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Environmental Assessment Final

HIDAWAY ALLOTMENT

North Fork John Day Ranger District
Umatilla National Forest
Wallowa-Whitman National Forest

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SUMMARY

This Environmental Assessment (EA) has been prepared to assess and document the environmental impacts of reauthorizing livestock grazing on the Hidaway Allotment. The proposed action is similar to the current management of the allotment, but would be modified to reflect new standards and to implement protection measures for sensitive plants and for improved livestock distribution within the allotment. Two alternatives to the proposed action were developed, analyzed, and compared to the proposed action: Alternative 1 (No Grazing) and Alternative 3 that eliminates one allotment unit.

The Proposed Action is needed because management plans currently in place on the allotment are outdated and need to be updated to reflect changed laws, regulations, and information. The proposed action is expected to improve or maintain upland vegetation conditions and allow for forage utilization by modifying current grazing practices. The proposed action is also expected to improve riparian vegetation by fencing portions of two streams. One stream would have additional exclosure fence line. The second stream would be fenced to increase the size of an existing riparian pasture (and making it into two pastures) and to prevent overuse by livestock. Monitoring is incorporated into the action alternatives. Impacts to resources in the project area have been assessed, and no significant effects would result with implementation of the action alternatives.

Based on the information contained in this EA, the responsible official would decide whether to continue to authorize grazing on the allotments within the Hidaway project area. If the decision is to continue authorization of grazing, then the responsible official would decide what management prescriptions would apply.

DOCUMENT STRUCTURE

The North Fork John Day Ranger District of the Umatilla National Forest has prepared this Environmental Assessment in compliance with the National Environmental Policy Act (NEPA) and other relevant federal and state laws and regulations. This environmental assessment discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized into four parts:

Introduction: The section includes information on the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.

Comparison of Alternatives, including the Proposed Action: This section provides a more detailed description of the agency's proposed action as well as an alternative method for achieving the stated purpose. A no grazing alternative is also presented. These alternatives were developed based on significant issues raised by the public and other agencies. This discussion also includes mitigation measures. Finally, this section provides a summary table of the environmental consequences associated with each alternative.

Environmental Consequences: This section describes the environmental effects of implementing the proposed action and other alternatives. This analysis is organized by resource area. Within each section, the affected environment is described first, followed by the effects of the No Action Alternative that provides a baseline for evaluation and comparison of the other alternatives that follow.

Agencies and Persons Consulted: This section provides a list of preparers and agencies consulted during the development of the environmental assessment.

Appendices: The appendices provide more detailed information to support the analyses presented in the environmental assessment.

CHAPTER 1

INTRODUCTION

CHAPTER 1 - INTRODUCTION

LOCATION AND PHYSICAL CHARACTERISTICS

The Hidaway Allotment is located in Umatilla and Union Counties, Oregon (T. 5 S., R 33 E., Sections 1-5, 8-15, 20-29, and 32-36; T. 5 S., R 33.5 E., Sections 1-3, 10-15, 22-27, and 34-36; T. 5 S., R 34 E., Sections 4-9, 16-21, and 28-33; T. 6 S., R 33 E., Sections 1 and 2; and T. 6 S., R 34 E., Sections 1-6 and 9-12; Willamette Meridian.

The allotment is located approximately eight miles east of Ukiah, Oregon (Figure 1), south of State Highway 244. Private land borders the allotment along the western boundary. A portion of the southern boundary is bordered by the northernmost area of the North Fork John Day Wilderness. The eastern allotment boundary is bordered by the Wallowa-Whitman National Forest. The approximate elevation of the allotment is between 4,400 feet and 5,400 feet.

The Hidaway Allotment encompasses an estimated 37,260 acres of National Forest system lands. Although approximately 5,500 acres are within the Wallowa-Whitman National Forest, the entire allotment is administered by the Umatilla National Forest.

A portion of the South Fork-Tower and Squaw Inventoried Roadless Areas are located within the allotment boundaries. In 1979, an FEIS was prepared for the Desolation Planning Unit that included the South Fork-Tower area. Management direction of this allotment allocates the entire area for domestic livestock use, as well as other uses. There are approximately four miles of recreational trails that are primarily used by off highway vehicles (OHVs). The trail may also include hiking and horse use. During hunting season the trail provides access for hunters.

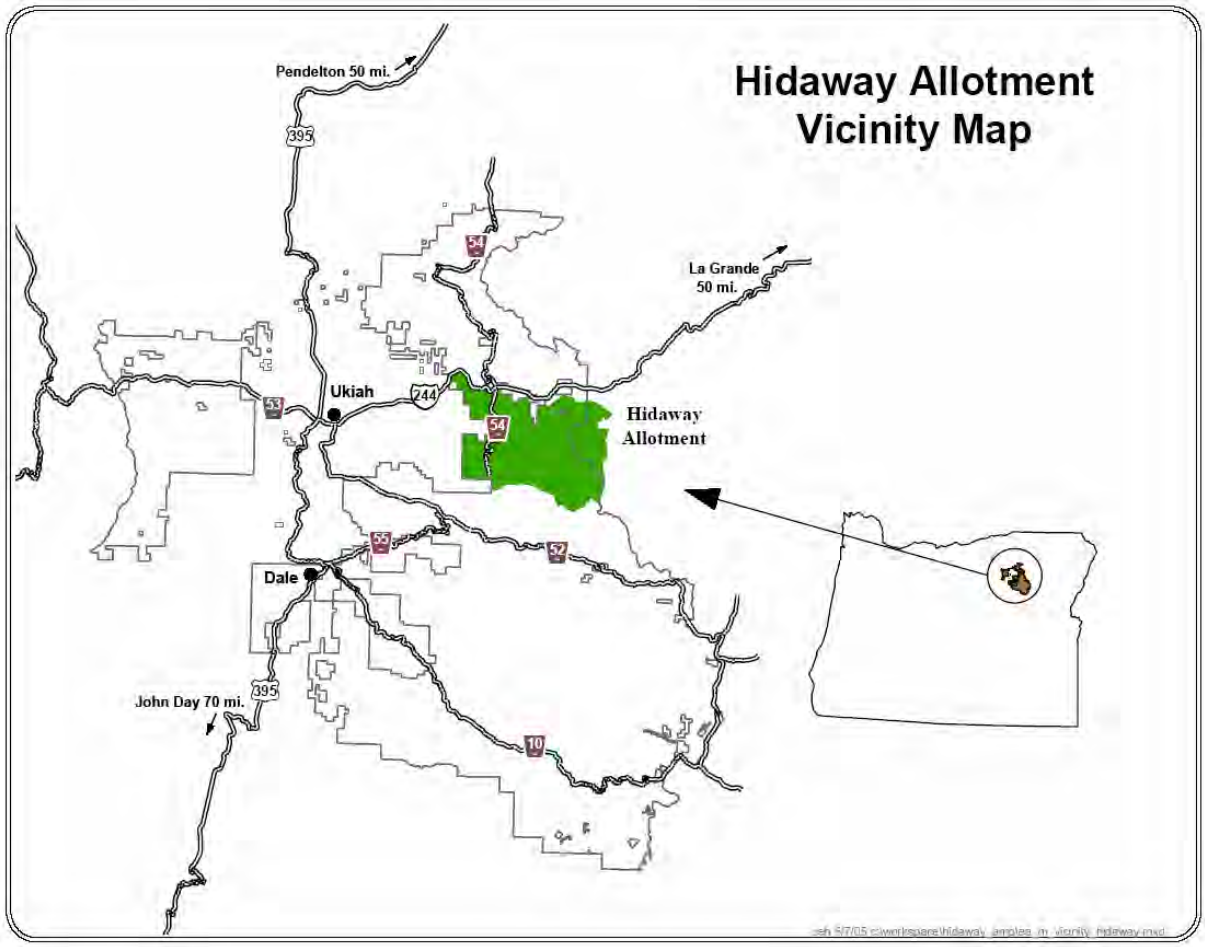
Animal species that are listed by the U.S. Fish and Wildlife Service (USFWS, 1999 and 2004) that have been documented on the Umatilla National Forest are: Columbia spotted frog, bald eagle, gray wolf, California wolverine, and Rocky Mountain big horn sheep. Fish listed by National Oceanic and Atmospheric Administration (NOAA) fisheries include steelhead.

ALLOTMENT HISTORY AND OVERVIEW

The earliest recorded use by domestic livestock in the analysis area was about 1885. Regulated use may have begun earlier but the earliest recorded allotment maps for the planning area date to 1911 and use records began to be kept in 1915. In 1917 the Camas-Hidaway allotment was established with a stocking rate of 2,800 cow/calf pairs. This allotment boundary included the area that is now Lucky Strike, Klondike (both to the north of the project area), and the west half of Hidaway allotment. The Dry Camas and Tower Units of the Hidaway allotment were not added to the allotment until 1958. Units and pastures are used interchangeably for this document.

