USDA Agricultural Research Service
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Agricultural Research Service
Pacific West Area
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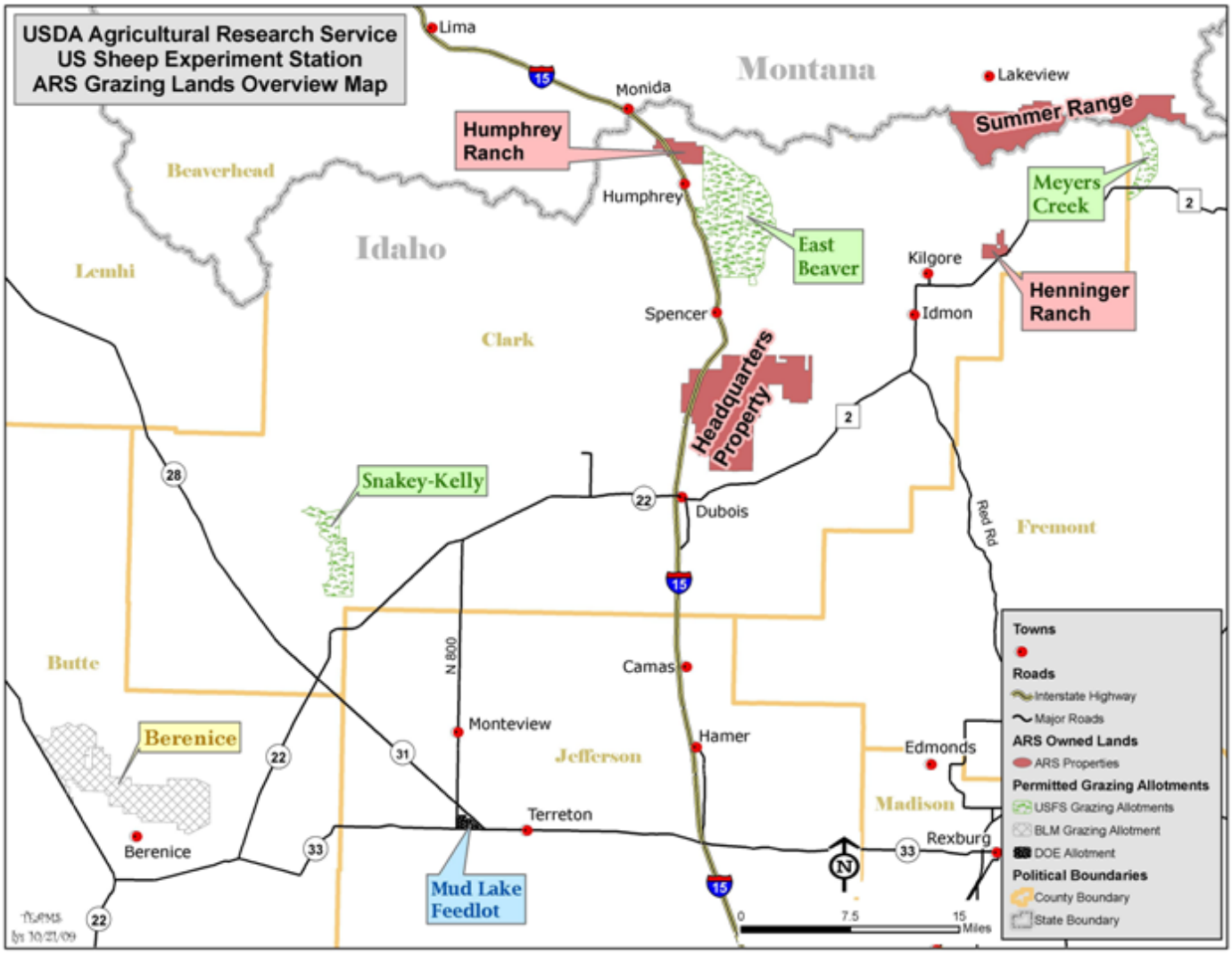
Supplemental Information Report

for

Interim U.S. Sheep Experiment Station Grazing and Associated Activities Project EA

United States Sheep Experiment Station
Dubois, Clark County, Idaho



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Where is this project in the NEPA process?

NEPA is a decision-making process. An acronym for the National Environmental Policy Act of 1969, NEPA provides opportunities for interested parties to give their ideas and opinions about federal actions. The following explains the steps of the NEPA process, and where the attached proposal is in that process.

_____ Step One - Need for a Project

The Agricultural Research Service or some other entity may identify the need for a project.

_____ Step Two - Develop Project Proposal

The Agricultural Research Service or a project proponent develops detailed, site-specific proposal.

_____ Step Three - Scoping (Public Input)

The Agricultural Research Service solicits public input on the site-specific proposal to define the scope of environmental analysis and range of alternatives to be considered.

_____ Step Four - Develop Reasonable Range of Alternatives

Scoping determines need for an EA: Agricultural Research Service develops alternatives that meet the purpose and need identified for the project.

____ Step Five – Information for Formal Public Comment Period

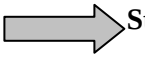
Agricultural Research Service performs analysis of environmental effects, identifies preferred alternative, and *may* solicit formal public comment.

_____ Step Six – Environmental Analysis & Decision

Agricultural Research Service finalizes the environmental analysis and makes decision to implement one of the alternatives.

_____ Step Eight - Implementation

Agricultural Research Service implements the project.



Step Nine - Monitor and Evaluate

Agricultural Research Service monitors and evaluates project results.

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Background

On November 28, 2008, Dr Andrew Hammond, Agricultural Research Service, Pacific Area West Director, signed the *Decision Notice for the Interim U.S. Sheep Experiment Station Grazing and Associated Activities Project Environmental Assessment* (USDA, 2008). This decision allowed the U.S. Sheep Experiment Station, Dubois, Idaho to continue historic and ongoing grazing operations through March 2010, the time needed to prepare an environmental assessment for the U.S. Sheep Experiment Station Grazing and Associated Activities Project 2009.

On September 21, 2009, the Federal District Court in Missoula issued an order enjoining and vacating the delisting of the Greater Yellowstone Area grizzly population. In compliance with this order, the Yellowstone grizzly population is once again a threatened population under the Endangered Species Act (http://www.fws.gov/mountain-prairie/species/mammals/grizzly/yellowstone.htm).

In late 2009, when the grizzly bear was relisted, the Agricultural Research Service, U.S. Sheep Experiment Station was in the process of preparing an environmental assessment for the U.S. Sheep Experiment Station Grazing and Associated Activities Project 2009. A formal comment period was held starting on December 14, 2009 and extended until January 25, 2010 (*Information for Public Comment, U.S. Sheep Experiment Station Grazing and Associated Activities Project 2009*. http://www.ars.usda.gov/News/docs.htm?docid=17878).

During informal discussions between the Agricultural Research Service and the U.S. Fish and Wildlife Service, Idaho Falls, Idaho (January 2010), it was determined that, because of the changed legal status for the Greater Yellowstone Area grizzly population, the Agricultural Research Service should enter into formal consultation for the grizzly bear.

As a result, the Agricultural Research Service has halted work on the environmental assessment for the U.S. Sheep Experiment Station Grazing and Associated Activities Project 2009 and will begin the environmental impact statement process to assess the effects of ongoing and historic grazing and associated activities on the U.S. Sheep Experiment Station, Dubois, Idaho. It is therefore necessary to address continued authorization of grazing activities after March 2010 until completion of the EIS, and new information related to the grizzly bear.

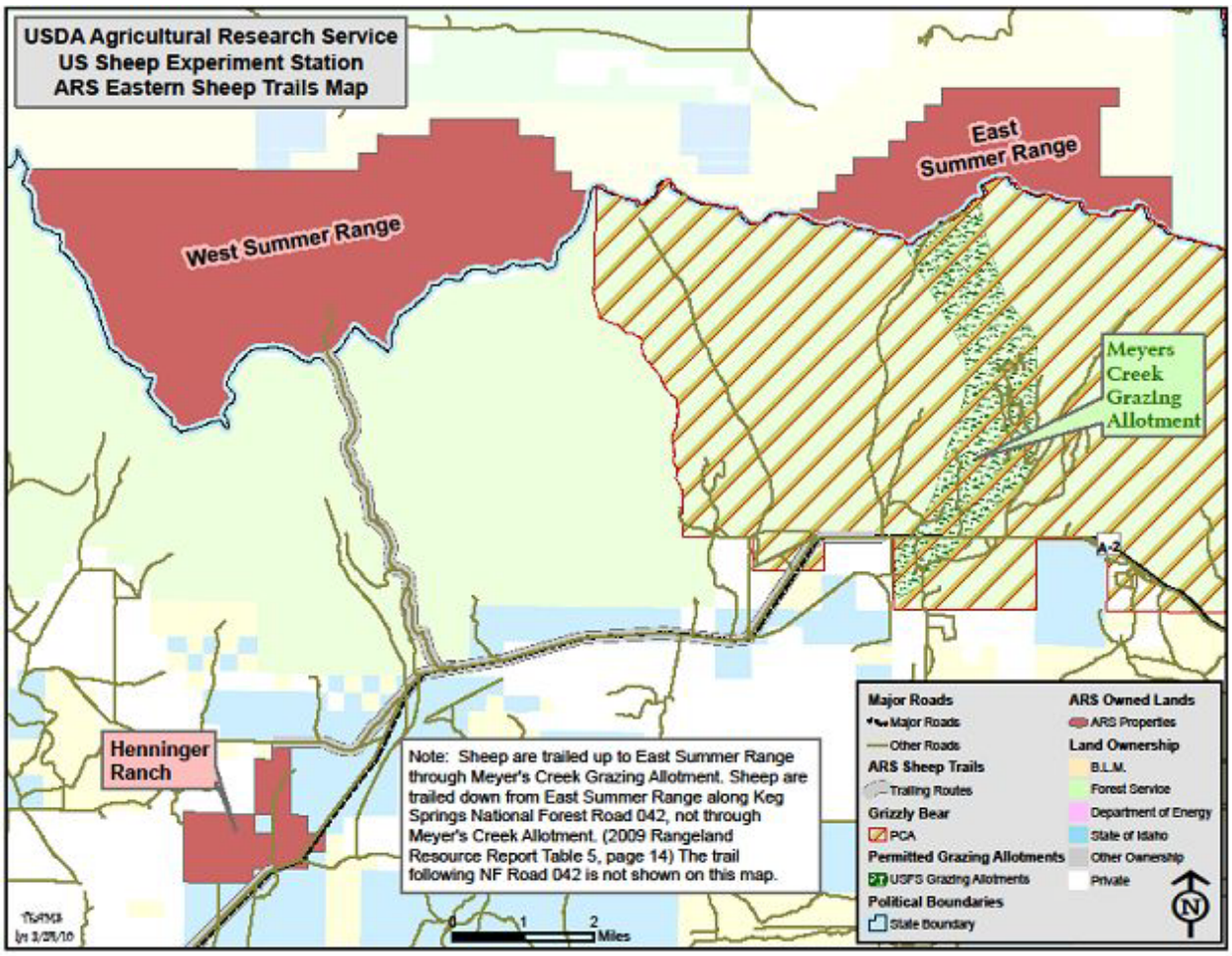

Figure 1. Eastern portion of the Agricultural Research Service lands for the U.S. Sheep Experiment Station lands, surrounding ownership, and Greater Yellowstone Area grizzly population Primary Conservation Area (PCA)

Changed Conditions

Because of the changed legal status for the Greater Yellowstone Area grizzly population, the Agricultural Research Service will begin formal consultation with the U. S. Fish and Wildlife Service.

