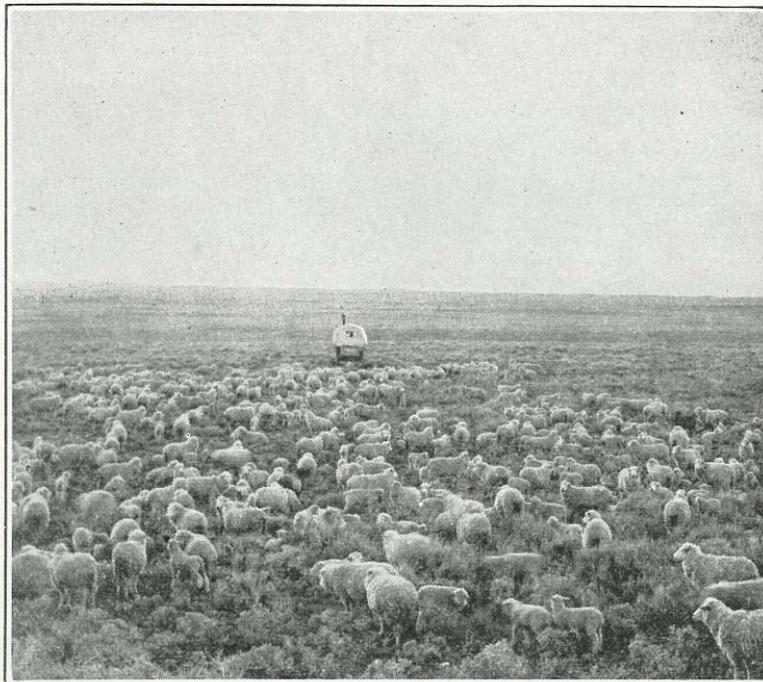


# Summary of Public Comments Received on the Proposed Action During Scoping

## U.S. Sheep Experiment Station Grazing and Associated Activities Project 2010

### United States Sheep Experiment Station Dubois, Clark County, Idaho



Sheep on the range, United States Sheep Experiment Station,  
in Idaho

Horlacher, Levi J. and Hammonds, Carsie , 1936. *Sheep* . published by The Commercial Printing Company, Lexington, KY. 305 pages. The photo appears on page 5.

---

**For More Information Contact:**

Sue Wingate  
Environmental Coordinator  
TEAMS Enterprise Unit  
USDA Forest Service  
559-920-5235

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

## Table of Contents

Introduction.....	1
Content Analysis Process.....	1
Demographics of the Comment Letters.....	2
Geographic Representation.....	2
Organizational Affiliation.....	2
List of Commenters and Public Concern Categories.....	2
Public Concerns and Response to Comments.....	6
Access.....	6
Roads.....	6
Public Concern 1 The USSES should consider and analyze the effects from the use of and maintaining 20 miles of road and a two mile firebreak each year. ....	6
Sheep Trails, Crossings and Driveways.....	8
Public Concern 2 The USSES should consider mitigation measures (i.e., bridges, re-routes, and closing sensitive sites to sheep altogether) that would reduce the impacts of sheep driveways on water quality and erosion. ....	8
Alternatives.....	9
Proposed Action/No new federal action.....	9
Public Concern 3 The USSES should select the Proposed Action/No New Federal Action Alternative.....	9
Alternative 1.....	9
Public Concern 4 The USSES should select Alternative 1.....	9
Alternative 2.....	10
Public Concern 5 The USSES should select Alternative 2.....	10
Alternative 3.....	11
Public Concern 6 The USSES should select Alternative 3.....	11
Alternative 4.....	11
Public Concern 7 The USSES should select Alternative 4, because it eliminates domestic sheep grazing in the Bernice, Snakey, and Kelly allotments; minimizing grazing near bighorn sheep populations and reducing the risk of disease transmission. ....	11
Alternative Development.....	12
Public Concern 8 The USSES should consider and/or analyze other alternatives.....	12
Range of Alternatives.....	13
Public Concern 9 The USSES should include a reasonable range of alternatives in comparative form. .....	13
Botany.....	13
Plant Communities.....	13
Public Concern 10 The USSES should evaluate the impacts of grazing on plants.....	13
Climate Change.....	15
Public Concern 11 The USSES should describe the current conditions and future predictions of climate shifts in the Northwest and consider how it may lead to increased conflicts. The cumulative effects analysis should include a discussion on potential changes in precipitation, stream flow, and changes in vegetation. ....	15
Consultation.....	15
Public Concern 12 The USSES should consult with the US Fish and Wildlife Service (USFWS) regarding effects to listed species and disclose any recommended terms and conditions from the USFWS Biological Opinion for this project. ....	15
Public Concern 13 The USSES should disclose whether other agencies within the project area are cooperating agencies, and if the project is in compliance with relevant plans, standards and guideline, and the decisions to be made by these agencies (i.e., Forest Service, BLM and Department of Energy). ....	15

Heritage..... 16  
     Public Concern 14 The USSES should develop and integrate a survey strategy and facilities management plan that includes cultural mitigation measures. In addition, USSES should conduct consultation with all affected tribal governments. .... 16

Hydrology ..... 16  
     Water Quality ..... 16  
         Public Concern 15 The USSES should analyze water quality and quantity. .... 16

    Water Use ..... 19  
         Public Concern 16 The USSES should analyze the effect of water diversion for sheep watering on water levels in streams and how it affects other species. .... 19

Miscellaneous Comments ..... 19  
     Public Concern 17 The USSES should disclose who is benefiting from the sheep station. .... 19  
     Public Concern 18 The USSES should consider the following: ..... 20

NEPA ..... 20  
     Cumulative Effects ..... 20  
         Public Concern 19 The USSES should analyze the cumulative effects of their activities at an appropriate scale. .... 20

    Mitigation ..... 21  
         Public Concern 20 The USSES should analyze the effectiveness of all mitigation measures for each alternative and provide sufficient details that are specific to any given mitigation measure, which ensures the environmental consequences of such have been adequately evaluated. These measures should be required as opposed to recommended..... 21

    Process ..... 21  
         Public Concern 21 The USSES should ensure it complies with all procedural requirements and direction in the EIS. .... 21  
         Public Concern 22 The USSES should allow opportunity for the public to review and comment on the DEIS..... 23

    Proposed Action ..... 23  
         Public Concern 23 The USSES should acknowledge that any increase in production efficiency will be marginal and that it is not a realistic economic goal; therefore not a justifiable reason for continuing ARS operations. .... 23

    Proposed Action (Does Not Support) ..... 23  
         Public Concern 24 The USSES should not continue with this project and the proposed action because it is a ploy for money and jobs, and there is no supporting documentation that supports or justifies continuation of sheep grazing on these lands. .... 23

    Purpose and Need ..... 23  
         Public Concern 26 The USSES should include additional information in the Purpose and Need..... 23

    Research ..... 24  
         Public Concern 27 The USSES should consider the scientific value of research conducted at the sheep station..... 24  
         Public Concern 28 The USSES should design a more extensive research program. .... 25

    Scope ..... 25  
         Public Concern 29 The USSES should expand the scope of this project. .... 25

Range ..... 26  
     Exclosures..... 26  
         Public Concern 30 The USSES should expand its analysis of exclosures..... 26

    Grazing (Domestic) ..... 30  
         Public Concern 31 The USSES should expand its analysis of sheep grazing..... 30

Social and Economic..... 32  
     Cost Benefit Analysis ..... 32  
         Public Concern 32 The USSES should consider all aspects of the Cost Benefit Analysis..... 32

    Economic ..... 32

Public Concern 33 The USSES should not limit the economic analysis to Clark County, Idaho; a broader area of southeastern Idaho, southwestern Montana and possibly the Rocky Mountains region should be included. ....	32
Environmental Justice.....	32
Public Concern 34 The USSES should provide an analysis of the alternative's impacts with respect to all aspects of environmental justice. ....	32
Public Health .....	33
Public Concern 35 The USSES should analyze the impact/threat of numerous pathogens of which domestic sheep likely serve as vectors, and fully disclose the risk to humans of the transmission of the Q-Fever. ....	33
Social .....	35
Public Concern 36 The USSES should analyze the social and economic impacts resulting from the sheep station's operations. ....	35
Soils .....	36
Nutrient Cycling .....	36
Public Concern 37 The USSES should analyze the following regarding nutrient cycling: microbiotic cover which can severely damage even though vascular plant communities appear healthy; loss in microbiotic species richness; and trampling damage to microbiotic soil crusts. ....	36
Weeds.....	37
General .....	37
Public Concern 38 The USSES should fully analyze weeds. ....	37
Integrated Pest Management Herbicides .....	40
Public Concern 39 The USSES should fully analyze the use of integrated pest management. ....	40
Wildlife .....	42
Animal Rights.....	42
Public Concern 40 The USSES should stop the cruel treatment of animals.....	42
Bighorn Sheep Disease .....	42
Public Concern 41 The USSES should consider the available data regarding the spread of disease in bighorn sheep. ....	42
Bighorn Sheep General.....	44
Public Concern 42 The USSES should include analysis of bighorn sheep populations and habitat. .	44
Bighorn Sheep TES .....	44
Public Concern 43 The USSES should consider that the Forest Service has designated bighorn sheep as a sensitive species, especially in the Intermountain Region 4 of the Forest Service (Payette National Forest). ....	44
Black Bear .....	45
Public Concern 44 The USSES should fully analyze their effects to black bears: .....	45
Connectivity .....	45
Public Concern 45 The USSES should consider the effects (habitat use, population dynamics, and habitat connectivity) to wildlife from USSES operations that are located in a unique and vital corridor that links the Greater Yellowstone Ecosystem (GYE) with central Idaho. Linkage zones are different than corridors in that they are areas that could support carnivores at low densities over time and are not areas strictly used just as travel lanes. The sheep station creates a threat to the use of key habitat and dispersal corridors by several imperiled wildlife species. The continued operation of the sheep station is inconsistent with plans in Primary Conservation Areas identified in the Grizzly Bear Recovery Plan and in the Conservation Strategy for grizzlies in the GYE. These plans call for the retirement of sheep grazing allotments through voluntary actions by leaseholders as the preferred method for dealing with conflicts between livestock and wildlife and retirement of all sheep grazing within the Primary Conservation Areas. ....	45
Public Concern 46 The USSES should consider the information found in the BLM funded study (Beckmann 2006) that provides information on what large carnivores are using the region, areas of	

importance identified in the region, and identification of possible peripheral sink areas (area where mortality exceeds recruitment)..... 46

Coyote..... 46

    Public Concern 47 The USSES should consider direct, indirect, and cumulative effects on coyotes from USSES operations. In addition, the analysis should include effects from predator control and effects to ground nesting birds, especially sage grouse. .... 46

Fencing ..... 47

    Public Concern 48 The USSES should consider the effects of fencing on wildlife. .... 47

General Wildlife ..... 47

    Public Concern 49 The USSES should consider a range of concerns regarding wildlife..... 47

Grizzly Bear..... 48

    Public Concern 50 The USSES should consider a range of concerns regarding grizzly bears..... 48

Lynx..... 51

    Public Concern 51 The USSES should consider the direct, indirect, and cumulative effects to the Canada lynx. .... 51

Mountain Lion ..... 51

    Public Concern 52 The USSES should consider the direct, indirect, and cumulative effects to the mountain lion. .... 51

Predator Avoidance and Abatement ..... 51

    Public Concern 53 The USSES should analyze predator avoidance and abatement. .... 51

Sage Grouse..... 52

    Public Concern 54 The USSES should fully analyze effects to sage grouse..... 52

Threatened, Endangered, and Sensitive Species..... 53

    Public Concern 55 The USSES should identify the threatened, endangered, and sensitive species within the project area and consider the direct, indirect, and cumulative impacts to them and their habitat. This list should include the following TES species: American pika, bighorn sheep, cutthroat trout, grizzly bears, lynx, sage grouse, wolverines, and wolves. .... 53

Wolverine ..... 53

    Public Concern 56 The USSES should analyze direct, indirect and cumulative effects to wolverines. .... 53

Wolves..... 54

    Public Concern 57 The USSES should analyze the direct, indirect and cumulative effects to wolves. .... 54

Best Management Practices for Wildlife..... 56

    Public Concern 58 The USSES should develop enforceable Best Management Practices (BMPs)... 56

Comment..... 57

    Public Concern 59 Thank you for your comment. The USSES received the following comment letters that contained comments that were unsupported opinion or a statement of fact with no stated request for action: 2009 EA 30-day comment letters (new #'s) 33, 43, 61, 63, and 64. .... 57

Outside the Scope ..... 58

    Public Concern 60 The USSES received the following comment letters that contained comments that are outside the scope of this analysis: ..... 58

## Introduction

A Notice of Intent to Prepare an Environmental Impact Statement was published on Monday January 24, 2011 in the Federal Register. This began the Scoping Period for the U.S. Sheep Experiment Station Grazing and Associated Activities Project 2010. The official Scoping period closed on March 11, 2011. The U.S. Sheep Experiment Station received 25 comment letters from individuals, organizations, agencies, and business owners, and they were received by email and U.S. Post Office. There were 49 comment letters received during the 30-day comment period on the EA (2009), and those comments were included with the comments with the 25 comment letters from recent Scoping, totaling 74 comment letters analyzed in this content analysis process and report. There was one form letter that was received during the 30-day comment period on the EA.

All of the comment letters were analyzed using a process called content analysis, which was completed by a third-party contractor (see detailed process in the project record). In addition to the reports that were produced from the content analysis process, the Interdisciplinary Team (IDT) members read all of the comment letters. Of the 74 comment letters that contained unique and substantially different comments, there were 388 comments that were coded, analyzed, addressed, and entered into an Access database. The 388 comments were then associated with Public Concern statements (PCs) and the IDT then developed responses to each of the PCs. There are 59 PCs that have been responded to by the IDT, and they begin on page 6.

## Content Analysis Process

The content analysis team followed a systematic process of carefully logging-in, numbering, reading, coding, and summarizing all viewpoints and concerns that were submitted. The comments that were most helpful were those that were unique, substantially different, and were specifically related to the analysis disclosed in the EA and the Proposed Action. In addition to capturing unique and substantially different comments, this report attempts to reflect the emotion and strength of public sentiment in order to represent the public's values and concerns as fairly as possible. When an individual raised multiple concerns within the same letter, each unique comment was numbered and tracked separately. Each comment was assigned a unique tracking number and coded by subject or topic (see Appendices for the detailed content analysis process and for the coding structure).

Once the unique and substantially different comments were coded, concerns raised by different commenters on the same subject and with the same intent were grouped and summarized into public concern statements that capture the essence of those like-concerns. In this way, multiple comments may be addressed by one response. In some cases, more nuanced or complex concerns may be answered through multiple responses to multiple concern statements, or they may have a single response dedicated to just that specific comment. It is important to keep in mind that even though the public concern statements attempt to capture the full range of public concerns, they should be reviewed with the understanding that there is no limitation on who submits comments. Therefore, the comments received do not necessarily represent the sentiments of the public as a whole. This report attempts to provide fair representation of the wide range of views submitted. Every comment has the same value, whether expressed by many, or by one respondent. Analyzing comments is not a vote-counting process. The ID team response to the public comments was not determined by majority opinion, but, rather by the substance of the comments. The content analysis process ensured that every comment was read, analyzed, and considered.

## Demographics of the Comment Letters

Demographic analysis presents an overall picture of respondents: where they live, their general affiliation to various organizations or government agencies, and the manner in which they respond. The database that was used contains public comments organized by subject and then category and demographic information. This kind of database can be used to show public comment from certain geographic locations or show comments associated with certain types of organizations. Thus demographic coding, combined with comment coding, allows managers to use the database to focus on specific areas of public concern linked to geographic area, organizational affiliation, and response format.

### *Geographic Representation*

Geographic representation is tracked for each commenter. The following table displays the number of commenters by State.

State	Number of Comment Letters	Number of Signatures
Connecticut	1	1
DC	1	1
Idaho	1	2
Illinois	1	1
Minnesota	1	2
Montana	12	19
Nebraska	1	1
Washington	1	1
Wyoming	1	1
Unknown	54	8725
<b>Total</b>	<b>74</b>	<b>8754</b>

### *Organizational Affiliation*

Organizational affiliation is tracked for each comment letter. The following table displays, by organization type, the number of responses and signatures.

Organization Type	Number of Comment Letters	Number of Signatures
Business	2	2
Federal Agency	2	2
Group or Organization	28	8708
Individual	42	42
<b>Total</b>	<b>74</b>	<b>8754</b>

## List of Commenters and Public Concern Categories

Each Public Concern statement (PCs) is accompanied by a response that was developed by subject matter experts. Following is a list of the commenters, their letter number, and the associated public concern statement. Comments received during the 30-day comment period for the EA are being considered as scoping comments for this EIS. Table 1 is a combined list of the those who commented during the 2011

EIS Scoping period, and those who commented during the 2010 30-day EA comment period. The table has 2 columns for the letter number. Because all letters are being considered as 2011 EIS scoping comments, they all have a letter number in that column. Those letters that were received during the 2010 30-day comment period for the EA also have a second number, which is the number given each letter when it was cataloged for the EA. The purpose of providing the EA comment letter numbers here is to allow the commenters who submitted letters for both phases of this project to distinguish between their comments on the EA and their scoping responses to the EIS. In order to find the PC statements that address your comments, find your name or organization (which lists the organizations and then individuals alphabetically) and then a list of the PC numbers associated with your comment letter. In Table 2, the PCs are organized by subject so if you look for the subject that most closely aligns with your comment, it might be easier for you to find the PC number associated with your letter. In some cases your concerns may be addressed as part of several different, but related PC statements. The PCs and their response follow Table 2 and are organized according to Table 2.