From the 1940s through the 1960s, stocking rates were reduced to approximately 850 cow/calf pairs on the Camas-Hidaway Allotment. Condition and Trend Clusters were established to monitor range condition on upland forest habitat types.

Division fences and riparian units were constructed during the 1970s and 1980s. In 1970, the Camas-Hidaway Allotment was split along highway 244 and the south area became (and is currently) the



Map 1: Vicinity Map of the Hidaway Allotment Analysis Area

Hidaway allotment and the North area was called the Lucky Strike Allotment. The Hidaway allotment was a two-pasture allotment from 1970 until 1980-81 when the west pasture was divided and a drift fence was constructed in the east pasture to establish a four-pasture rotation system.

During the 1980s and 1990s, riparian areas and streams became a management priority. A riparian pasture was constructed to control livestock in a portion of Dry Camas Creek. Riparian corridor fences were constructed in the 1990s to exclude livestock from streams to allow stream and vegetation recovery. Riparian grazing standards were first emphasized in the early 1990s to measure livestock use within stream/riparian areas.

In 1994 the Tower pasture in the Hidaway allotment was fenced to facilitate management as the permittees were having a difficult time gathering cattle. The Tower pasture has been rested since 1994. In 1998 the Trough pasture in the Hidaway allotment was divided in half with the construction of a riparian corridor fence along an unnamed tributary of Camas Creek. The stocking level since 1994 has been 493 animal units.

PURPOSE AND NEED FOR ACTION

The Umatilla Land and Resource Management Plan (LRMP) has the following goal for range management on the Forest: "Manage the forage resources for an upward vegetative trend in areas in less than "fair" condition and an upward or stable trend for areas in "fair" or better condition, while providing for forage productivity and making suitable range available for livestock grazing. Increase the level of forage production where cost efficient and consistent with other resource goals." (LRMP 4-63).

The purpose of this action is to continue authorization of livestock grazing in a manner that is consistent with the Umatilla and Wallowa –Whitman Forest Plans, as amended. The needs associated with this purpose are:

Table 1: Purpose and Need for the Continued Authorization of Livestock grazing

Purpose and Need for Action	
There is a need to meet the requirement of Section 504 of the 1995 Rescissions Act, which requires NEPA analysis and decisions for all grazing allotments by 2010. There is a need to update the terms and conditions of the Allotment Management Plans and term grazing permits.	Management Plans currently in place are outdated and do not reflect changed laws, regulations, and new information. The present allotment management plan was implemented in 1981, prior to the Forest Plan. This needs to be updated to reflect the most current laws, regulations, and management direction, and to incorporate new or changed conditions and recent science.

Purpose and Need for Action	
There is a need for the permittee to continue grazing the Hidaway Allotment. There is a need to improve control of livestock for better distribution, more controlled utilization of vegetation, and protection of other resources.	**1.** Livestock grazing provided by the Hidaway Allotment provides an income to the permittee, Forest Service, and counties, as well as jobs and economic stability to the local ranching community. A decrease in the number of livestock permitted on this allotment would directly reduce revenues and could impact communities within the economic impact area. **2.** The purpose of the proposed action is to facilitate livestock management by providing more control in riparian areas and provide more flexibility when drought, fire or other natural events occur that would necessitate changes in management.

PROPOSED ACTION

The North Fork John Day Ranger District proposes to continue authorization of livestock grazing on the Hidaway Allotment located on the Umatilla and Wallowa-Whitman National Forests. A new Allotment Management Plan (AMP) would be written to update changes that have been made through Annual Operating Instructions, incorporating Forest plan, PACFISH, and Interagency Implementation Team standards (FSH 2209.13 Sec. 94.1). This proposal would be implemented in 2007.

The proposed action would include:

- Authorizing the maximum number of cattle (493 cc/animal units) to graze and the dates to allow grazing to occur.
- Authorizing additional fencing (1.0 mile) to increase the size of a riparian pasture, making it into two pastures.
- Authorizing additional fencing (0.5 mile) to increase the size of an existing exclosure, restricting livestock access.

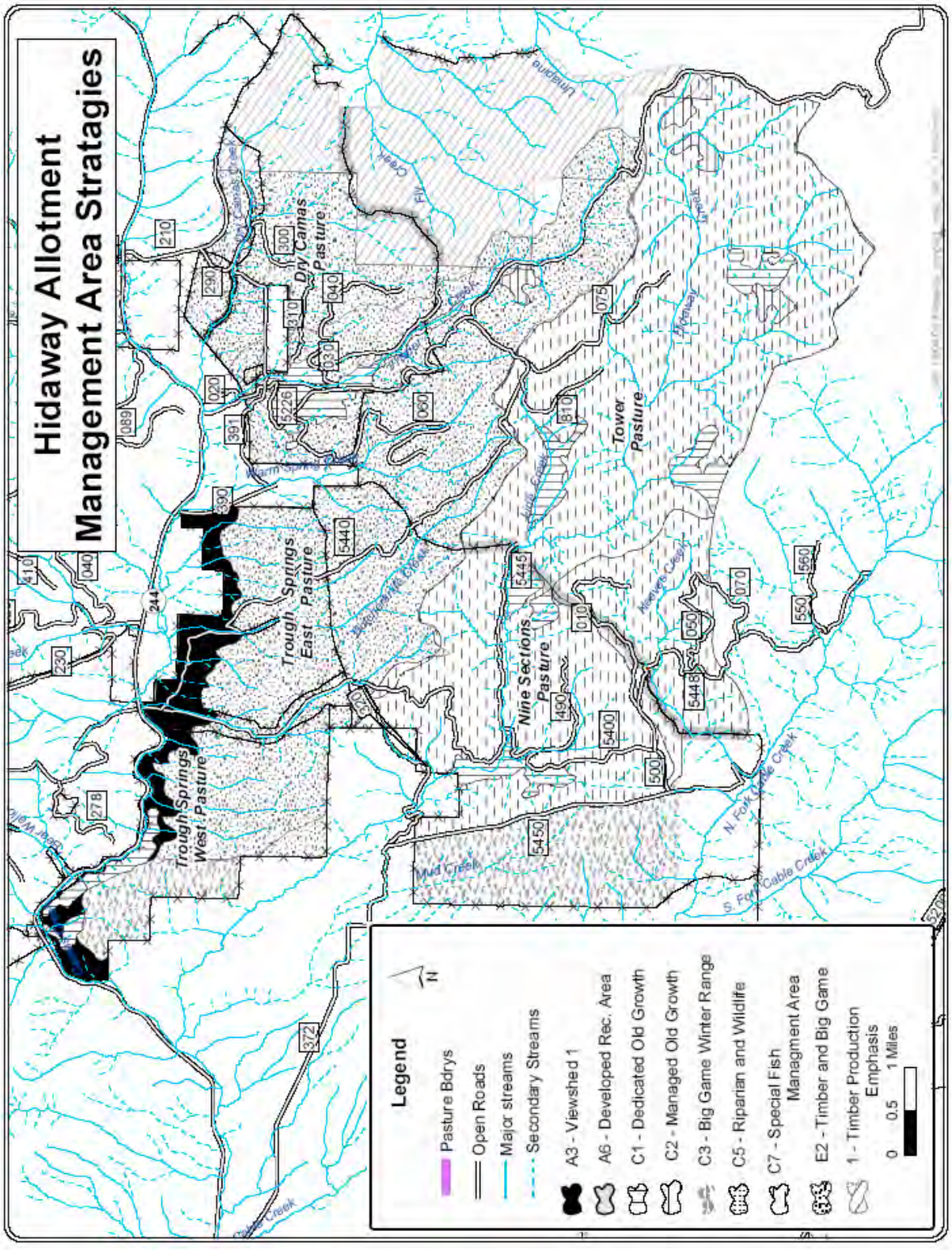
PLANNING FRAMEWORK

Analysis and documentation has been done according to direction contained in the National Forest Management Act, the National Environmental Policy Act, the Council on Environmental Quality regulations, The Endangered Species Act, Magnuson-Stevens Fishery Conservation And Management Act of 2000, the National Historic Preservation Act, the Clean Air Act, and the Clean Water Act, and the Rescissions act, Public Law 104-19, Section 504.

Management Direction

The Umatilla and the Wallowa-Whitman National Forest Land and Resource Management Plan Directions: The Umatilla National Forest Land and Resource Management Plan (1990, LRMP or Forest Plan) as amended, provides guidance for management activities. The Forest Plan establishes goals, objectives, standards, and guidelines for each specific management area of the Forest, as well as Forest-wide standards and guidelines. Management Areas and associated standards and guidelines are described in Chapter 4 of the Forest Plan. Management Areas within the project area are included in Map 2.