The Forest Service (Caribou-Targhee National Forest) has also had to begin formal consultation with the U.S. Fish and Wildlife Service for the grizzly bear on the Meyers Creek Allotment that the U.S. Sheep Experiment Station historically uses to trail sheep (early to late July from the Henninger Ranch to the East Pasture (Grazing Unit: Toms Creek); see Figure 1). The Meyers Creek Allotment is currently in the Primary Conservation Area for the Greater Yellowstone Area grizzly population (Figure 1). Until such time as the Forest Service completes formal consultation for the Meyers Creek Allotment, the allotment will be unavailable for use to the U.S. Sheep Experiment Station. The Meyers Creek allotment is the only access to the Agricultural Research Service's summer East Range. Therefore, as long as the Forest Service keeps the Meyers Creek Allotment closed the summer East Range will also be unavailable for grazing operations. Accordingly, the U.S. Sheep Experiment Station will not utilize these areas for grazing until consultation is finished and the Environmental Impact Statement is completed.

The elimination of grazing on the Meyers Creek allotment and the summer East Range is the same as Alternative 4 as proposed and analyzed in the *Information for Public Comment, U.S. Sheep Experiment Station Grazing and Associated Activities Project 2009,* which was commented on by the public during December 2009 and January 2010. Table 1 displays the properties grazed under the Previous Selected Alternative (11/28/08 decision) and Alternative 4/Current Selected Alternative.

Table 1. Properties grazed by Alternative

Properties	Previous Selected Alternative (11/28/08 decision)	Alternative 4/Current Selected Alternative
	Proposed Action / No New Federal Action	No grazing would occur on the East Summer Range as well as on the Meyers Creek allotment
Agricultural Research Service (ARS)		
Headquarters	Grazing	Grazing
Humphrey		
Henninger		
East Summer		***No Grazing***
West Summer		Grazing
Leased (DOE, USDA- Forest Service, DOI-Bureau of Land Management)		
Mud Lake Feedlot	Grazing	Grazing
Snakey-Kelly		
East Beaver		
Meyers Creek		***No Grazing***
Bernice		Grazing

Alternative 4/Current Selected Alternative

Alternative 4 was developed in response to the public suggestion (Scoping for the U.S. Sheep Experiment Station Grazing and Associated Activities Project 2009) that grazing be eliminated within and adjacent to the grizzly bear primary conservation area (PCA) (Note: Agricultural Research Service East Summer Range lands are not within the grizzly bear primary conservation area, but are only adjacent to it.). Alternative 4/Current Selected Alternative is similar to the decision to continue historic and ongoing grazing and associated activities under the Previous Selected Alternative (11/28/08), but there would be no grazing on East Range and no grazing on Meyers Creek Forest Service allotment. The majority of the animal units (AUM) needed to replace the July through August grazing that currently takes place on these two pastures would be made up by having an extended grazing period on the USSES Summer West Range lands. This increased grazing on the Summer West range would still result in only 7.2% of the available AUM being grazed on that pasture, necessitating no reduction in the number of sheep grazed for implementation of Alternative 4/Current Selected Alternative.

The average days and rounded sheep numbers for a typical year, when sheep would be moved on and off each range under Alternative 4/Current Selected Alternative are shown in Figures 2-4.

