (Table 1) the clearly sub-optimal grazing alternative is the one preferred by the Forest. This reveals that the income of the permittee is implicitly weighed much more heavily in the analysis than all the other resources values combined.

The EA fails therefore to adopt a transparent decision making procedure. Resource values should be assigned relative weights <u>prior</u> to analyzing the relative ranks of each alternative action for each resource value, and then the sum of the weighted ranks obtained for each alternative to identify the optimal alternative. This would be an objective way to arrive at management decisions. By selecting the sub-optimal alternative the Coronado National Forest is therefore violating NEPA:- "Agencies shall rigorously explore and objectively evaluate all reasonable alternatives" (40 CFR 1502.14a). The Forest is also violating the Administrative Procedures Act which compels federal agencies to make rational and objective decisions, not decisions based on faulty procedures or bald conclusions.

In an EA the agency is required to take a "hard look" at the project and its impacts, "as opposed to bald conclusions, unaided by preliminary investigation," and must "identify the relevant areas of environmental concern." (Maryland-National Capital Park and Planning Commission v. U.S. Postal Service, 487 F.2d 1029, 1040 (D.C. Cir. 1973))

Response 10-19: There was no hidden weighting of criteria involved in the selection of a preferred alternative. Law and policy (as cited in Section 1 of the EA) provide an ample basis for including livestock grazing among a balanced set of objectives for the allotments. Please also see the response to comment 1-25.

**Comment 10-20:** The projected precise figures for projected range soil and condition do not appear to be founded in any empirical evidence, and no statistical ranges of projections are given as required by best scientific statistical practice. These projections are therefore "bald conclusions".

Response 10-20: Empirical (observed) data was used as the basis for projected conditions (Docs. 9, 10, 41, 44, 53, 54, 55, 67, 69 and also in 2210 files in the District Office). There is no requirement for statistical analysis of range or soil condition, however, a statistical analysis of plant frequency and soil cover data on the Lyle Canyon Allotment is presented in Document 67.

**Comment 10-21:** NEPA does not require a cost/benefit analysis. However when one is attempted as it is here, it must "discuss the relationship between that [economic] analysis and any analysis of unquantified environmental impacts, values and amenities" (40 CFR 1502.23). Such a discussion is completely lacking.

Response 10-21: Information useful to a decision-maker is in fact presented in the EA (Doc. 61, p. 45, items 3, 4, 9, 10 and 11). It can be seen that the proposed action has a negative PNV, and a small impact on jobs and receipts at the County level. Data to quantify recreation impacts, etc. are not available, but the environmental benefits or impacts to (for example) range condition and trend, wildlife effects, etc. displayed in EA Section 3 can be compared to the economic impacts. Please also see the responses to comments 10-18 and 10-19.

**Comment 10-22:** The Center for Biological Diversity and our more than 6000 members regularly visit and greatly value the Huachucas as a unique ecosystem of great natural beauty that contains habitat crucial to the survival of imperiled species. The vast bulk of published scientific research shows that livestock grazing is a degrading land use that it is incompatible with full protection and recovery of arid western ecosystems. Based on an objective analysis of the evidence presented in the EA, the only rational conclusion to be drawn is that livestock grazing should end on these allotments. If the recreation and hunting economy were adequately analyzed we are sure that this analysis would weigh even more heavily against continued livestock grazing.

We urge the Forest Service to adopt the no grazing alternative and Forest Plan amendments that include permanent retirement of these allotments from grazing. If done in the context of regional retirement program for lands with habitat for imperiled species, this would eliminate the ongoing

net drain on the federal Treasury of the grazing program, the labyrinthine NEPA process and ESA litigation, and allow the Huachucas to more fully recover natural potential in accord with existing Plan requirements.

I would be grateful if you would incorporate responses to all of the foregoing comments and questions in an appendix to the final EA, as per 36 C.F.R. Section 215.6(d). I look forward to receiving a copy of the final decision, along with a copy of this appendix.