Map 2: Management Areas of the Hidaway Allotment



The Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (PACFISH, 1995) amended the Forest Plans for the protection of habitat and populations of resident native fish.

A3 – Viewshed 1 (3%): Manage the area seen from a primary travel route, use are, or water body, where forest visitors have a major concern for the scenic qualities (sensitivity level) as a natural appearing landscape (Forest Plan, page 4-99). A moderate level of livestock grazing is permitted. Openings created by management of timber stands should be available for management as transitory range. Development and maintenance of range improvements are permitted. Range utilization standards, management practices, and improvements are to be designed and managed to meet visual quality objectives (Forest Plan, page 4-101).

C1 – Dedicated Old Growth (4%): Provide and protect sufficient suitable habitat for wildlife species dependent upon mature and/or over mature forest stands, and promote a diversity of vegetative conditions for such species (Forest Plan, page 4-144). Moderate levels of livestock grazing are permitted; however, forage in general will be limited to that which is normally present under densely forested canopies. Maintain existing range improvement structures. Additional structural improvements are generally not permitted (Forest Plan, page 4-145).

C2 – Managed Old Growth (1%): Provide and protect sufficient suitable habitat for wildlife species dependent upon mature and/or over mature lodgepole pine forest stands, and promote a diversity of vegetative conditions for such species (Forest Plan, page 4-147). Moderate levels of livestock grazing are permitted; however, forage in general will be limited to that which is normally present under densely forested canopies. Maintain existing range improvement structures. Additional structural improvements are generally not permitted (Forest Plan, page 4-148).

C3 – Big Game Winter Range (7%): Manage big game winter range to provide high levels of potential habitat effectiveness and high quality forage for big game species (Forest Plan, page 4-151). Domestic livestock grazing is permitted at Range Management Strategy C. All available range and livestock management practices consistent with the primary management goal of maintaining or enhancing big game winter ranges may be used. Structural range improvements are permitted to the extent they are compatible with big game winter ranges (Forest Plan, page 4-153).

C5 – Riparian (Fish and Wildlife) (1%): Maintain or enhance water quality, and produce a high level of potential habitat capability for all species of fish and wildlife within the designated riparian habitat areas while providing for a high level of habitat effectiveness for big game (Forest Plan, page 4-163). Range management techniques that control livestock distribution and timing of use will be used to meet riparian goals. Range improvements that maintain or enhance riparian habitat goals will be permitted. Grazing systems utilizing riparian pastures may be required to maintain water quality and protect riparian vegetation (Forest Plan, page 4-164).

C7 – Special Fish Management Area (37%): Maintain and enhance water quality and produce high levels of anadromous fish habitat on an area-wide basis (Forest Plan, page 4-167). Intensive range management including superior grazing systems, such as periodic rest, will be practiced to protect and improve riparian vegetation and anadromous fish habitat. Range improvements (and their maintenance) will be permitted, and should be located to encourage livestock use away from the riparian areas (Forest Plan, page 4-168).

E1 – Timber and Forage (1%): Manage forest lands to emphasize timber production of wood fiber (Timber) and encourage production of forage (Forest Plan, page 4-178). Manage range and livestock through Range Management Strategies C and D with improved management systems. The full range of development and maintenance of structural and non structural improvements is

permitted. Permit increased domestic livestock and big game grazing to capture forage increases on transitory range (Forest Plan, page 4-179).

E2 – Timber and Big Game (32%): Manage forest lands to emphasize production of wood fiber (Timber), encourage forage production, and maintain a moderate level of big game and other wildlife habitat (Forest Plan, page 4-182). Manage range and livestock at Range management Strategies C and D with improved management systems. The full range of development and maintenance of structural and nonstructural improvements is permitted. Permit increased domestic livestock and big game grazing to capture forage increases on transitory range (Forest Plan, page 4-184).

1-Timber Production Emphasis (Wallowa Whitman NF Portion) (14%): Management emphasizes wood fiber production on suitable timber lands while providing relatively high levels of forage and recreational opportunities. Temporary forage increases result from silvicultural activities. Timber is managed according to Forest-wide standards and guidelines. Range—provide for protection of erosion seeding and tree plantations through changes in livestock management. In some instances, nonuse, fencing, or other means of control will be needed.

Current Laws

Development of this Environmental Assessment follows implementing regulations of the National Forest Management Act (NFMA); Title 36, Code of Federal Regulations, Part 219 (36 CFR 219); Council of Environmental Quality, Title 40; CFR, Parts 1500-1508, National Environmental Policy Act (NEPA). Many federal and state laws, including the Forest and Rangeland Renewable Resources Act (RPA), Endangered Species Act, Clean Air Act, and Clean Water Act also guide this analysis. The following is a brief explanation of each of these laws and their relation to the current project planning effort.

Forest Service Handbook 2209.13, Chapter 90 Rangeland Management Decision making sets out direction on planning and analysis, decision implementation, monitoring, review of decision, and modifications in the use or activity based on monitoring results.

Section 504 of the 1995 Rescissions Act requires that all allotments on each National Forest System unit establish and adhere to a schedule for the completion of environmental analyses and decisions for all allotments that require such analysis as required under the National Environmental Policy Act (NEPA) of 1969. The analysis for this allotment complies with that direction.

The American Antiquities Act of 1906: The American Antiquities makes it illegal to appropriate, excavate, injure, or destroy any historic, prehistoric ruin or monument, or any object of antiquity, situated on lands owned by the Government of the United States, without permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated.

The National Historic Preservation Act of 1966, as amended: The National Historic Preservation Act requires Federal agencies to consult with American Indian Tribes, State and local groups before nonrenewable cultural resources, such as archaeological and historic structures, are damaged or destroyed. Section 106 of this Act requires Federal agencies to review the effects project proposals may have on the cultural resources in the Analysis Area.

The Endangered Species Act of 1973, as amended: The Endangered Species Act is to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be

conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such tests as may be appropriate to achieve the purpose of the treaties and conventions set forth in subsection (a) of this section." The Act also states "It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act."

The Migratory Bird Treaty Act of 1918: The Migratory Bird Treaty Act is to establish an international framework for the protection and conservation of migratory birds. The Act makes it illegal, unless permitted by regulations, to "pursue, hunt, take, capture, deliver for shipment, ship, cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, including in this Convention…for the protection of migratory birds…or any part, nest, or egg of any such bird" (16USC 703). The original 1918 statute implemented the 1916 Convention between the United States and Great Britain (for Canada). Later amendments implemented treaties between the Unites States and Mexico, Japan, and the Soviet Union (now Russia).

The National Environmental Policy Act (NEPA) of 1969, as amended: The National Environmental Policy Act is "To declare a national policy which will encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damaged to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nations; and to establish a Council on Environmental Quality" (42 U.S.C. Sec. 4321). The law further states "it is the continuing policy of the Federal Government, in cooperation, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the present and future generations of Americans. This law essentially pertains to public participation, environmental analysis, and documentation.

The Council on Environmental Quality (CEQ) set forth the regulations for implementing NEPA (40 CFR parts 1500-1508). The CEQ has recently provided guidance on considering past actions in cumulative effects analysis (Memo to Heads of Federal Agencies, June 24, 2005).

The National Forest Management Act (NFMA) of 1976: The National Forest Management Act guides development and revision of National Forest Land Management Plans. There are several important sections within the act, including Section 1 (purpose and principles), Section 19 (fish and wildlife resources), Section 23 (water and soil resources), and Section 27 (management requirements). The Forest Plan, Volume 2, Appendix M, lists management requirements which would be consistent with NFMA.

The Clean Water Act, as amended in 1977 and 1982: The primary objective of The Clean Water Act is to restore and maintain the integrity of the Nation's waters. This objective translates into two fundamental national goals: 1. Eliminate the discharge of pollutants into the nation's waters; and 2. Achieve clean water quality levels for fishing and swimming. Under Section 303(d) of the Clean Water Act, the State has identified water quality-limited water bodies in Oregon. The North Fork of the John Day River, Cable Creek, Camas Creek, Frazier Creek, and Hidaway Creek are on the 303(d) list. The following executive orders are included within the Clean Water Act:

- **Executive Order 11988:** requires agencies to avoid adverse impacts associated with the occupancy and modification of floodplains.

- **Executive Order 11990:** requires agencies to avoid adverse impacts associated with the destruction or modification of wetlands.
- **Executive Order 12088:** requires Federal compliance with pollution control standards (such as the Clean Water Act).