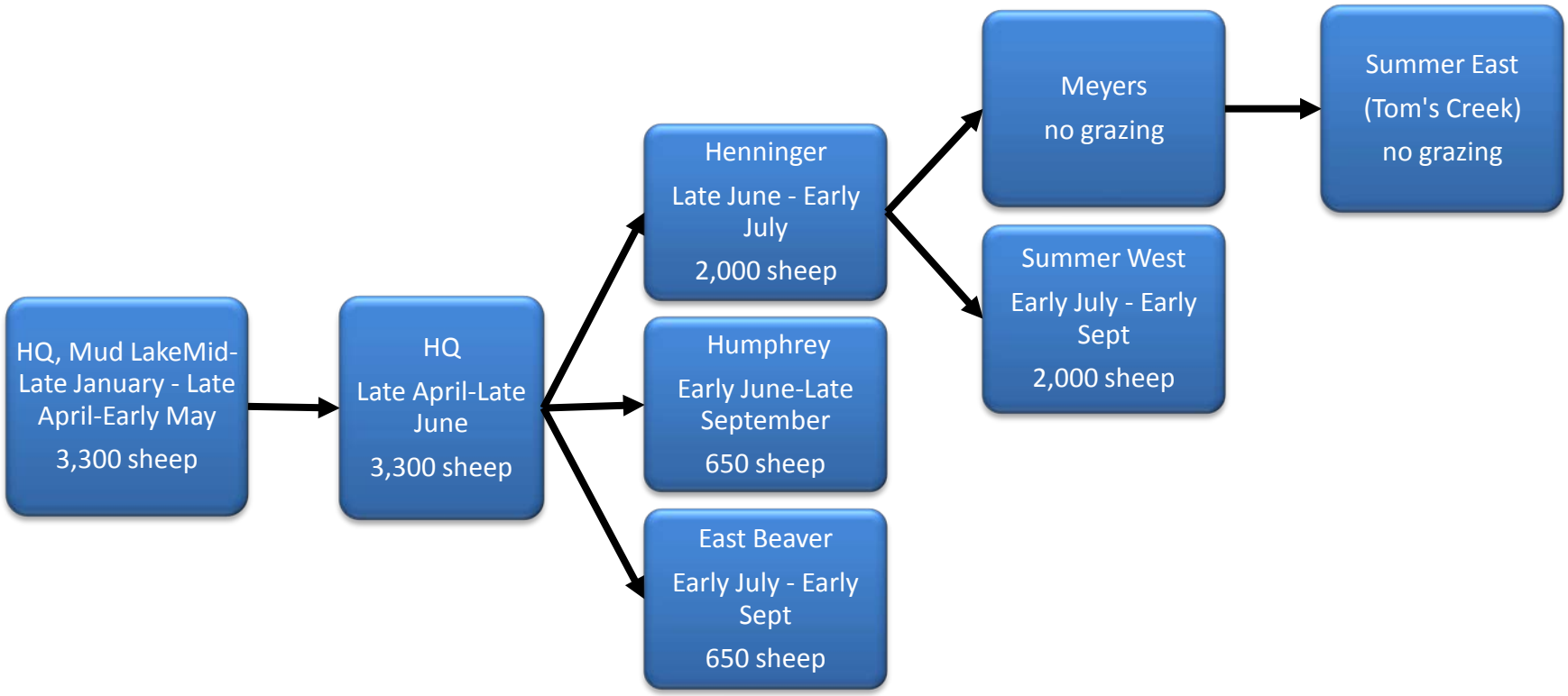

Figure 2. Alternative 4 sheep movement out to summer range

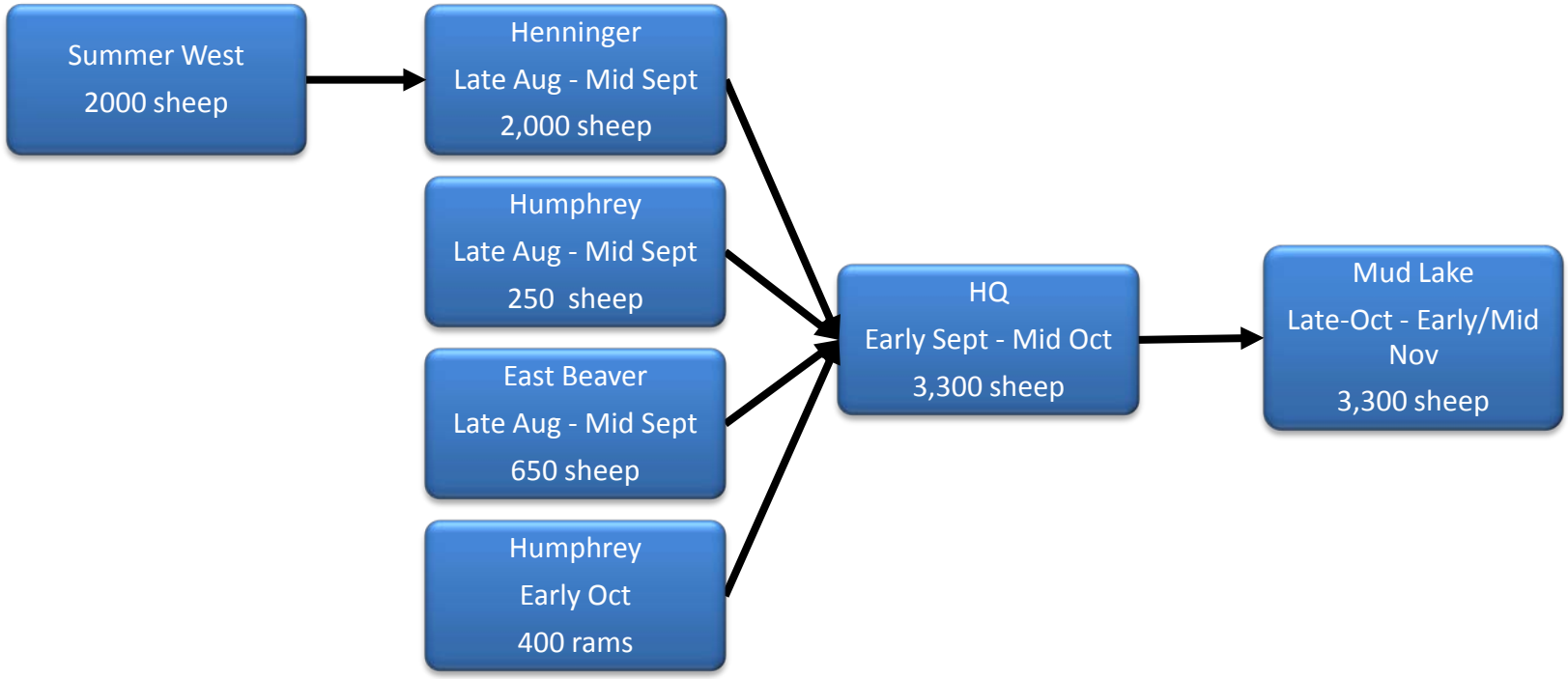

Figure 3. Alternative 4 sheep movement off summer range

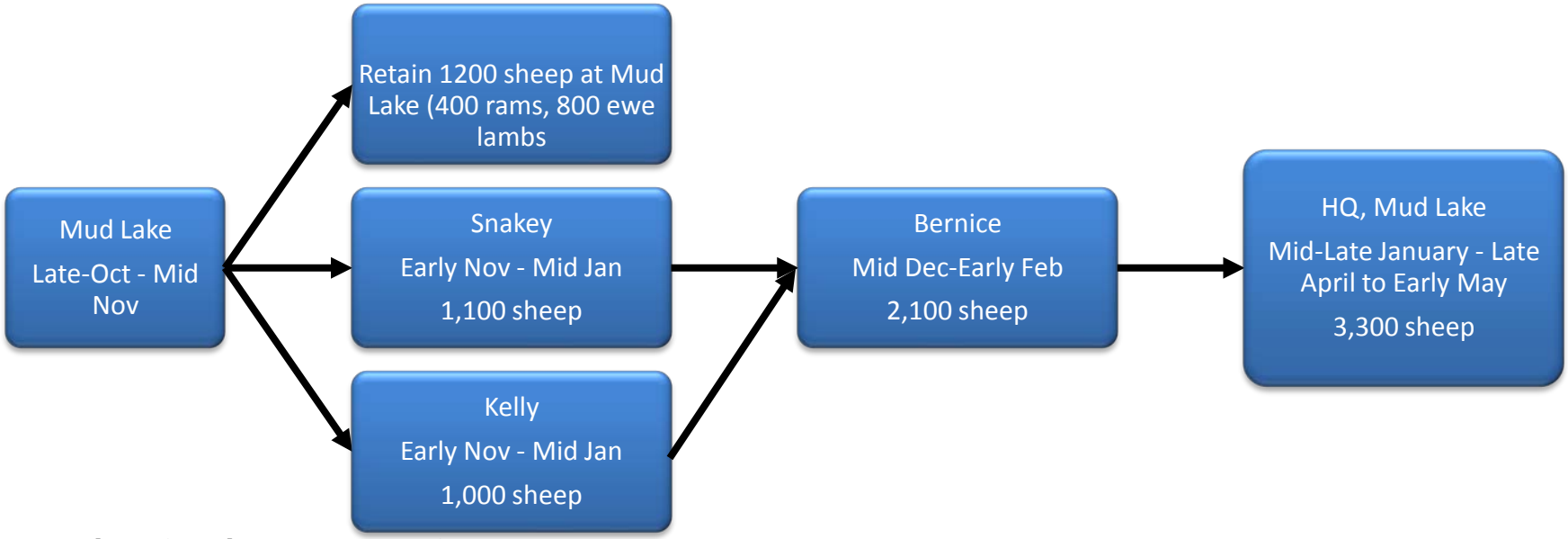

Figure 4. Alternative 4 sheep movement to winter range

Currently, two out of every three years sheep graze summer East Range and the Meyers Creek Allotment. During the third year these areas are rested. This rest/rotation cycle would have to be altered to eliminate the every third year rest on the Summer East Range land to accommodate the temporary loss of the Summer East and Meyers Creek lands.

Wildlife Conservation Measures

The U. S. Sheep Experiment Station will continue to implement a number of conservation measures to reduce the likelihood of potential conflicts with grizzly bear (as well as other predators) and domestic sheep/livestock. They include:

- Grizzly bear trapping, transportation, or lethal removal is outside the scope of this project and thus, if needed, would require the U.S. Sheep Experiment Station to re-initiate consultation or conduct an emergency consultation, in order to consider the probability of incidental take. (Definitions of take include disruption of breeding, feeding, sheltering behavior which ultimately leads to injury or death.)

- When creating research plans that include a sheep grazing component, consider potential livestock-bear conflicts and avoid areas where problems can be anticipated.

- Use good husbandry practices so that sheep are as healthy as possible, are suitable for research, and the number sick/stray animals is kept to a minimum. An institutional animal care and use committee evaluates research protocols and livestock management practices to ensure they are consistent with good animal husbandry, and comply with Federal laws that govern the use of agricultural animals in research. Protocols and practices that do not comply are not approved.

- Sheep herders, working dogs, and guard dogs are kept with the sheep full-time when on rangelands to reduce the likelihood of encounters, and to assist in efficient and prompt movement of animals when necessary. In the summer range, sheep are accompanied by a minimum of two guard dogs, two herd dogs, and a full time sheep herder. Very few stray animals occur over the course of the season because of the close contact the sheep herders have with sheep. In the evenings, sheep are bedded on an approximate one-acre area. On moonlit nights, the sheep do have the tendency to get up and graze, so extra vigilance is necessary to watch over sheep.. Lame animals that may occur on occasion are watched closely because of the impact they have on moving the herd, and because animals need to be accounted for to maintain research objectives. Therefore, when lame animals do not recover, they are subsequently removed from the herd within a short period of time, (approximately every 3 days when the camp tender brings supplies) and transported back to the headquarters property. .

- All unnatural attractants to bears are minimized. This includes treatment or removal of livestock carcasses, and proper storage of human foods, garbage, and dog food. Approved "bear-proof" containers are used, and damaged containers are repaired or replaced so that they work as designed. Camp tenders and managers make periodic visits (approximately every three days) to remove trash and/or dead animal carcasses in order to eliminate potential bear attractants. In some locations it is not feasible to remove carcass (due to degree of decomposition and/or access to get them out). In such cases, the carcass is left in place and decomposition expedited with the addition of lime.

- At least two formal training-orientation meetings are conducted annually with U.S. Sheep Experiment Station employees and herders to make sure they can identify grizzly bear, black bear, bighorn sheep, Canada lynx, mountain lions, etc. In addition, they discuss U.S. Sheep Experiment Station sanitation and garbage removal practices, nonlethal procedures to address livestock-wildlife encounters, and

who to contact should encounters occur. Training and education are ongoing and not limited to formal meetings.

- Regarding grizzly bears, herders are instructed to do everything possible to avoid an encounter. Moving the sheep to other areas of the pasture may occur, and moving sheep to other pastures/locations is an option if problems persist. They are to report the sighting to their supervisor as soon as possible. Sheepherders carry guns and bear spray for safety and to scare off inquisitive animals. If a grizzly bear is threatening sheep, herders may discharge their rifle into the air if they think it will help frighten the bear (hazing). A herder may shoot directly at a grizzly bear only if his personal safety is threatened, however this situation has not occurred with U.S. Sheep Experiment Station grazing, and is not expected to occur.

- When on Agricultural Research Service land, all existing and suspected bear activity and (or) conflicts are reported directly to APHIS Wildlife Services. APHIS Wildlife Services then contacts state and federal agencies as necessary.

- When on USDA, Forest Service, or on DOI, Bureau of Land Management land, all existing and suspected bear activity and(or) conflicts are reported directly to the Forest Service or Bureau of Land Management, respectively, as well as APHIS Wildlife Services.

- In an interagency agreement with the U.S. Forest Service (USDA Forest Service, 2007), the U.S. Sheep Experiment Station agrees they will comply with meeting grizzly bear management goals on the Meyers Creek and East Beaver Allotments including notifying appropriate personnel of encounters, and temporarily stopping or modifying grazing as necessary, should bear conflicts arise with humans or livestock. Refer to the specific interagency agreement for details.

Other reasonable and prudent measures may be developed as formal consultation with the U.S. Fish and wildlife Service proceeds.

Comparison of Resource Effects

Table 2 displays the summary of resource effects between the Previous Selected Alternative (11/28/08 decision) and Alternative 4/Current Selected Alternative as developed in the *Information for Public Comment, U.S. Sheep Experiment Station Grazing and Associated Activities Project 2009* document (UDSA, 2009). For detailed analyses, see Appendix A to this document.

Based on the continued use of wildlife conservation measures and the elimination of grazing in the Meyers Creek allotment and East Summer Range during the consultation and analysis period, the effects to the grizzly bear are expected to be minimal and further reduced from those documented in the EA and *Decision Notice for the Interim U.S. Sheep Experiment Station Grazing and Associated Activities Project.*.

Table 2. Comparison of alternatives by resource effects

Previous Selected Alternative (11/28/08 decision)	Alternative 4- Current Selected Alternative
Proposed Action / No New Federal Action	**No grazing would occur on the East Summer Range as well as on the Meyers Creek allotment**
Range	
Alternative 1 would continue to provide range conditions necessary for the U. S. Sheep Experiment Station to continue its mission of current and ongoing research	Cessation of grazing and associated activities on the East Range and Meyers Creek allotment would have some changes to range conditions. By eliminating the opportunity for rest and recovery cycle that use of the East Range provides, there would be an increase in the