**Table 1. 2010 DEIS – scoping comment letters and associated public concerns**

Commenter	2011 EIS Scoping Letter #	2010 30 day EA Comment Letter #	Public Concern (PC) #
Amens, Karl	42	017	57A, 57L
American Sheep Industry Assn., Idaho Wool Growers Assn., Montana Wool Growers Assn., Oregon Sheep Growers Assn., Texas Sheep and Goat Raisers' Assn., and Wyoming Wool Growers Assn., Mary Jensen	18	N/A	3A-C, 27AB,
American Wildlands, Dylan Taylor	69	049	6E, 18A, 48B
Anderson, Carl	35	010	60A
Anonymous	5	N/A	24
Atlan, Leslie	28	003	39A, 49H
Babcock, Adam	52	027	28B
Bauer, Brad	9	N/A	4D
Bender, Peter	63	043	59
Borzoth, Tim	47	022a	41A, 50A-D
Bureau of Land Management, Tim Bozorth	14	N/A	5B, 8A, 42A, 50BFDKL
Burroughs, Karen	32	007	57L
Center for Biological Diversity and Western Watersheds Project, Marc Fink	15	N/A	9A-D, 10B, 12, 15BC, 19AC, 20, 21A-C, 21L, 26A-F, 29B, 31C, 35, 38A-D, 39B-E, 41A-E, 45, 49H, 50A-D, 51, 53A, 56A, 57A-D
Center for Biological Diversity, Marc Fink and Western Watersheds Project, Jon Marvel	58	038	12, 19A, 21A, 21B, 41BD, 49CIJ, 50A-D, 58
Chrissos, H.L.	19		50D
Cornell University, Michael Thonney, Professor	34	009	3A, 3B
Defenders of Wildlife, David Gaillard	46	021	3C
Defenders of Wildlife, David Gaillard	65	045	6A-C, 20, 41C, 49K, 50BF, 58A-G
Defenders of Wildlife, Mike Leahy	24	N/A	1, 2, 4D, 8HI, 14, 21E, 22, 28A-D, 31D, 33, 41C, 44A-C, 45, 46, 49AHL, 50EFJNO, 51, 53D-G, 56BC, 57J, 60BC

Commenter	2011 EIS Scoping Letter #	2010 30 day EA Comment Letter #	Public Concern (PC) #
Elpers, MaryJo	54	029	21A
Environmental Protection Agency Region 10, Lynne McWhorter	25	N/A	8JK, 11, 13, 14, 15D-G, 19D, 21BDIJK, 31E-I, 36ABD, 41B, 55, 57CK
Form-Letter	55	033f	11, 45
Frieseman, Paul	4	N/A	Request to be on mailing list
Gallatin Wildlife Association, Paul Griffin	1	N/A	23, 36, 41D, 42C, 43, 48C, 50B, 55, 57A, 60D
Gallatin Wildlife Association, Paul Griffin	12	N/A	5A, 23, 32J, 36, 41D, 43, 48C, 50B, 57A
Gehrke, Robison	57	037	20, 31B, 41B-D, 42A, 45
Goggins, Gregory	27	002	40
Greater Yellowstone Coalition, Barb Cestero	21	N/A	8E, 45, 50DKM, 57E-G
Greater Yellowstone Coalition, Katie Strong	59	039	4A, 10A, 11, 15A, 16, 19B, 20, 21A, 30A-H, 31A, 37, 38AF, 41BE, 48AB, 49DHJ, 50CDE
Hagenbarth Livestock, Jim Hagenbarth	2	N/A	3A
Hagenbarth, Jim	48	023	3A-D
Helle Livestock, John Helle	3	N/A	27AB
Jackson, Bruce	31	006	60A
Jenkins, Edi	64	044	59
Kesich, John	43	018	59, 60A
Krause, Courtney	44	019	40
Lanskey, Marcus	33	008	59
LeVine, Mary Fabre	40	015	60A
Levitt, Mary	38	013	60A
Livingston, Jim	37	012	24
Maroon, Marcia	6	N/A	60A
McCormack, Tom	30	005	57M
McKenna, Patrick	73	053	53A, 60G
McNamee, Tom	51	026	45, 60A
Montana Fish, Wildlife and Parks, Patrick Flowers	66	046	41B, 50A, 50B
Morris, Wendy	26	001	40
National Parks Conservation Association, Patricia Dowd	10	N/A	60A
National Wildlife Federation, Idaho Wildlife Federation, and Montana Wildlife Federation, Thomas France	16	N/A	8BC, 11, 27C, 29C, 41C, 45, 50DF, 54A-D
National Wildlife Federation, Thomas France	68	048	6D, 7, 45, 50BF, 54B
Natural Resources Defense Council, Kellie Cutrer	22	N/A	4C, 42C, 50B, 53C
Natural Resources Defense Council, Lisa Upton	56	036	41B, 45, 49J, 50A-G, 51, 60A, 60D
Natural Resources Defense Council, Whitney Leonard	23	N/A	4AB, 8FG, 9C, 21D, 26G, 41BCD, 42ABC, 45, 50AEF, 51, 55, 57HI
Naumann, Chris	53	028	21A, 60A
Neal, Charles	8	N/A	4C, 6E, 60A

Commenter	2011 EIS Scoping Letter #	2010 30 day EA Comment Letter #	Public Concern (PC) #
Neal, Charles	49	024	4C, 60A
Okuzumi, Margaret	50	025	11, 49H
Pintler Audubon Society, Jack Kirkley	7	N/A	4B, 45, 50BC, 57B, 60A,
Safari Club International and Subcommittee on North American Conservation, William Mealer	17	N/A	27C, 36, 41BF, 42B, 43, 45, 48CD, 53B, 60ADF
Seip, Ann	39	014	40
Sierra Club Idaho Chapter, Edwina Allen	20	N/A	8D, 26ABDE, 27D, 41B, 45, 55
Sierra Club Rocky Mountain Chapter, Diedre Butler	70	050	60A
Sleeper, Stephen	74	054	60A
Springer, Kimberly	36	011	40
Steinke, Andrea	41	016	40
Steitz, Jim	72	052	57A-M
Taft, John	62	042	60A
The Humane Society of the United States, Susan Hagood	61	041	59
US Meat Animal Research Center, Kreg Leymaster	11	N/A	18B
Waldron, Dan	45	020	3A
Welland, P.	29	004	17
Western Watersheds, Jon Marvel	67	047	34, 35, 41A-E, 42B, 44A, 6850B
Wild Earth Guardians, Wendy Keefover-Ring	60	040	32A-E, 47, 49AB, 50HK, 51, 52
Wild Sheep Foundation, Neil Thagard	71	051	41AH
Wildlife Conservation Society, Jon Beckmann	13	N/A	4C, 29A, 44A, 45, 46, 60B

**Table 2. Public concern statements organized by subject**

Subject	PCs Associated With This Subject
Access – Roads	1
Access - Sheep Trails, Crossings and Driveways	2
Alternative - Proposed Action/No new federal action	3
Alternative - Possible Alternative 1	4
Alternatives - Possible Alternative 2	5
Alternatives - Possible Alternative 3	6
Alternatives - Possible Alternative 4	7
Alternatives - Alternative Development	8
Alternatives - Range of Alternatives	9
Botany - Plant Communities	10
Climate Change	11
Consultation	12, 13
Heritage	14
Hydrology - Water Quality & Use	15, 16
Miscellaneous	17, 18
NEPA – Cumulative Effects	19, 20, 21, 22, 23, 24, 26, 27, 28, 29
Range	30, 31

Subject	PCs Associated With This Subject
Social and Economic	32, 33, 34, 35, 36
Soils	37
Weeds	38, 39
Wildlife	40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58
Thank you for your comment	59
Outside the Scope	60

Following are the Public Concern statements (PCs) and the Response to Comments (RTCs); and they are organized by Subject. For a complete, detailed report of the Content Analysis, which includes all of the coded comments from the comment letters, please see the separate Content Analysis Report in the project record.

## Public Concerns and Response to Comments

### Access

#### Roads

##### *Public Concern 1*

*The USSES should consider and analyze the effects from the use of and maintaining 20 miles of road and a two mile firebreak each year.*

##### Response to PC 1

See Hydrology Report (pages 53-54), Soils Report (pages 8-9) for analysis of effects from annual road and firebreak maintenance. Also, see DEIS, Infrastructure.

**Roads:** Road Maintenance includes ongoing upkeep necessary to retain or restore roads to meet management objectives. Maintenance activities could involve drain dip construction and surface drain installation, culvert armoring, minor culvert installation and replacement, drop inlet installation, catch basin reshaping, roadside brushing, and surface grading. The intention of this activity is to maintain existing road features and to meet best management practice standards. Roads needed for operations and management access are described in the Rangeland Report, page 23. Road surface and drainage structures are maintained annually or as maintenance is needed for efficient resource management and research travel. Local roads on Headquarters, Humphrey, and Henninger are gated. Public motorized travel is restricted.

Cleared firebreaks around burn units are also used for motor vehicle and equipment access during burn operations and for research, before, during, and after the areas are burned. Firebreaks not needed for motorized access for research are rehabilitated, restored to native vegetation after project completion. Firebreaks around prescribed burn areas are not maintained. They are not seeded and are left to revegetate with native species. Windrowed shrub, grass, litter, and debris removed from firebreak clearings is pulled back and spread over the cleared area after the burn with a motor grader, generally within the same season. Invasive, noxious weeds have not been a problem on the cleared firebreaks. *Bromus tectorum L.*

(cheatgrass), present since 1930s, is present on some cleared areas but is not persistent at this elevation and under these climatic conditions. A study of cheatgrass encroachment is continuing on the 2005 Hitching-Post Burn at Headquarters Range in parts of sections 5, 6, 7, and 8 T11N, R37E (Taylor 2008). Road clearings and/or maintenance and cleared firebreak effects are included in each resource analysis and report. Motor vehicle transportation of noxious weeds seeds is a concern.

**Invasive plant species infestations on ARS lands:** Infestation sites are GPS (Global Positioning System) mapped as polygons or as points for small spot invasions. Weed locations are maintained in the USSES records. Roadside noxious weed locations are also identified on hard copy maps and recorded for treatment operations.

In 1994 NRCS range conservationists conducted a field inventory on ARS Headquarters property to evaluate ecological status or range condition of the plant communities. Of 162 field plots sampled, cheatgrass was present on 38 plots; a trace on 21 plots, 2 - 3 percent on 12 plots, 4 plots had 5percent, and one plot had 12percent cheatgrass cover. Cheatgrass was present on 23 percent of the plots with 87 percent of the plots had three percent or less cheatgrass cover. On the 2009 range survey line intercept transects cheatgrass occurred less than one percent on five transects. No cheatgrass was present on Humphrey, Henninger, or summer range transects. The table below displays cheatgrass presence on the 2009 Headquarters survey transects.

Cheatgrass Percent Cover	
Transect No	Cheatgrass % cover
HQ 1	< 1
HQ 2	<1
HQ 3	0.3
HQ 4	0.7
HQ 5	0
HQ 6	0
HQ 7	0

**Wildlife:** The effects of roads and firebreaks was reviewed for all wildlife species and found to be of little concern given that the unique wildlife habitat occurs in unroaded portions of the Centennial Range. The effects of prescribed fire were considered in the effects section for sage-grouse.

## Sheep Trails, Crossings and Driveways

### *Public Concern 2*

*The USSES should consider mitigation measures (i.e., bridges, re-routes, and closing sensitive sites to sheep altogether) that would reduce the impacts of sheep driveways on water quality and erosion.*

### Response to PC 2

Mitigation measures related to hydrology, to reduce potential impacts of sheep driveways on water quality and erosion, have been included in the Hydrology Report (pages 43-45). Water quality and condition of sheep crossings within the project area are discussed in the 2011 Hydrology Report (page 50).

**Driveways:** There are approximately four miles of maintained sheep driveways through timbered areas on the West and East Summer Ranges. Sheep driveway locations are shown on the DEIS, Appendix A, Sheep Drive Map 14 for East and Map 16 for West Summer Range. There are no sheep driveways on the low elevation pastures. The only maintained driveways are through timbered areas in West Summer Range (Odell/Big Mountain) and East Summer Range (Toms Creek). Annual driveway maintenance is done through the timbered areas. (2011 Rangeland Report, page 13)

Small diameter downed wood across driveways is retained on site; some limbing may be done on retained downed trees. New or recently fallen trees (greater than 10 or 12 inches in diameter) are cut out and removed (pulled back into adjacent timber stands) from the driveways each year. Occasionally sheep driveway trails are rerouted, closed, and rehabilitated. Driveways may be rerouted when a better route is located or an alternate route is needed for research. Driveways through timber patches and across meadows are short, generally less than ½-mile long. If adverse effects to soil or water occur, mitigation measures (cross drains with woody debris to divert overland flow) are implemented or a driveway segment maybe rerouted to avoid sensitive areas. Old driveways, no longer needed or used, are closed and rehabilitated; seeded with native species, brush or woody debris if available returned to the site, and animals are kept off to restore the area. (2011 Rangeland Report, page 13)

Driveway stream crossings are described in the 2011 Hydrology Report pages 14-16, 29-31, 38, 44, 50-51, 54, 56-63. Effects of sheep driveways on vegetation, soil, and water are covered in the Rangeland Resource, Hydrology, and Soils reports. The Rangeland Report (2011), page 38 states “A rotational/deferred grazing system with rest one year in three and light stocking rates have developed good range conditions with a stable or upward trend. Only small (less than 50 total acres) areas representing less than one percent of the area grazed (sheep driveways/trailing/watering/bedding) showed heavy use.”

Driveway maintenance would continue to facilitate moving sheep to graze underutilized areas. Effects of sheep crossing Odell Creek would be mitigated with water diversion structures. These structures would be constructed when the alternative is implemented to divert any overland water flow from the driveway through filter vegetation before runoff enters Odell Creek. Mitigation measure (2011 Rangeland Report, page 30) states: “At the sheep driveway crossing on Odell Creek in section 11, T15S, R2W there is bare soil, 10 feet wide for about 150 feet on the south side of the crossing, on 15 to 20 percent slope. To divert overland flow and prevent soil transport into Odell Creek, cross drains would be constructed on the driveway trail. Place three 10 to 12 inch diameter logs (available in the adjacent timber stand) angle imbedded three inches deep across the trail to divert runoff into undisturbed areas with existing vegetation ground cover and down woody debris. The three cross drains would be placed 40 to 50 feet apart, at sites

where the trail grade is less than 10 percent, for efficient cross drain function and to minimize maintenance needs. Cross drains would also be constructed on the narrow trail further to the west. This trail segment is eroding into a washed out trench, cross drains would divert water off the trail and eliminate further down cutting. Cross drains would be monitored and maintained annually. The sheep driveway crossing on the south fork of Odell Creek near the south line, section 14, T15S, R2W, is low impact, with grass and forb cover and little adverse effect.” (2011 Rangeland Report, page 30). Implementing proposed mitigation measures would be minimize soil effects, and water quality would be maintained at stream crossings. With mitigation noted above, soil and water quality concerns would be met.

**Wildlife:** Conservation measures have been added to the project proposal to reduce effects to wildlife species. These can be found in the affected environment section for grizzly bears, bighorn sheep, and sage grouse.

## Alternatives

### Proposed Action/No new federal action

#### *Public Concern 3*

*The USSES should select the Proposed Action/No New Federal Action Alternative.*

- A) Alternatives to the present research program have been analyzed in detail and support no new federal action.
- B) Wildlife habitat associated with sheep management has been thoroughly addressed.
- C) The proposed action is vital for Clark County economics and the continuation of the sheep industry.
- D) The proposed action promotes the ecological sustainability of the range resources and wildlife habitat that USSES manages.

#### Response to PC 3

See DEIS, Comparison of Alternatives, Table 15, page 61-62.

### Alternative 1

#### *Public Concern 4*

*The USSES should select Alternative 1.*

- A) Ending Sheep Station operations and grazing represent a true no action alternative versus the Proposed Action.

B) The Sheep Station is not a compatible use of public lands and the need for the practice of high altitude sheep grazing no longer exists.

C) The Centennial Mountain Range area is crucial as a linkage zone between the Greater Yellowstone Ecosystem and the Central Idaho wilderness areas, which is essential for establishing the integration of various subpopulations in adjacent ecosystems.

D) The Sheep Station is adjacent to portions of the Primary Conservation Area for Grizzly Bears in the Greater Yellowstone Ecosystem where permittees have voluntarily retired sheep grazing permits to avoid conflicts with grizzly bears.

E) Although the grazing utilization of these lands and the management of such is intensive, the impacts of this exemplary operation on wildlife are substantial, unacceptable, and can only be resolved by this alternative.

#### Response to PC 4

See DEIS, Comparison of Alternatives, Table 15, pages 61-62.

- A) See DEIS, Alternative 1 - Proposed Action – No New Federal Action, pages 55-56.
- B) See DEIS, Publically Suggested Alternatives Eliminated From Detailed Consideration, pages 52-55.
- C) See Public Concern 45.
- D) See DEIS, Grizzly Bear.
- E) See DEIS, Wildlife, pages 109-163.

#### Alternative 2

##### *Public Concern 5*

*The USSES should select Alternative 2.*

A) Alternative 2 would resolve legal and other potential conflicts with wolves, grizzly bears, and bighorn sheep.

B) Alternative 2 is consistent with Forest Service policy. Continued grazing on these specified pastures/allotments would demonstrate why the grizzly bear should remain on the threatened species list.

#### Response to PC 5

See DEIS, Comparison of Alternatives, Table 15, pages 61-62.

A and B) See DEIS, Wildlife, pages 109-163.

## Alternative 3

### *Public Concern 6*

*The USSES should select Alternative 3.*

- A) Closing the East Summer Range and Meyers Creek Allotment because these areas are only grazed two out of three years with the season being two months long.
- B) Grazing in the East Summer Range should be prohibited due to the mortality risk and displacement impacts for grizzly bears.
- C) No supporting justification that Alternative 3 would significantly impair USSES operations.
- D) Closing pastures in the Centennials to domestic sheep grazing is a critical step in promoting wildlife connectivity between the Greater Yellowstone Area and the Salmon-Selway Ecosystems.
- E) Alternative 3 would alleviate conflicts with carnivores and wildlife forage competition and displacement.

### Response to PC 6

See DEIS, Comparison of Alternatives, Table 15, pages 61-62.