The Clean Air Act, as amended in 1990: The purposes of The Clean Air Act are "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population; to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution; to provide technical and financial assistance to state and local governments in connection with the development and execution of their air pollution prevention and control programs; and to encourage and assist the development and operation of regional air pollution prevention and control programs."

Multiple-Use Sustained-Yield Act of 1960: The Multiple Use – Sustained Yield Act of 1960 requires the Forest Service to manage National Forest System lands for multiple uses (including range, recreation, fish and wildlife, watershed, and timber). All renewable resources are to be managed in such a way that they are available for future generations.

Executive Order 13186 (migratory bird): On January 10, 2001, President Clinton signed an Executive Order (E.O. 13186) titled "Responsibilities of Federal Agencies to Protect Migratory Birds." This E.O. requires the *"environmental analysis of Federal actions, required by NEPA or other established environmental review processes, evaluates the effects of actions and agency plans on migratory birds, with emphasis on species of concern."*

Executive Order 13112 (invasive species): This 1999 order requires Federal agencies whose actions may affect the status of invasive species to identify those actions and within budgetary limits, "(i) prevent the introduction of invasive species; (ii) detect and respond rapidly to and control populations of such species… (iii) monitor invasive species populations… (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded;…(vi) promote public education on invasive species… and (3) not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species… unless, pursuant to guidelines that it has prescribed, the agency had determined and made public… that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions."

Forest Order 12962 (aquatic systems and recreational fisheries): This 1995 order requires federal agencies to evaluate the effects of federally funded actions on aquatic systems and document those effects relative to the purpose of this order. The purpose is to conserve, restore, and enhance aquatic systems to provide for increased recreational fishing opportunities nationwide.

2005 Pacific Northwest Preventing and Managing Invasive Plants Record of Decision: The 2005 Pacific Northwest Preventing and Managing Invasive Plants Record of Decision provides Goals, Objectives, and Management Direction (Standards) for prevention and treatment of invasive plant species on National Forest Lands in Region 6.

DECISION FRAMEWORK

The Responsible Official for this proposal is the North Fork John Day District Ranger. The District Ranger would decide whether or not to continue to authorize livestock grazing in the Hidaway Allotment. The decision would address whether to implement the project as proposed, to implement Alternative 3, or to choose the No Grazing alternative, Alternative 1.

If the District Ranger decides to authorize livestock grazing, the decision would include determining how the grazing resources are to be managed to best meet the goals of the LRMP and meet the purpose and need for the project. The decision would also include the kind and number of livestock, season of use, terms and conditions, and mitigation and monitoring as needed.

The District Ranger would decide if implementation of any alternative would cause significant effects requiring analysis in an environmental impact statement. That determination would be based on context and intensity, and weighing the significance of the actions (40 CFR 1508.27).

Implementation of either Alternative 2 (Proposed Action) or Alternative 3 would occur through incorporation of the selected alternative into an allotment management plan (AMP) specific to this allotment.

CHAPTER 2

COMPARISON OF THE ALTERNATIVES INCLUDING THE PROPOSED ACTION

CHAPTER 2 – ALTERNATIVES

PUBLIC PARTICIPATION AND TRIBAL CONSULTATION

Public involvement for the Hidaway Allotment began when 96 letters were sent on April 21, 2006 to Tribal governments, special interest organizations, individuals, and State and Federal resource management agencies. The proposal was listed in the summer 2006 Schedule of Projects (SOP) for the Umatilla National Forest. The project has been consulted with representatives of the Confederated Tribes of the Umatilla Indian Reservation, National Marine Fisheries Service, and the permittee. Two responses to scoping were received: The Oregon Natural Desert Association (ONDA) and the Oregon Natural Resources Council (ONRC), now known as Oregon Wild.

Responses were evaluated as to whether they presented an issue or alternative, indicated scope or method of analysis, referenced pertinent research, or provided an opinion. This evaluation is contained in Appendix D of this document.

The Interdisciplinary Team also considered potential issues not identified during the comment period, but which could have effects based on past experience and public comments from previous, similar projects. All issues associated with the proposed action are discussed below.

Using the comments received from the public, key issues were identified that were the basis for the development of an additional action alternative.

ISSUES

Issues are separated into Key Issues and Additional Analysis Concerns.

Key Issues

Key Issues are those that represent a point of debate or concern that cannot be resolved without consideration of the trade-offs involved. These issues spur the design of alternatives and additional mitigation measures, if necessary, to the proposed action that provide a different path to achieve project objectives. Trade-offs can be more clearly understood by developing alternatives and displaying the relative impacts of these alternatives weighed against the proposed action.

Key Issue 1: Grazing Management Of The Tower Unit

For the past 12 years the Tower Unit has been rested from grazing by livestock. Difficulties associated terrain and with managing the movement and gathering of cattle was the primary reason for unit rest. Forage production and availability limits the optimal use and weight production necessary for viable economic returns for the permittee.

- Management difficulties expressed by past permittees of managing livestock in the Tower Unit
- The amount of forage available to livestock in the Tower Unit.

Key Issue 2: Lynx Habitat

ONRC commented that it is unclear how this project would affect lynx and lynx habitat. Their concern that there is no comprehensive strategy for the identification of lynx habitat and the conserving of habitat for lynx and their prey species.

- Lynx habitat in the Tower Unit.
- Predicted effects on federal status of listed species

Key Issue 3: Roadless Areas

The Hidaway Allotment includes portions of two inventoried roadless areas: South Fork-Tower and Squaw. In addition, Oregon Natural Resources Council submitted a map of what they consider to be unroaded areas within the allotment. They are concerned that the "*unique value* [of the unroaded area] *associated with low road density must be preserved."* They proposed that analysis consider affects on roadless values such as dispersed non-motorized recreation, high water quality, and wildlife habitat. This issue will be measured using the following criteria:

- Qualitative discussion on effects to dispersed non-motorized recreation, such as camping, hiking, collection of mushrooms, etc.
- Qualitative discussion of effects on roadless area characteristics (natural appearance, integrity, solitude, remoteness, manageability).
- Effects to the wilderness eligibility of the roadless areas.
- See Hydrology section for discussion and measurement of water quality.
- See Wildlife section for discussion and measurement of habitat quality.

Additional Analysis Concerns

In addition to the key issues, other environmental components have been considered in the Environmental Effects section as a way to compare the alternatives, though they did not result in different alternatives or design elements. These issues are important for providing the Responsible Official with complete information about the effects of the project, such as where project design criteria are being proposed to reduce impacts from the proposed action, or how the project is consistent with Forest Plan direction.

Threatened, Endangered, Proposed, and Sensitive Species (PETS)

The proposed action would authorize livestock grazing within the boundaries of the Hidaway Allotment. Based on local surveys and monitoring, as well as published literature regarding distribution and habitat use, the following Threatened, Endangered, Proposed, or Sensitive species have the potential to occur in or adjacent to the analysis area: gray wolf, California wolverine, Canada Lynx, Columbia spotted frog, Grey Flycatcher, bald eagle, Snake River Chinook, Snake River steelhead, Mid-Columbia steelhead, redband trout, *Botrychium lanceolatum, Botrychium minganense, Calochortus longebarbatus var. longebarbatus, Triflium douglasii*, and 10 species of non-vascular species. The effects to PETS species from the alternatives would be discussed using the following criteria:

- Predicted effects on federal status of listed species
- Effects to proposed, endangered, threatened, and sensitive (PETS) species

Fish Habitat

There are two species of salmonids that use streams within the Hidaway Allotment area: steelhead and redband trout. Steelhead has been listed as a threatened species under the Endangered Species Act. Soil disturbance caused by livestock grazing could result in sediment reaching streams and degrading fish habitat. Livestock grazing can affect riparian vegetation that supports fish habitat. The effects to fish habitat from the alternatives would be discussed using the following criteria:

- Miles of stream that is not authorized for livestock grazing due to existing or proposed riparian corridor fencing.
- Amount of sediment expected to reach the streams that support fish habitat.
- Compliance with PACFISH/INFISH Riparian Management Objectives.
- Predicted response of fish to potential habitat changes.

Soils

Livestock grazing can compact soil and expose it to erosion. The effects to soils from the alternatives would be discussed using the following criteria:

- Percent of soil exposure across the allotment based on livestock concentration areas (trails, water sources, handling facilities).