Previous Selected Alternative (11/28/08 decision)	Alternative 4- Current Selected Alternative
	grazing pressure on the West Range.
Federally-Listed Wildlife Species	
***Canada Lynx (Lynx canadensis)* - U. S. Sheep Experiment Station Grazing and Associated Activities Project 2009, "may affect, but is not likely to adversely affect Canada lynx." The project would have "No Effect" on critical habitat as none is present or proposed within the project area.**	
For both alternatives there is a very low probability of Canada lynx occurrences on Agricultural Research Service lands. Minimal, if any, effects would occur with regard to Canada lynx, both to individuals as well as to habitat. No effects would occur to designated critical habitat as none is present, and none is being proposed or considered in the area..	
***Greater Yellowstone Area grizzly population* (*Ursus arctos horribilis*)**	
At the time of the 11/28/08 Decision notice this grizzly population was not a listed species, therefore the Previous Selected Alternative was "not likely to adversely affect the Yellowstone Distinct Population of grizzly bear" Due to the recent relisting of the Greater Yellowstone Area grizzly population the USSES is entering into formal consultation with the USFWS and initiating the environmental impact statement process.	"Not likely to adversely affect the Yellowstone Distinct Population of grizzly bear" Grazing and associated activities would not occur on the East Summer Range (Tom's Creek) or on the Meyers Creek allotment of the U.S. Forest Service eliminating all grazing in and directly adjacent to the bear's primary conservation area. .
Gray Wolf (Canis lupus) Northern Rocky Mountain Distinct Population Segment. Currently not a listed species. Determination applies if returned to previous federal status of nonessential experimental population)	
"Not likely to jeopardize the continued existence of the gray wolf or adversely modify proposed critical habitat"	
Other Wildlife Species	
Rocky Mountain Bighorn Sheep (Ovis canadensis canadensis) Not a federally listed species. State game species with controlled hunts in some areas	
Not directly affected by grazing on any of the U.S. Sheep Experiment Station properties	
Greater Sage-grouse (currently not a listed species, details included in the Wildlife Report)	
Benefits to habitat derived from increased mosaic of shrubs, forbs, grasses, and maintained lek sites. Small temporary displacement from grazing sheep during early brood rearing. Overall balance between positive and negative effects are neutral.	
Pygmy Rabbit (currently not a listed species, details included in the Wildlife Report)	
Pygmy rabbits would persist with population numbers and trends similar to the current condition. Prescribed or wildland fires would temporarily reduce portions of pygmy rabbit habitat until shrub cover returns to a mature state.	
Connectivity habitat for wide- ranging carnivores (Concern brought up during public scoping). Details included in the Wildlife Report	
Carnivore use of the Centennial Mountain range would continue similar to the current condition. Would not reduce connectivity in the Centennial Range. Large carnivores travel through and/or occupy habitat mostly without disturbance because of the large scale of available habitat, and sheep bands occupy only a small acreage for short duration. Lethal control actions would remain minimal and at levels similar to past actions. Lethal control would not occur for grizzly bears.	
Fish and Amphibians - Details included in the Wildlife Report	
No effects would occur to arctic grayling, westslope cutthroat trout, or Yellowstone cutthroat trout. Effects to spotted frogs, boreal western toads, chorus frogs, and other amphibians would be rare and limited to the loss of a few individual animals (adult amphibians or larvae) in localized areas associated with watering activities in springs and lakes. Interdisciplinary review of current aquatic conditions found stable stream channels, non-erosive banks, functioning flood plains, dense willows, and vigorous riparian vegetation is the dominant characteristic in all of the fish-bearing streams and lakes and where amphibians are expected to occur.	
Infrastructure	
There would be no changes to the activities associated with the infrastructure.	Roads, fences, and firebreaks would continue to be maintained as necessary; sheep would continue to be transported to winter ranges and Mud Lake Feedlot by truck; sheep would continue to be trailed to Henninger, Snakey-Kelly, and West Summer; driveways in West Summer would continue to be used

Previous Selected Alternative (11/28/08 decision)	Alternative 4- Current Selected Alternative
Sheep	
There would be no change from the existing sheep herd (3,300 sheep)	
Soils	
Soils stable and productive except for low veg/soil state at Henninger. Maintains active noxious weed abatement program, though uses Krovar at feedlots. Maintains natural fire cycle at Headquarters.	Soils stable at Headquarters and Humphrey. Improved riparian soils at Beaver Creek willow tributary; Possible decreased plant vigor, litter production at Henninger and West Summer pasture. Decreased risk of invasive plants, though use of Krovar in feedlots; Maintains natural fire cycle at Headquarters.
Hydrology	
All proposed alternative would meet the intent of the Clean Water Act and the Executive Orders for wetlands and floodplains.	
No Change from present	
Botany	
There would be no impacts to federally listed plant species from any alternatives proposed because no species occur and no habitat for federally listed plant species is present within Agricultural Research Service lands. All alternatives proposed within this environmental assessment would be in compliance with threatened and endangered plants according to the Endangered Species Act.	
Heritage	
Selection of neither alternative would require Heritage review and compliance	
Socioeconomics	
No change in social or economic conditions	
Environmental Justice	
No change in the current economic conditions, and would not have any impact on minority or low income populations	

Comments Received Concerning Alternative 4/Current Selected Alternative

- Two commentors specifically mentioned the use of Alternative 4 during the public comment period on the *Information for Public Comment, U.S. Sheep Experiment Station Grazing and Associated Activities Project 2009* (USDA, 2009). The NEPA documents indicate that occupied grizzly bear habitat in the eastern portion of the project area (East Summer Range and the Meyers Creek allotment) can be closed with no reduction in sheep numbers and minimal increases to the range utilization on other ARS lands and allotments (Alternative 4). We favor the elimination of sheep in these two areas to comply with the Greater Yellowstone Grizzly Bear Conservation Strategy (eliminating sheep grazing within the Primary Conservation Area ("PCA")) and to reduce the risk of grizzly bear conflicts immediately adjacent to the grizzly bear PCA (East Summer Range). Perhaps grazing could still continue in the East Summer Range without violating the grizzly bear strategy—by trucking sheep to that pasture rather than trailing them through Meyers Creek—but we believe sheep should be removed from this area altogether due to its importance to grizzly bears. . . Closing the East Summer Range and Meyers Creek Allotment to sheep grazing (Alternative 4): These areas are only grazed two out of three years, and the season is only two months long (p. 1, Table 1); When these areas are grazed, 226 Animal Unit Months of forage are consumed (Table 1), which supports fewer than 600 sheep for those two months (226 AUM's/2 months x 5 sheep/AUM); The Environmental Assessment ("EA") indicates that Meyers Creek must be grazed to provide the sheep a means to be trailed to the East Summer Range without the excess haste that would harm the sheep—What about trucking the sheep to the East Summer Range on the Keg Springs Road? Yet even if this could be done, we oppose sheep grazing in the East Summer Range due to both the mortality risk and displacement impacts it poses for grizzly bears using that area. . . . We disagree with the claim in the summary table (Table 13, p. 43) that there is no difference between the effects on grizzly bears from Alternative 4 versus the Proposed Action. Clearly, eliminating sheep from occupied grizzly bear habitat in the eastern portion of the USSES lands and the Meyers Creek Allotment—effectively keeping USSES sheep at least five miles from the grizzly bear Primary Conservation Area—will significantly reduce the impacts of the USSES operations on grizzly bears. . . . We are not convinced that Alternative 4 would significantly impair the USSES operations, as claimed in Tables 14 and 15 with no supporting justification (pp. 47-49, 52). . . . We are further reassured that Alternative 4 is a relatively "easy fix" to the risks posed to grizzly bears by the USSES operations with the statements in the EA that there will be "no change to employment and income conditions" from this alternative compared to the Proposed Action.

  RESPONSE: During the extended period of the Interim EA the agency will proceed under Alternative 4, meaning that there will be no grazing on the Meyers Creek Forest Service allotment or on the U.S. Sheep Experiment Station summer East Range. It is possible that the final agency action that is decided upon during the Environmental Impact Statement process will reinstate grazing on these two parcels, but any such proposed action will be dealt with during the EIS process.

- Under EA alternative 4, sheep grazing would be eliminated within and adjacent to the grizzly bear PCA. ARS acknowledges that if sheep grazing were eliminated on the last occupied sheep allotment (Meyer's Creek) within the grizzly bear PCA, the intent of habitat standards in the Forest Plan Amendment (2006) would be fully implemented (emphasis added).. . .. Also under Alternative 4, grazing would be eliminated on Tom's Creek, the East Summer range, which is on the border of the PCA. "The area is likely biologically suitable and socially acceptable to grizzly bear occupancy according to the Grizzly Bear Management Plan for Southwestern Montana (MFWP, 202, in EA,

p.96). . . . If grazing were eliminated from these locations, "grizzly bear mortality from U.S. Sheep Experiment Station activities would not occur" (emphasis added).

RESPONSE: During the extended period of the Interim EA the agency will proceed under Alternative 4, meaning that there will be no grazing on the Meyers Creek Forest Service allotment or on the USSES Summer East range. It is possible that the final agency action that is decided upon during the Environmental Impact Statement process will reinstate grazing on these two parcels, but any such proposed action will be dealt with during the EIS process.

References

Lewis, Gregory. 2009. Personal Communications with Gregory Lewis, Station Director, ARS, USSES Dubois, Idaho

Moffet, Corey (2008) Personal Communications with Corey Moffet, Rangeland Scientist, ARS, USSES Dubois, Idaho.

USDA (U.S. Department of Agriculture), Agricultural research Service. November 2008. Interim U.S. Sheep Experiment Station Grazing and Associated Activities Project, Decision Notice, Finding of No Significant Impact, and Environmental Assessment. (http://www.ars.usda.gov/News/docs.htm?docid=17878)

_____. December 2009. Information for Public Comment, U.S. Sheep Experiment Station Grazing and Associated Activities Project 2009. (http://www.ars.usda.gov/News/docs.htm?docid=17878)

Appendix A – Effects of Alternative 4- Current Selected Alternative

Range

Headquarters/Humphrey/Henninger

Same as the Selected Alternative (11/28/08 decision).

East Summer Range

Same as the Selected Alternative (11/28/08 decision).

West Summer Range (Odell/Big Mountain)

Forage utilization on West Summer Range would increase from 5.1 percent in the Selected Alternative (11/28/08 decision) to 7.2 percent in Alternative 4. With increased forage use, stocking and utilization would remain light. Cessation of grazing on East Summer would result in grazing West Summer (Odell/Big Mountain) each year. Although rest rotation could be done on some grazing units, good range conditions with a static or slight upward trend would continue. Small (less than 50 acres) areas of heavy use on sheep driveways, watering sites, bedding and herder camps would increase with higher use.

Alternative 4 - Summary Range Direct/Indirect Effects

Table A-1 displays available forage in AUMs, AUMs used, percent of available forage used, grazing period used during the year and number of days grazed by property.

Cessation of grazing and associated activities on the East Summer Range would have some changes to range conditions on the Agricultural Research properties. However, the overall unavailability of the East Summer Range for grazing would not provide range conditions necessary for the U. S. Sheep Experiment Station to continue its current and ongoing research mission.