- A) See DEIS, Range, pages 95-98.
  - B) See DEIS, Wildlife, pages 109-163.
  - C) See DEIS, Comparison of Alternatives, Table 15, pages 61-62.
- D and E) See Response to PC 45.

## Alternative 4

### *Public Concern 7*

*The USSES should select Alternative 4, because it eliminates domestic sheep grazing in the Bernice, Snakey, and Kelly allotments; minimizing grazing near bighorn sheep populations and reducing the risk of disease transmission.*

### Response to PC 7

See DEIS, Comparison of Alternatives, Table 15, pages 61-62. See DEIS, Big Horn Sheep, pages 138-145.

## Alternative Development

### *Public Concern 8*

*The USSES should consider and/or analyze other alternatives.*

- A) An alternative should be considered that would eliminate sheep grazing in the East and West Summer Ranges, the Humphrey Ranch, the East Beaver, and Meyers Forest Service allotments, and the Henniger allotment. This would increase utilization of the Headquarters and Humphrey pastures, while providing increased protection to grizzly bears and an opportunity for the BLM to reintroduce bighorn sheep on lands north of the East and West Summer Ranges.
- B) A modified version of Alternative 1 should be considered that does not confine grazing only to the Mud Lake feedlot and includes other opportunities for grazing on private or public lands where conflicts with wildlife do not occur.
- C) A modified version of Alternative 3 should be considered that would maximize consistency with the Forest Service plans for forests in the Greater Yellowstone Area with cessation of grazing in allotments within the Primary Conservation Areas; thereby reducing conflicts between sheep and large carnivores.
- D) An alternative should be considered that limits all grazing to only the sheep station headquarters property.
- E) An alternative should be considered that eliminates sheep grazing in the Centennial Mountains of both Montana and Idaho; thereby providing increased protection for grizzly bears and wolves.
- F) An alternative should be considered that evaluates the feasibility of relocating the Sheep Experiment Station to another location.
- G) An alternative should be considered that transfers the Sheep Experiment Station's function to another ARS facility.
- H) An alternative should be considered that makes reducing conflicts with and minimizing impacts of sheep grazing on wildlife a priority of operations and research, and ends use of the East Summer pasture and Myers Creek allotment.
- I) An alternative should be considered that analyzes relocation of the USSES, is wildlife friendly, encompasses best management practices for making sheep production compatible with maintaining native wildlife, implements and researches the effectiveness of existing and new methods of coexistence into its research.
- J) An alternative should be considered that would focus on reducing contact between domestic and bighorn sheep.

K) A range of reasonable management alternatives should be considered that will meet the goals and objectives of the purpose and need; address significant issues identified during scoping; and address resource and environmental needs, and management concerns.

#### Response to PC 8

See DEIS, Publically Suggested Alternatives Eliminated From Detailed Consideration, pages 52-55.

## Range of Alternatives

### *Public Concern 9*

*The USSES should include a reasonable range of alternatives in comparative form.*

- A) The Sheep Station should consider alternatives that are not within the jurisdiction of the lead agency.
- B) The Sheep Station should consider a true no action alternative.
- C) The Sheep Station should consider conducting and/or relocating the same or similar experiments in other locations that are less controversial and less ecologically important for wildlife species.
- D) The Sheep Station should consider limiting all grazing to only the USSES headquarters property.

#### Response to PC 9

See DEIS, Alternatives, pages 48-62; a total of 14 alternatives have been considered.

## Botany

### Plant Communities

#### *Public Concern 10*

*The USSES should evaluate the impacts of grazing on plants.*

- A) The Sheep Station should evaluate the effects of grazing on the species composition of plant communities in the project area.
- B) The Sheep Station should evaluate the effects of grazing on native plant species, including those considered sensitive and those being considered for protection under ESA, such as the whitebark pine, which is a crucial food source for grizzly bears.

## Response to PC 10

### A)

From Rangeland Report, page 6: Rangelands were assessed for Headquarters, Henninger, and Humphrey properties and, for East and West Summer ranges by an interdisciplinary team consisting of rangeland management specialists, wildlife biologist, soil scientist, and hydrologist. The interdisciplinary team used field surveys, literature reviews, and rangeland monitoring, ocular observations, personal communications with USSES scientists and professional observations, and photographs to assess rangeland conditions.

Survey results indicated soils are stable across the vast majority of USSES rangelands. Utilizations light to moderate only small (less than 50 acres) areas (sheep driveway/trailing/watering and bedding locations) showed heavy use. There is an appropriate diversity of forbs, shrubs, and grasses across these rangelands. Reference sites and exclosures not grazed in 30 years compared (ocular) to areas outside exclosures showed no differences in species composition. Rotational, deferred and rest from grazing with light to moderate stocking rates have allowed for fair to good range conditions with static to upward trend across vast majority of rangelands.

From Rangeland Report, page 41 Line Intercept Cover data collected indicates major grass and forbs species are present. However, due to fire exclusion, herbaceous species cover is lower than recommended by the ecological site description (ESD), which should be 65 percent of the overall composition. The line intercept method consists of a horizontal, linear measurement of plant intercepts along the course of a line (tape). It is designed for measuring grass or grass-like plants, forbs, shrubs, and trees. The line point intercept method measures vegetation along a given distance and from those measurements composition is extrapolated.

The Rangeland Assessment Report, (page 2) includes a map with plot locations for each property. Plant species composition is shown by percent cover for each property. Page i lists scientific and common names of plant species present. Starting on page 5, Table 2 through Table 17, display percent cover by species and percent cover by grass, forbs and shrubs for each inventory plot site (for each property). Existing species composition was compared to reference ecological site descriptions to determine rangeland conditions. Forested vegetation types are not grazed and were not surveyed. USSES sheep grazing operations would have no effect, other than driveways through forest vegetative areas.

### B)

The 2011 Botany Report states (page 1), “There are no land management guidelines or standards that focus management of specific botanical resources at the agency level.” Under provisions of the ESA, federal agencies are directed to seek to conserve endangered and threatened species and to ensure that actions authorized, funded, or carried out by them are not likely to jeopardize the continued existence of any threatened or endangered species, or result in the destruction or adverse modification of their critical habitats.

There are four federally-listed plants in the State of Idaho and three federally-listed plants in the State of Montana; and only one species, Ute ladies’-tresses (*Spiranthes diluvialis*), has been documented or has potential habitat near the geographic area of the USSES ([http://ecos.fws.gov/tess\\_public/pub/stateListing.jsp?status=listed&state=ID](http://ecos.fws.gov/tess_public/pub/stateListing.jsp?status=listed&state=ID) accessed 10/08, Fertig et al. 2005). The nearest know location of this species to any Agricultural Research lands is approximately 25 miles southeast of the headquarters area in wetland sites near Henry’s Fork river. These occurrences are all associated with either flood plain areas, ditches; sub irrigated wet moist areas, wet river terraces, and or very wet meadows at approximately 5,000 feet elevation.

Because there is no habitat for the endangered plant Utes' lady-tresses there are no direct, indirect, or cumulative effects. There would be no impacts to federally listed plant species from any alternatives proposed because no species are known to occur and no habitat is present within Agricultural Research lands. The Botany Report, 06/16/2011, Table 1 (pages 2 through 4) lists common plant species for each property area. Analysis of the whitebark pine is beyond the scope of this analysis as grazing does not occur in the forested portion of the ARS lands.

## Climate Change

### *Public Concern 11*

*The USSES should describe the current conditions and future predictions of climate shifts in the Northwest and consider how it may lead to increased conflicts. The cumulative effects analysis should include a discussion on potential changes in precipitation, stream flow, and changes in vegetation.*

Response to PC 11

See DEIS, Climate Change, page 80.

## Consultation

### *Public Concern 12*

*The USSES should consult with the US Fish and Wildlife Service (USFWS) regarding effects to listed species and disclose any recommended terms and conditions from the USFWS Biological Opinion for this project.*

Response to PC 12

The DEIS discloses cooperative efforts with USFS, BLM, and Idaho Fish and Game regarding bighorn sheep separation, grizzly bear management, sage-grouse, and other species. Similarly, compliance and/or consistency regarding other relevant plans (such as the Grizzly Bear Conservation Strategy and Idaho Bighorn Sheep Management Plan) is discussed in the effects section for each species.

### *Public Concern 13*

*The USSES should disclose whether other agencies within the project area are cooperating agencies, and if the project is in compliance with relevant plans, standards and guideline, and the decisions to be made by these agencies (i.e., Forest Service, BLM and Department of Energy).*

Response to PC 13

ARS is a cooperating agency under MOUs with BLM and USFS for grazing allotments, and with DOE for grazing and feeding sites at Mud Lake. ARS also cooperates with USFS (MOU) for fire suppression and fire management. This agreement allows for including wildland fire as a vegetation management tool on ARS lands. MOU objective 3 provides:

A. To provide authority for and a basis for cooperation among the USSES and FS concerning management of wildland fire use events that may affect USSES lands.

4. PROGRAM COVERAGE.

A. The agencies agree to cooperate with implementation of wildland fire use wildland fire management activities and events, to achieve land management goals.

5. STATEMENT OF WORK.

A. Agencies will develop cooperative arrangements to cover administrative and jurisdictional responsibilities that will provide for mutual assistance for managing wildland fires that are managed for resource benefits; and

B. When wildland fire use fires burn on, or threaten USSES lands, joint planning will be conducted by local officials of the representative agencies to manage the wildland fire use.

C. The Forest Service will be the responsible agency for managing wildland fire use fires that spread onto USSES lands. The Forest Service will work closely with USSES to determine management objectives and strategies.

## Heritage

### *Public Concern 14*

*The USSES should develop and integrate a survey strategy and facilities management plan that includes cultural mitigation measures. In addition, USSES should conduct consultation with all affected tribal governments.*

### Response to PC 14

See DEIS, Design Features, Best Management Practices, Monitoring; Heritage, page 40, and Appendix D - Draft ARS Sheep Station Heritage Management Plan.

## Hydrology

### Water Quality

### *Public Concern 15*

*The USSES should analyze water quality and quantity.*

A) The analysis should address effects from increased evapotranspiration rates and desertification from grazing.

B) The analysis should address compliance with state water quality standards.

C) The analysis should address grazing related activities that further degrade already impaired streams.

D) The analysis should address grazing related activities that affect 303 (d) listed water bodies and the requirement to comply with the antidegradation provisions of the Clean Water Act.

E) The analysis should address any TMDLs that have been developed and approved within the planning area.

F) The analysis should use the LRMP revision process to proactively support Water Quality Restoration Plan development and TMDL implementation.

G) The analysis should include details of the water quality monitoring plan including frequency, responsible agency, and thresholds that would result in a management shift.

### Response to PC 15

The main sheep driveway crossing on O'Dell creek is described in the Rangeland Report, page 16 through 18 and watering operations are described on page 18 and 19. O'Dell Creek driveway crossing mitigation is described in the Rangeland Report, page 30. Sheep watering sites locations on east and west summer ranges are displayed on maps 14 and 15 in the Appendix A – Maps.

A) Desertification occurs when the amount of dry-land biological productivity is reduced. There are several causes and overgrazing is included as a one, or there may be a combination of causes. The term does NOT refer to the expansion of existing deserts (<http://www.britannica.com/EBchecked/topic/159114/desertification>). Desertification can take place when plant cover is reduced and the amount of bare ground increases. With increases in bare ground comes increased evaporation. However, this process was not noted in either the upland or lowland grazing properties at ARS except for some small areas at the Henninger Ranch property. Both the EIS and the Hydrology Report address existing conditions for uplands and stream health through Proper Functioning Condition (PFC) surveys (Hydrology Report: Watershed Characteristics and Conditions, pages 8-31; DEIS, Watershed Characteristics and Condition: pages 125-128, Affected Environment, Water Quality- pages 130 and 131).

Uplands were observed to be consistently well vegetated with grass and forbs with no evidence of desertification or disruption of hydrological cycling. If desertification was taking place this process would have been reflected by areas of bare ground throughout the grazing properties, and if present, would likely be functioning as areas of active erosion. Such areas were not documented in both the specialist report and the DEIS. Also, refer to the DEIS, Range Affected Environment, pages 81-90, which describes stable states for all the grazing properties except for portions of Henninger Ranch, in regards to vegetative condition and trend, pages 61-65.

B) ARS is required to comply with the Clean Water Act, and executive orders for floodplains and wetlands. Existing conditions for streams, wetlands and floodplains is documented in the Hydrology Report (page 42). This includes documenting 303(d) listed streams within the project area. Potential impacts to streams and water quality are also discussed, by alternative, in the Hydrology Report (pages 32-38).

C) Within the project area, the existing condition for streams was evaluated. Included in these examinations were the major drainages of Hell Roaring, Odell, Corral, and Beaver Creeks. No evidence of grazing related degradation of impaired streams was observed.

D) The Hydrology Report (pages 32-38) identifies the location of 303(d) listed streams within the project area for both Idaho and Montana. Streams not identified in the included maps are presumed to comply with the appropriate state water quality criteria and standards. This assumption will be clarified in the Hydrology Report (pages 32-38). Under each alternative potential impacts to water quality are discussed as well as the determination of probable direct and indirect effects.

E) At present, no TMDLs (Total Maximum Daily Load) have been developed and approved within the project area for the State of Montana. TMDLs though have been proposed and are listed in the 2010 Integrated Report for the State of Montana, Appendix B. TMDLs have been proposed for O'Dell Creek, Tom Creek, and Corral Creek. Priorities defined in Appendix B are Low for Corral Creek and Moderate for Corral and Tom Creek. These priorities are for the 2010-2012 period, but no work undertaking their development has occurred. The Hydrology Report (pages 32-38) for the EIS discusses the 303(d) list and related field observations under Existing Conditions, Water Quality Section.

In the State of Idaho, two TMDLs have been completed, but not implemented. TMDLs have been completed for water temperature and fecal coliform. The listed segments are on Beaver Creek. Segment Numbers are: The Beaver Creek (Rattlesnake Ck-Dry Ck-ID17040214SK014-05) which is listed for water temperature; Beaver Creek (Rattlesnake Ck-Dry Ck-ID17040214SK015-05) which is listed for water temperature; and Beaver Creek (Rattlesnake Ck-Dry Ck-ID17040214SK021-05) which is listed for water temperature and fecal coliform. The beneficial use that is not supported is cold water aquatic life for Beaver Creek (Rattlesnake Ck-Dry Ck-ID17040214SK014-05) and the Beaver Creek (Rattlesnake Ck-Dry Ck-ID17040214SK015-05) segments. For the Beaver Creek (Rattlesnake Ck-Dry Ck-ID17040214SK021-05) segment cold water aquatic life, primary contact recreation, and salmonid spawning.

F) The mission of the USSES is research. It is not a designated land management agency, such as the Forest Service or BLM. The USSES is not required to have a land management plan nor a water quality restoration plan. There is no required LRMP process to support a water quality restoration plan or its development. Streams and water bodies not identified as 303(d) listed streams will be added to the Hydrology Report (pages 32-38). The Hydrology report documents potential impacts, and outcomes to water quality and streams, for the proposed action and other proposed alternatives.

G) See response 15 F above. USSES does not have established goals and objectives from a land management plan; it does not have a land management plan with designation assumptions or indicators that were used in the management plans development. There are no land management plan predictions for effects that require validation. There are no land management plan mitigations which require effectiveness monitoring.

USSES' compliance with the CWE has been evaluated using the State of Idaho and Montana's integrated monitoring reports for 2008 and 2010 respectively. The 2010 report for Idaho is still in draft at this time. The temperature TMDL for Beaver Creek, in Idaho, has been approved but not implemented. Responsible agencies for implementing the TMDL on Beaver Creek are Idaho Association of Soil Conservation Districts, Idaho Department of Lands, BLM, and USFS. ARS is not listed as an agency responsible for implementing the TMDL on Beaver Creek. Beneficial uses monitoring for the required Integrated 303(d)/305(b) report continues by both the State of Montana and Idaho. Although scheduled for TMDLs for sediment, siltation and phosphorous (Corral Creek), Turbidity (Odell Creek), and sediment/siltation (Tom Creek) in the State of Montana, no TMDL's have been developed or implemented. Discussions with the State of Montana (Fryxell, 2011) revealed that these entire reaches were listed for convenience. Further discussion indicated that the State of Montana feels that for the upper reaches of Odell, Hell Roaring, and Corral Creeks that the upper reaches of these streams are in good condition overall (Fryxell, 2011). No grazing-related sources of sediment and siltation, alterations to flow or to stream side

vegetation were observed during the field seasons of 2008 or 2009 in the headwaters of Tom Creek (Moser and Fryxell, 2008 and Fryxell, 2009).

Although Corral, Odell, and Tom Creeks have been listed as requiring TMDLS the listings appear to be based on problem specific to certain reaches lower within the Red Rock Lakes basin, which are not located on ARS administered lands. The State of Montana 2004-2006 Integrated report describe the upper reaches of Corral and Hell Roaring Creeks, whose headwaters are in the Tom Creek summer range, as in excellent condition (State of Montana, 2006b and 2006c). Field observations in July 2008 and August 2009 support these conclusions (Moser and Fryxell, 2008, Fryxell, 2009). In both areas, vegetation appeared consistent and well established, in the areas that were visited. There were no major areas of upland instability or erosion that were observed in these field trips that could be potential sources of sediment. No areas of excessive riparian impacts and browse were observed that could be construed as alteration of riparian vegetative cover. In addition smaller tributary streams were observed throughout the project area and were observed to be in good shape. As a result, the effectiveness of ARS's range management practices, maintenance of watershed condition and water quality may be inferred.

Although the States of Idaho and Montana are continuing to monitoring beneficial uses, and no other streams are listed as impaired, or needing a TMDL, ARS will conduct water quality monitoring to "screen" for water quality problems. If no water quality issues are defined through this process the effectiveness of range management practices would again be confirmed. If water quality issues are defined, a water quality monitoring plan would be developed, and tailored to the issues defined during screening. The plans design, monitoring frequency and selected water quality analytes would be determined based on the problems defined during screening. Thresholds would be the applicable state water quality criteria and standards. Sampling would be conducted using the requirements defined for the selected analytes by the appropriate State-Idaho or Montana.

