Moores Creek Cattle and Horse "On-Off" Allotment
Environmental Assessment

USDA Forest Service
Mountain Home Ranger District
Boise National Forest
Intermountain Region

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INTRODUCTION

The Moores Creek Cattle and Horse "On-Off" Allotment (Moores Creek Allotment) encompasses about 8,140 acres, including about 1,820 acres of National Forest System (NFS) land, 80 acres of federal land administered by the USDI Bureau of Land Management (BLM), 350 acres of land held in trust by the State of Idaho, and 5,890 acres of private land. The allotment is located within the boundary of the Sawtooth National Forest, but is under the administrative authority of the District Ranger of the Mountain Home Ranger District of the Boise National Forest.

The allotment is located in Elmore County, Idaho, about 46 miles east of Mountain Home. It is located in Township 1 North, Range 10 East, sections 10, 13 to 15, 20 to 28, and 33 to 35; and in Township 1 North, Range 11 East, sections 18 and 19, Boise Meridian (Figure 1).

The allotment lies in Forest Plan Management Area 1 – Lower South Fork Boise River, as designated by the revised Boise National Forest Land and Resource Management Plan (Forest Plan, USDA Forest Service, 2003) and within three management prescription categories (MPCs) (Forest Plan, pp. III-92-93):

- MPC 4.1c – Undeveloped Recreation: Maintain Unroaded Character with Allowance for Restoration Activities;
- MPC 4.2 – Roaded Recreation; and
- MPC 6.1 – Restoration and Maintenance Emphasis within Shrubland and Grassland Landscapes.

None of the MPCs include standards or guidelines specific to grazing activities (Forest Plan, pp. III-87-90). There is also no specific management area direction for soil resources that are relevant to livestock grazing activities (Forest Plan, pp. III-99-105).

Cattle graze the NFS portion of the allotment under permit from the USDA Forest Service. Ten cow/calf pairs graze the "on" (NFS) portion of the allotment for a grazing season of June 15 to October 31 in a deferred rotation. The "off" portion of the allotment, which includes BLM, state trust, and private lands, is grazed by 490 cow/calf pairs for the same season.

There are no instances of permit non-compliance documented in the current or historical range files for the Moores Creek Allotment (see 2230 files, Mountain Home Ranger District).

In addition to cattle grazing, sheep trail across the northwestern corner of the allotment twice per year on the ridge dividing Casey and Louse Creeks. Approximately 2,500 to 4,000 head of ewes with lambs are trailed through in late May to early June to access sheep allotments on the Boise National Forest. This trail is used again in the fall, typically mid- to late-October. The number of bands that trail

through this area has steadily decreased since the mid-1960s. The sheep trail is less than one mile long on NFS land in the Moores Creek Allotment.

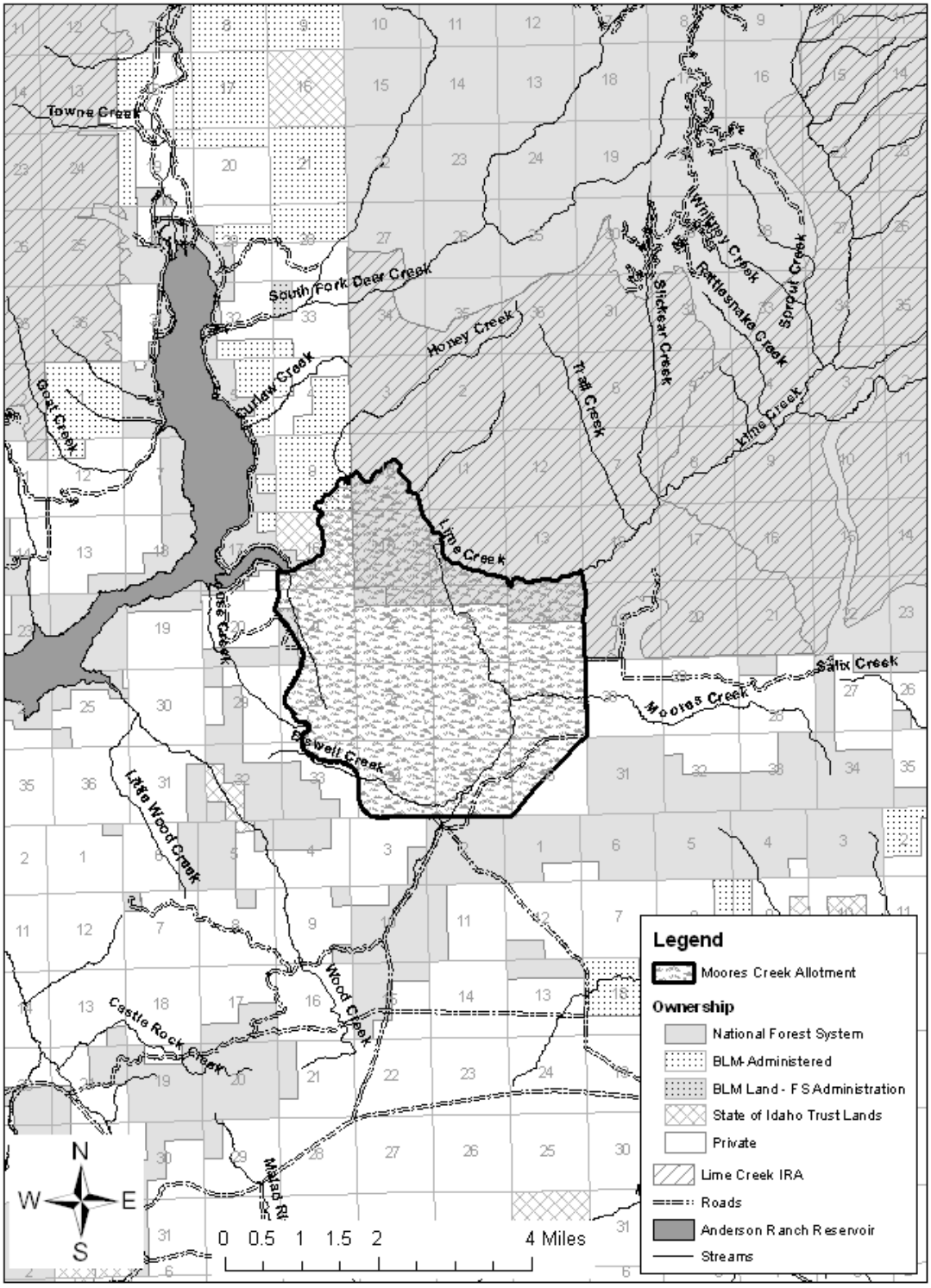

Figure 1. Location of the Moores Creek Allotment

The EA for the Moores Creek Cattle and Horse "On-Off" Allotment is tiered to the Final Environmental Impact Statement (FEIS) and planning record supporting the 2003 revised Forest Plan, including documentation related to the Continuous Assessment and Planning (CAP) process described in Chapters III and IV of the Forest Plan. This documentation includes monitoring reports implementation guides, and errata and corrections to the 2003 FEIS and Forest Plan. Documented analyses in the Forest Plan FEIS have been referenced rather than repeated in some instances. Analyses pertaining to the FEIS for the 2003 Forest Plan are contained in the Forest Planning record located at the Boise National Forest Supervisor's Office in Boise, Idaho.

PROPOSED ACTION

The proposed action for the Moores Creek Allotment is "no action." This alternative proposes no changes to current allotment management. For this reason, the proposed action is the baseline for analysis and serves as the no action alternative relative to any other alternatives.

Specifically, the proposed action would continue to authorize 10 cow/calf pairs on the "on" (NFS) portion of the allotment for a grazing season of June 15 to October 31 in a deferred rotation. This results in a utilization of 46 head-months (HMs) on NFS land per year. Grazing by 490 cow/calf pairs on the "off" (non-NFS land) portion of the allotment would continue for the same season.

There would continue to be some flexibility in allotment administration allowed for weather conditions, range readiness, and livestock needs. If the forage is fully utilized or the Forest Service determines that further grazing would damage resources, the permittee may be required to remove livestock early.

Grazing would continue on the Moores Creek Allotment consistent with standards, guides, terms, and conditions listed in the Term Grazing Permit, as supplemented by Annual Operating Instructions (AOIs), as well as with direction specified in the standards and guidelines of the Forest Plan. These standards may be modified by the Responsible Official to accelerate attainment of the desired conditions, and include:

- Maximum forage utilization of representative areas within each pasture containing NFS land will not exceed the values shown below at the end of the growing season. Those utilization levels are as follows:

  Riparian Areas: Maximum 45 percent use or retain a minimum 4-inch stubble height of hydric greenline species whichever occurs first (Forest Plan Standard RAST01, p. III-45).

  Upland Vegetative Cover Types: Vegetative slow growth, after seed ripe conditions, or late season pastures – 50 percent use (Forest Plan Standard RAST01, p. III-45).

- Livestock salting is prohibited in Riparian Conservation Areas (RCAs) (Forest Plan Standard RAST04, III-45). Place salt no closer than ¼ mile from water and not within 100 feet of designated roads. Move salt from areas where utilization standards have been met (Terms and Conditions).

- All water developments must provide access and escape to and from water for all types of wildlife (this requirement is a part of the Terms and Conditions for the allotment that exceeds the requirements of Forest Plan Standard RAST09, p. III-45).

- Bulls must test negative for Trichomoniasis before entering NFS land (This requirement is in the Annual Operating Instructions).