Table 3. Alternative 4 – percent of forage used, grazing period and grazing days by property[c]

Property	Available Forage AUMs[a]	AUMs Used	Percent of Available Forage Used	Inclusive Grazing Period	Approximate Grazing days[b]
Headquarters	28,353	1598	5.6	April 23 – June 25	86
				Sept 1 – Nov 1	61
Humphrey	4,476	603	13.5	June 1 – Oct 20	142
Henninger	1,914	470	24.6	June 25 – July 9	15
				Aug 31 – Sept 15	16
East Summer	4,043	0	NA	July 3 – Aug 31	60
West Summer	9,881	711	7.2	July 9 – Aug 31	54

[a] - Animal Unit Month. By definition, one (1) AUM represents 790 lbs of dry forage consumed over 30.44 days by a 1,000-lb cow that is nursing a calf. For the purposes of this table, five (5) sheep3 are equivalent to one (1) AUM.
[b] - Depending on weather conditions and day of the work week these dates may shift ± 7 days.
[c] - A sheep is considered a lamb that is weaned, a yearling ram or ewe, a mature ram or ewe, or a pregnant or lactating ewe with a lamb(s).

Range Cumulative Effects

The spatial boundary for range cumulative effects for this analysis includes the U.S. Sheep Experiment Station properties (Headquarters, Humphrey, Henninger, East and West Summer Ranges) and the leased lands (Mud lake Feedlot, Snakey, Kelly, East Beaver, Meyers, Bernice), use of these lands is part of the overall grazing strategy for the U.S. Sheep Experiment Station. The temporal boundary represents resource impacts that occur across timeframes of five years. The five-year timeframe allows for yearly fluctuations while being an appropriate timeframe to identify range condition and trend.

Within the cumulative effects area, none of the properties is adjacent to another. Sheep are trucked or trailed between properties and allotments. Therefore, effects to range are not interdependent. An increase or decrease in range condition on one property or allotment does not affect range condition on any other property.

Alternative 4 (No Grazing East Summer Range, Meyers Creek Allotment)

Mud Lake Feedlot, Snakey, Kelly, Bernice, and East Beaver Allotments

Same as the Selected Alternative (11/28/08 decision).

Meyers Creek Allotment

No grazing on Meyers Creek allotment eliminates grazing of the transition unit between low- and high-elevation grazing. Loss of this unit affects flexibility and increases utilization on Henninger. All other affects are the same as alternative 2.

Cumulative effects from continued grazing and related activities including past, present, and foreseeable future grazing and related actions would not adversely affect the current range resource.

Alternative 4 – Summary of Cumulative Effects

Cumulative effects from continued grazing and related activities including past, present and foreseeable future grazing and related actions would not adversely affect the current range resource.

Table A-2 displays available forage in AUMs, AUMs used, percent of available forage used, grazing period used during the year and number of days available for grazing by allotment.

Cessation of grazing and associated activities on the East Summer Ranges and Meyers Creek allotment would have some changes to range conditions. However, the overall unavailability of the East Summer Range and Meyers Creek allotment for grazing would not provide range conditions necessary for the U.S. Sheep Experiment Station to continue its current and ongoing research mission.

Table A-2. Alternative 4 – percent of forage used, grazing period and grazing days by allotment

Allotment [a]	Available Forage AUMs[g]	AUMs Used	Percent of Available Forage Used	Inclusive Grazing Period	Approximate Grazing days Available
Mud Lake [e]	560	160	28.6	April 1 – June 1	62
Snakey-Kelly [b], [c]	1756	421	24.0	Nov 1 – Dec 15	45
East Beaver	17887	213	1.2	July 3 – Sept 1	61
Meyers Creek	3076	0	NA	NA	NA
Bernice [d], [f]	2808	650	23.2	Dec 15 – Feb 5	53

[a] - Grazing units within allotments are rest rotation grazed.
b - Snakey has 1200 sheep permitted for the allotment, Nov 6 to Jan 2, date move out of Snakey/Kelly is based on weather conditions, early snow accumulation would require move out dates earlier than permitted dates. Sheep would always be moved out of Snakey on or before January 12 and always moved out of Kelly on or before January 13.
c - Kelly has 1000 sheep permitted for the allotment, Nov 20 to Jan 3.
d - Bernice has 1050 sheep permitted for the allotment, Nov 23 to Feb 1, and 1050 sheep permitted for the allotment, Dec 06 to Feb 5,
e - 400 Rams and 700 ewe lambs are retained at Mud Lake when 2230 sheep are moved in mid November to graze at FS and BLM allotments.
f- Grazing dates at Bernice depends on snow conditions, early snow requires moving earlier than early February 5 with less days grazed.
[g] Animal Unit Month. By definition, one (1) AUM represents 790 lbs of dry forage consumed over 30.44 days by a 1,000-lb cow that is nursing a calf. For the purposes of this table, five (5) sheep3 are equivalent to one (1) AUM.

Federally Threatened, Endangered, and Proposed Species

Activities on the U.S. Sheep Experiment Station are subject to the Endangered Species Act.

Canada Lynx (Lynx canadensis)

Canada Lynx Summary of Direct/Indirect Effects

Disturbances to Canada lynx are unlikely in the Selected Alternative (11/28/08 decision) as well as Alternative 4 a, based on low potential for year-round occupancy, lack of control measures directed at felines, and the presence of full time sheep herders and guard dogs that limit depredation. However, the potential exists for lynx to move through the area foraging and in search of larger expanses of high quality habitat. In such cases, disturbances would be limited to an occasional lynx avoiding the immediate area coincident with a band of domestic sheep, guard dogs, and herd dogs. Where suitable foraging and denning habitat is present in sufficient quantities, Canada lynx would temporarily adjust their location to avoid encounters, but continue to forage in nearby forested stands.

Canada Lynx Cumulative Effects

The spatial boundary for the discussion of cumulative effects for Canada lynx is the Centennial Mountain Range, because this landscape incorporates multiple Lynx Analysis Units established by the USFS (2005) in cooperation with the U.S. Fish and Wildlife Service, and is large enough in size to support a resident population of several lynx. The temporal boundary is from present day through the next 10 years because projections beyond that timeframe are similar to that being described, but with reduced accuracy.

As stated in the affected environment section of the report, the official status of adjacent habitat on U.S. Forest Service lands is unoccupied according to the Canada Lynx Conservation Agreement (USDA Forest

Service, 2006). There is potential for occasional lynx to use the Centennial Mountains while temporarily foraging or moving between larger expanses of quality habitat in northwest Wyoming and Central Idaho. The proposed project and alternatives do not reduce available habitat, would not add additional effects which would render potentially occupiable habitat as unsuitable, nor would it deter from the Centennial mountains ability to provide temporary Canada lynx travel and foraging between higher quality habitat in Yellowstone or Central Idaho. As such, the project and alternatives do not contribute to additional cumulative effects.

There are no interrelated actions associated with this project. Interdependent actions include livestock grazing permits issued in Targhee National Forest lands, as well as past and proposed timber sales there. Existing habitat on USFS lands is managed in compliance with the Lynx Conservation Assessment and Strategy, the Lynx Conservation Agreement, as well as Northern Rockies Lynx Management Direction (2007) and thus, would maintain conditions that provide for continued protection and recovery of Canada lynx. Considering that effects from the proposed project are negligible, and effects from past or planned projects provide for lynx conservation, then there are no additional cumulative effects to Canada lynx from the project proposal or its alternatives.

Canada Lynx Biological Determination

The project biologist has determined that U. S. Sheep Experiment Station Grazing and Associated Activities Project 2009, may affect, but is not likely to adversely affect Canada lynx." This determination is supported by rationale presented in the Biological Assessment and summarized below.

- Suitable lynx habitat is present, however that habitat has been identified as having a low potential for year-round occupancy, and recent observations of Canada lynx in the area are rare.
- Canada lynx have not been targeted for abatement on Agricultural Research Service lands, nor are there records of personal accounts indicating that abatement actions have been taken to control Canada lynx on Agricultural Research Service lands. No take would occur from predator control activities.
- Grazing practices and associated activities implemented by U.S. Sheep Experiment Station do not affect denning habitat, do not remove cover important to lynx travel, and retain adequate cover and forage available to snowshoe hares, lynx primary prey. Activities are consistent with standards in the Lynx Conservation Assessment and Strategy.
- Cumulative effects of the project are negligible.
- Negative effects are unlikely. If they occur at all, they would be limited to small temporary changes in daily movements. In the Centennial Mountains, individual lynx moving through the area may make small temporary adjustments in habitat use/travel routes to avoid conflicts with guard dogs and/or humans associated with grazing a band of sheep.

The project would have "No Effect" on critical habitat as none is present or proposed within the project area.

Grizzly Bear (Ursus arctos horribilis)

Grizzly Bear Alternative 4

Alternative 4 was developed specifically to address public scoping comments related to sheep grazing within and adjacent to the grizzly bear Primary Conservation Area. In this alternative, U.S. Sheep Experiment Station grazing and associated activities would not occur on the Meyers Creek allotment of the U.S. Forest Service (within the Primary Conservation Area), nor would grazing occur on the USSES East Summer Range (Tom's Creek) (adjacent to, but not within, the Primary Conservation Area). The area is likely biologically suitable and socially acceptable to grizzly bear occupancy according to the Grizzly Bear Management Plan for Southwestern Montana (Montana Fish Wildlife and Parks, 2002), though boundaries for such designation have not been formally identified in Montana. The potential for livestock/grizzly bear conflicts would be nearly eliminated, since the predominant grizzly bear population is located within the Primary Conservation Area, and U.S. Sheep Experiment Station grazing would not occur within five miles of the Primary Conservation Area. Grizzly bear mortality from U.S. Sheep Experiment Station activities would not occur.

Grizzly Bear Cumulative Effects

The spatial boundary for the discussion of cumulative effects for grizzly bears is the Greater Yellowstone Ecosystem, because it is the boundary for the Yellowstone Distinct Population Segment of grizzly bears, and, therefore, puts the potential effects in the context of grizzly bear recovery for the designated population. The temporal boundary is 10 years because projections beyond this time period are less likely to be accurate. The expected level of the effects for the project would not contribute to overall cumulative effects in a way which is detrimental to grizzly bear recovery considering the following points:

- The Yellowstone Distinct Population Segment of grizzly bears continues to expand in both population size and distribution.
- No grizzly bear mortality is expected from U.S. Sheep Experiment Station activities, nor is there an expected loss of habitat or loss of use in existing suitable habitat. Effects would be limited to rare occasions when a lone bear or sow with cubs is temporarily hazed to stop an immediate threat to sheep or human safety. No injury or harm to the bear is expected.
- Occasional harassment of a bear and implementation of other conservation measures described previously would not increase annual mortality nor would the mortality threshold described in the Final Conservation Strategy be exceeded. Although mortality thresholds were exceeded in 2008 for the Distinct Population Segment, none of these mortalities were attributed to U.S. Sheep Experiment Station activities, and most were attributed to hunting related incidents (many related to black bear hunting). It is reasonable to conclude that management actions that reduce mortalities related to hunting incidents are a likely tool to minimize grizzly bear mortality and keep it below established thresholds.