## Water Use

### *Public Concern 16*

*The USSES should analyze the effect of water diversion for sheep watering on water levels in streams and how it affects other species.*

### Response to PC 16

Sheep watering operations are described in the Rangeland Report, page 14. Analysis on the effects from water diversion for sheep water on water levels in streams has been added to the Hydrology Report (pages 51-53).

## Miscellaneous Comments

### *Public Concern 17*

*The USSES should disclose who is benefiting from the sheep station.*

### Response to PC 17

See DEIS pages1-3, History of the Sheep Station at Dubois; and Appendix E of the DEIS, page A-83, Collaborative Research at the ARS USSES.

### *Public Concern 18*

*The USSES should consider the following:*

- A) The Sheep Station should consider management strategies that address wildlife concerns and include participation in regional collaborative partnerships.
- B) The Sheep Station should consider that the proposal to continue existing grazing practices will maintain sheep resources at the USSES, whereas alternative proposals can be implemented only by decreasing the number of sheep, thereby affecting the second largest research flock in the United States and result in the loss of valuable information from this research.

### Response to PC 18

- A) As with all federal agencies, budgets are very tight, and ARS, USSES is funded solely to carry out its mission (DEIS, Mission Statement, U.S. Sheep Experiment Station, Dubois, Idaho, page 15) and is not funded to participate in regional collaborative partnerships.
- B) The proposed action is to continue historic grazing and associated activities in support of the USSES mission (DEIS, Mission Statement, U.S. Sheep Experiment Station, Dubois, Idaho, page 15).

## **NEPA**

### Cumulative Effects

#### *Public Concern 19*

*The USSES should analyze the cumulative effects of their activities at an appropriate scale.*

- A) Grazing and related activities on all USSES, Forest Service, BLM, and Department of Energy lands.
- B) All domestic livestock grazing in the region.
- C) Predator control actions taken in response to domestic livestock grazing in the region.
- D) An identified resource(s) with a geographic area that is appropriate and time period which includes any past, present, or foreseeable future actions that potentially will affect the resource(s) along with a baseline description and any scientifically defensible threshold levels for the resource(s).

### Response to PC 19

See DEIS, Chapter 3 – Environmental Effects (page 78) for a discussion of cumulative effects by resource. Each resource has included the activities on the Forest Service and Bureau of Land Management allotments and Department of Energy lands as appropriate in the cumulative effects analysis. There are

two reasons that these properties are included under the cumulative effects rather than the direct/indirect effects analyses.

The settlement agreement in Center for Biological Diversity and Western Watersheds Project, v. U.S. Sheep Experiment Station; U.S. Department of Agriculture; Agricultural Research Service; and U.S. Forest Service (2008) stipulated that: "1. The U.S. Agricultural Research Service shall prepare an "environmental assessment" ("EA") or "environmental impact statement" ("EIS"), pursuant to the National Environmental Policy Act ("NEPA"), regarding the grazing of sheep and related activities on U.S. Sheep Experiment Station lands. " The stipulation was to prepare a NEPA analysis of grazing and related activities on "U.S. Sheep Experiment Station lands." Separate NEPA analyses were prepared by the respective agencies for Sheep Station use of those lands. It is neither required nor appropriate that the Sheep Station revisit these decisions. In keeping with the settlement agreement direction and the existing NEPA analyses for the other agency parcels, this environmental impact statement analyzes the direct/indirect effects of the proposed actions on ARS lands only. The effects of grazing on the allotments and feed lot are therefore considered in the cumulative effects analyses.

## Mitigation

### *Public Concern 20*

*The USSES should analyze the effectiveness of all mitigation measures for each alternative and provide sufficient details that are specific to any given mitigation measure, which ensures the environmental consequences of such have been adequately evaluated. These measures should be required as opposed to recommended.*

### Response to PC 20

See DEIS, Design Features, Best Management Practices, Monitoring, pages 38-43; and analysis of effects by resource.

## Process

### *Public Concern 21*

*The USSES should ensure it complies with all procedural requirements and direction in the EIS.*

- A) The Sheep Station should analyze all impacts (direct, indirect and cumulative) from sheep grazing and related activities on resources within the project area resulting over an indefinite period of time.
- B) The Sheep Station should describe the affected environment that establishes the baseline conditions.
- C) The Sheep Station should include supporting data and analysis for all conclusions.

- D) The Sheep Station should explain how research conducted at the sheep station is contributing to the sheep industry and the goal of improving rangeland ecosystem sustainability as reflected in its mission statement and found in the Purpose and Need.
- E) The Sheep Station should change the name of the section entitled Predator Avoidance and Abatement to Predation Avoidance and Abatement as a point of clarification.
- F) The Sheep Station should describe stakeholder involvement.
- G) The Sheep Station should demonstrate the need for continued grazing.
- H) The Sheep Station should include issue mitigation.
- J) The Sheep Station should explain how coordination with pertinent agencies and stakeholders will influence management decisions.
- K) The Sheep Station should include tables, maps, figures, charts, and photos that display clear and concise information.
- L) The Sheep Station should include an alternative comparison table that summarizes significant impacts between alternatives.
- M) The Sheep Station should include an analysis that considers gene flow and habitat fragmentation associated with the station's operations.

#### Response to PC 21

- A and B) See DEIS, analysis of effects by resource.
- C) See individual Specialist Reports; additional information can be found in the project file.
- D) See DEIS pages 1-3, History of the Sheep Station at Dubois; and Appendix E of the DEIS, page A-83, Collaborative Research at the ARS USSES.
- E) This comment is a matter of personal preference and does not affect the analysis.
- F) For a list of commenters, see Table 1. 2010 DEIS – scoping comment letters and associated public concerns, page 3.
- G) See DEIS, Purpose and Need, pages 15-20.
- H) See DEIS, Issue-Driven Alternatives, page 48.
- I) While ARS will consider comments during the environmental analysis, the decision rests solely with ARS.
- J) See DEIS.

K) See DEIS, Comparison of Alternatives, Table 15. Comparison of alternatives by National Program 101 and 215 applicable components and purpose and need, pages 61-62.

L) See DEIS, Wildlife pages 109-163.

### *Public Concern 22*

*The USSES should allow opportunity for the public to review and comment on the DEIS.*

#### Response to PC 22

There will be a public comment period on the DEIS.

## Proposed Action

### *Public Concern 23*

*The USSES should acknowledge that any increase in production efficiency will be marginal and that it is not a realistic economic goal; therefore not a justifiable reason for continuing ARS operations.*

#### Response to PC 23

Future discoveries of production advancements cannot be quantified. Some may be large or small. While potential advancements in some cases may manifest as small benefits for individual operators, their combined benefit regionally and nationally would be greater.

## Proposed Action (Does Not Support)

### *Public Concern 24*

*The USSES should not continue with this project and the proposed action because it is a ploy for money and jobs, and there is no supporting documentation that supports or justifies continuation of sheep grazing on these lands.*

#### Response to PC 24

The DEIS responds to this comment, see especially the Purpose and Need on pages 15-20.

## Purpose and Need

### *Public Concern 26*

*The USSES should include additional information in the Purpose and Need.*

A) Describe the origins of the research goals and objectives.

- B) Identify the users requesting and using the research from the station.
- C) Specify the number of years of research that is anticipated.
- D) Provide the rationale for why this is the only location to conduct such research.
- E) Identify other areas that would be less controversial for such research.
- F) Describe the steps that have been taken to identify other potential areas suitable for this research.
- G) Describe the extent of benefits provided by the sheep station.

#### Response to PC 26

A, B, and C) See DEIS, Agricultural Research Service; Mission Statement, U.S. Sheep Experiment Station, Dubois, Idaho, beginning, page 15.

D, E, and F) See DEIS, Publically Suggested Alternatives Eliminated From Detailed Consideration, pages 52-55.

G) See DEIS pages 1-3, History of the Sheep Station at Dubois; and Appendix E of the DEIS, page A-83, Collaborative Research at the ARS USSES; and Socio-Economics, pages 212-217.

## Research

### *Public Concern 27*

*The USSES should consider the scientific value of research conducted at the sheep station.*

- A) The Sheep Station is a vital source for providing information for the sheep industry and land management agencies;
- B) The Sheep Station provides valuable information for improving the production efficiency of sheep operations while sustaining the health of rangeland ecosystems;
- C) Continued research in high elevation grazing pastures is not necessary to accomplish any meaningful research and it is counterproductive to the best use for these habitats; and
- D) The Sheep Station should identify the research objective requiring such a long duration activity.

#### Response to PC 27

A and B) S See DEIS pages 1-3, History of the Sheep Station at Dubois; and Appendix E of the DEIS, page A-83, Collaborative Research at the ARS USSES

- C) See DEIS, Publically Suggested Alternatives Eliminated From Detailed Consideration, pages 52-55.
- D) The duration of the research activities are dependent on the research being conducted.

### *Public Concern 28*

*The USSES should design a more extensive research program.*

- A) The Sheep Station should conduct research that identifies any bottleneck that inhibits movement across and residence in the Centennials from removal of large carnivores for protection of sheep on USSES lands.
- B) The Sheep Station should research non-lethal ways to reduce and eliminate sheep and wild predator conflicts.
- C) The Sheep Station should research best animal husbandry practices for maintaining large carnivores, except in well defined cases on USSES lands.
- D) The Sheep Station should research quantifiable thresholds for impacts to wildlife.

### Response to PC 28

Scientists at the USDA, Agricultural Research Service, U.S. Sheep Experiment Station are not authorized to conduct wildlife research. To conduct research implied in items 28A through 28D, the Agricultural Research Service would need to provide new authorizations and new funding to support new programs, including scientists trained in appropriate disciplines, at the U.S. Sheep Experiment Station.

## Scope

### *Public Concern 29*

*The USSES should expand the scope of this project.*

- A) The Sheep Station should conduct research on the wildlife of that ecosystem and how it affects them, to ensure the sustainability of a grazing ecosystem.
- B) The scope of the analysis should address effects from grazing of sheep and related activities on BLM, FS, and Department of Energy parcels; and
- C) Alternatives 1 through 4 capture the appropriate scope, but should include impacts to the sage grouse.

### Response to PC 29

A) Scientists at the USDA, Agricultural Research Service, U.S. Sheep Experiment Station are not authorized to conduct wildlife research. To conduct research implied in items 29A, the Agricultural Research Service would need to provide new authorizations and new funding to support new programs, including scientists trained in appropriate disciplines, at the U.S. Sheep Experiment Station. Also,

determining the effects of sheep grazing and associated activities on BLM and FS land would duplicate ongoing BLM and FS efforts. The Department of Energy land used for the U.S. Sheep Experiment Station Mud Lake facility is not grazing land. Surrounding county and private land is as a landfill and irrigated and used as crop land, respectively.

B) Effects from the grazing and associated activities on the FS and BLM allotments are considered in this analysis in the context of cumulative effects. The direct/indirect effects of these activities were analyzed in the NEPA analyses conducted by the lead agencies specifically for the individual allotments.

C) See the Wildlife Report, pages 55-62, for effects to sage grouse.

## Range

### Exclosures

#### *Public Concern 30*

*The USSES should expand its analysis of exclosures.*

A) Due to the small size of the exclosures, they may be inadequate to provide habitat for a plant community unaffected by nearby grazing activities and they may not represent landscape-level diversity that might allow the native ecosystem to re-establish.

B) The exclosures have been grazed prior to exclosure and the comparison is between a recovering site and a grazed site; not an ungrazed site with a grazed site.

C) Exclosure studies may underestimate the extent of grazing effects because they cannot monitor the most drastic damage which occurred long ago.

D) The analysis should identify variations in the ability of sites to recover and provide useful comparisons.

E) The analysis should show how long each exclosure has been established.

F) The analysis should show if any exclosures have ever been broken into by livestock and if so, for how long.

G) The analysis should show if the vegetation in the exclosures is truly native vegetation or an altered community.

H) The analysis should show if the area within the exclosures has recovered and can validly serve as a comparison to judge conditions outside of the exclosure.

#### Response to PC 30

Field review by the Interdisciplinary Team verified that the exclosures, though small, represent a native plant ecosystem and demonstrate conditions with minimal disturbances. Similarly, the range affected

environment section measured the existing vegetation conditions, based on numerous transect data, and compared those findings to expected native conditions in the region based on ecosystem classification types.

A) Enclosure size is 15.15 m x 15.15 m (50 feet x 50 feet) and 30.3 m x 30.3 m (100 feet x 100 feet), (Klement 1997) enclosure intent is to compare taxonomic composition and richness, range health, site productivity (biomass) cover, bare ground, gopher activity within an ecological site or specific vegetation community. Each site-specific enclosure is located not to study or compare effects or diversity on diverse ecological types. However, with multiple enclosures located on different vegetative communities effects can be determined for the vegetative types across the landscape.

From Rangeland Report, page 38: "Three enclosure were established in 1960, five were added in 1978, after 14 years very little change was evident inside or outside enclosures. With light stocking, deferred and rotational grazing, any difference between vegetation species composition, ground cover or other differences were not an effect of grazing (Klement 1997). In 1994, 25 perennial tall forb community sites were sampled, including three with grazing enclosures. These vegetation types were also surveyed in 1959, 1978, 1979, and 1994. In 2008, Klement and Moffet tested the hypotheses that site conditions such as biomass, taxonomic composition and richness, cover, bare ground, and gopher mounding were constant among years and between levels of grazing on the grazed and ungrazed areas surveyed in 1959, 1978, and 1994. Results indicate sheep on USSES summer range had no effect on subalpine tall forb vegetation communities. Between 1964 and 1994, grazing had been light with less than 11 percent of available forage used. Analysis results indicated no difference or shift between perennial tall forb to grass for either plant community either inside or outside enclosures (Klement 2008)."

From Rangeland Report, page 36 and 38: "Rotation and rest one year in three with light stocking have developed good range conditions with a continued stable or upward trend. A comparison of enclosures that have not been grazed in 30 to 50 years to areas outside enclosures, showed no differences in composition. Forb production in 2009 was high and would be expected to continue with current stocking."

B) From Rangeland Report, page 10: "There are no detailed records of land use prior to the USSES establishment. Livestock grazing research under the ARS ownership, which dates from circa 1918, predates the county. High elevation summer ranges could have been used for sheep or cattle grazing before transfer to ARS."

C) See item 30A above, for Klement 1997 and Klement and Moffet studies results. From Rangeland Report, page 5; and in 1994 NRCS Headquarters Property Surveys. In 1994, NRCS (Natural Resource Conservation Service) range conservationists conducted a field inventory on ARS Headquarters property to evaluate ecological site status or range condition on stratified plant communities. Ecological status or range condition is the present state of the vegetation of the ecological site in relation to the climax or natural potential plant community for the site. The primary purpose of determining ecological condition is to provide a basis for predicting the extent and direction of change that can result in the plant community from specific vegetation treatments or management actions.

Range site or ecological site descriptions represent the site's natural potential plant community. Range condition or ecological status represents the present plant community status. Vegetation treatments, grazing or other management actions can direct plant communities toward or away from the natural site potential (ecological site description). The 1994, inventory collected data on 162 plots to established relative range conditions on nine natural potential plant communities on ARS Headquarters property (NRCS 1995). The range site or ecological status evaluation determined that one percent of the sites sampled were in excellent condition, 63 percent in good condition, 31 percent fair condition and two

percent in poor condition. Three percent were seeded (crested wheatgrass) and ecological status was not determined or rated for potential climax plant cover.

During the inventory process apparent trend was estimated based on plant composition, presence of climax species seedlings, plant residue, plant vigor, and soil surface conditions. The 162 plot data compiled indicated 32 percent of the sampled sites are in an upward trend, six percent are in a downward trend and 62 percent are static. Three percent of the stable or static site was seeded area, not evaluated.

1991 Summer Range Surveys: In 1991, a team of SCS (later name changed to NRCS) range conservationists conducted a field inventory on ARS Summer Range property to evaluate ecological status or range condition of the plant communities. The primary purpose of determining ecological condition is to provide a basis for predicting the extent and direction of change that can result in the plant community from specific vegetation treatments or management implementations.

Summer range lands were subdivided into ecological Range Site Descriptions for each natural plant community. Major factors affecting natural plant communities include soil, climate, aspect, slope, and other environmental conditions that result in specific range production. Each range site is described on the bases of the climax or natural potential plant community it is capable of supporting. Each Ecological site was inventoried for percent canopy cover for grasses and grass like plants, forbs, cryptogams, shrubs and trees. Percent cover range was recorded for each grass and grass like species, forb species, shrubs and tree species, lichens and moss groups. Each site description includes a discussion of what plants are expected to increase or decrease with prolong degradation from heavier than prescribed stocking rates.

Range sites or ecological site descriptions represent the site's natural potential plant community. Range condition or ecological status represents the present plant community status. Vegetation treatments, grazing or other management actions can direct the plant community toward or away from the natural site potential (ecological site description). The 1991 inventory collected data to established relative range conditions on eight natural potential plant communities (range site descriptions) on ARS summer range. Data was compiled and peer reviewed in 1992 (SCS 1992). The range site or ecological status was determined from field inventory worksheets for each specific site location. Site descriptions include: \* South Slope Gravelly range site in good condition; \* Mountain Meadow Loamy range site, good condition with one description in excellent condition; \* Windswept Mountain Ridge site good condition; \* Mountain Meadow Semiwet range site excellent condition; \* Mountain South Slope range site predominantly in good condition with one site description in fair condition: \* Steep Mountain Slope range site predominantly in excellent condition with two site description in good condition and one site description in fair condition; \* Mountain Slope range site predominantly in good condition with one site description in excellent condition; and \* Riparian Wet Meadow range site was in excellent condition.