- Only certified noxious weed-free hay, straw, or feed is allowed on NFS land (Forest Plan Standard NPST01, p. III-36).
- On all lands outside of designated travelways, motorized use is prohibited, unless otherwise authorized (Forest Plan Standard REST04, p. III-64).

The Forest Service's goal has been to administer this allotment to Forest Plan Standards, which have been established to allow the attainment of the following desired conditions over time:

> A sustainable level of forage, consistent with other resource management direction, is available for use through the Forest Service grazing permit system. Rangeland forage quality is maintained or improved in areas where vegetation management projects and range management actions occur. Riparian areas continue to be a focal point for providing vegetative diversity, landscape capability, soil productivity, wildlife habitat, proper stream channel function and water quality important to sustaining beneficial uses. Riparian areas are functioning properly and/or have improving trends in vegetative composition, age class structure and vigor. Upland range vegetation is contributing to proper hydrologic function. The composition and densities of shrubs, grasses and forbs are variable and dynamic across the landscape (Forest Plan, p. III-44).

The proposed action includes continued monitoring of the allotment through grazing permit administration, which includes monitoring unit rotation and forage utilization and inspections of range improvements (water developments, fences, corrals, etc.) as needed.

There is one water development and approximately one mile of fence on NFS land. These improvements are required to be brought to properly functioning condition each grazing season prior to livestock entering the allotment (or unit within the allotment), as defined in the Term Grazing Permit (see Project Record). There are no additional improvements proposed for the allotment.

As a result of the 2006 North Sheep decision (*Western Watersheds Project v. USFS*, Case No. CV-05-189-E-BLW, District Court of Idaho), Forest Plan Capability Analyses and Site-Specific Capability Analyses are required for all allotments. These analyses have been completed for the Moores Creek Allotment and the Rangeland Management Specialist has determined that there is sufficient capable rangeland to support permitted numbers.

Capability analysis shows sufficient capacity to support the number of livestock that are currently permitted, and the Forest Service has met the capability definition in the Forest Plan. Therefore, no issues related to livestock grazing are expected. Under these conditions, by definition, the allotment is meeting or moving toward desired conditions.

NEED FOR ACTION

The need for this action is to authorize the appropriate level of livestock use within the Moores Creek Allotment under updated management direction designed to achieve management objectives and move existing resource conditions toward desired conditions.

1. Authorizing continued grazing will address the objectives of the range management program in the National Forest System and the goals and objectives in the Boise National Forest Land and Resource Management Plan.

    a. The objectives of the range management program in the National Forest System are:

- To manage the range vegetation to protect basic soil and water quality resources, provide for ecological diversity, improve or maintain environmental quality, and meet public need for interrelated resource use [FSM 2202.1(1)].
- To integrate management of range vegetation with other resource programs to achieve multiple use objectives contained in Forest land and resource plans [FSM 2202.1 (2)].
- To provide livestock forage, wildlife food and habitat, outdoor recreation, and other resource values dependent on range vegetation [FSM 2202.1(3)].
- To contribute to the economic and social well being of people by providing opportunities for economic diversity and by promoting stability for communities that depend on range resources for their livelihood [FSM 2202.1(4)].
- To provide expertise on range ecology, botany, and management of grazing animals [FSM 2202.1(4)].

Authorization to graze the specific area is needed through a project level NEPA decision (FSH 2209.13 Chapter 91). If the decision is made to authorize livestock grazing, Allotment Management Plans (AMPs) implement the applicable management direction from the NEPA decision.

b. The Forest Plan provides for the multiple-use and sustained yield of goods and services from the Forest. Forest plans determine the capability and suitability of the plan area and establish programmatic direction including goals, objectives, standards, guidelines, and monitoring requirements. Forest Plan management direction for rangeland resources includes the following goals:

- Provide for livestock forage within existing open allotments, in a manner that is consistent with other resource management direction and uses.
- Manage rangelands using controlled livestock grazing, range structural and non-structural improvements, vegetative and ground rehabilitation, fire, and timber management in various combinations to meet desired conditions.
- Manage upland vegetation on suitable rangelands to maintain or restore hydrologic function and soil productivity of watersheds containing allotments.
- Manage herbaceous and shrub vegetation on suitable rangelands to meet resource objectives in an efficient manner.
- Manage livestock grazing within riparian areas to accommodate the maintenance or restoration of aquatic and riparian processes and functions.
- Coordinate livestock grazing to address conflicts with other resource uses in a manner that is consistent with Forest Plan management direction.

The proposed action was designed to comply with the Forest Plan and the livestock grazing standards and guidelines that it promulgates as a means of eventually achieving the Forest Plan's goals.

DECISIONS TO BE MADE

This EA will serve to inform the following decisions for the Moores Creek Allotment:

1. Whether to authorize continued grazing on the Moores Creek Allotment.
2. If grazing is allowed to continue, whether management changes would likely be necessary to address the Forest Plan's goals, objectives, and desired future conditions for the NFS land in this allotment; and
3. Whether the resulting action would likely result in significant impacts necessitating the preparation of an environmental impact statement.

ALTERNATIVES CONSIDERED

This allotment analysis was originally scoped with a letter that was mailed to several interested agencies, groups, and individuals in 2005 with the intent of determining issues that might have required the development of alternatives. Comment letters were received from Idaho Conservation League and Western Watersheds Project. The Forest Service's consideration of comments received that expressed opposition or concern with the proposed action is attached to this EA as Appendix A.

A vast majority of the comments received in 2005 expressed general concerns and recommended that the Forest Service analyze the effects of grazing on particular resource elements, without including a description of a site-specific, cause-effect relationship between an action and an effect that might demonstrate the need for such an analysis.

The interdisciplinary team (IDT) considered each comment received but found no unresolved conflicts requiring resolution through the development of alternatives to the proposed action.

With no new issues or alternatives being raised during the scoping process, and to better focus this assessment, the Responsible Official determined that the scope (40 CFR §1508.25) of this project would be limited to the proposed action and a no grazing alternative (36 CFR §220.7(b)(2)(i)).

ENVIRONMENTAL CONSEQUENCES

Incorporated by reference into this section of the EA are specialists' reports for range, vegetation, watershed, fisheries, wildlife, soils, and cultural resources; biological evaluations for wildlife and botanical resources; and biological assessments for fish and wildlife; all of which are included in the project record.

Grazing Opportunity and Allotment Management

The Rangeland Management Specialist determined that there is sufficient forage on NFS land within the allotment to support the continuation of grazing at currently permitted levels of use. This determination was made after the specialist conducted a site-specific range capability and suitability analysis for the NFS land in the allotment. This analysis identified a total of 175 acres of NFS land capable of supporting grazing. All of those acres lie within areas defined as suitable for grazing in the Forest Plan. This analysis determined that the NFS land in the allotment has a capacity of about 50 head-months (HMs) of available forage. This capacity exceeds the current permitted use of 46 HMs (Project Record, Range Specialist's Report).

The no grazing alternative would require a minimum of two years' notice to the permittee before being implemented. Once implemented, the no grazing alternative would eliminate livestock grazing on 1,820 acres of NFS land. This alternative would eliminate 46 head months of grazing opportunity on NFS land for the permittee's herd.

The no grazing alternative would also require the removal of approximately one mile of fence on NFS land once livestock grazing on NFS land is phased out. A pond that exists on NFS land would remain in place, but would no longer be available to the permittee's livestock after two years.

The no grazing alternative included the assumption that the private landowner would continue to graze cattle on the non-NFS land at the same intensity and duration for which it is currently grazed – 490 cow/calf pairs from June 15 to October 31. In order for the private landowner to effectively graze their private property and to prevent livestock trespass on NFS land, the landowner would need to construct 6.5 miles of fence at the National Forest boundary.

Vegetation Resources

The Rangeland Management Specialist has determined that implementation of continued grazing at currently permitted levels on the Moores Creek Allotment would not result in a downward trend in desired conditions for upland vegetation, riparian vegetation, or noxious weeds.

Three vegetation condition indicators were measured on the uplands to determine effects of current grazing management. These include ground cover, sagebrush canopy, and aspen. Ground cover measurements taken in 1973 are consistent with desired ranges for properly functioning upland ecosystems. An increase of six percent in ground cover was measured on one site between data sets collected in 1973 and 2009. Ground cover on NFS land is sufficient to provide for good overall condition within the project area and meets or exceeds levels recommended for healthy and functional ecosystems. Upland vegetation on NFS land within the Moores Creek Allotment is meeting or moving toward desired conditions (Project Record, Vegetation Specialist's Report, p. 9).

Sagebrush canopy is outside of desired conditions as defined in the Forest Plan. The current level of livestock grazing is not contributing to this deviation from the desired condition. Decreased fire frequency, primarily due to human interruption of natural fire cycles, combined with historic (prior to the mid 1900's) livestock grazing that occurred before adequate recovery of vegetation after fire, likely account for the imbalance between canopy cover classes. Mechanical treatment or burning of sagebrush would be necessary to bring canopy densities in line with desired conditions (Project Record, Vegetation Specialist's Report, p. 10).

Aspen clones observed on the Moores Creek Allotment are in good condition at this time with adequate regeneration to support the stand. On-site observations estimated 500 stems per acre of young (less than 4-inch DBH) aspen, which has been determined to be capable of sustaining an aspen stand. Aspen stands on the allotment are meeting or moving toward desired conditions. However, additional monitoring should be conducted in the future to ensure that stands are regenerating and not becoming decadent (Project Record, Vegetation Specialist's Report, p. 11). With such localized and negligible direct and indirect effects on upland areas, no potential cumulative effects to upland vegetation are expected to result from this alternative.