U.S. Sheep Experiment Station activities are not expected to limit grizzly bear movement or occupancy in the Centennial Mountains, and similarly would not limit genetic exchange with other grizzly bear populations. This finding is based on a limited number of documented encounters, no previous control actions on Agricultural Research Service lands or Meyers Creek, no projected mortality as a result of U.S. Sheep Experiment Station activities, and large expanses of suitable habitat in the Centennial Mountains.

"Interrelated actions" are those that are part of a larger action and depend on the larger action for their justification. The removal and closure of sheep grazing permits on Forest Lands inside the PCA, is an interrelated action, part of the Forest Plan Amendment for grizzly bear. Under this interrelated action, all domestic sheep grazing on National Forests inside the PCA has been subsequently vacated and/or closed except for that occurring on the Meyers Creek allotment by the USSES. Under the proposed action, this allotment would continue to be grazed in its current fashion. It remains consistent with the Forest Plan Amendment because the standard applies to permittees voluntarily withdrawing their grazing. Since grazing on Meyers Creek allotment is instrumental to the grazing rotation schedule and movement of sheep, the US Sheep Experiment Station would not currently be considered a "willing" permittee.

Grizzly Bear Biological Determination

The biological determination described below is preliminary. Based on the relatively recent court order vacating the decision to delist the Yellowstone Distinct Population Segment of grizzly bear, there is a considerable probability that appeals, information gathering, and U.S. Fish and Wildlife Service processes are underway that may influence or change the project biologist's determination and/or supporting analysis prior to a final decision on the project.

The project biologist has determined that– Alternative 4/Current Selected Alternative, may affect, but is not likely to adversely affect the Yellowstone Distinct Population of grizzly bear. This determination is supported by rationale summarized below.

- No grizzly bear mortality would be expected. Neither lethal control nor trap and transport would be implemented or requested under this proposal. Should the need arise for these abatement techniques related to grizzly bear, consultation would be reinitiated.

- Effects are limited to rare occasions when a lone bear or sow with cubs is temporarily hazed to stop an immediate threat to sheep or human safety. No injury or harm to the bear is expected.

- The project would not limit grizzly bear occupancy or movement through the Centennial Mountains, because grizzly bear habitat would not be reduced, and the U. S. Sheep Experiment Station grazing practices include light utilization, for short durations, over a large landscape, with Summer Ranges rested one out of every three years. This grazing method would prevent frequent and recurring encounters with grizzly bears that might otherwise alter bear behavior or necessitate the need for lethal control.

- Potential opportunities for genetic exchange with other grizzly bear populations would not be affected as occupancy or movement through the Centennial range would not be limited. In addition, recent evidence demonstrates that genetic diversity is not limiting Yellowstone Distinct Population Segment grizzly bear populations in the short term, and that translocation from other populations is an adequate method to address genetic diversity shortfalls over the long term.

- Ten (10) conservation measures (described previously) would be in place to ensure that the U. S. Sheep Experiment Station activities continue to operate in a manner that minimizes the potential for encounters and effects to grizzly bears. These conservation measures include proactive measures to avoid conflicts (research design criteria, guard dogs, sheep herders, and storage/removal of attractants), annual training, policy to address encounters non-lethally (move sheep, haze only if necessary), and established communication processes with other agencies.

- There have been less than five with grizzly bears in the past decade relative to the U. S. Sheep Experiment Station activities. No grizzly bears have been killed, captured, or relocated from

Agricultural Research Service lands or on U.S. Forest Service/Bureau of Land Management allotments in response to U. S. Sheep Experiment Station activities. It is expected this trend would continue.

- U. S. Sheep Experiment Station sheep grazing in the Meyers Creek allotment was analyzed previously by the U.S. Forest Service who found that the grazing has occurred there for decades with minimal conflicts, meets the standards and guidelines from the Grizzly Bear Forest Plan Amendment, and noted that "The permittees [U. S. Sheep Experiment Station] have had an excellent record of avoiding conflicts with bears for many years."

- The potential for livestock/grizzly bear encounters would be further reduced in Alternative 4/Current Selected Alternative, since the predominant grizzly bear population is located within the Primary Conservation Area, and U. S. Sheep Experiment Station grazing would not occur within five miles of the Primary Conservation Area.

- The expected level of effects for the project would be minimal, and would not contribute to overall cumulative effects in a way which is detrimental to grizzly bear recovery.

Other Wildlife Species

There are no federal laws applicable to 'Other Wildlife Species.' These species are discussed here, because of the potential status change for the gray wolf, and because an alternative addresses public concern for the Rocky Mountain bighorn sheep.

Gray Wolf (Canis lupus)

Alternative 4

Effects from activities in these three alternatives are essentially the same since each proposes similar livestock grazing in the Centennial Mountains where wolves are known and expected to occur. The Selected Alternative (11/28/08 decision) proposes grazing in both the East and West Summer Ranges. Alternative 4 proposes grazing in the West Summer Range while discontinuing grazing in the East summer range and U.S. Forest Service Meyers Allotment. Potential effects to wolves remain the same throughout each alternative, because each alternative continues grazing in occupied wolf habitat.

A review of the activities described in Alternative 4/Current Selected Alternative indicates that activities would have effects on gray wolves and their habitat. Specifically, the activities that would have some effects can be categorized and described as follows:

1. Trailing, grazing, and camp tending activities in the Centennial Mountains have previously, and would continue to result in occasional encounters with wolves. The habitat is occupied by deer and elk (a natural food source for wolves), and the addition of sheep bands would, on occasion, attract wolves opportunistically searching for food, or wolves habituated to sheep as an easy food source. Mitigations including the presence of full time sheep herders, guard dogs, and herd dogs provide consistent and effective methods of non-lethal control, which in-turn discourages most individual wolves and wolf packs from habituating to U.S. Sheep Experiment Station sheep herds as a food source. In addition, on a daily basis, herders keep a daily count on sheep, and ride trails to gather strays. Dead or injured sheep are removed from the field when possible, or treated with lime and/or buried to render the carcass unavailable as a food source. As a result, the effect of attracting wolves to domestic sheep as a potential food source is substantially reduced because of continual human presence, guard dog presence, and by reducing the number of stray sheep, or dead sheep available as

a food source. The overall direct and indirect effect to wolves from these activities is minimal. Effects of harassment and predator control activities (such as firing gun shots in the air and other abatement tools) are discussed separately in number 3 below.

2. Activities that could affect daily or annual movements of wolf prey (deer, elk, and moose) also have the potential to indirectly effect gray wolf movements. Prescribed fire may improve range conditions such as increased vigor on the annual growth of shrubs and grasses, which correspondingly attracts more ungulates. Thus, wolves could be indirectly attracted to areas with prescribed fire, in search of big game food sources concentrated near productive foraging habitats. Prescribed fire is occurring on the headquarters property, which is big game transitional range. Since this area is covered in snow much of the winter season, its capacity to support deer and elk in large concentrations is minimal, and its corresponding potential to affect gray wolf is even smaller and limited to a short duration as ungulates migrate through the area to different elevations. Maintenance of fire breaks and roads on the Agricultural Research Service lands could temporarily have small effects on deer and elk herd movements, where the ungulates avoid mechanized operating equipment. However, these effects are limited to times when heavy equipment is operating in the area. With a lack of public motorized access to roads on the U.S. Sheep Experiment Station, big game persists with minimal disruption across the landscape, which translates to few or no corresponding impacts to wolves. Water developments that occur in the Big Mountain allotment may occasionally attract deer, elk or moose, but these occasions are rare since ungulates more likely use natural water sources. Fencing on Agricultural Research Service lands at lower elevations is constructed to specifications that do not limit travel for ungulates, and upper elevation fencing (horse corral) is temporary, small in size, and is not big enough to substantially affect big game movements. The one large fence present on Agricultural Research Service lands near the headquarters (coyote fence) does eliminate big game access to forage on approximately 640 acres. Since the fence is within low elevation sagebrush that does not include any mapped wetlands or unique wildlife habitat features, and is surrounded by thousands of acres of similar habitat, the fence does not limit ungulate use across the landscape or their access to limited habitats. As a result, effects would be limited to the loss of a small amount of available forage for deer and elk, a local change in daily movements of deer and elk around the one square mile exclosure, and ultimately, little or no corresponding effect to wolves.

3. Effects to wolves are expected from predator control activities on Agricultural Research Service lands including non-lethal measures such as hazing, lethal removal of individual animals, and in some cases, particularly when depredation to private livestock is also occurring, removal of entire packs and/or breeding pairs. The history of minimal conflicts with wolves on U.S. Sheep Experiment Station before 2008, and the incremental control measures that resulted in the removal of two packs in 2009 near Humphrey Ranch, indicate that control measures are likely to vary from year to year. In most years, such as occurred in 2005 through 2008, non-lethal activities including having sheep herders and guard dogs with sheep, hazing individual wolves during encounters, and trapping/radio collaring individual wolves would be adequate to address depredation on U.S. Sheep Experiment Station. Despite proactive conservation measures to reduce conflicts, in some years packs would establish and/or expand in or near the Centennial Mountains, and depredate more heavily on livestock from U.S. Sheep Experiment Station as well as adjacent private producers. In these cases, lethal control measures would be necessary to curtail depredation on U.S. Sheep Experiment Station sheep and/or prevent a pack from habituating to domestic sheep. Lethal removal would be implemented on one to three wolves. In uncommon circumstances such as occurred in 2009, when numerous depredations continue on private and U.S. Sheep Experiment Station livestock, control actions could continue in an incremental fashion until an entire offending pack is removed, varying between three and ten animals. At the legal discretion of U.S. Fish and Wildlife Service, Idaho/Montana Wildlife Agencies, and APHIS Wildlife Services (depending on current listing status), incremental control

measures would continue to be authorized, to a varying degree, resulting in the removal of individual wolves, breeding pairs, and on occasion, established packs.

Gray Wolf Cumulative Effects

The spatial boundary for the discussion of cumulative effects for wolves is the Centennial Mountain Range because this area is:

- Large enough to sustain one or more wolf packs,
- Is influenced by (or influences) wolf management on adjacent lands under other ownership, and
- Is an important piece of undeveloped habitat between the GYE and Central Idaho.