Response 10-22: Thank you for your comments. Also, please see responses 1-1, 7-3, 7-5, 9-2, 10-15, 10-18 and 10-19. Our data indicate that the proposed action and alternatives will not degrade the resources of the allotments, and that they are within agency policy of making forage from suitable rangelands available to qualified livestock operators, while continuing to provide for recreation and a high level of visitor satisfaction.

**Comment 11-1:** The Department recommends that Desired Condition #1 be restated to: "Range condition is rated moderately high or better throughout the allotment." Also, we recommend deleting Desired Condition #8; permitted numbers that reflect recent actual use may not attain desired resource goals.

Response 11-1: In describing desired conditions we have considered site potential. Some sites within the project area are in a stable states which reflect a moderately low range condition when compared to a plant community that has never been overgrazed. These sites are not expected to change in condition rating, even with removal of grazing disturbance (EA pages 20 and 23).

**Comment 11-2:** The Department recommends that a single number of cattle should be permitted, and that number should be the maximum head allowed. If a range of permitted numbers is allowed, analysis of alternatives must be based on the highest number permitted, because no NEPA review will be conducted for any increase of use within the range.

Response 11-2: A range of permitted numbers allows more flexibility for the permittee and the Forest Service to adjust for year-to-year changes in forage conditions. The analysis is based on the percentage, by weight, of forage utilization by livestock, rather than absolute numbers of livestock (Doc ??). We feel this analysis is more realistic, since adjustments of numbers to adapt to forage conditions are routinely made to maintain utilization at proper levels.

**Comment 11-3:** (Comment specific to the Manila Allotment) According to the EA, current range conditions are low and moderately low on 32% of the allotment, current soil conditions are impaired or unsatisfactory on 47% of the allotment, and some riparian areas are unsatisfactory. Although the range trend is static and downward, the proposed action is to permit a range of stocking that approximates average actual use over the last three years (Attachment 1). To improve the overall range and riparian conditions within this allotment, given current conditions and lack of significant upward trend (according to the EA), the Forest should consider an alternative focused on improving range conditions to moderately high or better ( $\geq$ 50% of the potential natural community). As a management guide, utilization should be limited to 30% in areas of low and moderately low range condition and impaired or unsatisfactory soil condition

(Holechek 1996, Holechek et al. 1998b, Holechek et al. 1999a, Holechek et al. 1994, Klipple and Costello 1960, Lewis et al. 1956, Smith 1967).

Response 11-3: The alternatives considered in the EA range from current management to no grazing (EA Chapter 2). All alternatives except for the current management alternative are focused on improving range condition (EA pages 8, 9, 14 and 20). Alternative 3 proposes changes in the grazing management in areas of the allotment that have been identified as having a low or moderately low condition with a static or downward trend. It is notable that the current trend is strongly related to drought conditions as evidenced in recent evaluation of adjacent sites that have not been grazed in around 30 years, and are currently in low condition with a downward trend (Doc. ??). The proposed utilization limits (maximum of 45% in on key species in key areas) are similar to utilization rates recommended in the literature you cited, which are pasture-wide averages, averaged over a number of years. Further, recent research on a study site near the project area has shown that pasture-wide average utilization of 45% (averaged over 40 years) allowed for improvement in range condition (Angell and McLaran 2000).

**Comment 11-4:** (Comment specific to the Lyle Canyon Allotment) According to the EA, current range conditions are low and moderately low on 47% of the allotment, current soil conditions are impaired or unsatisfactory on 34% of the allotment, and the condition of some riparian areas are unsatisfactory. The proposed actions for Alternatives 3 and 4 are to permit a stocking rate of up to 10.1 and 10.4 cattle year long per square mile (cyl/sq. mi.), which is higher than the current stocking rate of 7.6 cyl/sq. mi. (Attachment B). To improve the overall range and riparian conditions to moderately high or better ( $\geq$ 50% of the potential natural community). As a management guide, utilization should be limited to 30% in areas of low and moderately low range condition and impaired or unsatisfactory soil condition, so that improvement will be achieved.