1989 Headquarters Property Surveys: In 1989, a team of SCS range conservationists conducted a field inventory on ARS US Sheep Experiment Station Headquarters property. Soil and range correlation and site condition inventories were conducted during the surveys. Frequency transects were established during this survey and read for the first time. Range site descriptions were revised or developed and peer reviewed in 1992. A complete plant species list was developed and plot locations mapped. Percent cover range (low to high) was recorded for each grass and grass like species, forb species, shrubs and tree species, lichens and moss groups. Ecological site descriptions were based on potential climax plant community, included range site production (AUMs), with stocking rates for excellent, good, fair and poor ratings and recommended grazing periods (SCS 1991).

As noted above, in 1994, ecological status or range condition is the present state of the vegetation of the ecological site in relation to the climax or natural potential plant community for the site. The primary purpose of determining ecological condition is to provide a basis for predicting the extent and direction of

change that can result in the plant community from specific vegetation treatments or management implementations.

2009 ARS, USSES Surveys: In 2009 ARS Headquarters, Henninger, Humphrey, East and West Range were assessed by an interdisciplinary team consisting of rangeland management specialists, wildlife biologist, soil scientist, and hydrologist. Results of the 2009 range surveys indicate good range conditions. Headquarters soils are stable with desirable forb, shrub, and grass diversity. Utilization is None to Slight (Table 3). Rotational and deferred grazing, rest during the primary growing season with light stocking rates have allowed for fair range conditions with static trend. Only small (less than 50 acres) areas representing less than 2 percent of the area grazed (sheep trailing/watering/ bedding) showed heavy use. Headquarters property is grazed April 23 to June 25 and September 1 to November 1.

Humphrey soils are very stable with desirable forb, shrub, and grass diversity. Utilization is light (Table 3) with rams and small groups of sheep grazed here. Rotational and deferred grazing with light stocking rates have allowed for good range conditions with a static or slight upward trend. Only small (less than 50 acres) areas representing less than two percent of the area grazed (sheep trailing/watering/bedding) showed heavy use. Humphrey ranch is grazed June 1 to October 20.

Henninger soils are stable with desirable forb, shrub, and grass diversity. Range condition is fair and appears in static trend. Utilization is light on forbs and grasses (Table 3). Field survey 2009 (visual) found Moderate to Heavy use on browse. This may be from early and late season deer and elk grazing. Historically, the ranch primarily grazed cattle up until purchased by the U.S. Sheep Experiment Station in the early 1940s. The presence of smooth brome (*Bromus inermis*) in pastures indicates that it was planted for cattle feed. Smooth brome is not preferred by sheep and is spreading into native vegetation areas and increasing in density. Only small (less than 10 acres) areas representing less than two percent of the area grazed (sheep trailing/watering/ bedding) showed heavy use. Henninger ranch is grazed June 25 to July 9 and August 31 to September 15.

East Summer (Toms Creek) soils are stable with a desirable diversity of forbs, shrubs, and grasses. Utilization is None to Slight (Table 3). A rotational/deferred grazing system with rest one year in three and light stocking have developed good range conditions with a stable or upward trend. Exclosures not grazed in 30 (30 to 50 years) years compared to outside exclosures showed no differences in composition. Only small (less than 50 acres) areas representing less than two percent of the area grazed (sheep driveways/trailing/watering/bedding) showed heavy use. East Summer range is grazed July 23 to August 31.

West Summer (Odell/Big Mountain) soils are stable, appropriate diversity of forbs, shrubs, and grasses. Utilization is None to Slight (Table 3). A rotational/deferred grazing system and rest one year in three with light stocking have developed good range conditions with a stable or upward trend. Exclosures not grazed in 30 years compared to outside exclosures showed no differences in composition. Only small (less than 50 acres) areas representing less than two percent of the area grazed (sheep driveway/trailing/watering/bedding) showed heavy use. West Summer range is grazed July 9 to August 31.

D) See survey and study findings under item C response above.

E) From 2011 Rangeland Report, page 38, three exclosures were established on ARS Summer Range in 1960, five were added in 1978. Bork 1997, long term fall (1924) grazing study at U.S. Sheep Experiment Station, indicate “old exclosures” were established in 1940s and “new exclosures” were established in 1950 (Bork 1997).

F) Exclosure drop fences are raised, and monitored for effectiveness before sheep are moved into each pasture for grazing. “Exclosures at Headquarters are sheep proof, maintained to exclude sheep from grazing excluded areas. The West Summer Range exclosures are drop fences, put up to exclude sheep when pastures in the exclosure areas are grazed. These drop fences are again let down after sheep are removed from the pasture”, 2011 Rangeland Report page 21.

G and H) See survey and study findings under items A, B and C response above.

## Grazing (Domestic)

### *Public Concern 31*

*The USSES should expand its analysis of sheep grazing.*

A) The Sheep Station should identify studies conclude the total removal of livestock is necessary to restore ecosystem health not just reduction in grazing or short term seasonal use.

B) The analysis should address the extent to which sheep grazing and fire suppression have altered the composition of plant species and biodiversity.

C) The analysis should address the potential competition between domestic sheep and native ungulates, and the indirect impact on predators.

D) The Sheep Station should consider bison along with cattle and horse grazing to complement/contrast that of sheep.

E) The Sheep Station should consider the potential adverse effects of sheep grazing on water quality.

F) The Sheep Station should consider timing grazing to minimize impacts on stream banks.

G) The analysis should include a monitoring plan for water quality and forage.

H) The Sheep Station should identify any necessary management actions that would shift if areas become degraded.

I) The analysis should address the effects of grazing intensity on stream temperatures.

### Response to PC 31

A and B) See Range Report (2011, pp. 31-41) for a description of the existing Range condition. The purpose of this project is to “achieve the research goals and objectives to achieve the mission (to develop integrated methods for increasing production efficiency of sheep and simultaneously to improve the sustainability of rangeland ecosystems) of the Sheep Station (DEIS, page 14).” Ecosystem restoration is not part of the purpose and need for this project. As research station, The USSES has no management plan that determines how the range is to be managed other than to achieve its mission.

C and D) In regards to bison, USDA, ARS, U.S. Sheep Experiment Station lands are not suitable for bison grazing, and U.S. Sheep Experiment Station facilities were not built to contain bison (see DEIS, Publicly Suggested Alternatives Eliminated From Detailed Consideration, #6, page 51). In the autumn of some years, cattle are grazed on U.S. Sheep Experiment Station Headquarters lands, and occasionally on the Humphrey and Henninger Ranches, to reduce fuels and consume plants that sheep do not select to create a more balanced mix of shrubs, grasses, and forbs. The Headquarters land has no surface water and is too arid to favor bison grazing; bison seem to prefer cooler and moister conditions (Lyman and Wolverton, 2002). The Humphrey and Henninger Ranches are cooler and somewhat moister than the Headquarters lands. However, the Humphrey and Henninger Ranches contain legacy networks of irrigation canals, which were constructed before ARS purchased the ranches from the private sector in the 1940s, that bison would damage or destroy. Overall, bison grazing would have a negative effect on USDA, ARS, U.S. Sheep Experiment Station lands and fences. Thus, this alternative was eliminated. (2009 Lewis). Lyman, R. L., and S. Wolverton. 2002. The late prehistoric–Early historic game sink in the Northwestern United States. *Conserv. Biol.* 16:73-85. Patrick Gass’s detailed kill record shows no buffalo were killed west the continental divide by Core of Discovery, August 1805 (McGregor 1997).

E) Current water quality conditions and potential impacts to water quality are discussed in the Hydrology Report (2011; See Also DEIS, Hydrology, pages 179-210), as well as discussing watershed condition, water quality, potential impacts to water quality as well as current conditions, and potential impacts, on sensitive areas such as wetlands, riparian areas and floodplains.

F) Grazing inclusive dates are listed under each Alternative in Rangeland Report starting on page 36, Table 11, Alternative 1. The timing of when sheep are moved is dependent on sufficient forage. As a result, when sheep are moved, banks should be well vegetated, minimizing impacts to stream banks as root strength and cover would be maximized. This in turn would maximize bank protection and stability and impacts to stream banks would be minimized.

G and H) See Hydrology Report (2011). See also DEIS, Hydrology, page 178. Water quality monitoring for beneficial uses has been conducted by the States of Montana and Idaho and is ongoing as they collect information for the EPA 303(d)/305(b) Integrated Report, which is due every two years. In addition, ARS will conduct water quality monitoring to screen for any water quality issues located in within the project area. If any water quality issues are defined a detailed monitoring plan would then be developed based on the concerns defined during the screening level of monitoring. If a more detailed water quality-monitoring plan is initiated based on screening of water quality within the project area, management shifts would be initiated if warranted based on the type of problem defined.

I) The BLM encourages analysis to consider the influence of grazing intensity on stream temperatures and indicates that research has demonstrated that watersheds with no grazing had significantly lower maximum temperatures compared to those watersheds that have been managed for grazing, particularly within Ponderosa pine and mountain ecosystems. No references were provided with this comment. Perhaps his comment was inadvertently included, as cattle prefer to hang out low in a watershed in riparian areas and near water. Sheep however prefer uplands and slopes. The forest within the project area does not contain Ponderosa pine, but mountain meadows do exist. During fieldwork, no evidence of vegetation removal immediately adjacent to streams was observed except for very small areas at sheep crossings. There was no evidence of sheep grazing on, and removing, vegetation and cover immediately adjacent to streams. As a result, evidence of vegetation removal and alteration of stream temperature was not observed.

## Social and Economic

### Cost Benefit Analysis

#### *Public Concern 32*

*The USSES should consider all aspects of the Cost Benefit Analysis.*

#### Response to PC 32

NEPA does not require Federal agencies to prepare a cost-benefit analysis. Therefore, not preparing financial efficiency or cost-benefit analyses does not constitute a violation of NEPA. In terms of the monetizable values within the study area, the alternatives would not result in a measurable change in the flow of dollars to and from the USSES. The alternatives do not effect funding to the USSES. Non-monetary or non-market benefits include those that are not valued in the market place. These include recreational and wildlife values, as well as other existence, option and bequest values. A non-market valuation study to analyze these values would result in an exorbitant cost to the agency and would not yield information relevant to effects of the alternatives. Any not market values, or lack thereof, resulting from USSES operation are already accounted for in the baseline. The alternatives do not propose any actions that would significantly affect such values. Therefore, including non-market values in any type of cost-benefit or social impact analysis is outside the scope of this project.

### Economic

#### *Public Concern 33*

*The USSES should not limit the economic analysis to Clark County, Idaho; a broader area of southeastern Idaho, southwestern Montana and possibly the Rocky Mountains region should be included.*

#### Response to PC 33

The analysis area for the EIS has been expanded to include Beaverhead County in Montana and Bonneville, Jefferson and Madison counties in Idaho. Employment, income, and tax effects are analyzed individually for Clark County and the larger 5-County analysis area to capture a greater portion of direct and indirect expenditures made by the station while not masking change specific to salary-related expenditures that occur within Clark County. While a very small amount of expenditure leakage occurs outside this area, further expansion of the analysis area would dilute important relationships with the local economy and provide limited additional insight.

### Environmental Justice

#### *Public Concern 34*

*The USSES should provide an analysis of the alternative's impacts with respect to all aspects of environmental justice.*

#### Response to PC 34

See the DEIS, Environmental Justice section, pages 216-217. The Environmental Justice section identifies both minority and low-income populations as groups of concern in the study area. All action alternatives were analyzed to determine if the proposed actions would result in any disproportionate adverse impacts to minority and low-income groups. It is noted that adjustments in area employment and/or income that could result from action alternatives could affect low-income groups. However, any adverse indirect or induced effects would be spread amongst all segments of the population despite their racial, ethnic, or poverty status. The alternatives do not have any proposed actions that would affect employment of minority workers through the H2-A program, or any other employment programs for minority workers.

## Public Health

### *Public Concern 35*

*The USSES should analyze the impact/threat of numerous pathogens of which domestic sheep likely serve as vectors, and fully disclose the risk to humans of the transmission of the Q-Fever.*

### Response to PC 35

See Economics Report, pages 3-5. No disproportionate adverse effects would be realized because there are no proposed actions in the alternatives that would result in an increased exposure of any group to diseases or other health concerns. Such exposure risks by sheepherders is already accounted for in the baseline and no disproportionate adverse impacts to minority or low income groups would occur as a result of action alternatives. Any alternative that would reduce grazing would likely reduce their exposure to human health risks rather than increase disease risk for any ethnic or income group. Furthermore, it is likely that sheepherders are more aware of disease risk from sheep than the general public and take greater precautions to protect themselves.

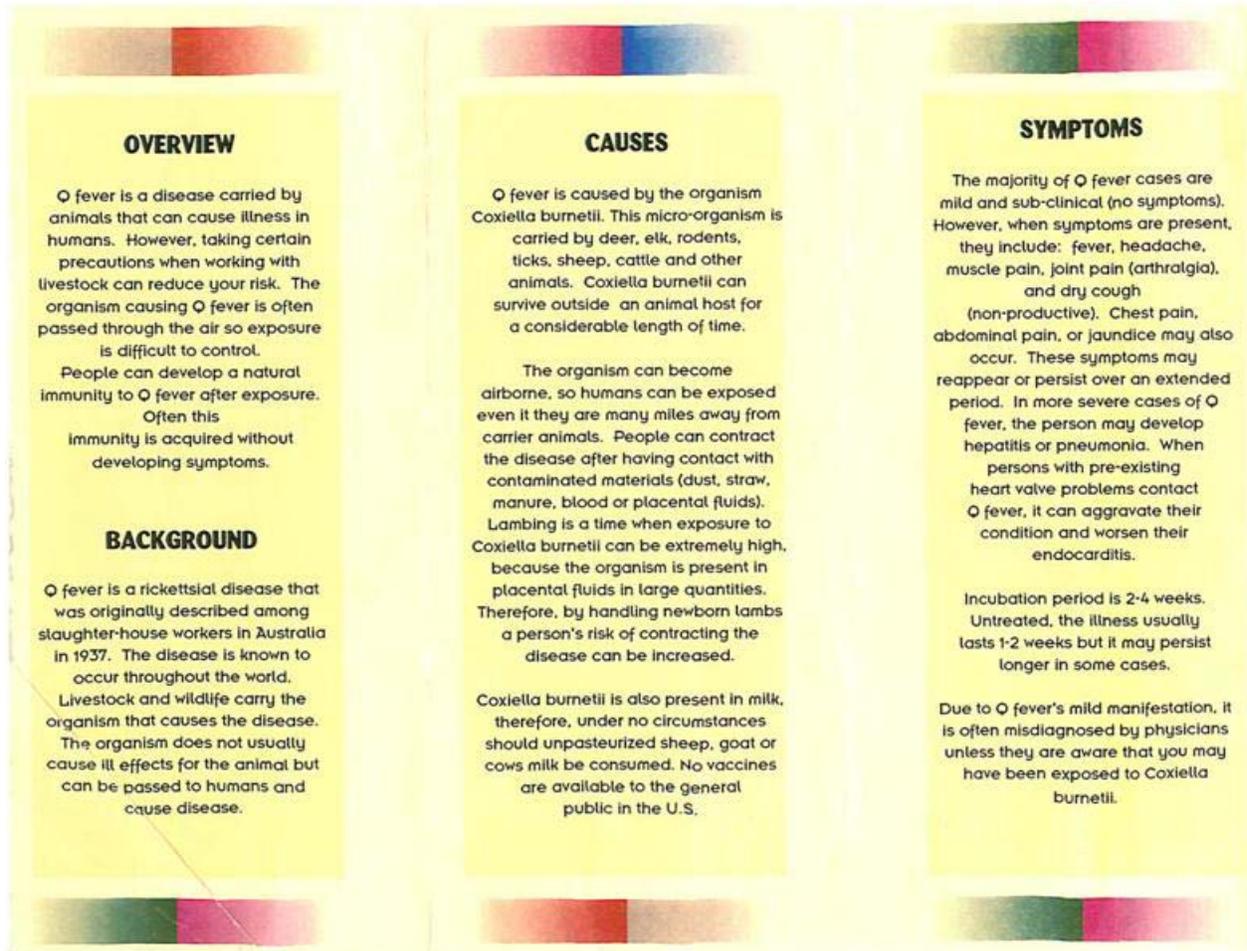
Zoonotic diseases are defined as infectious diseases that are communicable from nonhuman animals (e.g., livestock, poultry, wildlife, and pets) to humans under natural conditions. The U.S. Centers for Disease Control and Prevention lists a number of zoonotic diseases, some of which are notifiable diseases. A partial list of zoonotic diseases and a current list of notifiable diseases, including Q-fever (*Coxiella burnetii* infection), may be obtained from the U.S. Centers for Disease Control and Prevention (<http://www.cdc.gov/>).