Riparian systems on the allotment are functioning at or near desired conditions. Approximately seven miles of Lime Creek, a perennial stream channel, form the northern boundary of the project area. This stream is seldom accessed by livestock because of the steep, rocky slopes adjacent to it. GIS analysis indicates that there is approximately one mile of Moores Creek, another perennial drainage, on NFS land within the project area. A field review of a portion of this drainage concluded that streambanks are well-vegetated and in stable condition. Floodplains are also well-developed and in stable condition. Riparian plant communities are in mid- to late-seral condition. Riparian systems on the Moores Creek Allotment are meeting or moving toward desired conditions (Project Record, Vegetation

Specialist's Report, p. 15). With such localized and negligible direct and indirect effects on riparian areas, no potential cumulative effects to riparian vegetation are expected to result from this alternative.

There are no known populations of noxious weeds within the project area, but it is assumed that scattered rush skeleton weed plants occur on the allotment. Continuation of livestock grazing would not contribute substantially to the spread of this weed. It has become so widespread across the district that biological controls will be necessary to control its spread (Project Record, Vegetation Specialist's Report, p. 17). Maintenance of the road system would likely result in soil disturbance, the effects of which would accumulate with the direct and indirect effects of grazing. This would increase the area susceptible to noxious weeds.

Elimination of grazing on NFS land after two years would most likely not improve upland conditions in sagebrush stands. Without a disturbance such as fire or livestock grazing, sagebrush stands become dense and plant diversity within these stands is reduced.

Implementation of the no grazing alternative would lead to slight improvements in upland vegetation in selected areas where cattle tend to congregate. Removal of livestock would allow these areas to revegetate over time. Localized impact areas around water developments and salt licks would also revegetate over time.

Under the no grazing alternative, riparian vegetation would progress toward desired conditions at a faster rate after livestock are removed from the allotment. In those areas where livestock had accessed the stream, increased bank stability would also be expected under this alternative. Removal of livestock would result in less browsing and trampling of riparian vegetation. Spot locations that receive heavier use when livestock are present would be expected to recover substantially when livestock are removed. Stronger, more lush riparian vegetation would be expected to establish relatively quickly in these areas.

Removal of livestock would eliminate the possibility of noxious weed spread by livestock. The primary vectors for spreading these weeds – typically wind for rush skeleton weed and motorized vehicles for other weed species – would not be changed. Without the presence of livestock on the allotment, permittees would not be riding the allotment on a regular basis and reporting noxious weed infestations. This could result in new infestations going undetected and becoming large infestations that are difficult to treat and manage.

Rare Plant Species

The Botanist considered effects to all Threatened, Endangered, Proposed, Candidate, and USDA Forest Service Region 4 Sensitive plant species with known populations or suitable habitat in the Moores Creek and Lime Creek fifth-field subwatersheds and with suitable habitat for that species in or near the allotment. Table 1 summarizes the determinations of the continued grazing alternative's effects on those species considered.

There would likely be no differences in impacts to *L. papilliferum* between the continued grazing and no grazing alternatives.

Botrychium lineare (Slender-leaf moonwort), *Bryum calobryoides* (bryum moss), *Phacelia minutissima* (small phacelia), and *Pyrrocoma insecticruris* (bugleg goldenweed) are species tied to habitat in aspen stands and riparian areas, seeps, and springs (although sometimes on the fringe). Termination of grazing in these areas would likely lead to eventual recovery of proper functioning conditions and structure in any areas where detrimental disturbance has occurred.

Table 1. Effects determinations of the continued grazing alternative on rare plants

Species (Status)	Determination
Slickspot Peppergrass (P) *Lepidium papilliferum*	NLTJ
Slender-leaf moonwort (S) *Botrychium lineare*	MII
Beautiful Bryum (S) *Bryum calobryoides*	MII
Small Phacelia (S) *Phacelia minutissima*	MII
Bugleg goldenweed (S) *Pyrrocoma insecticruris*	MII

P = Proposed Endangered
S = Sensitive
NLTJ = Not likely to jeopardize continued existence or adversely modify proposed critical habitat.
MII = May impact individuals, but would not likely contribute to a trend towards Federal Listing or cause a loss of viability to the population or species.

This does not mean that the vegetative composition would summarily revert to that of the pre-grazing era. Heavy past use of livestock in this allotment under previous management regimes may have altered the soil characteristics (through erosion, loss, or structural change) enough that it no longer supports the same suite of species that it did historically. Additionally, some species may have been extirpated from the area, and the means of regeneration are no longer present (seed, spores or plant propagules). However, overall habitat for these rare plants would be expected to improve without livestock grazing.

There are likely to be cumulative impacts of continued grazing with the residual effects of past grazing under previous management regimes on rare plants and their habitat. These cumulative effects include soil compaction, change in species composition and abundance, and introduction and spread of non-native plants and weeds (Project Record, Biological Assessment/Evaluation - Botany, p. 30). Grazing of cattle in the sheep driveway may decrease native plant diversity and coverage, and increase the area open for weed colonization in this one-mile long area.

"Improved" range and pasture grasses such as smooth brome, soft brome and orchard grass are present in the Moores Creek Allotment. Such plants were likely introduced to increase livestock forage, or sometimes to combat noxious weed invasions. Introduced species are often strong competitors and can inhibit the establishment and growth of native species.

Soils Resources

The Soils Resource Specialist considered effects of continued grazing on detrimental soil disturbance (DD), total soil resource commitment (TSRC), effective ground cover (EGC), and susceptibility to landslides within the allotment. Under the continued grazing alternative, the existing conditions of DD and TSRC are the accumulated effects of grazing with other past and present activities on the allotment. Those conditions are summarized in Table 2. The Soils Resource Specialist also considered effects to microbiotic soil crusts, or biological soil crusts (BSC), in response to a public comment.

Table 2. Contribution of current grazing and other past and present activities to existing condition of detrimental disturbance (DD) and total soil resource commitment (TSRC)

Contribution to Existing Condition	DD	TSRC
Current Grazing	4.4%	0.6%
Other Sources	0.7%	0.5%
Current Accumulated All Sources	5.1%	1.1%

The DD estimate of 4.4 percent represents the direct and indirect effects continued livestock grazing activities to soils. This value is attributed to the current livestock grazing strategy for the allotment and is consistent with Forest Plan Standard SWST02 which limits DD to 15 percent. DD is primarily the result of displacement and compaction in variable, localized areas radiating from sites where animals obtain salt or water. These livestock-related disturbances are considered short-term as the shrubs, forbs, and grasses are allowed to seasonally recover or re-seed and provide root stability and establish a vegetative surface buffer. Review of representative sites on other allotments having similar landforms and soils indicate compaction in isolated areas where cattle graze across the landscape is a short-term impact, and effects are diminished by root action, frost heave/freeze-thaw, ground dwelling rodents, and shrink-swell from drying and wetting (Alexander and Gilman, 1994).

The direct and indirect effects of the continued grazing alternative on TSRC are estimated to be less than one percent. This value is attributed to the current livestock grazing strategy for the allotment and is consistent with Forest Plan Standard SWST03 which limits TSRC to five percent. Grazing activities that contribute to TSRC include heavy soil compaction in the immediate area of the water developments and salting areas.

With limited livestock grazing on landslide prone areas, there is a very low probability for continued grazing or other current land uses in the analysis area to influence soil-hydrologic processes and increase the potential for landslides.

The direct and indirect effects of the continued grazing alternative on EGC are represented by the existing conditions values in Table 3. Ground cover conditions reflect the inherent landtype potential and current livestock grazing use patterns – the NFS land within this allotment are experiencing a low level of livestock grazing. With ground cover averaging around 80 percent, these values are above the ranges for desired conditions of the representative soil types-vegetation communities and meet the intent of Forest Plan Guideline SWGU05. That guideline recommends that "the minimum ground cover should be sufficient to prevent erosion from exceeding the range of soil erosion rates that are characteristic of the local soil type, landform, climate, and vegetation of the area, or the soil-loss tolerance" (Forest Plan, p. III-23).

Data for BSC are absent for the allotment area. The analysis for BSC utilized ground cover and shrub canopy information compiled from landform and soils characterization information, the Range Analysis and Monitoring data, the Technical Reference, *Site Potential for Biological Soil Crust Development Based on Biological and Physical Factors* (Rosentreter and Pellant, draft), and personal communications (Rosentreter, 2009). When comparing the literature to the well-developed soils, the low amount of bare soil, and the annual precipitation for NFS lands within this allotment, the potential for BSC is very low, and none were observed during site visits. Therefore, neither alternative has the potential to affect BSC.

Table 3. Effective ground cover (ECG) from year 1973 and 2009 monitoring data on the Moores Creek Allotment

Monitoring Site	Boise NF Soil SHR		Desired Ground Cover (%)	ECG (%)	
	Landtype	Soil Unit		1973	2009
A-1	120c-8	GDFA-5	20-50	95	
A-2	120c-8	GDFS-3	20-50	61	
A-3	122-1	JECA-2	30-50	90	80
A-5	122-4	IECA-2	60-80	85	
B-1	122-1	JECB-2	30-50	62	
B-2	120d-4	GDFA-5	30-50	85	84
B-3	120c-8	GDFA-5	20-50	85	
B-4	136-1	GEDN-4	30-60	53	
B-5	120c-8	GDFA-5	30-50	58	
O-1	122-1	JECB-2	30-50	60	
O-2	136-1	GEDN-4	30-60	76	82
O-3	135-1	JECB-2	30-50	31	

The no grazing alternative would cease all cattle grazing operations on NFS land associated with this allotment. DD levels would gradually diminish over the short term (3 to 15 years) as existing impacts resulting from the current livestock grazing naturally ameliorate. Where livestock grazing and related activities have resulted in TSRC, these impacts would be evident for up to 40 years. With no grazing, some of the existing range improvements would be removed, causing some additional temporary soil disturbance. Although site-specific areas would be impacted, mitigations to restore livestock grazing impacts in localized sites would promote initiation of soil forming processes and lead to long-term recovery. Conditions for EGC would continue on the current trend unless other disturbances (i.e. wildfire or prescribed fire) measurably change the vegetation composition.