Treaty Rights

The Hidaway Allotment analysis area lies within the area ceded to the United States Government by the Confederated Tribes of the Umatilla Indians (CTUIR) as a result of the Treaty of 1855. Specific treaty rights applicable to this land base are generally articulated in Article I of the CTUIR Treaty of 1855 and include:

> "*The exclusive right of taking fish in all the streams where running through or bordering said reservation is further secured to said Indians; as also the right of taking fish at all usual and accustomed places in common with citizens of the Territory; and of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land."*

Although the 1855 treaties do not specifically mandate the federal government to manage habitats, there is an implied assumption that an adequate reserve of water be available for executing treaty-related hunting and fishing activities. Proposed activities have the potential to change habitats for wildlife, cultural plants and fish, which could then affect the exercise of treaty rights of local tribes. Effects to these resources will be discussed in the Wildlife, Fisheries, and Range sections of Chapter 3.

Heritage Resources

Livestock grazing has the potential to disturb artifacts of cultural significance, reducing their value for interpretation. The effects to heritage resources from the alternatives would be discussed using the following criteria:

- Proximity of known cultural sites to livestock concentration areas.
- Number of affected sites potentially eligible for the National Register of Historic Places.
- Effectiveness of proposed protection measures

Economic and Social Conditions

Livestock grazing provided by the Hidaway Allotment provides an income to the Forest Service, counties, and permittee, as well as jobs and economic stability to the local ranching community. A decrease in the number of livestock permitted on this allotment would directly reduce revenues and could impact communities within the economic impact area. The effects to economic and social conditions from the alternatives would be discussed or measured using the following criteria:

- Changes in grazing fee payments to the Forest Service, associated payments to counties, permittee costs and income.
- Economic stability within the economic impact area as described through the number of jobs and income created by grazing the Hidaway Allotment.

ALTERNATIVES

This section describes and compares the alternatives considered for the Hidaway Range Allotment. It includes a description and map of each alternative that has been considered. This section also presents the alternatives in comparative form, sharply defining the differences between each alternative and providing a clear basis for choice among options by the decision maker and the public. Some of the information used to compare the alternatives is based upon the design of the alternative and some of the information is based upon the environmental, social and economic effects of implementing each alternative.

Alternatives Considered in Detail

Alternative 1 (No Grazing)

Under the No Action alternative, the Term Grazing Permit would be cancelled within two years of implementation of the decision. No livestock grazing would be authorized. The requirement to implement this decision no sooner than two years following the project decision is pursuant to Forest Service Handbook (FSH) 2209.12 part 16.24, and the code of Federal Regulation 36 CFR 222.4(4)(1). No permit would be issued for the allotment unless a subsequent NEPA decision to re-stock the allotment was made.

Maintenance of range developments on the allotments would no longer be the responsibility of the permittees. Range improvements would be removed or rehabilitated. All developments not needed for resource management would be removed. Water improvements could be naturally reclaimed, or measures such as ripping and planting could be implemented to restore the areas.

Alternative 2 (Proposed Action)

The proposed action would authorize 493 cattle (cow/calf pairs or the equivalent) from June 1st through September 30th (2,007 Head Months) within the Hidaway Allotment boundary. Grazing would be adjusted, annually, if conditions or events (fire, drought, saturated soil conditions) indicate a shortening of the season.

Livestock would be managed in a pasture rotation system within the East Trough, West Trough, Dry Camas, Nine-Sections, and Tower Units (Map 3). The pasture rotation for a particular year would be determined based on range conditions, consistent with seasonal restrictions described below. Table 2 describes the approximate number of days livestock would be authorized in each Unit. The actual number of days livestock are authorized in each Unit would be modified annually based on Unit rotations, utilization levels, and annual conditions. Some Units may be rested in a particular year and adjustments to the season or numbers of livestock would be made to account for less acres being grazed.

Table 2: Alternative 2 (Proposed Action) of the Hidaway Allotment

Unit	Permitted Numbers	*Days in Unit	*Head Months	Acres
Dry Camas	493	27	444	5,341
Nine-sections	493	30	493	8,224
Tower	493	40	658	17,996
East Trough	493	10	165	2,748
West Trough	493	15	247	2,951
Totals	**493**	**122**	**2,007**	**37,260**

***Numbers are estimated. Actual use depends on annual variations in conditions, utilization levels, and rotation (some Units may be rested in a particular year).

Alternative 3 (Current Management – Modified)

Alternative 3 (Map 3 and Table 3) would be similar to Alternative 2 (Map 2 and Table 2). Differences between the two action alternatives would be:

- The 18,000 acre Tower Unit would be eliminated from the Hidaway Allotment.
- Authorizing grazing would begin June 16th, not June 1st as in Alternative 2.

The Tower Unit would not become its own allotment or a part of this or another allotment unless a separate analysis was completed in the future.

Table 3: Alternative 3 of the Hidaway Allotment

Unit	Permitted Numbers[1]	Days in Unit[2]	Head Months[2]	Acres
Dry Camas	493	26	427	5,341
Nine-sections	493	42	690	8,224
East Trough	493	18	296	2,748
West Trough	493	20	329	2,951
Totals	**493**	**106**	**1,742**	**19,264**

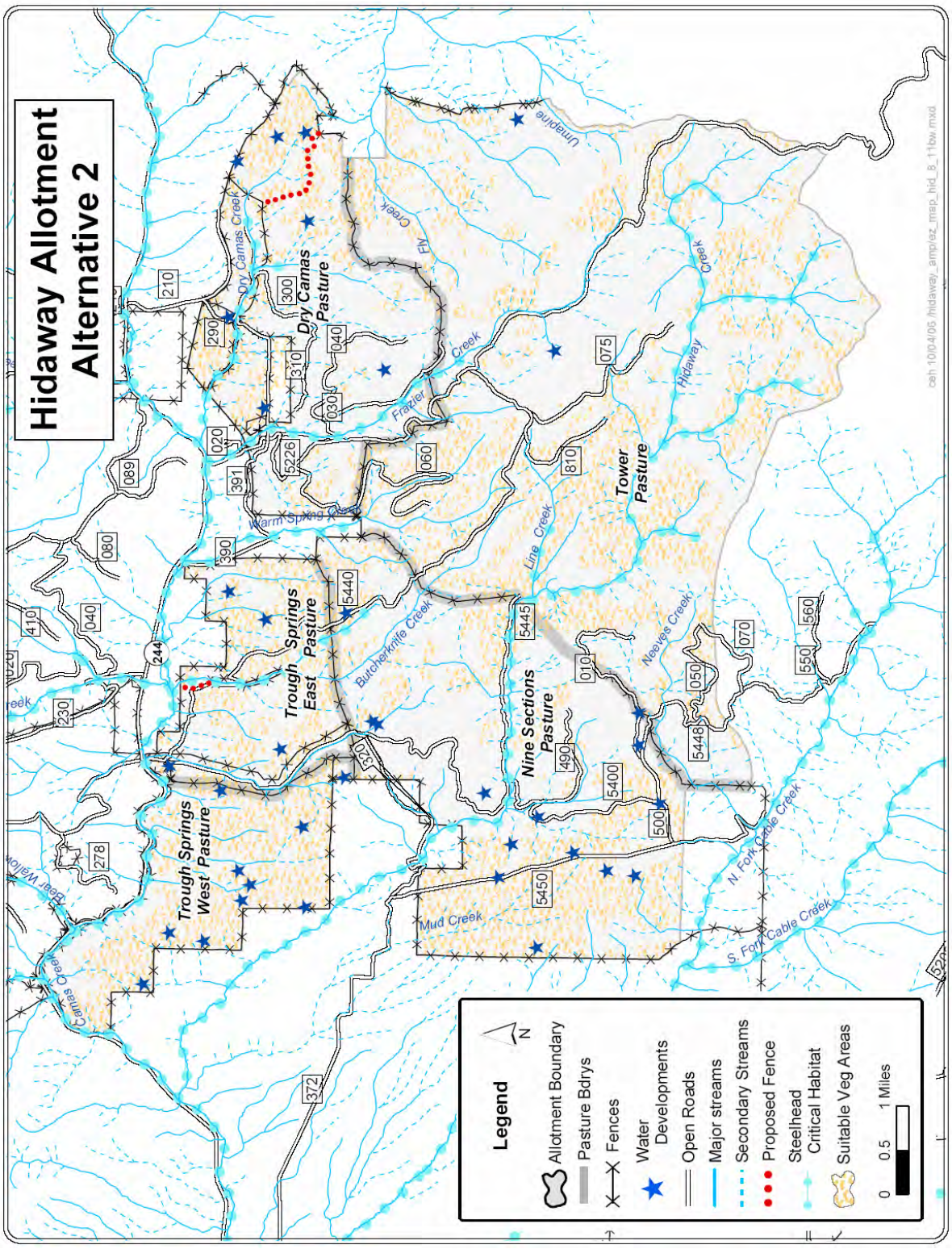
[1]Permitted numbers are maximum numbers.
[2]Numbers are estimated. Actual use depends on annual variations in conditions, utilization levels, and pasture rotation. .