The temporal boundary is 10 years because projections beyond that point are similar to those being discussed, but become less accurate over time.

The project is not expected to add cumulative effects detrimental to wolf recovery based on the following information:

- Hunt season quotas for 2009 in identified hunt units that contain Agricultural Research Service lands are five wolves in the Upper Snake Wolf Hunt Zone of Idaho and 12 wolves in the Wolf Management Unit 3 of Montana. Hunting seasons are managed on an annual quota basis by state wildlife agencies, who point to evidence that such management will not detract from sustaining the current population, and that genetic connectivity will not be impacted, even if the maximum quota of 330 animals is reached. On September 8, 2009, Judge Molloy (Missoula) denied a request for a preliminary injunction based on a lack of evidence of irreparable harm to the wolf from the 2009 wolf hunting season in Idaho and Montana.
- The Northern Rocky Mountain Wolf population is expanding in both size and distribution, and a limited number of wolves or packs have been or would be impacted by continued operations on the U.S. Sheep Experiment Station.
- State wildlife agencies have the authority to authorize or deny lethal control actions on private or agency lands, thus procedures are in place to balance lethal control actions with larger population/pack management goals in the Centennial Mountain Range.

Gray Wolf Biological Determination

The project biologist has determined that the proposed project is “Not likely to jeopardize the continued existence of the gray wolf or adversely modify proposed critical habitat”

This determination is supported by rationale presented in the Biological Assessment including:

- There are no known wolf packs residing on Agricultural Research Service lands.
- Gray wolves in the project area are within the Northern Rocky Mountain Distinct Population Segment designated by the U.S. Fish and Wildlife Service and are managed as a non-essential experimental population.
- The effect of attracting wolves to domestic sheep as a potential food source is mitigated by non-lethal measures including full time herd dogs, guard dogs, and sheep herders.

- Proposed activities would have minimal effects to ungulate movements and thus, few, if any effects to wolves that depend on them as a food source.
- Control measures would be used as a last resort, would be implemented through APHIS Wildlife Services, would target only offending animals, and would be conducted under authority granted by state wildlife agencies and the US Fish and Wildlife Service consistent with the 10j. rule.
- There is a low incidence of past conflicts between domestic sheep and wolves on Agricultural Research Service lands.
- The Northern Rocky Mountain Gray Wolf Population continues to expand in size and distribution, and exceeds original recovery goals.

Rocky Mountain Bighorn Sheep Ovis canadensis canadensis

Rocky Mountain bighorn sheep are not a federally listed species and as such are not subject the Endangered Species Act.

Bighorn Sheep Direct/Indirect Effects

Selected Alternative (11/28/08 decision) and Alternative 4/Current Selected Alternative

Effects from activities in these three alternatives are the same since each proposes similar livestock grazing and associated activities in occupied bighorn sheep habitat. Bighorn sheep are not directly affected by grazing on any of the U.S. Sheep Experiment Station properties, because bighorn sheep do not occur there. The Hilgard bighorn herd in Montana is over 17 miles away from the nearest U.S. Sheep Experiment Station property (Summer East pasture), and the Tendoy bighorn herd also in Montana is over 23 miles away from the Humphrey property. Interaction between domestic sheep on U.S. Sheep Experiment Station properties and existing bighorn sheep herds is not known or expected to occur.

U.S. Sheep Experiment Station sheep grazing on Bureau of Land Management (Bernice allotment) and USFS (Snakey/Kelly allotments) has the potential to negatively affect the Idaho bighorn herds reintroduced into the Lemhi range and the Beaverhead range, however the measures in place are appropriate methods to minimize potential contacts, and consistent with Idaho direction. The Idaho Progress Report (2008) indicates that bighorn sheep range does overlap with these allotments, therefore the potential for interaction, and resulting mortality in the bighorn herds is plausible. Based on a review of parameters modeled in Clifford et al., 2009, bighorn sheep herds that occupy the southern portion of the Lemhi range and to a lesser extent the Beaverhead range have a moderate probability of coming into contact with domestic sheep, over a period of several decades, and potentially leading to a respiratory outbreak and subsequent bighorn mortality. This contact could occur from U.S. Sheep Experiment Station grazing on these Bureau of Land Management/USFS allotments or from contact with domestic sheep grazing in other nearby areas. Precise research on the movements of this bighorn sheep herd (such as radio-telemetry data collected over a period of years) is expensive and has not yet been established. Idaho progress reports, the Bureau of Land Management MOU and communications between various agency personnel express a desire and willingness to collect additional site specific data if funds become available.

Several factors are in place to minimize potential of direct contact and subsequent bighorn herd mortality. Bighorn sheep are thought to be geographically and temporally separated from areas grazed by U.S. Sheep Experiment Station domestic sheep on the Snakey/Kelly allotments, by an approximate distance of three miles or more of rough terrain and heavy snow loads during winter months (Personal

communication, Keetch, 2008). Bighorn sheep typically occupy the west side of the Beaverhead Mountains in the winter months, while the U.S. Sheep Experiment Station grazes domestic sheep on the east side of Beaverheads (Snakey/Kelly allotments) November 6 – January 3rd. Similarly, on the Lemhi range, bighorn sheep typically occupy higher elevations in the foothills and mountains while domestic sheep remain in the lower elevations. Although it is unknown how far south individual sheep may wander in high snow years, bighorn sheep typically stay north of North creek, (Personal communication, Lowe, 2009). The Bernice allotment (which is grazed by U.S. Sheep Experiment Station between November 23 – February 5) is south of the North Creek geographic boundary. In addition to the relative geographic and temporal separation described above, implementation of the "Specified Actions" included in Bighorn Sheep Action Plan portion of the Bureau of Land Management/U.S. Sheep Experiment Station MOU further reduces the possibility of potential contact in the following ways:

- On site supervision of the domestic sheep bands as well accompaniment by guard dogs would assist in preventing direct contact and interaction between domestic sheep and bighorn.
- Active herding to keep domestic sheep below the 5,600 foot contour and off of mountain foothills and canyons would assist in maintaining geographic separation between bighorns and domestics.
- Scouting for bighorns and maintaining a 3-mile or larger buffer of separation between known bighorn sheep herds and domestic sheep bands would minimize the probability of direct contact.
- Promptly notifying designated Idaho Fish and Game personnel if contact is suspected or becomes imminent would allow for the option of management removal of individual bighorn sheep to prevent infection spreading to the remainder of the bighorn herd.

Conclusion: There is a possibility that contact could occur between bighorn sheep herds and domestic sheep herds using southern portions of the Lemhi and Beaverhead mountain ranges. This contact could occur from U.S. Sheep Experiment Station winter grazing on Bureau of Land Management /U.S. Forest Service allotments, or from contact with other domestic sheep grazing activities in this portion of the range (such as private lands or other permitted grazing on federal lands) during any season of the year. Bighorn sheep mortality and overall suppressed health of a bighorn herd may or may not occur as result of contact with domestic sheep, but the degree of negative effects to the herd, and the primary source of infection are speculative. Grazing practices that are already in place by the U.S. Sheep Experiment Station, implementation of the specified actions of the Bighorn Sheep Action Plan, and geographic factors that naturally separate U.S. Sheep Experiment Station grazing and bighorn sheep winter ranges appear to adequately minimize the potential of interaction between U.S. Sheep Experiment Station domestic sheep and bighorn sheep, and allow for appropriate control/removal of sheep should contact occur or become imminent.

Bighorn Sheep Cumulative Effects

The spatial boundary for the discussion of cumulative effects for bighorn sheep is the upper Snake River Region in Idaho as well as the Montana portion of the Centennial Mountain Range because this area encompasses all U.S. Sheep Experiment Station grazing activities that occur in occupied and potential bighorn sheep habitat, and considers state management objectives for known bighorn herds in the area. The temporal boundary is 10 years because projections beyond this time period are less likely to be accurate.

The expected level of the effects for the project would not to contribute to overall cumulative effects in a way which is detrimental to bighorn sheep management in this portion of Idaho and Montana considering the following points:

- Grazing of U.S. Sheep Experiment Station sheep on Forest Service and Bureau of Land Management federal lands has only a minimal risk of contact between bighorn sheep and domestic sheep because of geographic and temporal separation.
- Grazing of U.S. Sheep Experiment Station sheep near occupied bighorn sheep habitat includes the presence of guard dogs and full-time sheep herders, which affords additional protection measures to reduce the possibility of actual contact between bighorn and domestic sheep.
- U.S. Sheep Experiment Station follows the specified actions listed in the Bighorn Sheep Action Plan which includes procedures to manage separation between bighorn sheep and domestic sheep, and initiate a communication plan to allowing prompt removal of infected bighorn or domestic sheep should contact be suspected.
- Although the risk of contact from U.S. Sheep Experiment Station activities can only be completely eliminated in alternative two, additional sources for spread of respiratory disease occur throughout known or suspected bighorn sheep range. Thus, bighorn populations are expected to continue in their current condition and trend, regardless of which alternative is selected.

There are no known or foreseeable planned bighorn sheep reintroductions in areas grazed by U.S. Sheep Experiment Station.

Other Resource Considerations

Infrastructure

Table A-3. Infrastructure changes from the Selected Alternative (11/28/08 decision) for Alternative 4- Current Selected Alternative

Component	Alternative 4- Current Selected Alternative
Roads	No change from existing
Sheep Transportation by Truck	Sheep would continue to be transported to the winter range and Mud Lake by truck
Trails	Sheep would continue to be trailed to Henninger, Snakey-Kelly, and West Summer
Driveways	Driveways in West Summer would continue to be used
Fences	No change from existing

Sheep

Table A-4 displays the adjustment in sheep numbers from Selected Alternative (11/28/08 decision) that would need to be made for Alternative4 based on the reduction of grazing areas.

Table A-4.Sheep number adjustments for Alternative 4- Current Selected Alternative

Sheep	for Alternative 4- Current Selected Alternative
Number of sheep to be retained	No Change from existing
Percent of Existing herd retained	
Numbers of sheep to be disposed of	
Percent of Existing herd disposed of	

Soils

Summary of Soil Direct Indirect Effects

Table A-5 displays a comparison of direct/indirect soils effects by alternative.

Table A-5. Summary of soil effects

Soil Effects	Alternative 4- Current Selected Alternative
Grazing - Headquarters	Soils stable and productive
Grazing – Henninger	Continued low veg/soil production
Grazing – Humphrey	Soils stable and productive
Grazing- Summer Range	Risk for downward trend in summer west from no rest-rotation
Invasive Plants	Decreases risk of invasion, possible offsite leaching of krovar
Prescribed burning	Maintains natural fire cycle at Headquarters.