Because the no grazing alternative would eliminate livestock grazing, there would be no livestock grazing-specific Forest Plan Standards and Guidelines applicable to soils resources. Where desired conditions for soil productivity are currently not being achieved, mostly in isolated areas across the allotment, they would be realized in the short and long term. Because desired conditions for soil productivity are currently being maintained across the allotment, more rapid recovery of isolated impacts will advance the achievement of goals and objectives for soil productivity.

The DD estimate of 5.1 percent for existing conditions represents the cumulative effects of continued grazing on soils (Table 2). This value is attributed to the current livestock grazing strategy for the allotment and included impacts from the current and ongoing activities. This value is below the 15 percent threshold described by Forest Plan Standard SWST02.

Combined with existing long term soil impairment, the cumulative TSRC of continued grazing is estimated to be 1.1 percent (Table 2). This value is attributed to current livestock grazing strategy for the allotment and impacts from the current and ongoing activities. This value is below the five percent threshold described by Forest Plan Standard SWST03.

The cumulative effects of continued grazing on EGC are represented by the year 2009 values in Table 3. Ground cover conditions are above the inherent landtype potential and represent a low level of livestock grazing use. The current livestock use affecting ground cover is the sheep driveway. The

sheep driveway is a high impact and does not provide forage for the cattle grazing, essentially making this 15- to 20-acre corridor unavailable to the Moore's Creek permittee. However, ground cover values over the rest of the allotment are within desired condition ranges for the representative soil types and vegetation communities and meet the intent of Forest Plan Guideline SWGU05.

The soil productivity conditions are within the Forest Plan parameters of 15 percent detrimental soil disturbance, less than 5 percent total soil resource commitment, and effective ground cover is at or near conditions representative of the landtypes/soils within the activity area. Continued livestock grazing under the current management is consistent with the Forest Plan management direction and expected to meet soil resource objectives, thereby achieving or maintaining desired soil productivity conditions.

Under the no grazing alternative, although cattle grazing on the Moore's Creek Allotment would be eliminated, the sheep driveway and the unclassified roads would remain as disturbances impacting soils. DD levels attributed to the Moore's Creek Allotment would gradually diminish over the short term (3 to 15 years). TSRC from current livestock grazing would continue to be evident for up to 40 years. With no grazing, some of the existing range improvements would likely be removed, causing some additional temporary soil disturbance. Although site-specific areas would be impacted, mitigations to stabilize disturbed sites would promote initiation of soil forming processes and lead to long-term recovery. Conditions for EGC would not exhibit a measurable change under the no grazing alternative.

Because the no grazing alternative would eliminate livestock grazing there would be no livestock grazing-specific Forest Plan Standards and Guidelines applicable to soils resources. Where desired conditions for soil productivity are currently not being maintained or achieved, mostly in isolated areas across the allotment, they would be realized in the short and long term. Cumulatively, the no grazing alternative would contribute to objectives for MPC 4.1c – Undeveloped Recreation: Maintain Unroaded Character with Allowance for Restoration Activities; and MPC 6.1 – Restoration and Maintenance Emphasis within Shrubland and Grassland Landscapes.

Watershed Resources

The Watershed and Fisheries Specialist report considered effects of grazing to all watershed condition indicators (WCIs) identified in Appendix B of the Forest Plan and determined that six WCIs would be affected by the continued grazing and no grazing alternatives on the Moores Creek Allotment (Project Record, Fisheries and Watershed Specialist Report, Section 4.3.1 and Appendix B):

1. Temperature
2. Sediment/Turbidity
3. Width/Max Depth Ratio
4. Streambank Condition
5. Change in Peak/Base Flows
6. Riparian Conservation Areas

However those effects would be minimal.

The Moores Creek Allotment includes portions of three 6th field subwatersheds: Lower Lime Creek, Moores Creek, and Anderson Ranch Reservoir. Casey Creek is the primary intermittent stream on the NFS portion of the allotment, but there are also several other smaller intermittent streams.

The steep and rocky slopes adjacent to Lime Creek prohibit livestock access, thus minimizing the likelihood of any potential effects on this reach of Lime Creek. The lower mile of Moores Creek, which occurs on NFS land within the allotment, is accessible by livestock. However, based on field review this section of Moores Creek has limited livestock use, and the riparian functions and ecological processes are at or near the desired conditions.

Beneficial uses for the three subwatersheds include cold water salmonid spawning, primary contact recreation, secondary contact recreation, and domestic water. There are no public regulated municipal watersheds within these subwatersheds or downstream of the allotment that may be affected by allotment management activities.

Lime Creek, which forms the northern boundary of the allotment, makes up about seven miles of perennial channel. Lime Creek was originally listed as a 303(d) listed stream due to temperature.

There is one mile of perennial channel in the lower end of Moores Creek. Moores Creek is a 303(d) listed stream for an unknown pollutant.

Monitoring data from an Idaho Department of Environmental Quality (IDEQ) Beneficial Use Reconnaissance Program (BURP) site in lower Moores Creek shows that water quality fully supports all the designated beneficial uses for this stream (Cold Water Aquatic Life and Secondary Contact Recreation), implying upland conditions are good and not negatively affecting channel conditions downstream of the allotment.

Lime Creek flows into Anderson Ranch Reservoir at the west boundary of the allotment. The reservoir was 303(d) listed in 2008 for mercury pollution. This reservoir is also 303(d) listed for an unknown pollutant.

Water movement through the soils in these subwatersheds occurs at slow to moderate rates, mainly as subsurface flow. Water typically is released at slow to moderate rates to streams. Other than during rain-on-snow events or high-intensity rainfall from thunderstorms, almost all water leaves this area as subsurface flow. Soils that are deep and fine textured generally moderate the response of the sediment/turbidity and change in peak base flow WCIs associated with grazing effects. Most small swales and intermittent drainages showed no signs of past or active erosion or landsliding, indicating relatively stable slopes.

The six WCIs and their current baseline condition on Moores Creek, Lime Creek, and Anderson Ranch Reservoir at the subwatershed scale are described in Table 4. The current functionality of the WCIs shown in Table 4 are an average for the entire subwatershed, including all land ownerships (private and federal). Based on field reviews, the condition of the NFS land within the allotment is in large part at or near desired conditions as compared to other ownerships. This is likely due to these lands being grazed based on the Forest Plan standards and guidelines (USDA Forest Service, 2003).

Table 4. Current functionality of relevant WCIs in the three relevant subwatersheds

Pathway	WCI	Subwatershed		
		Lime Creek	Moores Creek	Anderson Ranch Reservoir
Water Quality	Temperature	FUR	FUR	FR
	Sediment/Turbidity	FUR	FUR	FUR
Channel Condition and Dynamics	Width/Max Depth Ratio	FA	FA	FA
	Streambank Condition	FA	FR	FR
Flow/Hydrology	Change in Peak/Base Flows	FA	FUR	FA
Watershed Conditions	Riparian Conservation Areas	FR	FR	FR

FA = Functioning appropriately
FR = Functioning at risk
FUR = Functioning at unacceptable risk

The effects of continued grazing on the upland soil-hydrologic, and RCA functions and processes should be maintained where currently functioning appropriately, and trending toward desired condition where currently not at desired conditions. Further, negative effects from cattle grazing on water quality and associated beneficial uses would likely be reduced on NFS land because this alternative requires proper use of streamside riparian vegetation and minimal use in those areas identified as needing improvement (Project Record, Fisheries and Watershed Specialists' Report, Section 4.3.1.1).

The temperature and sediment/turbidity WCIs for water quality would be maintained or show no measurable change in the temporary, short, and long term under the continued grazing alternative. Potential negligible improvements in stream temperature would occur as RCA conditions continue on an improving trend. Slight reductions in sediment should occur as vegetation conditions in the allotment continue improving toward their desired future condition.

The width/max depth ratio and streambank condition WCIs would be maintained or show no measurable change in the temporary, short, and long term under the continued grazing alternative. As vegetation conditions in the allotment improve, the potential for sediment inputs would continue to decrease and width to depth ratio and streambank condition would negligibly improve.

The change in peak/base flows WCI would be maintained or show no measurable change in the temporary, short, and long term under the continued grazing alternative. The Moores Creek subwatershed is functioning at unacceptable risk (FUR) for the change in peak/base flows WCI. The altered flow regime within this subwatershed can be attributed to grazing practices in place prior to the 1970s (which may have altered and/or reduced vegetative cover) and to approximately 51 surface water points of diversion; however, only one of these diversions occurs on this allotment.

The Lower Lime Creek and Anderson Ranch Reservoir subwatersheds are functioning appropriately (FA) for the change in peak/base flows WCI. The banks and slopes adjacent to Lime Creek are steep and cliffy. Therefore livestock are rarely found in this portion of the allotment. This, combined with the improving trends in upland vegetation would likely result in maintenance of the change in peak/base flows WCI, which is FA, within these subwatersheds.