Response 11-4: All alternatives (including the current management alternative) are focused on improving range condition (EA page 8, 9, 14, 15, 21 and 22). Also, please see Response 11-3 regarding our approach to controlling forage utilization.

**Comment 11-5:** (Comment specific to the Lyle Canyon Allotment) We believe that implementation of Alternative 3 could have more impacts to wildlife habitat than Alternative 4. The comparison of alternatives is based mainly on the amount of rest between grazing, but stocking rate (acres per animal month [ac/am] or cyl/sq. mi.) has been shown to be more important than the amount of rest (Brown 1990, Hart et al. 1993, Holechek et al. 1998a, Holechek et al. 1998b, Holechek et al. 1999b, Pieper and Heitschmidt 1988, Skovlin 1987, Skovlin et al. 1976, Van Poollen and Lacy 1979). The proposed stocking rates for Alternatives 3 and 4 are almost identical (Attachment B). The proposed action for Alternative 3 adds the Collins pastures (4 square miles) but does not decrease the stocking rate because this alternative also adds 36 cyl. Although the Lyle Canyon herd will be in each pasture for less time, the size of the herd will increase from 146 head to 182 head.

Response 11-5: The effects of the various alternatives to wildlife habitat are disclosed in the EA (pages 33-38) and further analyzed in the Biological Assessment and Evaluation and the

Biological Opinion for Ongoing Grazing (Docs. ?? and ??). The proposed stocking rates are conservative, and the benefits of pasture rest are well known (Reed et. al. 1999). As you have pointed out, the stocking rates (cyl./sq. mi. or ac/am) for Alternatives 3 and 4 are almost identical. There is no substitution of increased rest for increased stocking rate. Please see the responses to comments 1-1, 1-2, 7-5, 9-2 and 10-6.

**Comment 11-6:** (Comment specific to the Lyle Canyon Allotment) Alternative 3 has the potential to result in more impact to wildlife habitat, because 4 square miles of land that would be ungrazed under Alternative 4 will be grazed under Alternative 3, with no corresponding decrease in grazing intensity on the Lyle Canyon and Becker parcels. If the Collins pastures were added as a reserve for drought, without a corresponding increase in cattle numbers, Alternative 3 would have less impact on wildlife habitat than Alternative 4. Most of the habitat of the Collins pastures is heavily wooded, and if extra permitted numbers are added for these pastures without adding much usable land, overuse can occur on the balance of the allotment.

Response 11-6: The determination of grazing capacity for the Collins pastures only considered usable land (Doc. 24), and so will not lead to overgrazing on the balance of the allotment.

**Comment 11-7:** (Comment specific to the Lyle Canyon Allotment) There appears to be an error on Table 2 regarding the stocking rate (Capable Acres Per Animal Month, cow/calf) for the Lyle Canyon Alternatives 3 and 4. Capable acres for Alternative 3 (includes Lyle Canyon, Becker Parcel and Collins 3 pastures are 11496. Proposed animal months are 1404 to 2184. Therefore, the calculation of Capable Acres Per Animal Month should be 8.1 to 5.2 ac/am. Capable acres for Alternative 4 (includes Lyle Canyon and Becker parcel) are 8953, and proposed animal months are 972 to 1752. Therefore, the calculation of Capable Acres Per Animal Months should be 9.2 to 5.1 ac/am.

Response 11-7: You are correct. Using the acreage figures reported in the text of the EA (pages 4 through 7) the Capable Acres Per Animal Month for Alternatives 3 and 4 are 8.1 to 5.2, and 9.2 to 5.1 respectively.

**Comment 11-8:** (Comment specific to the Canelo Allotment) The proposed stocking allocated to the Canelo Allotment of 204 AM for 0.87 square miles is a stocking rate of 19.5 cyl/sq. mi. This is high for the habitat, based on NRCS's average recommended stocking rates for oak woodland, and could minimize opportunities to enhance wildlife habitat within this allotment.