At the USDA, ARS, U.S. Sheep Experiment Station, zoonotic diseases, the risk of acquiring zoonotic diseases and how to reduce the likelihood of acquiring a zoonotic disease are explained annually to employees. The transmission of many zoonotic diseases is greatest when people are attending animals before, during, and after parturition. The risk of transmission during other portions of the animal-production cycle is considerably less. Thus, USDA, ARS, U.S. Sheep Experiment Station standard operating procedures to avoid the transmission of zoonotic diseases focus on the lambing period and include the provisions listed below. In addition, except for housing located on the headquarters property of the U.S. Sheep Experiment Station, the nearest residences are approximately 7.2 km (4.5 miles) from lambing areas at the U.S. Sheep Experiment Station. Only U.S. Sheep Experiment Station employees may rent housing at the U.S. Sheep Experiment Station. \* Visitors are not permitted in lambing areas during the lambing season. \* A visitor is someone who is not an ARS employee or someone who is not working at the U.S. Sheep Experiment Station under a Specific Cooperative Agreement, Memorandum of Understanding, or as a contractor. \* People without official work-related business are not permitted in lambing areas during lambing season. \* Employees who work in lambing areas during lambing season are instructed to wear "street" clothes, including boots or shoes, from home and then change into work

clothes before they enter lambing areas. \*Employees are instructed to change from work clothes to street clothes before returning home. \*A clothes washer, detergent, and dryer are provided so that employees can wash and disinfect work clothes at the U.S. Sheep Experiment Station. This and the previous items reduce the risk of disease organisms being transported to or from the U.S. Sheep Experiment Station. \* Employees working in lambing areas during lambing season must wear boots and water-proof chaps that can be washed and disinfected at the end of each work day or when they leave the lambing area and go to another work area. \*Wash stations are located in strategic areas where boots and chaps can be washed and disinfected. \*Disposable rubber gloves are provided for employees who work in lambing areas during lambing season. Employees are instructed how to use and properly dispose of the gloves. \*Employees are instructed to use protective (i.e., rubber) gloves to perform certain tasks. \*Food and beverages are not permitted in lambing areas. \*Employees are trained how to reduce the risk of oral and inhalation contamination. \*A break room, located in a building approximately 50 meters (164 feet) from the nearest lambing area, is approved for consuming food and beverages. Employees are instructed to wash and disinfect boots, chaps, and hands before entering this building. \*Lambing areas are cleaned daily during the lambing season, and buildings used to house ewes and lambs are cleaned and disinfected before the beginning and after the end of each lambing period. \*Outdoor pens are cleaned before and after the lambing period. \*After lambing season and after the areas have been cleaned and disinfected, authorized personnel may escort small groups of visitors through the lambing areas, but not until after the visitors understand that these areas are considered biohazard areas during lambing season and that zoonotic disease organisms may persist in the environment for quite some time. \*These provisions are consistent with information and suggestions from the U.S. Centers for Disease Control and Prevention and other sources, which can be found with the following URL. \*<http://www.bt.cdc.gov/agent/qfever/clinicians/epidemiology.asp>. \*<http://www.cdc.gov/ncidod/dvrd/qfever>. \*[http://www.cfsph.iastate.edu/Factsheets/pdfs/Q\\_Fever.pdf](http://www.cfsph.iastate.edu/Factsheets/pdfs/Q_Fever.pdf) . \*The following brochure was issued to help explain a zoonotic disease to employees, interns, collaborators, contractors, and visitors.

*Coxiella burnetii* seems to be part of microbial ecosystems worldwide, except perhaps in New Zealand. *Coxiella burnetii* has been isolated worldwide from ticks, domestic and wild ruminants , domestic and wild canids , cats, domestic and wild lagomorphs , rodents, skunks, raccoons, and birds, and *C. burnetii* seems to be enzootic in domestic and wild ruminants and various wildlife species. Even though *C. burnetii* and Q fever are considered panglobal , the scientific literature indicates that the true incidence (i.e., clinically verifiable disease) of Q fever, and thus *C. burnetii* infection, have not been firmly established anywhere. According to the Centers for Disease Control and Prevention and McQuiston et al. (2006) , there are 50 to 60 reported cases of Q fever in the United States annually, and the average annual reported incidence in the United States is 0.28 cases per one-million people. By contrast, 19,931 cases of Lyme disease were reported in the United States in 2006, or 90 cases annually per one-million people (see, <http://www.textbookofbacteriology.net/Lyme.html>). Between 1978 and 2004, there were seven reported cases of Q fever in Idaho and seven reported cases of Q fever in Montana (McQuiston et al., 2006). Based on the data, there is no evidence that Q fever is a significant risk to human health in Idaho and Montana. To the best of our knowledge, the warning on recreation maps, “ARS sheep flocks carry a disease organism that can be passed to humans using the area,” is not based on data describing the presence of *C. burnetii* on USDA, ARS, U.S. Sheep Experiment Station lands or in U.S. Sheep Experiment Station animals, nor was it based on the diagnosis of Q fever in USDA, ARS, U.S. Sheep Experiment Station employees or family, or on the diagnosis of Q fever in Idaho or Montana. In fact, we know of no survey data that would include any USDA, ARS, U.S. Sheep Experiment Station lands, animals, or employees. The warning seems to have been added originally in the 1980s, although we are not able to determine the exact date. We have not been able to determine who authorized the original statement or who authorized Harvey D. Blackburn to sign the 1996 revision of the map on behalf of the USDA, Agricultural Research Service. Because little background and supporting information accompanies this warning, the warning has created the unintended impression that people who enter

Agricultural Research Service lands are at a greater risk of developing Q fever than are people who do not enter Agricultural Research Service lands, even though there are no data or any evidence to support the warning or the impression that it creates. Because it is an unfounded warning, the Forest Service and Bureau of Land Management have been asked to remove it when the map is revised again (Lewis, G. 2008. Personal communication).



## Social

### *Public Concern 36*

*The USSES should analyze the social and economic impacts resulting from the sheep station's operations.*

### Response to PC 36

The analysis in the DEIS has been expanded to include effects from station operations on the area economy. ARS (USSES) operations are described in the Rangeland Report, pages 12 through 31.

## Soils

### Nutrient Cycling

#### *Public Concern 37*

*The USSES should analyze the following regarding nutrient cycling: microbotic cover which can severely damage even though vascular plant communities appear healthy; loss in microbotic specious richness; and trampling damage to microbotic soil crusts.*

#### Response to PC 37

The Rangeland Report, page 41 states: “The Rangeland Assessment (Grooms, 2009) evaluated and assessed the Headquarters, Henninger, Humphrey, and East and West Summer Ranges using an interdisciplinary team consisting of rangeland management specialists, a wildlife biologist, a soil scientist, and a hydrologist.” The Rangeland Report, page 1 states; “The rangelands were assessed for the Headquarters, Henninger, Humphrey, East Pasture and West Pasture Allotments by a U.S. Forest Service Enterprise Team interdisciplinary team consisting of rangeland management specialists, wildlife biologist, soil scientist, and hydrologist. . . . Vegetative cover (collected at SS HQ1) is adequate to prevent the formations of rills and gullies and to maintain the soil in place.” Descriptions for Henninger, Humphrey, East and West Summer Range high use areas, (watering sites, camp sites and driveways) are described in the Rangeland Report, page 6 with more details on pages 32 through 39.

Cryptogam: The 1994 NRCS Headquarters property survey data sheet include cryptogam cover percent. Cryptogam cover was not present on all vegetation types. Cryptogam cover ranged from 0-12percent. The field data sheets cover type include Live plant cover, Litter (residue), rock, cryptogam (moss lichens), bare ground and total percent cover. Point transect column on field data record sheets were dot tallied and total percent cover for live plants, litter (residue), cryptogam ( mosses and lichens), bare ground, and rock percent cover were tallied and totaled for each survey point (162 plots). Cryptogam cover was considered, recorded and evaluated during the NRCS/SCS range condition survey, inventory. It was used to determine Ecological Rating (range condition) for each vegetation community. Rating of excellent, good, fair, and poor were determined from ecological site descriptions. Below is a sample of cryptogam cover data from some of the 162 plots. Most cryptogam was less than five percent; one plot had 12 percent, the high of all 162 plots. Data sheets are grouped by ecological site (vegetation community type), nine types were stratified and surveyed on Headquarters property.

Survey Data		
Transect No	Photo no	% cover
28-c	384-155	8
LB-4	385-134	0
030	NW SECTION	--- 0
24-C	384-155	4
LCB-7	385-134	1
LB-8	385-134	6
LB-9	385-134	2
LB-11	BLANK	4
027	OPEN NW SECTION	--- 0
029	“	---

031	"	---
LB-6	385-134	2
021	OPEN NW SECTION	---
026	"	---
025	"	---
028	"	---
02	BLANK	10
PASTURE 31-D	31-D-2-JO	2
PASTURE 31-D	PASTURE 31-D	8
PASTURE 32-A, B 12	BLANK	5
29-A, B10	BLANK	2
34-4, B9	BLANK	10
32-A, B8	BLANK	4
29-C, B6	BLANK	4
29-A, B2	BLANK	6
29-A, B1	BLANK	12

## Weeds

### General

#### *Public Concern 38*

*The USSES should fully analyze weeds.*

A) The Sheep Station should analyze the effects from all non-native, invasive species.

B) The Sheep Station should analyze the effectiveness of integrated pest management such as the use of herbicides, beetles, and livestock grazing as biocontrol methods.

C) The Sheep Station should analyze how domestic sheep are vectors of weed infestations through seeds attaching to their fleeces, hooves, and ingestion and elimination of seeds.

D) The Sheep Station should analyze and implement monitoring, reporting, and BMPs to reduce risks of introduction and spread of invasive species created by the sheep station actions, such as trailing and trucking sheep through areas with serious noxious weed infestations.

#### Response to PC 38

A) Weed infestations on ARS properties are located mainly in sheep pens and along roads. Invasive plant species infestations on ARS lands are GPS (Global Positioning System) mapped as patch polygons or spots (points) and included in the USSES records for treatment. Roadside noxious weed locations are also

identified on hard copy maps for control actions. Treatment is ongoing and monitored for effectiveness, Rangeland Report page 28 and 29

Page 18 (Rangeland Report), Areas up to ¼ acre are disturbed from sheep use around water troughs, and tend to have crested wheatgrass cover. Ecological site surveys done in 2009 indicate crested wheatgrass is not spreading. Pages 20 and 21 states (Rangeland Report), crested wheatgrass provides the primary ground cover at the ¼ acre or less campsites where camp activities remove or trample sagebrush and other vegetation. Total area affected by campsites is a very small or is a negligible percent of the total pasture area.

Page 25 (Rangeland Report), Crested wheatgrass was planted on Dubois ARS lands about 1940 (National Wool Growers, 1947 and 1948, photo of planting results is dated 8-22-1941). Plantings were at 5,800 feet elevation with 12 inch precipitation. Plantings produced forage for eight sheep months/acre. Large areas were planted with wheatgrass on Headquarters property in 1960s (Jacobson 09-2009 personal communication). Also on page 25 (Rangeland Report), Fifty-two acres of forage kochia, bitterbrush, and crested wheatgrass planting are planned for 2011.

Page 28 (Rangeland Report),

In 1994 NRCS range conservationists conducted a field inventory on ARS Headquarters property to evaluate ecological status or range condition of the plant communities. Of 162 field study plots, cheatgrass was present on 38 plots; a trace on 21 plots, 2 to 3 percent on 12 plots, 4 plots had 5 percent and one plot had 12 percent cheatgrass cover. Cheatgrass was present on 23 percent of the total survey plots, 87 percent of the plots with cheatgrass had 3 percent or less cheatgrass cover.

On the 2009 Headquarters range survey line intercept transects, cheatgrass occurrence was less than one percent on five line transects. No cheatgrass was present on Humphrey, Henninger, or summer range transects. Table 10 displays cheatgrass and crested wheatgrass presence on the 2009 Headquarters survey transects.

*Bromus tectorum* L. (cheatgrass), present since 1930s, shows up on some cleared areas but is not persistent at this elevation or environment. A study of cheatgrass encroachment is continuing on the 2005 Hitching-Post Burn at Headquarters Range in parts of sections 5, 6, 7, and 8 T11N, R37E (Taylor 2008). Page 34 (Rangeland Report), the presence of smooth brome (*Bromus inermis*) in [Henninger] pastures indicates that it was planted for cattle feed. Smooth brome is not preferred by sheep and is spreading into native vegetation areas and increasing in density.

From the 2009 Rangeland Assessment Report, starting on page 5, Tables 2 through 17 that field surveys completed in 2009 show crested wheatgrass cover as 3percent, 0percent, 4.5percent, 0.5percent, and 0percent respectively on the six survey range transects done on Headquarters property in 2009. Crested wheatgrass was absent on Humphrey and Henninger and summer range survey transects. Cheatgrass cover was less than one percent (0.3–0.7percent) on Headquarters ecological sites survey transects and was not found on Humphrey, Henninger, or summer range properties. No other invasive species were found (recorded) on any survey sites. Weed management and monitoring along roads, holding, feeding, and loading pens with heavy use is discussed above. ARS has a five-year grazing study on leafy spurge with three data sets, heavy grazing, no grazing and traditional grazing effects. The study area is on the Headquarters property just east of I -15. (Taylor 2008).

In 1994, NRCS range conservationists conducted a field inventory on ARS Headquarters property to evaluate ecological status or range condition of the plant communities. Of 162 field plots sample cheatgrass was present on 38 plots; a trace on 21 plots, 2 -3 percent on 12 plots; 4 plots had five percent;

and one plot had 12percent cheatgrass cover. Cheatgrass was present on 23 percent of the plots, and 87 percent of the plots had three percent or less cheatgrass cover. Crested wheat was present on 14 of the 162 plots, ten plots had a trace, one plot had 1percent, one plot 2percent, one plot 69 percent and one plot had 80percent cover. The 69percentpercent and 80percent crested wheatgrass cover were in planted areas and not evaluated for ecological status. Crested wheatgrass was present on 9 percent of the plots with 86 percent of the plots had 2 percent or less crested wheatgrass cover (NRCS 1994). Surveys show these non-native species are not aggressively invading ARS lands. (Rangeland Report page 33.)

B) Herbicide application is used minimally on invasive weed species that are not consumed by sheep. Herbicides have been used annually to control weeds along roadsides, in feedlots and corrals, small pastures (< 10 ha), and near building structures for about 30 years. Vegetation monitoring is conducted before and after grazing, which includes annual measurements of invasive weeds, native plant density, occurrence frequency, along with collecting annual or biannual aerial (100 to 200 m above-ground-level) and on-the-ground (1 to 2 m) digital imagery of grazed and non-grazed areas. Post treatment monitoring is conducted with site visits at five-year intervals. A description, target species and example of USSES noxious weed strategy is included in Appendix C.

ARS uses an adaptive management/integrated pest management approach for control and eradication of exotic, invasive weeds. This integrated approach is coupled with research on ecosystem functions and native plant communities and with research on weed seed production and spread with sheep grazing. As primary weed control, this integrated approach includes the use of strategic sheep grazing as a biocontrol method to reduce the production of weed seed and the spread of weeds. Other biocontrol methods, such as specific beetle species, alone or in combination with other biocontrol methods, are also used, Rangeland Resource Report page 28.

*Aphthona* spp. (leafy spurge flea beetles) have been used, because they consume only a narrow range of plants, all of which are in the spurge family. *Aphthona* spp. were meant to target leafy spurge, which encroached from private land onto a small portion of ARS land. *Aphthona* spp. are introduced biological control agents. Description: Black (*Aphthona lacertosa* and *Aphthona czwalinae*) and brown (*Aphthona nigricutis*) flea beetles are among the more successful biological control agents used in the control and management of leafy spurge on a relatively large scale in the Northern Great Plains. Leafy Spurge Flea Beetles, *Aphthona nigricutis* and *Aphthona lacertosa*: Both of these insects are small flea beetles that feed on the fine roots of leafy spurge as larvae. Adults feed on plant foliage.

In July 2004, beetles were transplanted onto ARS property to control leafy spurge. Since 2002, this is the only biocontrol insect transplant. We believe that leafy spurge flea beetles were transplanted onto ARS land before 2002, but those were not well documented and the people we believe might have transplanted them no longer work at the U.S. Sheep Experiment Station. The Continental Divide Cooperative Weed Management Area group provided the beetles. The beetles were acquired from Forest Service insectaries, which are located approximately 12 km north of USDA, ARS lands, along Beaver Creek and Peppermint Creek. Beetles were transplanted onto ARS property, among existing populations of beetles, along Beaver Creek between I-15 and the Old Butte Highway. Existing populations of beetles had migrated to ARS lands from other non-ARS lands where they were originally released. No insects have been transplanted onto ARS lands to control spotted knapweed. However, there are at least four biocontrol insects present. These insects have migrated to ARS lands from non-ARS lands where they were originally released.

C and D) Rangeland Report page 28 states; “Precautions are taken by ARS to minimize weed spread from sheep. To accomplish this, areas with weeds are grazed in spring when there is little or no risk of spreading weed seeds. ARS also quarantines animals for six days before moving sheep from weed infested areas or from feed with potential weed seeds to other grazing units. ARS does not graze areas when weed seeds are developed and there is risk of spreading seeds to another area.” Sheep are not fed

harvested feed when they are on grazing lands. When sheep are in the feeding facilities at Headquarters and Mud Lake they are quarantined before moving onto grazing lands. Sheep are trailed from Henninger along (County Road A2, National Forest, East Dry Road 327 and Keg Springs Road 042) these routes to other lands before plants flower and well before seeds are produced (Lewis 2011). Sheep are trucked on system roads to and from Bernice and Snakey Kelly. Before being trucked to and from Bernice and Snakey Kelly, sheep are in the Mud Lake feedlot for 35 days or so and fed harvested feeds. Sheep are in the Mud Lake feedlot during autumn and winter.

## Integrated Pest Management Herbicides

### *Public Concern 39*

*The USSES should fully analyze the use of integrated pest management.*

- A) The Sheep Station should analyze the effectiveness of herbicides, beetles, and livestock grazing as biocontrol methods.
- B) With the increase in herbicide spraying, the Sheep Station should analyze the increased environmental risk of harm to non-target plants, fish, and wildlife species.
- C) The Sheep Station should adhere to the EPA Risk Analysis Protocols, as does the Forest Service.
- D) The Sheep Station should implement monitoring and reporting for compliance with BMPs, No-Observable-Effects-Levels, and other conservation measures.
- E) The Sheep Station should implement a spill response plan.
- F) The Sheep Station should fully discuss the risks posed by intentionally-planted invasive species.

### Response to PC 39

A) The Rangeland Report page 28 states: "Vegetation monitoring is conducted before and after grazing, which includes annual measurements of invasive weeds, native plant density, occurrence frequency, along with collecting annual or biannual aerial (100 to 200 m above-ground-level) and on-the-ground (1 to 2 m) digital imagery of grazed and non-grazed areas." Post treatment monitoring is conducted with site visits at five-year intervals. A description, target species and example of USSES noxious weed strategy is included in Appendix - ARS Sheep Station Integrated Invasive Plant and Weed Control Is included in the Project File

B) See PC Response 38B above. The Hydrology Report, Table 10 include a list herbicides used by ARS for noxious weed control and Table 12 Lists Herbicides and Recommended Buffer Widths to Reduce Potential for Groundwater Contamination. The Hydrology Report, page 43 states, BMP measures have been proven effective across the country in managing non-point sources of pollution, and their implementation is required in both Idaho and Montana as part of the Clean Water Act (Seyedbagheri, 1996, Schuler and Briggs, USDA Forest Service, 2002, State of Idaho, 1999 and State of Montana, 2007).