Perennial streams have 300-foot RCAs (designated from the ordinary high water mark) on both sides of the streams. Intermittent streams, ponds and wetlands have 150-foot RCAs (designated from the ordinary high water mark). RCAs within the allotment boundary are primarily associated with intermittent streams.

While data specific to RCAs is lacking, assuming that the condition of the RCAs within the allotment are improving along with the conditions in the uplands, and that Forest Plan Standards are functioning as intended, the overall condition of the RCA should show negligible improvements with continued grazing.

Under the no grazing alternative, effects associated with former and ongoing grazing management on NFS land would cease. Overall, there would be improved riparian and water quality conditions on NFS land, leading to overall improved watershed conditions and associated water quality for beneficial uses. These improvements would occur more quickly as compared to the continued grazing alternative.

The degree of change from baseline riparian and in-stream habitat quality conditions that could be anticipated with the end of cattle grazing on the NFS portion of the allotment would vary depending upon the type and severity of effects associated with former and ongoing grazing management. Sedges, grasses, and some other riparian plants tend to rebound quickly to non cattle-grazed density and vigor. Grazing effects to willows and other riparian shrubs are more variable—growth of an existing shrub would more quickly respond to implementation of the no grazing alternative than would density of a group of plants or potential recolonization of areas from which willows had been extirpated.

For the most part, recovery towards vegetative desired conditions under the no grazing alternative should be noticeable within 3 to 10 years. A longer time interval may be necessary before improvements to soil, water runoff, streambanks, and aquatic habitat are recognizable. Depending upon the specific causes of any water temperature increases associated with current grazing (riparian vegetation impacts), water temperatures should moderate within a year.

Past, present, and reasonably foreseeable future activities considered in cumulative effects analysis are listed in the project record. Lacking any measurable direct or indirect effects of the continued grazing alternative, there is no potential for direct or indirect effects of other past, present, or reasonably foreseeable future activities to accumulate with the effects of this alternative.

Direct and indirect effects of the no grazing alternative have a slight benefit to the WCIs. However, the direct and indirect effects of other past, present, or reasonably foreseeable future activities are negligible and would not overlap in space or time with the effects of the no grazing alternative.

Fisheries

The Fisheries Biologist considered the effects to fish and fish habitat likely to result from the continuation of grazing on the Moores Creek Allotment (Project Record, Fisheries and Watershed Specialist Report, sections 3.6 and 4.3). No potential measurable effects are likely to occur.

The majority of streams within the allotments are first- and second-order intermittent streams, and due to the intermittent nature of the streams, waters within the allotment boundary would not generally be capable of supporting substantial fish populations. Rainbow/redband trout (*Onchorhynchus mykiss*) and other fishes are likely present within Lime Creek and lower Moores Creek (the only perennial waters within the allotment). However, the banks and slopes along Lime Creek and lower Moores Creek are steep and cliffy resulting in very limited livestock access (Ruffing pers. comm. with Fisheries Biologist, 2009), and therefore these streams are not measurably affected by grazing activities.

Kokanee (*Onchorhynchus nerka*), whitefish (*Prosopium sp.*), northern pikeminnow (*Ptychocheilus oregonensis*), redsided shiner, suckers, and dace are additional fish species commonly found in the Boise River and its various tributaries.

Columbia River bull trout (*Salvelinus confluentus*) are the only fish management indicator species in the Forest Plan (USDA Forest Service 2003, Vol. 2, p. E3) and are also listed as Threatened under the Endangered Species Act (ESA). However the continued grazing alternative would have "no effect" on bull trout because the Moores Creek Allotment does not occur within any potential or existing bull trout population or contain any suitable or designated critical habitat (Project Record, Biological Assessment – Effects of the Moores Creek On/Off Allotment on Canada Lynx, Yellow-billed Cuckoo, and Bull Trout). Anderson Ranch Reservoir has been identified as bull trout migratory and overwintering habitat. However, since livestock use of the RCAs on federal land is limited or non-existent, no measurable effects to Lime Creek or Moores Creek are expected. Therefore no influence to reservoir conditions is expected.

Westslope cutthroat trout (*O. clarki lewisi*) are listed as a Sensitive species by the Regional Forester (USDA Forest Service, Intermountain Region, 2003). Westslope cutthroat trout are not known to be native to the Boise River drainage (Behnke, 1992). There would be no impact to westslope cutthroat trout or their habitat within their historical range.

Table 5 summarizes the effects of the continued grazing alternative on the relevant WCIs within the three affected subwatersheds. Under the no grazing alternative, the condition of several of the WCIs would improve, resulting in positive changes in the quality of fish habitat, both within the allotment and downstream. The potential effects to fish habitat under the no grazing alternative are described in the Watershed Resources section of this EA. Depending upon the specific causes of any water temperature increases associated with current grazing (riparian vegetation impacts), water temperatures should moderate within a year.

Without any potential observable or measurable direct or indirect effects to fish and fish habitat that might overlap in time and space with the residual, direct, or indirect effects of other past, present, or reasonably foreseeable future activities, there would be no cumulative effects of the continued grazing alternative on fish and fish habitat.

Table 5. Combined effects and trends of the continued grazing alternative on relevant WCIs in Lower Lime Creek, Moores Creek, and Anderson Ranch Reservoir subwatersheds

Pathways	WCI	Existing Condition			Combined Effects/Trends of the Continued Grazing Alternative			
		Lime Creek	Moores Creek	Reser-voir	Effects	Tempo-rary	Short-term	Long-term
Water Quality	Temperature	FUR	FUR	FR	M	+	+	+
	Sediment/Turbidity	FUR	FUR	FUR	M	+	+	+
Channel Condition and Dynamics	Width/Max Depth Ratio	FA	FA	FA	M	+	+	+
	Streambank Condition	FA	FR	FR	M	+	+	+
Flow/ Hydrology	Change in Peak/Base Flows	FA	FUR	FA	M	+	+	+
Watershed Conditions	Riparian Conservation Areas	FR	FR	FR	M	+	+	+

FA = Functioning appropriately
FR = Functioning at risk
FUR = Functioning at unacceptable risk
M = Maintain or no measurable change
"+" = Improvement trend in the condition of an indicator, not necessarily an increase in the number or measurement of an indicator

Wildlife

The District Wildlife Biologist considered effects of continued grazing to listed wildlife species with habitats on the Mountain Home Ranger District. Continued grazing of the Moores Creek Allotment would have no effect to Canada lynx (*Lynx canadensis*) (Threatened) or yellow-billed cuckoo (*Coccyzus americanus*) (Candidate) (Project Record, Biological Assessment – Effects of the Moores Creek On/Off Allotment on Canada Lynx, Yellow-billed Cuckoo, and Bull Trout).

No suitable habitat for lynx is present on the allotment. Continued grazing of the allotment would not affect identified linkage zones for lynx. The allotment is also outside any designated or proposed lynx analysis unit (LAU).

The Moores Creek Allotment area does not contain large (greater than 25 acres) stands of cottonwood with a willow understory and the proposed action would not directly or indirectly affect suitable habitat for yellow-billed cuckoo.

The District Wildlife Biologist considered whether habitats for USDA Forest Service, Region 4 Sensitive species were present on the Moores Creek Allotment and determined that only habitats for greater sage-grouse (*Centrocercus urophasianus*), spotted bat (*Euderma maculatum*), Townsend's big-eared bat (*Corynorhinus townsendii*), spotted frog (*Rana luteiventris*), bald eagle (*Haliaeetus leucocephalus*), and gray wolf (*Canis lupus*) are present on the allotment. Of those species, the Wildlife Biologist determined that only greater sage-grouse, gray wolf, and spotted frog would be affected by the continuation of grazing on the allotment (Project Record, Wildlife Specialist's Report and Biological Evaluation). Continued grazing on the Moores Creek Allotment would have no impact to those

Sensitive wildlife species with no habitat on the allotment. Table 6 shows the impact determinations for Sensitive species with habitats present within the allotment.

Table 6. Determinations and rationale for Sensitive wildlife species with habitats present on the Moores Creek Allotment

Species	Determination	Rationale
Greater Sage-grouse (*Centrocercus urophasianus*)	May Impact	Nesting habitat present and lek sites known to occur within allotment.
Gray Wolf (*Canis lupus*)	May Impact	Habitat present, historic conflict between cattle and wolves on this and neighboring allotments.
Spotted Frog (*Rana luteiventris*)	May Impact	Habitat present within Moores Creek and Lime Creek.
Spotted Bat (*Euderma maculatum*)	No Impact	No roosting habitat present. Foraging habitat present
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	No Impact	No effects to foraging opportunities.
Bald Eagle (*Haliaeetus leucocephalus*)	No Impact	No change to nesting or roosting habitat.

Continued grazing of this allotment may impact individual greater sage-grouse but is not likely to cause a trend to federal listing or loss of viability to this species. About 64 percent of the allotment is identified as key sage-grouse habitat. Less than one percent of the key sage-grouse habitat within the allotment is on NFS land.

Within the Moores Creek Allotment the primary threats to sage-grouse are predation, fence strikes, and direct interactions with cattle. Although rare, direct interactions with cattle could cause flushing or other actions that may increase susceptibility to predation. Although Idaho sage-grouse populations have shown declines in recent years, fires and drought are the primary factors contributing to those declines (Idaho Sage-grouse Advisory Committee, 2006; Idaho Department of Fish and Game, 2007).