Connected Actions to Alternative 2 (Proposed Action) and Alternative 3

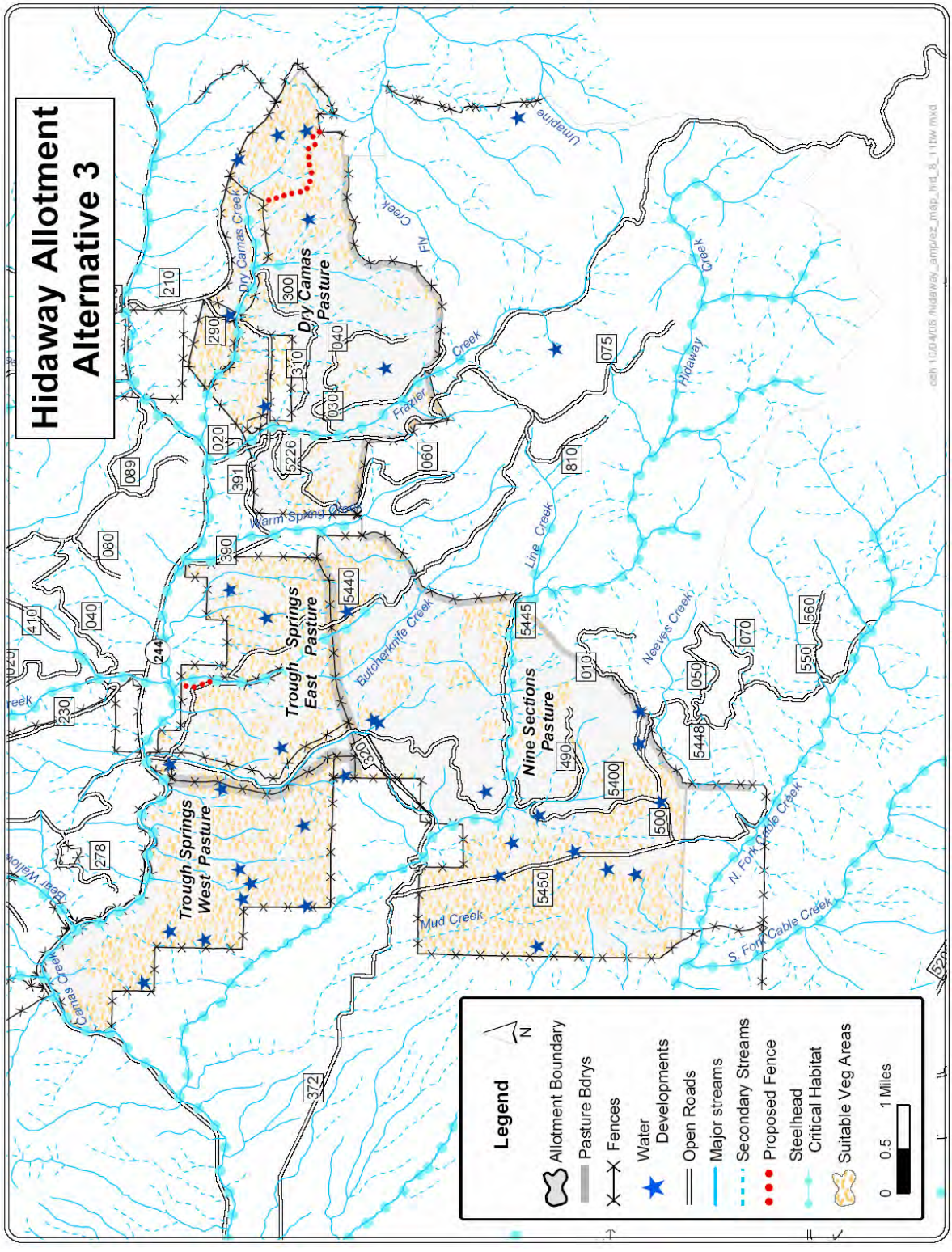
- Approximately one-half mile of fence would be constructed below, and connecting to, the existing Butcherknife Creek exclosure to restrict livestock access, from approximately one-half mile of stream, downstream to the Forest boundary.
- To improve livestock management and riparian habitat along Dry Camas Creek, approximately 1 mile of fence would be constructed, prior to the 2010 grazing season. This fence would create

a riparian pasture of approximately 603 acres, adjacent to a 378 acre riparian pasture..

Map 3: Alternative 2 (Proposed Action) for the Hidaway Allotment



Map 4: Alternative 3 for the Hidaway Allotment



Comparison of Alternatives

This section provides a summary of implementing each alternative. Information in Tables 4 and 5 display the differences between the alternatives.

There is no proposed road construction, timber harvest, or prescribed fire associated with proposed grazing (Table 4). No changes in natural integrity, apparent naturalness, solitude, remoteness, or manageability are anticipated with or without grazing. Therefore, grazing would not affect the roadless character of either the South Fork-Tower or the Squaw Roadless areas. Grazing would not prevent conversion of these areas to wilderness, since grazing is a permissible activity in wilderness areas.

Table 4: Alternative Comparison Table – Quantitative

Allotment Characteristics	Alternative 1 (No Grazing)	Alternative 2 (Proposed Action)	Alternative 3 (Current Management Modified)
Allotment Acres	0	37,260	19,264
Number of Pastures	0	5	4
Grazing Season Dates (Cattle)	No Dates	June 1 – September 30	June 16 – September 30
Number of Cow/Calf Pairs	0	493	493
Head Months	0	2,007	1,742
Days in Units	0	122	106
Fences and Riparian Pasture			
Miles of New Fences	0	1.5	1.5
Acres of Riparian Pasture	0	981	981

Table 5 displays the qualitative differences between alternatives.

Table 5: Comparison of how each Alternative Addresses the Key Issues

Issue	Alternative 1 (No Grazing)	Alternative 2 (Proposed Action)	Alternative 3
Grazing Management of the Tower Unit	The grazing permit would be canceled for grazing in all allotment units, including the Tower Unit.	Livestock grazing would occur in the Tower Unit. Authorized use would allow for adjustments for use due to natural events.	Management flexibility would be reduced because the 18,000 acre Tower Unit would not be an option to utilize for grazing. Approximately 247 fewer head months would be authorized than Alternative 2.
Lynx Habitat	No grazing activities would occur in potential lynx habitat.	Grazing would occur within potential lynx habitat that is within the Tower Unit	Grazing would not occur within potential lynx habitat (the Tower Unit)
Roadless Areas	Livestock grazing would not occur within the South Fork-Tower and Squaw roadless areas.	Grazing would continue to be authorized in the South Fork-Tower and Squaw Roadless areas.	Livestock grazing would not occur within the South Fork-Tower and Squaw roadless areas.

Alternatives Considered But Eliminated From Detailed Analysis

Current Management

Each year, current management of the Hidaway Allotment authorizes up to 493 cow/calf pairs from June 16th through September 30th in a pasture rotation system. As part of the Hidaway Allotment, the Tower Unit is available, but has not been grazed since 1993, at the permittees request. This alternative was considered but dropped from consideration. The two proposed action alternatives provide more effective management of livestock within the allotment than current management.

Increase in Authorized Livestock Numbers or Grazing Season

By increasing the livestock numbers or lengthening the season of use. It was determined that conflicts with Forest resources and activities would occur. Increasing the authorized numbers, although it would benefit the livestock industry, would make it difficult to manage livestock within the utilization standards described in the Forest Plan, in both riparian and upland vegetation types.

The Hidaway Allotment often has saturated soil conditions in May and into June. This often limits when livestock can be turned onto the allotment without having unwanted effects to soils and vegetation. The off date has been September 30th, primarily to remove livestock prior to big game rifle seasons in the fall.

Restoration Alternative

A request was made to include a restoration only alternative, removing livestock and emphasizing riparian restoration. This alternative was dropped because it did not address the purpose of and need for this project. Livestock use is limited along Butcherknife Creek, Dry Camas Creek, and Camp Creek as well as the limited livestock access to portions of Hidaway Creek, Frazier Creek, Fly Creek, and Umapine Creek and natural restoration is taking place. It was determined that active restoration is not needed at this time. Enlarging an existing riparian pasture through an exclosure fence would improve conditions in the new area to be fenced.

Condition and Trend monitoring found that upland vegetation is in a satisfactory condition as defined in the Forest Plan. As a result, it was determined that active restoration was not needed at this time. This alternative also did not meet the purpose and need.

PROJECT DESIGN FEATURES

The following measures would be implemented through project administration to protect resources associated with the Hidaway Allotment.