C, D, and E) Herbicide Application would follow all label directions for application and all herbicide application is limited to the minimum amount of active ingredient (pounds of active ingredient/acre) as analyzed in the current SERA. All guidelines and safety precautions would be followed in any application of chemical materials. Following all guidelines and safety procedures would assure safe herbicide use. See Appendix - ARS Sheep Station Integrated Invasive Plant and Weed Control- Integrated Pest Management. Table C-1. includes Target Species for Grazing Control of Exotic Weeds. Roadsides, working facilities, dry-lot and corrals, and small pasture weed infestations control process is described starting on page 2 of USSES Integrated Invasive Plant /Weed Control.

Herbicide Use Protocols include plant species targeted for exotic weed infestations and herbicide control methods used. Appendix C, Table C-2. Target Species for Herbicide Control of Exotic Weeds, includes target species to control, infestation location, herbicides used, and application season. Herbicide Hazard Quotients and Effects to Human Health include an inventory of herbicides used, displayed in the storage room, describe storage protocol according to the manufacture label. All human health and environmental related issues are managed according to the most current MSDS displayed in the storage room. The Chemical Hygiene Plan includes Standard Operating Procedures (SOP) are maintained at the Main ARS Office for each work area to comply with treatment regulations. The operation procedures include requirements for use of caustics, corrosives, and flammables transportation and storage, use and care of fume hoods and other laboratory equipment, medical surveillance and work place monitoring plan.

F) From the 2009 Rangeland Assessment Report, starting on page 5, Tables 2 through 17, field surveys completed In 2009 show crested wheatgrass cover as 3percent, 0percent, 4.5percent, 0.5percent and 0percent respectively on the six ecological site survey range transects done on Headquarters property in 2009. Crested wheatgrass was absent on Humphrey, Henninger, and summer range survey transects. Cheatgrass cover was less than one percent (0.3-0.7percent) on Headquarters ecological site survey transects and was not found (survey record) on Humphrey, Henninger or east and west summer range properties.

Crested wheatgrass introduced in 1950s has not spread on ARS properties. Crested wheatgrass is established at camp and watering sites and, where planted on Headquarters property, 4.5percent cover is the highest recorded crested wheatgrass cover at Study Site HQ3 (6/21/2009) located directly west and north of the USSES headquarters across US highway 15 at UTM 401633E, 4903362N. Headquarters Study Site HQ1 (SS HQ1) (6/21/2009) located south and west of the USSES headquarters at UTM 404120E, 4898306N had three percent crested wheatgrass cover. All other survey transect ecological sites on ARS properties, had less than one percent or no (zero) crested wheatgrass cover.

Cheatgrass cover was less than one percent on Headquarters property and did not occur on all other property ecological sites surveyed in 2009. No other invasive species were found (survey record) on any survey sites. Weed management and monitoring along roads, holding, feeding and loading pens with heavy use is discussed under PC 38 above. ARS has a five-year grazing study on leafy spurge with three data sets, heavy grazing, no grazing and traditional grazing effects. The study area is on the Headquarters property just east of I 15. (Taylor 2008).

## Wildlife

### Animal Rights

#### *Public Concern 40*

*The USSES should stop the cruel treatment of animals.*

#### Response to PC 40

It is USDA-Agricultural Research Service (ARS) policy to assure that all ARS research animals are treated humanely. Thus, all animal care and use at the USDA-Agricultural Research Service (ARS)-U.S. Sheep Experiment Station, and all other ARS research locations, must comply with USDA-Research, Education, and Economics (REE) Directive 635.1, Humane Animal Care and Use. USDA-ARS-Institutional Animal Care and Use Committees review all animal care and use protocols before animals may be used for research. REE Directive 130.4, Animal Care and Use Committee, describes the responsibilities of Institutional Animal Care and Use Committees. The USDA-ARS-Institutional Animal Care and Use Committee for Idaho approves only the protocols that fully comply with REE Directive 635.1. Animals at the USDA-ARS-U.S. Sheep Experiment Station cannot be used for research until after the USDA-ARS-Institutional Animal Care and Use Committee for Idaho has approved each protocol. The USDA-ARS-Institutional Animal Care and Use Committee for Idaho provides annual reports to the USDA-ARS-Pacific West Area Director. Those reports are reviewed to assure compliance with REE Directives 130.4 and 635.1. Approved reports are sent to USDA-ARS-Headquarters for review and to assure compliance with REE Directives 130.4 and 635.1. USDA-ARS then furnishes information required under the Animal Welfare Act to the USDA-Animal and Plant Health Inspection Service (APHIS) for their review (Lewis, 2010, personal communication)

### Bighorn Sheep Disease

#### *Public Concern 41*

*The USSES should consider the available data regarding the spread of disease in bighorn sheep.*

- A) Bighorn sheep cannot be reintroduced to historic and suitable bighorn sheep habitat if domestic sheep are grazing in adjacent areas.
- B) The Sheep Station should ensure an adequate separation buffer of 8.4 miles as established in the Payette National Forest's Risk Analysis of Disease Transmission report or 9 miles as established in the Western Association of US Fish and Wildlife Agencies guidelines.
- C) The Sheep Station should remove domestic sheep from bighorn sheep ranges within the project area (Bernice, Snakey, Kelly allotments, East and West Summer pastures).
- D) The Sheep Station should analyze the degree of risk of contact and disease transmission associated with domestic sheep grazing.

E) The Sheep Station should address the need for supporting data identifying sources of disease other than those associated with domestic sheep.

F) The Sheep Station should consider the use of double fencing.

G) The Sheep Station should include in its analysis a source habitat model, core herd home range analysis, and risk of contact and disease models.

H) The Sheep Station should obtain additional federal funding for compatibility research between domestic and bighorn sheep.

#### Response to PC 41

The possibility of bighorn sheep reintroduction was considered as a part of cumulative effects, noting that the presence of domestic sheep grazing is one variable. There are no current or foreseeable reintroductions planned in the vicinity of the USSES. Separation and the risk of contact, transmission and disease were evaluated in the Wildlife Report in the effects section and included all areas grazed by USSES. Regarding contact and disease transmission between domestic and bighorn sheep, both sides of the issue were considered, current science was incorporated, and available models and habitat (such as the Payette Model and potential summer habitat) were addressed. Double fencing is not a practical solution to eliminate all potential contact in open-range grazing area.

A) This is addressed in the DEIS. Domestic sheep grazing does not preclude introduction, however it is one variable that affects sites chosen for reintroduction. States are required to have adequate NEPA analysis before conducting activities that directly affect federal lands (such as the reintroduction of species).

B and G) The Payette National Forests Risk Analysis was reviewed. However, modeling criteria such as extensive telemetry data is not available at this location in order to perform comprehensive modeling. Therefore other information was used to evaluate the risk of contact, transmission and disease spread. Bighorn Sheep Affected Environment Section and Environmental Consequences.

C) Location of all known bighorn sheep herds is addressed in the Bighorn Sheep Affected Environment Section.

D) This topic is discussed in the Bighorn Sheep Affected Environment Section and direct/indirect Effects Section.

E) Current science regarding bighorn/domestic sheep contact, bacteria transmission, and disease spread was reviewed, referenced, and used to evaluate the risk of effects associated with the project.

F) This comment does not apply to USSES activities in bighorn sheep habitat. The areas are classified as "open range".

H) Based in part on a meeting at U. S. Forest Service Headquarters in Washington D. C., Agricultural Research Service is exploring ways to enter into collaborative research with USFS (Knowles personal communication, 2011).

## Bighorn Sheep General

### *Public Concern 42*

*The USSES should include analysis of bighorn sheep populations and habitat.*

A) The Sheep Station may prevent the Forest Service from meeting its mandate to provide for viable bighorn sheep populations as reintroduction will be precluded if domestic sheep are grazed in the Bernice, Snakey, Kelly allotments, and East and West Summer pastures as they are adjacent to bighorn sheep populations.

B) Bighorn sheep occupy habitat in other areas such as Mount Jefferson, Taylor-Hillgards, Madison Mountain range, Quake Lake, Reynolds Pass, Antelope Flats, and Hell Roaring Creek. The Sheep Station should conduct research to identify the number of bighorn sheep within the Centennial Mountains and how many of them migrate there from the Madison Range herd.

C) The Sheep Station should suspend operations that affect bighorn sheep.

### Response to PC 42

Sensitive species analysis and management applies to USDA Forest Service policy and is outside the scope of this document. The possibility of bighorn sheep reintroduction was considered as a part of cumulative effects, noting that the presence of domestic sheep grazing is one variable in choosing reintroduction sites. There are no current or foreseeable reintroductions planned in the vicinity of areas grazed by USSES. All known bighorn sheep herds were reviewed. Similarly, potential bighorn sheep summer habitat generated for Idaho and Montana using the Payette Model was considered. The limiting factor (potential for contact between domestic and bighorn sheep, transmission of bacteria, and disease spread) was analyzed and is applicable in and adjacent to occupied habitat.

## Bighorn Sheep TES

### *Public Concern 43*

*The USSES should consider that the Forest Service has designated bighorn sheep as a sensitive species, especially in the Intermountain Region 4 of the Forest Service (Payette National Forest).*

### Response to PC 43

Sensitive species analysis and management applies to USDA Forest Service policy and is outside the scope of this document.

## Black Bear

### *Public Concern 44*

*The USSES should fully analyze their effects to black bears:*

- A) The Sheep Station should provide an accurate summary of lethal control actions taken against black bears on USSES and associated leased lands. This summary should also disclose whether the lethal actions were taken against black bears or grizzly bears.
- B) The Sheep Station should implement mitigation measures to prevent lethal actions.
- C) The Sheep Station should analyze using guard animals because they harm bears by displacing them from important habitat and creating an obstacle to bear movements.

### Response to PC 44

The effects to black bears, other carnivores and summary of past control action is included in the Wildlife Report. Mitigation measures designed to prevent lethal control are included in the DEIS, Wildlife Conservation Measures, pages 38-40, and:

- A) This information has been considered and includes personal communications with USDA APHIS Wildlife Services, USSES personnel, and the Interagency Grizzly Bear Science Team. There have been no known removals or mortality of grizzly bears involving USSES activities.
- B) These are included in the Affected Environment Section for grizzly bears.
- C) This is addressed in the grizzly bear section and the connectivity section. Based on the minimal number of known encounters, the wide expanse of available habitat, and the temporary grazing activities in the Centennial Range, USSES activities are not expected to be an obstacle to bear movements.

## Connectivity

### *Public Concern 45*

*The USSES should consider the effects (habitat use, population dynamics, and habitat connectivity) to wildlife from USSES operations that are located in a unique and vital corridor that links the Greater Yellowstone Ecosystem (GYE) with central Idaho. Linkage zones are different than corridors in that they are areas that could support carnivores at low densities over time and are not areas strictly used just as travel lanes. The sheep station creates a threat to the use of key habitat and dispersal corridors by several imperiled wildlife species. The continued operation of the sheep station is inconsistent with plans in Primary Conservation Areas identified in the Grizzly Bear Recovery Plan and in the Conservation Strategy for grizzlies*

*in the GYE. These plans call for the retirement of sheep grazing allotments through voluntary actions by leaseholders as the preferred method for dealing with conflicts between livestock and wildlife and retirement of all sheep grazing within the Primary Conservation Areas.*

#### Response to PC 45

Effects to carnivores and use of the potential linkage corridor habitat in the Centennial Range are addressed in the Wildlife Report. Sheep grazing on USSES properties is outside of the grizzly bear Primary Conservation Area. Continuation of trailing on the USFS Meyers Creek allotment, which is the only area inside the PCA, is necessary for USSES to access the Summer East property. Such use is consistent with the Grizzly Conservation Strategy which advocates voluntary retirement of use. USSES is unable to voluntarily discontinue such use without sacrificing its research mission. Also, access to Summer East Pasture is a necessary component of a rest-rotation grazing schedule that maintains long term healthy rangeland habitat/forage conditions. This is addressed in the Connectivity Section of other wildlife resources.

#### *Public Concern 46*

*The USSES should consider the information found in the BLM funded study (Beckmann 2006) that provides information on what large carnivores are using the region, areas of importance identified in the region, and identification of possible peripheral sink areas (area where mortality exceeds recruitment).*

#### Response to PC 46

This information was reviewed and considered in the Connectivity section, affected environment. A number of additional points are presented that suggest USSES grazing activities are permeable to TE carnivores and that other barriers to movement (not related to USSES such as Interstate-15, private land development, and hunting seasons) are of far greater concern.

## Coyote

#### *Public Concern 47*

*The USSES should consider direct, indirect, and cumulative effects on coyotes from USSES operations. In addition, the analysis should include effects from predator control and effects to ground nesting birds, especially sage grouse.*

#### Response to PC 47

Effects to sage-grouse were analyzed. Effects to coyotes, ground nesting birds (general) and many other wildlife species were not analyzed in detail because no known issues were present or suspected. The biologist consulted a number of additional biologists, management agencies, and wildlife data sources to decide on which species needed detailed effects analysis based on regional or national issues. A

description of this “narrowing” process is documented in the lead paragraphs of the “Other Wildlife Species” section.

## Fencing

### *Public Concern 48*

*The USSES should consider the effects of fencing on wildlife.*

- A) The Sheep Station should analyze the effects of fencing on native wildlife.
- B) The Sheep Station should analyze the wildlife friendliness of fences, (i.e., how often animals have gotten stuck or tangled in fencing).
- C) The Sheep Station should collect and analyze data concerning the dislocation, injury, and death of wildlife from 180 miles of permanent fence on Headquarters, Humphrey, and Henninger ranches.
- D) The Sheep Station should address the inconsistency of fences in regards to the concept of wilderness and native wildlife on public lands.
- E) The Sheep Station should analyze the effectiveness of current fencing to keep bighorn sheep outside of domestic sheep areas.

### Response to PC 48

Fencing in the Centennial Mountain Range is minimal and temporary, and therefore would not affect bighorn sheep or carnivores. No data is available in the project area concerning injury or death to specific wildlife species and none is expected. The type and amount of fencing in low elevation properties is similar to those throughout the region and does not pose any unique risks to wildlife in the area. Fencing in high elevation areas is also addressed in the wildlife report, is minimal, and is not expected to have any negative effects on wildlife.

## General Wildlife

### *Public Concern 49*

*The USSES should consider a range of concerns regarding wildlife.*

- A) The Sheep Station should consider the mortality and displacement of native carnivores in critical habitat.
- B) The Sheep Station should consider the benefits of native carnivores in the ecosystem.
- C) The Sheep Station should consider any controversy arising from impacts to wildlife.
- D) The Sheep Station should consider the effects of control actions resulting from depredation.

- E) The Sheep Station should consider the effects if depredation ceases or continues.
- F) The Sheep Station should identify the level of depredation that has occurred on all lands used by the USSES.
- G) The Sheep Station should quantify numbers of depredations and control actions.
- H) The Sheep Station should conduct a full analysis of direct, indirect and cumulative effects to all native species and their habitats (including American Pika, Arctic Grayling, birds, aquatic species, and cutthroat trout).
- I) The Sheep Station should analyze their impacts to predators - federal and state predator control measures and/or predators being forced to establish larger home ranges.
- J) The Sheep Station should analyze the competition between domestic sheep and native ungulates and/or herbivores for forage.
- K) The Sheep Station should adopt effective management measures for domestic sheep that do not harm large carnivores.
- L) The Sheep Station should consider adopting wildlife management strategies for Idaho and Montana, and complying with federal wildlife direction.

## Response to PC 49

A description of predator control activities is described in the proposed activities. To verify the number of past incidents and what species were affected, the biologist obtained and reviewed animal damage reports and predator control actions from USDA APHIS Wildlife Services since 1998. This information as well as interviews of USSES staff and other biologists in the region were used to document the affected environment for each wildlife species being analyzed in detail such as grizzly bear, gray wolf and Canada lynx. See the "Analysis of Other Species" section for a description of additional species and issues addressed in detail based on known concerns applicable USSES activities. Consistency with other state or federal wildlife management strategies is addressed on a species by species basis.

## Grizzly Bear

### *Public Concern 50*

*The USSES should consider a range of concerns regarding grizzly bears.*

- A) The Sheep Station should take into consideration that the East and West Summer Ranges are adjacent to the PCA and are within occupied grizzly bear habitat.

- B) The Sheep Station should be consistent with the FS and other federal agencies in eliminating sheep grazing in occupied grizzly bear habitat by eliminating grazing in the East and West Summer Ranges, the Humphrey Ranch, the East Beaver, Meyers and Henniger allotments (Grizzly Bear Management Plan).
- C) The Sheep Station should provide documentation substantiating bears killed in 1988 were black bears and not grizzly bears.
- D) The Sheep Station should take into consideration that grizzly bears that kill sheep are likely to continue to depredate livestock and thus will likely be removed, thereby increasing the risk to grizzly bears.
- E) The Sheep Station should evaluate the importance of USSES lands to the future of Yellowstone's grizzly population in light of rapid changes in available bear foods.
- F) The Sheep Station should analyze the effects of their grazing operations which block grizzly bear movement through the Centennials corridor that links the Greater Yellowstone Ecosystem (GYE) with central Idaho.
- G) The Sheep Station should use the information found in the BLM funded grizzly study (Beckmann 2006).
- H) The Sheep Station should consider how their operations contribute to bear avoidance of roads and/or add to grizzly mortality.
- I) The Sheep Station should consider non-lethal methods of deterrents to be used by the herders against grizzly bears.
- J) The Sheep Station should use the recent data and maps for grizzly bear distribution in the Centennial Mountains created by the Interagency Grizzly Bear Study Team in Bozeman, MT and the GPS grizzly bear location and movement path data from 2000 to present for the Centennial Mountains.
- K) The Sheep Station should manage for a recovered grizzly bear population.
- L) The Sheep Station should consult with the USFWS on grizzly bear.
- M) The Sheep Station should report grizzly bear activity including depredations and other conflicts and how the conflicts were resolved to state wildlife agencies.
- N) The Sheep Station should implement mitigation measures to remove sheep carcasses and consult with state wildlife agencies on appropriate responses before taking action to trap or displace any bears.