Sage-grouse depend on a variety of shrub-steppe habitats throughout their life cycle, and are considered obligate users of several species of sagebrush. GIS analysis indicates that there are approximately 100 acres of sagebrush on NFS land (Project Record, Vegetation Specialist's Report). The sagebrush understory of productive nesting areas contains native grasses and forbs, with horizontal and vertical structural diversity that provides an insect prey base, herbaceous forage for pre-laying and nesting hens, and cover for the hen while incubating. Forbs and insects are essential nutritional components for chicks. Therefore, early brood-rearing habitat must provide adequate cover adjacent to areas rich in forbs and insects to assure chick survival during this period (mid-May to mid-June) (Connelly et al. 2004).

A healthy perennial grass and forb understory is also an important component of nesting and brood-rearing habitat. Benefits provided by an herbaceous understory include increased access to insects and forbs by chicks during the first month of life. Insects are a key component of sage-grouse early brood-rearing habitat (Idaho Sage-grouse Advisory Committee 2006). A high protein diet of insects is necessary for all young upland game birds during the first month of life. Based on ground cover data,

range land conditions are in an upward trend on the Moores Creek Allotment (Project Record, Vegetation Specialist's Report).

The Moores Creek Allotment has a turn on date of June 15 which is at the end of the critical brood-rearing time. The allotment is also on a deferred rotation, providing half of the allotment with no grazing until mid-August, each year. Both the deferred rotation and June 15 turn on date provide sage-grouse with areas of no disturbance during the critical time periods of brooding and chick rearing within the allotment. In general, livestock management practices that promote the sustainability of desired native perennial grasses and forbs should maintain or minimally impact sage-grouse habitat (Idaho Sage-grouse Advisory Committee 2006). The grazing management plan on the Moores Creek Allotment provides for protection of sage-grouse during the critical nesting and brooding period and maintains habitat during the summer occupancy period.

Continued grazing of the Moores Creek Allotment may impact individuals but is not likely to cause a trend to federal listing or loss of viability to gray wolf. The US Fish and Wildlife Service released 15 Canadian wolves in January of 1995 and 20 Canadian wolves in 1996 into the Central Idaho Experimental/Non-essential Population Management Area. Since those releases, gray wolf populations have been increasing on the Boise National Forest and within the Central Idaho Recovery Area (CIRA). As of 2008, 88 wolf packs have been documented in the CIRA with an estimated population of 846 wolves. The Boise National Forest is used as the home range for all or part of twelve known packs, including the Moores Creek pack on the Moores Creek Allotment.

Gray wolf population trends across the Boise National Forest and the Central Idaho Recovery Area are exceeding recovery objectives at this time. Wolves in the northern Rocky Mountains were delisted on May 4, 2009. All wolves in Idaho are now managed as a big game species by the Idaho Department of Fish and Game.

Continued grazing of the Moores Creek Allotment may impact individuals but is not likely to cause a trend to federal listing or loss of viability to spotted frogs. Based on stream gradient and channel type, about nine miles of riparian stream habitat in Moores Creek and Lime Creek within and bordering the allotment are considered habitat for spotted frogs. Grazing in the Lime Creek drainage is limited to occasional use, cattle seem to avoid these areas on the allotment due to steep slopes down to the creek and timber stands containing high levels of jackstraw and downed wood. Waterholes may also provide habitat for spotted frogs. The on date limits cattle presence at these sites until after June 15 when the tadpole stage is completed.

Road construction (and subsequent use), prescribed burning, hunting, OHV riding, and grazing by domestic sheep and cattle represent the past, present, and reasonably foreseeable actions that contribute to cumulative effects to sage grouse and wolves in this analysis area. The continued grazing alternative would not represent a direct incremental effect to combine with these other actions. The no grazing alternative does not differ in cumulative effects from the continued grazing alternative due to the continued grazing that would occur on private lands. About 99 percent of the sage grouse habitat within the Moores Creek Allotment occurs on private land, which would continue to be grazed, even though grazing would be phased out on NFS land.

The Moores Creek Allotment is within a migration route for elk during the spring and fall seasons. Continued grazing of the Moores Creek Allotment would not restrict movement of big game species during spring and fall migrations.

It is possible that elk use some of the area for parturition in May and June. The on date of June 15 excludes conflict between calving and fawning of deer, elk and pronghorn with cattle use. Mule deer and pronghorn antelope arrive in late spring and will occupy areas within the allotment and available habitat outside the allotment. Water developments within the allotment play an important part in providing a season long water source for big game species.

Identified winter range occurs on 24 acres of private land within the allotment boundary. No winter range occurs within the allotment on NFS land for big game species.

During July of 2008, surveys were conducted for pygmy rabbits (*Brachyulagus idahoensis*) and burrowing owls (*Athene cunicularia*) on Moores Flat, Moores Creek, and Big Springs allotments (field notes on file in project record). No indications of species occurrence were observed during surveys (i.e. burrows, fecal pellets).

Cultural Resources

The Forest Archeologist considered the effects to historic properties on National Forest System lands within the allotment from both alternatives. Direct, potentially adverse effects to historic properties from livestock use and rangeland management activities can include but are not limited to the displacement, damage, and destruction of artifacts, building remains, and associated landscape features. Braided trails, denuded vegetation, erosion, and intense soil churning within site boundaries from livestock use can affect artifacts and overall site integrity. Historic structures, pictographs, and petroglyphs can be damaged by livestock rubbing. Range improvements such as salting, water troughs, spring developments, and fences in or near site boundaries can directly impact sites through ground disturbance associated with implementation and maintenance. Direct and indirect effects can occur if these improvements encourage concentrated livestock use on sites.

The National Historic Preservation Act (NHPA) is the principle guiding statute for the management of cultural resources. Section 106 of NHPA requires federal agencies to consider the effects of their activities and programs on historic properties, and provide the Advisory Council on Historic Preservation the opportunity to comment on Agency undertakings. At the state level, the State Historic Preservation Officer (SHPO) reviews federal undertakings on behalf of the Advisory Council. The procedures for implementing Section 106 of NHPA are outlined in the U.S. Code of Federal Regulations (36 CFR Part 800).

NHPA, as amended in 1992, also requires federal agencies to consult with appropriate Indian tribes regarding the management of traditional religious and cultural properties eligible for the National Register of Historic Places. The Nez Perce Tribe, Shoshone-Bannock Tribes, and Shoshone-Paiute Tribes in particular have expressed their interests in cultural resources management on the Boise National Forest. The Tribes consider Native American sites in the area to be very important to their respective cultures.

Direct and indirect effects to historic properties from livestock use and rangeland management activities are determined by applying NHPA's criteria of effect. NHPA defines an adverse effect as one that diminishes the integrity of a historic or prehistoric site's location, design, setting, materials, workmanship, feeling, or association. Adverse effects include physical destruction, damage, or alteration to all or part of a site, and/or the introduction of visual, audible, or atmospheric elements that are out of character with the site, or alter its setting (36 CFR 800.5[a][2][i-vii]). Criteria of effect are only applied to those sites determined eligible for the National Register.

If an undertaking will not alter the characteristics of a historic property that make it eligible for listing on the National Register then a "No Effect" determination may be reached. "No Adverse Effect" determinations are applied when the Forest Service, in consultation with the SHPO, (1) determines that the effects do not meet the criteria of adverse effect, or (2) modifies the undertaking imposes conditions to avoid adverse effects. Should the Forest Service determine that an activity will have an adverse effect on a historic property, and SHPO concurs, the agency and SHPO will stipulate measures to resolve or mitigate the effect(s).

The Cultural Resources Specialist considered (1) the results of previous cultural resources inventories in the area; (2) the criteria of effect outlined in the 36 CFR 800 regulations implementing NHPA Section 106; (3) the intensity of livestock use on the National Forest System lands within the allotment; and (4) range improvements to determine the existence or potential for direct and indirect effects to historic properties.

The Forest Archeologist has determined that implementation of either alternative will have No Effect on historic properties because none have been identified during previous cultural resources inventories of National Forest System lands in the allotment. The Forest Service will document the No Effect determination with the Idaho SHPO under the terms of a Programmatic Agreement (FS Agreement No.: 06-MU-11040218-059) between the two agencies regarding the Rangeland Management Program. The Programmatic Agreement outlines the terms and conditions for satisfying the Forest Service's NHPA Section 106 responsibilities for the identification, evaluation, and resolution of adverse effects (should they exist) to historic properties in allotment areas.

Consistency with Other Laws, Regulations, and Policies

A number of disclosures involving compliance with various laws, executive orders, and regulations are required in grazing NEPA analyses. These disclosures are listed below.

CLEAN WATER ACT

The Clean Water Act (CWA) is a federal statute that requires states and tribes to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The watershed and fisheries analyses were focused on effects to six WCIs that serve as surrogates for the chemical, physical, and biological integrity of the water potentially affected by the Moores Creek Allotment. The analyses showed that there would either be no effect or a negligible beneficial effect to the WCIs, thus meeting the intent of the Act (Project Record, Fisheries and Watershed Specialists' Report, Tables 5 to 8, and Appendix E, p. 62).

EXECUTIVE ORDER 11988, FLOODPLAIN MANAGEMENT

The continued grazing alternative would not increase flood hazards.

EXECUTIVE ORDER 11990, PROTECTION OF WETLANDS

The continued grazing alternative would result in no net loss of wetlands.

PRIME FARMLAND, RANGELAND, AND FOREST LAND (DEPT. REGULATION 9500-3)

There are no prime farmlands, rangeland, or forest lands located on the Boise National Forest (Boise National Forest Revised Land and Resource Management Plan FEIS, p. 3-979).