Response 11-8: The proposed stocking rate for the Canelo Allotment is up to 2.7 acres per animal month, which is slightly higher than the 3.5 acres per animal month recommended for the area as an initial stocking rate by the Natural Resource Conservation Service (Doc.s ??,??,??). Keep in mind that no matter what the stocking rate is, utilization will be limited to 45 percent of current years growth on key species in key areas. This level of utilization has been shown to be compatible with enhancing wildlife habitat (Holechek 2000).

**Comment 11-9:** Mule deer, Coues white-tailed deer, and Gould's turkey are present on all three allotments. The Department is willing to assist in the development of objectives to address necessary fawn and pult hiding cover for these species. The months of mid-March through May

are important for turkey breeding and nesting success, while July to September are critical times for deer fawning. These times closely correlate to times when removal of herbaceous vegetation by livestock is most evident, particularly when winter/spring and/or summer rains are below average.

Response 11-9: Thank you for your input. We will continue to work closely with the Department in managing habitat for these species.

**Comment 11-10:** Gould's Turkey should be added to the list of typical avifauna under Section F, Wildlife (page 33). Most areas on these 3 allotments have the potential to be key habitats for turkey. Nesting, breeding, loafing, roosting, brood and feeding habitats are all important for turkey population success. The riparian area of Tom's Corner Pasture consists of Ponderosa pine and Chihuahuan pine and may be important as a turkey roost for breeding and nesting. Because turkey observations have been reported on the Canelo Allotment, potential impacts to breeding and nesting success should be considered and addressed.

Response 11-10: Gould's Turkeys have also been observed in the Lyle Canyon Allotment (Doc. ??) and the Manila Allotment (Docs. ??, ??). Impacts to Gould's Turkey by action alternatives are addressed in the Management Indicator Species Report (Doc. ??).

**Comment 11-11:** The Department recommends that waters on Forest Lands be available to wildlife yearlong. Escape ramps should be placed in all water troughs. We recommend that newly constructed fences be built using Arizona Game and Fish Department Standard Game Fence Specifications. Fences constructed across roads should not deny public vehicle access without public review (NEPA compliance). Gates should be installed on ridgelines and major conyon bottoms to facilitate public access (horse and foot access, if there are not roads). All gates should be constructed so that they can be easily opened and closed so as to minimize gates being left open. The Department is willing to assist in the development of range improvement projects to ensure that potential wildlife issues are addressed.

Response 11-11: Thank you for your comment. Department recommendations for wildlife water availability and for fence constructions have been incorporated into the standard operating procedures for administration of range allotments (eg. Docs. ??,??). We will continue to work closely with the Department to redeem our shared responsibility for providing high quality wildlife habitat.

**Comment 12-1:** The Hopi Tribe appreciates your continuing solicitation of our input and your efforts to address our concerns.

Response 12-1: Thank you.

**Comment 12-2:** The Hopi Tribe considers our ancestral villages, shrines and trails, known to archaeologists as archaeological sites and isolated occurrences, to be the "footprints" of our ancestors, and evidence of their fulfillment of a convenant. Therefore, we support the identification and avoidance of archaeological sites.

Response 12-2: Efforts to identify sites are documented in the project record (Docs. 30, 45, 47, 48). Archaeological sites will be avoided.

**Comment 12-3:** We appreciate that the Manila Allotment Fence and Pipeline location was selected to avoid several previously identified sites along Lyle Canyon, and that our previously expressed comments and concerns are addressed in the Heritage Resources section of the Environmental Assessment.

Response 12-3: Thank you.

**Comment 12-4:** Therefore, the Hopi Cultural Preservation Office supports the Proposed Action/Preferred Alternative.

Response 12-4: Your support is noted.

**Comment 12-5:** Please continue to keep the Hopi Cultural Preservation Office notified of specific proposals with the potential to impact archaeological sites and cultural resources.

Response 12-5: We will do so.