- A) This information is included in the DEIS under Grizzly Bear Affected Environment. USSES lands are within the Yellowstone Distinct Population Segment boundary for grizzly bear, but outside of the Primary Conservation Area.
- B) The location of occupied grizzly bear habitat in relation to USSES properties was considered. Similarly, consistency with the Grizzly Bear Conservation Strategy (2007) and its State Management Plans (Appendices) were reviewed. USSES activities were found to be consistent with direction in those documents.
- C) The project biologist contacted USDA APHIS Wildlife Services to verify this information (Farr, 2010) but found he was not in position at the time. There is no evidence suggesting the bears killed in 1988 were grizzly bears, as the species was listed at the time, and therefore USFWS documentation would exist regarding the loss of grizzly said grizzly bears.
- D) This was addressed in the grizzly bear affected environment section (Grizzly Bear Mortality Factors) and said risk is considered as part of the potential effects.
- E) The grizzly bear cumulative effects section recognizes a potential decline in Whitebark pine as a food source and found that USSES activities would not exacerbate conflicts with grizzly bears.
- F) This topic was considered in the Other Wildlife Resources section (Connectivity). Similarly, potential effects to genetic exchange were considered (Grizzly Bear, direct/indirect effects).
- G) This information was reviewed and considered in the Connectivity section, affected environment. A number of additional points are presented that suggest USSES grazing activities are permeable to carnivores and that other barriers to movement (not related to USSES such as Interstate-15, private land development, and hunting seasons) are of far greater concern.
- H) Disturbance to bears from USSES roads is not of concern since bear habitat is in the Centennial Mountain Range which represents unroaded portions of USSES properties.
- I) Non-lethal measures are practiced and described in the Grizzly Bear section “Activities to Reduce Conflicts Grizzly Bears”.
- J) The project biologist obtained recent telemetry data and mortality maps from Haroldson, 2010 and summarized this data in the grizzly bear affected environment (Results of Telemetry Data for Grizzly Bear Use on ARS Lands).
- K) The proposed action and alternatives allow for continued occupancy by grizzly bear and do not negatively affect recovery goals.
- L) The consultation process for TE wildlife has been initiated beginning in 2008 and is discussed in the DEIS under the heading “Consultation”. The USFWS advised us only to consult on one action, therefore, a biological assessment will be finalized and submitted to the USFWS based on the project decision rather than all the alternatives. Any terms and conditions and/or incidental take statements issued in the USFWS biological opinion would be included as part of the project record.
- M) A summary of all known grizzly bear accounts involving USSES properties is documented in the grizzly bear section (Known accounts of past interactions between domestic sheep and grizzly bears).
- N) This is addressed in the grizzly bear section (Activities To Reduce Grizzly Bear Conflicts).

## Lynx

### *Public Concern 51*

*The USSES should consider the direct, indirect, and cumulative effects to the Canada lynx.*

### Response to PC 51

This topic is addressed in the DEIS, Canada lynx Affected Environment, Direct/Indirect/Cumulative Effects.

## Mountain Lion

### *Public Concern 52*

*The USSES should consider the direct, indirect, and cumulative effects to the mountain lion.*

### Response to PC 52

Effects to mountain lion were considered as part of the Connectivity Direct and Indirect Effects section of the EIS. Otherwise, effects to mountain lions is not a major concern given they typically occupy lower elevation lands and there is only one documented encounter with USSES activities.

## Predator Avoidance and Abatement

### *Public Concern 53*

*The USSES should analyze predator avoidance and abatement.*

- A) The Sheep Station should consider impacts to carnivores from federal and state predator control measures.
- B) The Sheep Station should consider fatal impacts to native and endangered predators.
- C) The Sheep Station should phase out grazing to avoid predator conflict.
- D) The Sheep Station should distinguish between predators and predation in terms of abatement.
- E) The Sheep Station should change the name of the section to Predation Deterrence and Abatement.
- F) The Sheep Station should implement non-lethal predator deterrence strategies to increase predator conservation while decreasing livestock losses.
- G) The Sheep Station should compile records of predator conflicts related to USSES operations from adjacent land owners and involved agencies.

## Response to PC 53

- A) Detailed consideration of predator control measures used by other agencies is outside the scope of this document. However, regarding grizzly bears, Canada lynx, and gray wolves, a review of control measures in the last 10 years in the Centennial Range occurred to evaluate if any were related to USSES activities, and/or to evaluate how USSES activities might contribute to cumulative effects.
- B) A review of APHIS control measures implemented on USSES properties since 1998 was reviewed.
- C) Alternatives 2 and 3 phase out livestock grazing and avoid or reduce potential conflicts.
- D) The focus of the discussion in the EIS is to reduce predation on sheep, not to reduce the number of predators on the landscape. However, in order to complete and convey an accurate analysis, the process of predator abatement is outlined (USSES Proposed Activities, Activities To Reduce Grizzly Bear Conflicts, Wolf Control Procedure).
- E) The IDT Leader will consider this suggested grammatical edit.
- F) In the grizzly bear section, “Activities to Reduce Grizzly Bear Conflicts”, which also applies to other predators, emphasizes deterrence and avoidance.
- G) Detailed consideration of predator control measures used by other agencies is outside the scope of this document. However, regarding grizzly bears, Canada lynx, and gray wolves, a review of control measures in the last 10 years in the Centennial Range occurred to evaluate if any were related to USSES activities, and/or to evaluate how USSES activities might contribute to cumulative effects.

## Sage Grouse

### *Public Concern 54*

*The USSES should fully analyze effects to sage grouse.*

- A) The Sheep Station should analyze sage grouse habitat management - the appropriate amount of acres per year for prescribed burn.
- B) The Sheep Station should address the high densities of sage grouse nesting close to lek locations, and the effects of deliberately locating grazing on important grouse nesting and brood rearing areas.
- C) The Sheep Station should consider sage grouse population conservation.
- D) The Sheep Station should manage sage grouse habitat with livestock grazing.

## Response to PC 54

- A) Prescribed burning in relation to effects to sage-grouse is described in the Sage-grouse Affected Environment (Fire History in Sage-grouse Habitat). Despite a history of fire disturbance that exceeds guidelines in Connelly et al., 2002, USSES properties continue to support a healthy and stable sage-grouse breeding population and associated leks.

- B) Conservation measures to protect sage-grouse leks and surrounding habitat are described in the Sage-grouse Affected Environment Section.
- C) Lek surveys on USSES since 1978 have showed a stable and healthy population with a stable number of leks and an increase in males strutting on each lek (Sage-grouse affected environment).
- D) Conservation measures to protect sage-grouse leks and surrounding habitat while continuing grazing are described in the Sage-grouse Affected Environment Section.

## Threatened, Endangered, and Sensitive Species

### *Public Concern 55*

*The USSES should identify the threatened, endangered, and sensitive species within the project area and consider the direct, indirect, and cumulative impacts to them and their habitat. This list should include the following TES species: American pika, bighorn sheep, cutthroat trout, grizzly bears, lynx, sage grouse, wolverines, and wolves.*

### Response to PC 55

The DEIS does include analysis of effects to TE species Canada lynx and Grizzly bear. In addition, pre-field review indicated that effects to wolves, bighorn sheep, and sage-grouse should also be analyzed in detail. Potential effects to cutthroat trout, and wolverine were also examined but further review demonstrated little to no effect to these species. Additional species (USFS Sensitive species, state species of concern, etc.) were also reviewed and narrowed down to a select list where potential effects warranted further analysis. The process for identifying which species were analyzed in detail is discussed in the DEIS “Other Wildlife Species” section, lead paragraphs.

## Wolverine

### *Public Concern 56*

*The USSES should analyze direct, indirect and cumulative effects to wolverines.*

- A) The Sheep Station should analyze all effects from operations including trailing, fragmentation of habitat, and disturbance to denning wolverines.
- B) The Sheep Station should analyze wolverine vulnerability to guard animals and predator control.
- C) The Sheep Station should consider that restricting wolverine movement may isolate the Yellowstone subpopulation threatening its persistence.

### Response to PC 56

The detail of analysis for each species is commensurate to the potential risk to the species considering known or suspected issues. Wolverine is not a federally listed species, and the potential for encounters and subsequent risks to individuals or habitat is low to none.

A) This topic was addressed in the DEIS, Other Wildlife Species – North American Wolverine. The described activities for all alternatives do not create barriers to wolverine travel, do not alter forest vegetation or ungulate populations that might affect wolverine use, and do not concentrate activity on talus slopes that might be used for denning.

B) This topic is not a concern considering the wide-ranging nature of the species', the small area of the Centennial Range temporarily occupied by USSES activities, and the lack of past encounters.

C) This topic was addressed in the DEIS Other Wildlife Species – North American Wolverine as well as the “Connectivity” section.

## Wolves

### *Public Concern 57*

*The USSES should analyze the direct, indirect and cumulative effects to wolves.*

A) The Sheep Station should analyze all effects to wolves from operations.

B) The Sheep Station should address its non-compliance with other wolf management direction for sheep grazing in the GYE.

C) The Sheep Station should consider non-lethal wolf control measures.

D) The Sheep Station should consider BMPs that will reduce the potential for wolf contact and conflict such as avoiding denning sites and removal of sick sheep and carcasses as attractants.

E) The Sheep Station should use of the most recent data on wolf distribution in both Idaho and Montana.

F) The Sheep Station should analyze the data on lethal removal of wolves over the past decade.

G) The Sheep Station should consider the impacts of lethal removal of wolves due to contact within the corridor.

H) The Sheep Station should take into consideration that grazing sheep in this corridor increases the risk of depredation and lethal removal.

I) The Sheep Station should take into consideration that limited genetic mixing between the GYE and central Idaho wolf population is occurring due to lethal removal.

J) The Sheep Station should address the threat to wolves from the use of guard animals.

K) The Sheep Station should describe activities proposed to manage predators and how that management would be consistent with wildlife standards.

L) The Sheep Station should analyze their effects to wolf recovery as a species.

M) The Sheep Station should address elimination of predators via aerial hunting.

#### Response to PC 57

A) Operations refer to traditional and on-going activities associated with sheep grazing research, such as the keep and grazing of approximately 3,300 sheep. This topic was addressed in the DEIS, Gray Wolf Direct/Indirect Effects, numbers one, two, and three.

B) Wolves are no longer a federally listed species. In Montana they are classified as a species in need of management, with a legal hunting season. In Idaho they are managed as a big game animal with a legal hunting season. The effects described in the DEIS are not expected to affect the delisted status of gray wolves nor reduce the population or number of breeding pairs near the recovery threshold of 150 animals and 15 breeding pairs in each state. See DEIS, Direct and Indirect Effects for Gray Wolf.

C) Non-lethal control measures are described in the DEIS Design Features, Best Management Practices, Monitoring, Wildlife Conservation Measures. Measures 3 through 6 apply to wolves as well as grizzly bears. The section "Predator Avoidance and Abatement" section of the Proposed Action also indicates that the initial goal is for non-lethal control measures (harassment) of gray wolves seen in the vicinity of livestock.

D) Good health of the domestic sheep herd and removal/treatment of sheep carcasses is included as Design Features, Best Management Practices, Monitoring, Wildlife Conservation Measures, items 3, 4, and 5.

E) Data from 2010 and prior years was used as part of the existing condition - Wolf Pack Locations near the USSES.

F) Data supplied by USDA Wildlife Services was reviewed from 1998 through 2009 for number of conflicts and lethal control measures on wolves and other predators on USSES properties. The summary of these reports is in the project file "2009-koz Review 3 APHIS docs data supplied from Sue.docx".

G, H, and I) Species such as wolves, black bears, and mountain lions are not federally listed, are widespread, and are legally hunted in the region. Thus, USSES activities are unlikely to be the major influence on movements and occupancy of those populations. DEIS- Connectivity-third bulleted item.

J) Guard dogs are a deterrent to wolf predation on domestic sheep because guard dogs are protective of sheep within a band, and wolves are unwilling to confront those guard dogs. Guard dogs are an established method of avoiding predation by wolves and do not pose a threat to continued wolf recovery.

K and L) See response to B above.

## Best Management Practices for Wildlife

### *Public Concern 58*

*The USSES should develop enforceable Best Management Practices (BMPs).*

- A) The Sheep Station should develop measures to ensure that sick and/or stray animals are kept to a minimum.
- B) The Sheep Station should describe in detail how they dispose of sick and/or stray or dead sheep.
- C) The Sheep Station should properly construct and maintain the carcass pits used to dispose of dead livestock.
- D) The Sheep Station should provide bear proof poles to herders to secure sheep carcasses similar to those used in hunting camps to secure game meat.
- E) The Sheep Station should use electric fencing to secure attractants from predators.
- F) The Sheep Station should Increase herder vigilance.
- G) The Sheep Station should use multiple livestock guard dogs.

### Response to PC 58

- A) See Wildlife Conservation Measure Number 3 in the DEIS.
- B) See Wildlife Conservation Measure Number 5 in the DEIS.
- C) The carcass pit is located on the headquarters property in the vicinity of the building compound. Due to its location in a low elevation and inhabited area, it is not accessible to carnivores such as grizzly bears, wolves or Canada lynx.
- D and E) There has not been a history of conflicts with sheepherders at camp sites and none is expected so the measure is not needed.
- F) Comment implies herders are not vigilant. This is an inaccurate statement. No response needed.
- G) See Wildlife Conservation Measures Number 4 in the DEIS.

## Comment

### *Public Concern 59*

*Thank you for your comment. The USSES received the following comment letters that contained comments that were unsupported opinion or a statement of fact with no stated request for action: 2009 EA 30-day comment letters (new #'s) 33, 43, 61, 63, and 64.*

### Response to PC 59

Letters 33 and 64: These comments are not site-specific to the USSES Sheep Grazing and Associated Activities Project 2010 and/or contained comments that were unsupported opinion.

Letter 43: Some statements contained in this letter are factually incorrect and are based on hearsay and innuendo. There is no documentation to know whether the commenter is actually on Agricultural Research Service lands and spoke to sheepherders from the US Sheep Experiment Station.

The Agricultural Research Service has never considered its lands as recreational. The commenter has never received official permission from the Agricultural Research Service to access their lands for any reason. The Agricultural Research Service is solely a research agency. As a research agency, the Agricultural Research Service (in this instance, the U.S. Sheep Experiment Station) is not required to, or funded to, or does it manage its lands for multi-purpose public use (DEIS, Purpose and Need, Agricultural Research Service, page 15).

In the past, the Bureau of Land Management told people that Agricultural Research Service land was open to recreation, despite what the Agricultural Research Service told the Bureau of Land Management. Older Bureau of Land Management maps showed the Agricultural Research Service land as under the Bureau of Land Management control and had it shown as open to recreation. Agricultural Research Service people met with the Bureau of Land Management concerning this problem, and the Bureau of Land Management were supposed to have updated their maps some time ago (Lewis, personal Communication).

The commenter's descriptions of this area differ severely from documented, on the ground conditions of the Summer East and Summer West Pastures (DEIS, Environmental Effects, Range, Direct, Indirect effects, East Summer and West Summer Ranges, pages 85-89; U.S. Sheep Experiment Station Grazing and Associated Activities Project 2011 Range Report, Affected Environment, Existing Condition, East Summer and West Summer Ranges pages 30-35 to 39; The Rangeland Assessment pages 29 through 40; Project File, photos of the East and West Summer Ranges.)

Letter 61: This comment is not site-specific to the USSES Sheep Grazing and Associated Activities Project 2010. No map of the said conservation easement of the headwaters of Hell Roaring Creek in relationship to the project area was provided.

Letter 63: This comment does not provide site-specific information or a map of the referenced International Center for Earth Concerns and the Conservation Endowment Fund 16 acres in relationship to the ARS lands. ARS lands are not lands open to the public. Without such reference maps, it is impossible to know whether the "Entire hillsides, though not denuded, are certainly abused and show signs of erosion," are anywhere close to the ARS lands. There is no evidence that the sheepherders referred to ("sheepherders are not friendly to our visits and seem to think that they have ownership

privileges”) are associated with USSES operations. In addition, the allegations that, “shepherders are not friendly to our visits and seem to think that they have ownership privileges,” is unsubstantiated claims and hearsay. If, as the commenter states, they are utilizing “lands known as the Sheep Experiment Station” They are doing so without permission of the Sheep Station director. The comment, “the necessary ingredients for public enjoyment, as should be the case for public lands of this character,” is irrelevant and beyond the scope of this project, as the ARS lands are not open to the public.

## Outside the Scope

### *Public Concern 60*

*The USSES received the following comment letters that contained comments that are outside the scope of this analysis:*

- A) Close or relocate the station: 2009 EA 30-day comment letters (new #'s) 31, 35, 38, 40, 43, 49, 51, 53, 56, 62, 70, 74; and 2011 EIS Scoping comment letters 6, 7, 8, 10, and 17;
- B) Revisit the mission of the sheep station: 2011 EIS Scoping comment letters 13 and 24;
- C) Include the use of FS and BLM Allotments in the decision: 2011 EIS Scoping comment letter 24;
- D) Economics of domestic sheep production: 2009 EA 30-day comment letter (new #) 56; and 2011 EIS Scoping comment letters 1 and 17;
- F) Analyze the federal budget and deficit reductions: 2011 EIS Scoping comment letters 12 and 17; and
- G) Uncontrolled snowmobile use.

### Response to PC 60

- A) See DEIS, Publically Suggested Alternatives Eliminated from Detailed Consideration, Item 1, page 52.
- B, D, and F) This is beyond the Scope of this project, the purpose of which is to provide for the continuation of historic and ongoing grazing and associated activities at the U.S. Sheep Experiment Station in support of the mission of the Agricultural Research Service, U.S. Sheep Experiment Station in Dubois, Idaho.
- C) See DEIS, Activities Contributing to Cumulative Impacts, page 76.
- G) The ARS, USSES lands are restricted to public use. There is no snowmobiling allowed on the USSES lands.