FEDERAL LAND POLICY AND MANAGEMENT ACT (FLPMA), SECTION 402(G)

FLPMA requires two years' advance notice to a grazing permittee that the permittee's grazing privileges may be cancelled, except in emergency situations. If the no grazing alternative were to be selected, the affected grazing permittee would be sent the required advance written notification of the proposed closure of the allotment.

EXECUTIVE ORDER 12898, ENVIRONMENTAL JUSTICE

The Proposed Action is in compliance with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations." Continued grazing would not place any burden or disproportionate impact which could be considered an environmental injustice on any segment of the population. The proposal would not result in unequal protection of any part of the population of Elmore County, Idaho.

EXECUTIVE ORDER 13186 AND THE MIGRATORY BIRD TREATY ACT OF 1918

Migratory birds are present during the implementation period. They are normally present from the end of June to October. Continued grazing on NFS land could displace individuals any time during this period. Unintentional take could occur through destruction of nests and nestlings. Activities associated with grazing on this allotment would have little influence on migratory birds. Most migratory bird species are finished with the nesting period by July 1 and young have reached the fledged stage, allowing them to fly out of harm. The two week period between turn-on and the end of the nesting period would not noticeably change the effects to migratory birds. Additionally, the Moores Creek Allotment is on a deferred rotation, allowing for half the allotment to be rested until mid-August of each year (Project Record, Wildlife Specialist's Report and Biological Evaluation).

INVENTORIED ROADLESS AREAS

The Moores Creek Allotment includes about 1,687 acres within the Lime Creek IRA. The Lime Creek IRA encompasses about 97,000 acres on the Boise and Sawtooth National Forests and is designated as Primitive by the 2008 Idaho Roadless Rule (36 CFR Part 294, 73 FR 61456, et seq., 10/16/08). Neither the proposed action, nor its no grazing alternative, would have the potential to affect the IRA characteristics of capability, availability, or need of the Lime Creek IRA.

OTHER DISCLOSURES

There are no congressionally designated areas, Wild and Scenic Rivers, Research Natural Areas, protected caves, or parklands on the Moores Creek Allotment.

CONSULTATION AND COORDINATION

Forest Service IDT Members

Tina Ruffing	Team Leader, Range Resources, Vegetation Resources
Kay Beall	Rare Botanical Resources
Joe Bergstrom	Cultural Resources
Scott Bodle	Wildlife Resources
Devon Green	Fisheries Resources
Terry Hardy	Soils Resources
Bart Lander	NEPA Coordination
Susie Osgood	Cultural Resources Consultant
John Thornton	Watershed Resources

Tribes Consulted

Shoshone-Bannock Tribes – Fort Hall Business Council

Shoshone-Paiute Tribes of Duck Valley

REFERENCES

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APPENDIX A – RESPONSE TO COMMENTS

The Moores Creek C&H "On-Off" Allotment analysis was originally scoped with a Proposed Action Report that was mailed to several interested agencies, groups, and individuals in 2005. At that time, the Forest Service's intent was to complete a decision memo that, if no extraordinary circumstances were found in analysis, would have categorically excluded this analysis from documentation in an Environmental Assessment or Environmental Impact Statement. Scoping comment letters were received from Western Watersheds Project and Idaho Conservation League.

With the expiration of the congressional authorization to categorically exclude grazing allotment analyses, the Forest Service is disclosing the results of the environmental analysis of this allotment in an Environmental Assessment. There is no change to the original proposed action. To comply with the 30-day notice and comment period required for Environmental Assessments under 36 CFR 215, a "Legal Notice of Proposed Action" for this allotment was published in The Idaho Statesman, the newspaper of record, on March 9, 2009, and Proposed Action Reports were mailed to those interested parties who had commented in 2005. The 30-day notice and comment period ended at 11:59 p.m. on April 8, 2009.

The Forest Service considered each comment received during scoping. The project record also includes letters of support that were received from other commenters which are not included in the above list.

The following is the Forest Service's consideration of comments received during scoping that expressed opposition or concern with the proposed action. Following each comment is a number that identifies the commenter: (1) for Western Watersheds Project and (2) for Idaho Conservation League.

1. Who is the permittee on these allotments, and what other allotments does this permittee graze? What other allotments – on forest or BLM lands-are these cattle grazed on? (1)

Forest Service Response: The question as to whose cattle are grazed on the allotment is irrelevant to this analysis. There are no other NFS land that this permittee's cattle are grazed on. The decision has no potential to affect the permittee's use of privileges on the BLM-administered allotment which it also uses, 30 miles away from the Moores Creek Allotment.

2. Are sheep herded in these allotments and surrounding lands, and what is the impact of this herding on soils, vegetation, weed spread, etc.? (1)

Forest Service Response: Sheep are trailed in the stock driveway across the northwest corner of the allotment. The cumulative impacts of this herding on National Forest resources will be disclosed in the EA.

3. We are very concerned about possible impacts to the Lime Creek watershed or any other watersheds that may contain bull trout or other native trout populations. Which are these? What is the current condition of all perennial and intermittent streams here, as well as the overall health of the watershed? (1)

Forest Service Response: The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on bull trout and other native trout populations' watersheds, if present, will be disclosed in the Environmental Assessment.

4. Examine the possibility of incorporating the forest lands in these allotments with adjacent BLM or other forest allotments – so as to keep it from being sacrificed along with the private? (1)

Forest Service Response: The permittee has no grazing privileges on adjacent BLM or state land other than what is defined in the Moores Creek Allotment. Incorporating adjacent grazing lands is beyond the scope of this analysis.

5. Movement of livestock back and forth across these weed-infested areas results in rapid weed spread. All of these factors must be fully considered and assessed in examining the environmental impacts of livestock. (1)

Forest Service Response: The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on noxious weed spread will be disclosed in the Environmental Assessment.

6. Have changes to the grazing strategy occurred in an incremental manner over the years? What changes have been made? Have any changes undergone NEPA? (1)

Forest Service Response: The management of the allotment over past history has been adjusted when needed to respond to resource needs. The currently ongoing analysis is the first NEPA analysis for this allotment.

7. We ask that you collect important information on the health or condition of springs, seeps and many intermittent or ephemeral drainages here. Please provide data flow rates, water quality, changes in flows over time, effects of livestock developments, etc. on springs and seeps. (1)

Forest Service Response: The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on general watershed conditions and trends will be disclosed in the Environmental Assessment.

8. Provide all monitoring and other information that assesses or provides insight into livestock grazing that has occurred here, and the efficacy of any management actions, and describe what these actions were. (1)

Forest Service Response: This information will be available in the record.

9. What is the soil formation rate here? Has the site been permanently altered by erosion of soils on steep granitic slopes? How was forage affected? (1)

Forest Service Response: The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on soils and forage will be disclosed in the Environmental Assessment.

10. The Forest Service must conduct a livestock grazing suitability study, a forage production/productivity study, a capability study/determination and other necessary analyses to determine a sustainable level of use. (1)

Forest Service Response: The Forest Service has determined that livestock grazing is a suitable activity to occur within the Moores Creek Allotment. The site-specific capability analysis has been completed for this allotment and it has determined that there is sufficient capable range to support the currently permitted number of livestock.

11. The forest must identify all areas in the allotment that are "at risk" to weed invasion as a result of livestock grazing and trampling activity. Please describe zones of weed infestation, causes, rate of weed spread, identify "at risk" areas, etc. (1)

Forest Service Response: There is no Forest Plan requirement to identify areas at risk for noxious weed invasion. The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on noxious weed spread will be disclosed in the Environmental Assessment.

12. What damage is livestock trampling causing in these steep slopes? What damage to microbiotic crusts? Is it loosening soils so that they erode (wind and water erosions)? Etc. (1)

Forest Service Response: The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on soils and on microbiotic crusts, if they are likely to occur, will be disclosed in the Environmental Assessment.

13. We are very concerned that grazing in the allotments includes an extraordinarily high number of livestock over a prolonged period that includes the critical growing season for native plants, as well as the unrelenting hot season use. What is the critical growing period? What is the hot season? What areas are grazed during these periods? (1)

Forest Service Response: The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on native plants will be disclosed in the Environmental Assessment.

14. What are current standards of use? What will be triggers to remove livestock if standards are approached or neared? What is meant by "if the forage is fully utilized"? What standards, if any, currently exist here? Are they the same as described in the scoping letter? Why is this the only reason to remove livestock? Why do you have a trigger to remove livestock when zones of new weed infestation are identified- in order to try to prevent weed spread? (1)

Forest Service Response: The current standards for the use of the Moores Creek Allotment will be disclosed in the Environmental Assessment. Conditions that would require a change in the level of utilization to allow for resource sustainability are not expected on this allotment. If these utilization rates are found to be insufficient to meet resource objectives, they would be adjusted for this allotment. There is no trigger in place under current management to remove livestock from this allotment.

15. Please provide all monitoring information (Annual Operating Plans, utilization, trampling, browse, actual use, trespass, letters of noncompliance, warning letters, etc.) that would allow a reviewer to understand the history and patterns of grazing use here. (1)

Forest Service Response: Monitoring information is in the project record or in 2210 and 2230 Range files available at the Mountain Home Ranger District Office. The allotment has been managed in accordance with the Forest Service permit.

16. What is the status of the mule deer, elk, sage grouse, and other wildlife populations here? (1)

Forest Service Response: The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on wildlife will be disclosed in the Environmental Assessment.