Soils Cumulative Effects

The cumulative effects to soils are considered similar for all action alternatives. Over the last 86 years, grazing management appears relatively consistent with possibly upward trends in the last twenty years from reduced grazing and rest rotation in the uplands along with evolving grazing practices. The additive effects are considered more in detail within the context of the current plant community and soil condition.

The additive effects of past grazing are considered more in detail within the context of the current plant community and soil condition. Over the last 86 years, grazing management appears relatively consistent with possibly upward trends in the last twenty years from reduced grazing and rest rotation in the uplands along with evolving grazing practices.

Rehabilitation has occurred on the road to Blair Lake and on the Odell mine, returning hydrologic function; soil impairments from soil removal would continue at the mine site (see U.S. Sheep Experiment Station Hydrology Report, 2009) while the road to Blair lake has mixed revegetation success. Observations in summer 2009 found some sign of continued off-road vehicle use. The forb-dominated vegetation had vigorous regrowth due to the productive mollic soils. Ruts were still visible in some areas with continued erosion between water bars. Reclamation at this area would depend on halting travel. Adverse effects are limited to the road area and thus isolated.

Wildfire has past imprints that affect the ongoing soil productivity on Agricultural Research Service lands for the summer range. Wildfire sign from the early 1900s is visible still in the east Summer Range with old erosion gullies still visible at the north side of Tom’s Creek divide. This is indicative of the low production for the limestone and shale geology on steep slopes. Elsewhere, old wildfire sign is not visible and soil/vegetation is robust. Recent fire on the Meyers Creek allotment shows quick recovery.

Prescribed fire is limited to the Headquarters range where ongoing efforts continue. Roughly 19,000 have burned since 1936. About 70percent of this is from wildfire, though a more active burning program is in place over the past 10 years; prescribed burning averages 600 acres per year. The U.S. Sheep Experiment Station would like to increase to 900 acres per year to approximate a natural 30 year fire-return interval (NRCS In Review). Positive effects occur where fire is returned in the system with nutrient influx.

Hydrology

Alternative 4 Direct/ Indirect Effects

Alternative 4 would implement consecutive year grazing, of 3, 300 sheep, on the West Summer Range as the result of the East Summer Range being closed to grazing. Currently this pasture is rested every third year. Consequently, grazing pressure would potentially increase in the West Summer Range with a concomitant increased potential for ground disturbance, compaction, loss of vegetation and in-stream disturbance as sheep cross streams; with increased grazing pressure there is the potential for a decline in range due to concentrated use in bedding areas, development of trailing, soil trampling and loss of vegetative cover (Grooms et al 2009). However, adaptive management would be used to mitigate the increased potential for ground disturbance, compaction and loss of vegetative cover (Yurczyk, 2009g).

Although grazing pressure would increase in the West Summer Range this would not be expected to result in measurable degradation of riparian vegetation, as sheep prefer high exposed ridge tops. Loss of riparian vegetation adjacent to stream crossings would not be expected to be measurable as sheep would not browse on riparian vegetation. The increased potential for compaction and trampling includes water loving soils immediately adjacent to streams at stream crossings, due to potential increases in the number of times sheep are moved across creeks. However, the use of adaptive management and the implementation of mitigation measures would be expected to mitigate increased effects.

Indirect effects would be the same for Alternative 4 as the Selected Alternative (11/28/08 decision) except for those potential indirect effects that would occur in the East Summer Range.

With the elimination of the East Summer Range incidental sheep grazing would not occur. Elimination of incidental grazing use in the North Fork of Tom Creek would not result in observable improvement to this drainage.

Alternative 4 Cumulative Effects

Cumulative effects would be the same for all watersheds involved with U.S. Sheep Experiment Station grazing areas as described under the Selected Alternative (11/28/08 decision).This conclusion incorporates the direct and indirect effects discussed above.

Cumulative effects would remain the same for the Mud Lake Feedlot, Snakey-Kelly-Bernice and East Beaver allotments as they were described under Alternative 1. Grazing would not be conducted on the Meyers Creek allotment. With this loss there is a loss of flexibility in adaptive management and increase utilization at Henninger (Grooms et al, 2009). However, utilization under Alternative 4 increases only by 0.8 percent when compared to the Selected Alternative (11/28/08 decision). With such a small increase in utilization it, is unlikely any increase in direct and indirect effects would be detectable. As a result, no measureable increases in cumulative watershed effects would be expected.

Heritage Resources

Activities on the U.S. Sheep Experiment Station are governed by the National Historic Preservation Act (NHPA) of 1966 as amended, the Native American Graves Protection and Repatriation Act, the American Indian Religious Freedom Act, and the Archaeological Resources Protection Act.

Heritage Summary

Grazing and associated activities at the U.S. Sheep Experiment Station have occurred for approximately 86 years. Knowledge of prehistoric archaeological data is limited within the Agricultural Research Service lands, but such sites and resources are known to exist. Ranching, mining, and U.S. Sheep Experiment Station activity and development make up the historic component for the area.

The U.S. Sheep Experiment Station has proposed several activities over the course of the next five years. To comply with Section 106, a Heritage Management Plan has been outlined. This plan establishes a baseline from which to begin heritage work. Both Montana and Idaho State Historic Preservation Offices have yet to comment on the Heritage Management Plan outline. The Section 106 process will begin in the Spring of 2010, after high priority undertakings with the potential to effect cultural resources are identified and ground visibility improves.

Compliance with Relevant Laws, Regulations, Policies, and Plans

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effects that their federally funded activities and programs have on significant historic properties. "Significant historic properties" are those properties (historic and prehistoric) that are included in, or eligible for, the National Register of Historic Places. Properties that have not been evaluated for significance are considered eligible until such evaluation occurs. The National Register is a list of districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, and culture. The National Register is administered by the National Park Service in conjunction with the State Historic Preservation Offices (SHPOs).

As defined in 36 CFR Part 800 (Protection of Historic Properties as amended in August 2004), the Section 106 process and compliance with such also includes the coordination with other reviews, including NEPA, the Native American Graves Protection and Repatriation Act, the American Indian Religious Freedom Act, the Archaeological Resources Protection Act and any agency specific legislation (36 CFR Part § 800.3). Coordination and consultation with Idaho and Montana State Historic Preservation Offices would fulfill compliance with Section 106 of the National Historic Preservation Act.

As proposed, the Heritage Management Plan (Plan) would consider all activities in the Agricultural Research Service, U.S. Sheep Experiment station five-year action plan for Section 106 compliance procedures. The Plan would also include survey, recording and evaluation of Agricultural Research Service historic facilities, and provide a guidance plan for general maintenance and facility use of the historic resources.

The Plan would provide for a phased compliance survey procedure. According to 36 CFR Part 800, a phased identification and evaluation is possible when:

> …alternatives under consideration consist of corridors or large land areas, or where access to properties is restricted, the agency official may use a phased process to conduct identification and evaluation efforts. The agency official may also defer final identification and evaluation of historic properties if it s specifically provided for in a memorandum of agreement executed pursuant to § 800.6, a programmatic agreement executed pursuant to §800.14 (b), or the documents used by an agency official to comply with the National Environmental Policy Act pursuant to §800.8 (36 CFR Part 800.4).

The phased-in compliance procedure would be conducted in consultation with the Idaho State Historic Preservation Office and would provide direction for surveying areas of high probability regarding the potential occurrence of historic properties. This would include a sampling procedure of the high probability areas, phased in over a three- to five-year period, depending on the occurrence of historic properties.

Socio-Economic

There are no federal laws and regulations applicable to socioeconomics. The existing condition is considered the baseline for comparison of alternatives.

Alternative 4

There would be a net decrease in grazing under Alternative 4. There would be no decrease in sheep inventory under Alternative 4, and there would be no resulting change in employment and income. Therefore economic contributions reported under the affected environment would remain in effect. There would also be no out-migration of local households and no effect on public services and tax revenue.

Under all action alternatives there would be effects on the sheep industry resulting from lost knowledge associated with reductions in research capabilities. Current contributions to the sheep industry are summarized in the affected environment. U.S. Sheep Experiment Station research is dynamic; and therefore impossible to predict the full extent of impacts to sheep producers. However, it is logical to assume that as reductions in grazing increase, the informational capacity of research would decrease, and thus increase adverse impacts to the sheep industry.

Additional consequences may stem from changes that could occur to the use of federal lands as a result of changes to the U.S. Sheep Experiment Station grazing regimen. Under Alternatives 4, sheep grazing would be scaled back. This could allow for additional opportunities for recreation and environmental conservation. Some uses of the lands may have implications for the economic health of Clark County. For example, increases in recreational opportunities could increase visitation rates, and thus increase expenditures at local business and firms. However, given the volume of public lands in Idaho and Montana, it is unlikely that grazing by the U.S. Sheep Experiment Station would substantially affect recreational travel, thereby limiting the implications for local business.

Socio-Economic Cumulative Effects

Cumulative effects include the total change in social and economic conditions that would result from actions taken under the alternatives in conjunction with the direct and indirect effects of other present and reasonably foreseeable activities being conducted in the study area. The spatial and temporal boundary for the discussion of cumulative effects for economics is Clark County because expanding beyond this area could result in the dilution of impacts. There is currently no estimate of economic effects for these activities. Therefore, it is not possible to quantitatively estimate cumulative effects. No activities are expected to have a measurable effect on Clark County's economy. Additionally, the Mountain States Transmission Intertie (MSTI) 500kV would pass through portions of the study area. Economic effects of this transmission line include increased jobs and income (MSTI, 2009). Those effects are not estimated specifically for Clark County, and therefore are not quantitatively valued for cumulative effects.

Environmental Justice

The Environmental Justice principles set forth in Executive Order 12898 and CEQ (1997) were considered in regards to activities on the U.S. Sheep Experiment Station. Alternatives were reviewed to

determine whether or not the proposed actions adversely impact minority and low-income populations. The Selected Alternative (11/28/08 decision), would result in the continued operation of the U.S. Sheep Experiment Station. Under this alternative there would be no change in the current economic conditions, and would not have any impact on minority or low income populations.

CONCLUSION:

The purpose of this Supplemental Information Report was to determine whether new information or changed circumstances required the preparation of a supplemental environmental assessment. In light of the foregoing analysis, we conclude that the continuation of grazing, except for the Meyers Creek allotment and summer East Range, until the EIS is completed is not a substantial change to the previous action and will not result in significant impacts requiring a supplemental environmental assessment.