Seasonal Grazing Restrictions

Seasonal restrictions may be modified for consistency with consultation requirements described in the associated biological evaluations (BE) and biological assessment (BA).

- Frazier Creek: Livestock grazing would continue to not be authorized in the Dry Camas Unit gathering area until after July 15th to avoid steelhead spawning habitat and the Douglas clover *(Trifolium douglassii)* population.
- Hidaway Creek and Line Creek:

- Livestock access to these streams in the Tower Unit would not be authorized until after July 15th to avoid steelhead spawning habitat.
- The Nine-Sections Unit would not be grazed more than once in two years before July 15th. When Nine-Sections is grazed before July 15th, the permittees would be required to monitor Hidaway Creek for the presence of livestock. If livestock is present they would be moved and the permittee would be required to ride a minimum of one time per week to remove livestock from the area.

Best Management Practices (BMPs)

Refer to Term Grazing Permit (located at the North Fork John Day Ranger District) for terms and conditions associated with livestock administration on the Hidaway Allotment. Best Management Practices (Ref: November 1988 PNW publication titled General Water Quality Best Management Practices) and corresponding mitigation measures include:

Range

RM-1: To safeguard water quality under sustained forage production, and managed forage harvest by livestock and wildlife.

- The District Ranger is responsible for analysis of range allotments, determining the need for an environmental assessment, preparation of management plans, and processing of grazing applications.
- The Forest Supervisor approves management plan after appropriate environmental analysis, and issues grazing permits with stipulations and conditions. Most permits are issued for ten-year terms.
- Allotment management plans are revised as needed. Permittee operating plans are prepared or revised annually to allow for current allotment conditions and trends and to incorporate current instructions. The permittee carries out the plans under the immediate direction and supervision of the District Ranger or the Range Staff Officer. Corrective action is taken if a permittee does not comply with grazing permit conditions designed to protect soil and water resources.

RM-2: Soil and water resources would be protected through management of livestock numbers and season of use.

- Permission to turn out must be obtained from the Forest Officer at least five (5) days in advance. Livestock entry onto the allotment or into a specific pasture would not be permitted until:
  - Soils are dry enough to prevent damage
  - Key plant species are ready to withstand grazing.
- The off-date for a pasture is when stock are to be fully out of the pasture, or in the case of the last pasture in the rotation, fully off the Forest. It may be necessary to begin gathering early or hire additional riders to achieve this. The off date for the Hidaway Allotment is September 30th.
- If implementation standards are reached on key areas prior to the scheduled move or turn off date, livestock would be required to move to the next pasture or off the Forest earlier than scheduled.
- Livestock numbers, season of use, and movement may be adjusted each year to allow for resource management needs.
- Adjustments to livestock numbers, season of use, and movement may also be made during implementation to respond to resource conditions that develop as the season progresses. These conditions may include: drought, wildfire, achievement of key plant species utilization levels, stubble height or other unforeseen condition. The type of adjustment used would be determined by the Forest Officer in charge, based on the degree of the problem and its cause. If mitigation

activities do not achieve desired results, additional action would be taken (for example, reductions in stocking or season of use in subsequent years).

RM-3: Preclude concentration of stock in areas that are sensitive to concentrated use and/or preclude prolonged use of an area which would result in loss of vegetative cover and soil compaction.

- In no case would salt be placed closer than ¼-mile to streams or other wetlands without prior approval. Salting and bedding areas would not be located within 300 feet of any known heritage resource site.

RM-4: Safeguard water quality under sustained forage production and manage forage harvest by livestock and wildlife.

- Forage resources would be allocated on a pasture-specific basis to meet basic plant and soil needs as a first priority. Forage production above basic resource needs would be available to wildlife and permitted livestock.
- Management activities would be designed and implemented to retain sufficient ground vegetation and organic matter to maintain long-term soil and site productivity.

PACFISH Standards

The following Forest Plan standards (PACFISH) associated with livestock grazing apply to activities within and outside of Riparian Habitat Conservation Areas (RHCAs) that would degrade RHCAs.

- **GM-1:** Modify grazing practices (e.g. accessibility of riparian areas to livestock, length of grazing season, stocking levels, timing of grazing, etc.) that retard or prevent attainment of Riparian Management Objectives, or are likely to adversely affect listed anadromous fish. Suspend grazing if adjusted practices are not effective in meeting Riparian Management Objectives and avoiding adverse effects on listed anadromous fish.
- **GM-2:** Locate new livestock handling and/or management facilities outside of Riparian Habitat Conservation Areas. For existing livestock handling facilities inside Riparian Habitat Conservation Areas, assure that facilities do not prevent attainment of Riparian Management Objectives or adversely affect listed anadromous fish. Relocate or close facilities where these objectives cannot be achieved.
- **GM-3:** Limit livestock trailing, bedding, watering, salting, loading, and other handling efforts to those areas and times that would not retard or prevent attainment of Riparian Management Objectives or adversely affect listed anadromous fish.
- **GM-4** Adjust wild horse and burro management to avoid impacts that prevent attainment of RMOs or adversely affect listed anadromous fish and inland native fish.

Invasive Weed Prevention Practices

- Project maps in the Allotment Management Plan would show current, inventoried, high priority, invasive weed infestations to be avoided and/or monitored.
- Invasive weed prevention measures would be incorporated in allotment management plans where ground disturbance is likely. Information on invasive weed identification, methods of spread, and prevention measures would be provided to permittees.
- Permittees would be encouraged to identify new infestations of invasive weeds and report these annually to the Forest Service.
- All equipment used to maintain water developments would be cleaned in a manner sufficient to prevent invasive weeds from being carried onto the analysis area. This requirement does not apply to passenger vehicles or other equipment used exclusively on roads. Cleaning would occur

off of National Forest System lands. Cleaning would be inspected and approved by the Forest Officer in charge of administering the project.
- Any seed used in restoration would be certified weed free.

Range Improvements

- Existing ponds, troughs, handling facilities, and fences shall be reconstructed, repaired, or maintained without further NEPA documentation.
- Any ground disturbing activities such as construction of new structural improvements or reconstruction of existing facilities would require the necessary Tribal and State Historic Preservation Office (SHPO) consultation.
- Range improvements would be required to be maintained to FS specifications that would be identified in the AMP.

Soils

The Forest Plan has three requirements which relate to the effect of grazing to soils.
- Maintain a minimum of 80 percent of an activity area in a condition of acceptable productivity potential (p. 4-80).
- Management activities shall be designed and implemented to retain sufficient ground vegetation and organic matter to maintain long-term soil and site productivity (p. 4-80).
- Maintain minimum percent effective ground cover after cessation of any soil-disturbing activity. The range of minimum percent effective ground cover ranges from 20 percent to 90 percent depending on erosion hazard class and time elapsed since end of project(p. 4-80).

MONITORING

Implementation Monitoring Requirements and Responsibilities

The following monitoring would occur as part of implementing grazing in the Hidaway Allotment. These standards and monitoring methods have proven to be effective on the North Fork John Day Ranger District and supported by the Forest Plan, past monitoring, permit administration, and long term monitoring data.

Forest Plan Utilization Standards

Umatilla Forest Plan identifies utilization standards to assure continued maintenance or improvement of vegetation and soils. Maximum utilization standards have been set for both riparian and upland vegetative communities depending on range condition (Satisfactory or Unsatisfactory). Utilization of grass and forbs would be measured by percent weight of forage remaining, while shrubs would be measured by annual growth remaining (Table 6). These utilization standards would be maximum levels of use regardless of which animal species uses the forage or browse. The standard reached first would be the most restrictive and livestock would be removed prior to that standard being exceeded. If standards do not maintain the desired conditions, a more restrictive standard would be prescribed as part of the adaptive management process.

The Forest Service range manager would assess utilization during and after grazing. Monitoring of riparian vegetation would occur in areas that are representative of the associated pasture. Upland monitoring may be conducted by the permittee, with visual inspections by the Forest Service range

manager. If the range manager visually identifies an area of concern, more intensive measurements would be taken.

Height/weight curves for many rangeland plant species have been converted to utilization measures to provide a quick, reasonable estimate of the level of grazing that could be sustained while still allowing plants to store carbohydrates for seasonal growth and persistence.