17. The forest must conduct a comprehensive baseline survey for all important, special status, MIS or other plant or animal species of management concern here. For example, are sage grouse, pygmy rabbit, Brewer's sparrow, antelope, yellow warbler, yellow-breasted chat, ferruginous hawk, mule deer, northern goshawk or other important species present? (1)

Forest Service Response: The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on wildlife will be disclosed in the Environmental Assessment. Only those mentioned in the comment that are sensitive or MIS species, with habitat on the Moores Creek Allotment, will be surveyed.

18. The forest must provide adequate maps of current vegetation communities, assess their ecological conditions, and identify zones of weed invasion-including cheatgrass dominance of the understory, rush skeletonweed presence, and other weed infestation problems. (1)

Forest Service Response: The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on vegetative communities, including invasive species, will be disclosed in the Environmental Assessment.

19. The forest must also assess the direct, indirect and cumulative impacts not only of livestock grazing, but also of the other human uses such as extensive OHV use, that are occurring in watersheds in the allotment. (1)

Forest Service Response: There are no designated motor vehicle routes on the Moores Creek Allotment. All motor vehicle use on the allotment by permittees is administered through the Annual Operating Instructions. Any effects of this use are considered negligible.

20. Has the BNFP found the lands of these allotments to be suitable and capable? Where are maps depicting this? Please explain what this means. What areas are, or are not, usable by livestock without environmental degradation? Please provide a map and detailed information relating to suitability and capability. Did the analysis in the Forest Plan take into account the degraded conditions of soils, vegetation and watersheds here? (1)

Forest Service Response: Forest Plan-level analysis is beyond the scope if this analysis, but the allotment has received site-specific analysis of suitability and capability. The Forest Service has determined that livestock grazing is a suitable activity to occur within the Moores Creek Allotment. The site-specific capability analysis has been completed for this allotment and it has determined that there is sufficient capable range to support the currently permitted number of livestock.

21. What are the economic values of the wildlife, fisheries, and recreational uses of the lands that will be affected by theses decisions? How does livestock grazing detract from the recreational value or economic value of these uses? (1)

Forest Service Response: The Moores Creek Allotment receives light recreational use, primarily by big game hunters. There are no conflicts with existing recreational activities on this allotment that would detract from the recreational value or economic value of these uses.

22. How much land area has been logged or burned? (1)

Forest Service Response: There has been no logging in the area. The effects of past wildfires will be disclosed in the cumulative effects analyses for each resource in the Environmental Assessment.

23. How does livestock grazing affect hazardous fuels density, the type of fuels that are present, weed infestations, etc? (1)

Forest Service Response: There are no hazardous fuels conditions in the Moores Creek Allotment. The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on weed infestations will be disclosed in the Environmental Assessment.

24. How does grazing here affect water quality- including sediment, algae, fecal coliform, and such things as the potential for toxic algae in downstream reservoirs? (1)

Forest Service Response: There is no potential for the proposed action or alternatives to result in toxic algae in downstream reservoirs. The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on water quality will be disclosed in the Environmental Assessment.

25. What pathogens are found in soils and waters related to sheep or cattle use? Have these lands been tested for Q fever? (1)

Forest Service Response: According to the CDC, Q fever is most commonly carried in barnyard dust that contains high concentrations of manure, urine, or dried fluids from the births of calves or lambs. People become infected with the fever after breathing this dust. There is little risk for the proposed action to cause Q fever to be transmitted to humans because lambing is completed prior to sheep entering the project area, and animals are not heavily concentrated as in a feedlot or barnyard situation.

26. The forest must evaluate the impacts, necessity of, state of repair, and all other important effects of the range projects (fences, spring-gutting projects, pipelines, troughs, corrals and any other livestock facilities) on these lands. The forest must assess the benefits of removal of various facilities that may lead to resource degradation, are in poor repair, or otherwise are not serving the purpose for which they were built. (1)

Forest Service Response: The grazing permit requires the permittee to maintain the improvements in proper functioning condition.

27. What rare plant communities, RNAs, or other important or unique areas are present? (1)

Forest Service Response: There are no Research Natural Areas in the allotment. The allotment includes a portion of the Lime Creek Inventoried Roadless Area (IRA), but continued grazing would not affect the capability, availability, or need for the IRA. The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on rare plant communities will be disclosed in the Environmental Assessment.

28. What are the direct, indirect and cumulative impacts of roading here? What is the exact status of roading in these lands? How many roads are caused by ranching activities such as salt placement? (1)

There are no designated roads on NFS land within the allotment. The permittee is authorized to use motor vehicles on non-designated roads to conduct livestock management activities. The potential direct, indirect, and cumulative effects of this use on non-designated roads on NFS land within the allotment will be disclosed in the Environmental Assessment.

29. Please closely study the impacts of sheep grazing on aspen communities here. We are very concerned that you need to propose a 20% browse limitation on aspen or any woody vegetation use. (1)

Forest Service Response: The proposed action is not to authorize sheep grazing. The cumulative effects of the three to four bands of sheep that are trailed through the allotment twice each year will be disclosed in the Environmental Assessment.

30. How many acres are in the allotments? What is the stocking rate per acre? How will this be calculated based on suitability, current productivity, etc.? (1)

Forest Service Response: The Forest Service has determined that livestock grazing is a suitable activity to occur within the Moores Creek Allotment. The site-specific capability analysis has been completed for this allotment and it has determined that there is sufficient capable range to support the currently permitted number of livestock.

31. Please explain in detail any restoration activities may be contemplated here, and the affect of livestock grazing on their outcomes. (1)

Forest Service Response: No restoration activities are planned on the allotment at this time.

32. How are livestock impacting soils, microbiotic crusts, erosion processes? Which soils, have moderate or high erosion hazards, and where are they located? (1)

Forest Service Response: The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on soils and on microbiotic crusts, if they are likely to occur, will be disclosed in the Environmental Assessment.

33. How are livestock impacting cultural sites, and what is the interplay between livestock degradation of vegetation and soils, and impacts to cultural sites? (1)

Forest Service Response: Potential impacts on cultural resources will be avoided and mitigated under the programmatic agreement between the Forest Service and the Idaho State Historic Preservation Officer.

34. How is livestock use interfering with recreational uses of these lands? (1)

Forest Service Response: The Moores Creek Allotment receives light recreational use, primarily by big game hunters. There are no conflicts with existing recreational activities on this allotment.

35. What is the current sustainable level of forage production based on the vegetation that currently exists here? (1)

Forest Service Response: The Forest Service has determined that livestock grazing is a suitable activity to occur within the Moores Creek Allotment. The site-specific capability analysis has been completed for this allotment and it has determined that there is sufficient capable range to support the currently permitted number of livestock.

36. Please provide a map that depicts Management Prescription Categories across the allotments. How does livestock grazing affect these areas? How does it affect roaded/unroaded characteristics? (1)

Forest Service Response: The Environmental Assessment will disclose the Forest Plan Management Prescription Categories on the Moores Creek Allotment. The Project Record contains determinations of the consistency of current management of the Moores Creek Allotment with the standards and guidelines in the Forest Plan. The allotment includes a portion of the Lime Creek Inventoried Roadless Area (IRA), but continued grazing would not affect the capability, availability, or need for the Lime Creek IRA.

37. Where are important/critical/crucial winter range areas for native wildlife here, and what is their current condition? (1)

Forest Service Response: The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on wildlife will be disclosed in the Environmental Assessment.

38. How did the fire alter important components of the aquatic habitats, and how have they recovered? (1)

Forest Service Response: There is no record of recent wildfire within aquatic habitats on the allotment.

39. We ask that you prepare an EIS to fully assess the broad range of impacts that livestock are having to these important public lands. (1)

Forest Service Response: The potential direct, indirect, and cumulative effects of the proposed action, the no grazing alternative, and any other action alternatives on public lands will be disclosed in the Environmental Assessment. One of the purposes of an Environmental Assessment is to disclose the environmental effects of an action and its alternatives so the responsible official may determine whether an EIS is required.

40. Fully evaluate the importance of removing some of these blocks of forest land from grazing use, and using them as an ungrazed reference area, and for watershed protection and important aquatic and upland species. (1)

Forest Service Response: The comment suggests an action that is beyond the scope of this analysis.

41. We recommend that the maximum utilization of vegetation in riparian areas be restricted to 40% within 300 feet of streams, rivers, or other water bodies instead of 45%. In addition, the minimum stubble height should be increased to 6 inches instead of the current 4-inch standard. A 4-inch stubble height or 40% utilization level may not be sufficient vegetative cover to prevent or minimize sediment delivery. (2)

Forest Service Response: The current allowable use standards for the use of the Moores Creek Allotment will be disclosed in the Environmental Assessment. Conditions that would require a change in the level of utilization to allow for resource sustainability are not expected on this allotment. If these utilization rates are found to be insufficient to meet resource objectives, they would be adjusted for this allotment.

42. Because of the arid character of the South Fork of the Boise River Watershed, we believe that the maximum 50% grazing utilization of upland vegetation is insufficient. The maximum utilization level should be reduced to 45%. Reducing the maximum utilization of upland vegetation will help to insure that sufficient cover is present during the dry seasons and entering into the wet seasons to prevent surface erosion. (2)

Forest Service Response: Conditions that would require a change in the level of utilization to allow for sufficient vegetation cover are not expected on this allotment. If this utilization rate is found to be insufficient to meet resource objectives, they would be adjusted for this allotment.

43. The Forest Service needs to disclose the management indicator species, sensitive species, threatened species, and endangered species that might be affected by this action. (2)

Forest Service Response: The Environmental Assessment will disclose whether or not these species are likely to occur on the allotment; and if they are likely to occur, how they will be affected.