Table 6: Allowable Utilization Standards for the Hidaway Allotment

Measure of Vegetation Condition	Upland			Riparian	
	Grass and Forbs		Shrub	Grass and Forbs	Shrub
	Forested	Grassland			
Satisfactory	45%	55%	40%	45%	45%
Unsatisfactory	35%	35%	30%	35%	30%

IIT Monitoring Standards

The Forest Plan as amended by PACFISH/INFISH and Interagency Implementation Team (IIT) standards direct grazing practices that retard or prevent attainment of riparian management objectives that are likely to adversely affect federally listed fish be modified. Implementation monitoring on the Hidaway Allotment would continue in designated monitoring areas (DMAs) along reaches of Hidaway Creek, Butcherknife Creek, Dry Camas Creek or tributaries, or a combination of these creeks, to monitor livestock use. Monitoring multiple indicators such as shrub utilization, bank alteration/stability, and/or utilization of herbaceous vegetations based on specific stream characteristics would occur to be used as a tool to manage livestock to meet desired stream conditions. The standards (Table 7) would be consistent with consultation requirements.

Designated Monitoring Areas (DMAs) may be moved to different locations based on resource conditions. Trigger and shrub utilization will be applied as a point in time measurement. Greenline standards are monitored at the end of season. The standards may be changed to a more restrictive standard if it is determined that desired future conditions are not being maintained. Livestock would be moved from the area when the trigger standard is met or before it is met. The IIT protocol requires at least 20 percent of the Forest's monitoring sites to be monitored each year by the Forest Service.

Table 7: Interagency Implementation Team (ITT) Standards

Consultation Requirements	Riparian			
	Grass and Forbs			Shrub
	Greenline	Trigger Monitoring		
		Greenline	Terrace	
Median Stubble Height	4 inches	5 inches	3 inches	
Annual Growth Utilization				30%

Effectiveness Monitoring

Effectiveness monitoring, or long term monitoring, is used to determine the trend of riparian and upland vegetation as they relate to livestock grazing activities in the Hidaway Allotment. Described below is the effectiveness monitoring plan for the Hidaway Allotment.

- **Upland Habitats—**Five Condition and Trend (C&T) Clusters have been established in the Hidaway Allotment and have been monitored to determine the trend of vegetation and soil conditions on the allotment. These C&Ts would continue to be monitored every 10 years by the Forest Service. Trend evaluation would be used to determine if livestock grazing on the Hidaway Allotment is allowing maintenance of or movement towards Desired Future Conditions (Forest Plan Goal).

- **Riparian Habitats—**Permanent riparian photo points were established in the 1980s along Dry Camas Creek to evaluate the trend in riparian vegetation. These photo points would continue to be monitored by the Forest Service every five years. Additional riparian photo points would be established with implementation of Alternative 2 (Proposed Action) on Hidaway Creek within the Tower Unit and Butcherknife Creek in the East Trough and/or Nine-Sections Unit. Stream surveys would also be used to determine long term trend toward or maintenance of desired future conditions of stream characteristics (bank stability). Long term monitoring within the 4.5 miles of streams inside riparian exclosures would not be high priority as related to livestock grazing activities. Monitoring within the exclosures would be to determine the effectiveness of the fences to restrict livestock access.

CHAPTER 3

ENVIRONMENTAL CONSEQUENCES

CHAPTER 3 – ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This section summarizes the physical, biological, social, and economic environments of the affected project area and the potential changes to those environments due to implementation of the alternatives. It also presents the scientific and analytical basis for comparison of alternatives presented in Table 4. For the cumulative effects analysis, consideration of past actions followed guidance provided by the Council of Environmental Quality (June 24, 2005 Memorandum from James L. Connaughton, Project Record). Ongoing and reasonably foreseeable future actions considered in the cumulative effects analysis are listed in Appendix E. Where pertinent, analysis is tiered to the FEIS of the Umatilla and Wallowa-Whitman Forest Plans. Probable effects are discussed in terms of environmental changes from the existing condition and include qualitative and quantitative assessments of direct, indirect, and cumulative effects.

Direct effects: Those effects that occur at the same time and in the same general location as the activity causing the effects.
Indirect effects: Those effects that occur at a different time or different location than the activity to which the effects are related.
Cumulative effects: Those effects that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.

Specialist reports, prepared for this project, are located in the Project Record (40 CFR 1502.21). The project record is available at the North Fork John Day Ranger District office in Ukiah, Oregon.

RANGE

Brad Lathrop, Range Specialist
Range Report, Project Record

Key Issue 1: Grazing Management of the Tower Unit

For the past 12 years the Tower Unit has been rested from grazing by livestock. Difficulties associated terrain and with managing the movement and gathering of cattle was the primary reason for unit rest. Forage production and availability limits the optimal use and weight production necessary for viable economic returns for the permittee.

- Management difficulties expressed by past permittees of managing livestock in the Tower Unit
- The amount of forage available to livestock in the Tower Unit.

EXISTING CONDITIONS

The authorized season and numbers of livestock for the allotment has remained relatively constant since about the 1970s. Livestock have been managed under a pasture rotation system alternating early and later pastures since the 1980s, though the number of pastures has changed. Livestock grazing management has been focused on managing utilization levels within Units or specific areas by managing the number of days livestock are in each Unit and the season of use based on current weather and ground conditions to achieve desired conditions.

The maximum amount of utilization authorized for specific habitat types were established in the Forest Plan to meet individual plant needs. Authorizing grazing within the defined utilization standards is intended to move towards or meet desired vegetation conditions.

The season when livestock are in a specific Unit or in a specific area can change livestock distribution patterns. Spring or early summer grazing usually occurs in the uplands when open grass and forest lands and dry meadow communities are green and growing and water is most abundant. Mid to late summer use usually promotes livestock use in riparian and cool forested communities. Forage removal prior to seed drop (bunchgrass species) has been found to be detrimental to individual plants when grazed at improper levels. Managing livestock grazing in a pasture rotation system allows changing early season units from year to year or over several years to allow rest during the growing season to meet desired conditions.

The current management of the allotment authorizes a maximum of 493 cow/calf pairs from June 16th through September 30th through a Term Grazing Permit. Livestock are not authorized before June 16th or after September 30th. This season can be shortened due to annual conditions or events (fire, drought, saturated soil conditions). The last EA and Allotment Management Plan (AMP) were completed in 1982.

The current grazing system is a pasture rotation system in which fences separate the five that pastures that currently comprise the Hidaway Allotment. Table 8 displays the current status of the pastures. The Tower pasture has been rested since 1994. Pages three through five of this EA discuss the historical perspective of the Hidaway C&T Allotment.

Table 8: Existing Management of the Hidaway Allotment

Unit	Permitted Numbers[1]	Days in Unit[2]	Head Months[2]	Acres
Dry Camas	493	26	427	5,341
Nine-sections	493	42	690	8,224
Tower	Rested	0	0	17,996
East Trough	493	18	296	2,748
West Trough	493	20	329	2,951
All Units	493	106	1,742	37,260

[1] Maximum permitted numbers.
[2] Numbers are estimated. Actual use depends on annual variations in conditions, utilization levels, and pasture rotation.

Managing livestock in the Tower Unit has historically been labor intensive for past permittees. Gathering livestock and timely pasture moves was difficult due to thick timber and the large size of the pasture. A fence was constructed to separate the Dry Camas and Tower Units in the early 1990's. The permittee chose to not graze the Tower Unit due to the amount of time it took to manage livestock in the Tower Unit and it has been rested since 1994.

Since 1994 many changes have occurred within the Tower Unit. The Tower Fire of 1996 burned a substantial amount of the Tower Unit and has created transitory rangeland and improved visibility that is expected to improve gathering and herding livestock. Proposed fuel treatments in the Tower Unit area is expected to also increase transitory rangeland and improve livestock management.

Livestock Facilities

There are no new proposed water developments, or handling facilities, All range improvements may be repaired, maintained, or reconstructed.

- Thirty one ponds are available for livestock use.
- Nine gravel pit ponds are available for livestock use.
- There are six developed springs with watering troughs
- There is one livestock handling facility.

Existing Vegetation Condition

The "Effects of Livestock Grazing on Stand Dynamics and Soils in the upland Forests of the Interior West" (1997) authored by A. Joy Belsky and Dana M. Blumenthal argues that grazing in the west has contributed to severe wildfires. It discusses how historic livestock grazing influenced changes in the species composition of forested stands affecting fire regimes as well as severity and intensity of wildfires.

Borman (Site) found that the case studies used in this literature review were in areas that had high to severe grazing use and grazing often occurred season long. Borman also noted that though historic livestock grazing contributed to current conditions, climate and a change in fire frequency (due to fire suppression) also contributed to the current conditions.

The Hidaway Allotment experienced similar high levels of use during the late 1800s and early 1900s when many bands of sheep grazed this area on the annual trek to and from high elevation summer pastures. Stocking rates were high and season long use occurred in the area. The amount of use has been substantially reduced from tens of thousands of sheep, up to 2,000 cattle, as well as herds of horses.

Current utilization standards have been designed to maintain healthy plant communities. Long term monitoring has found that plant communities are currently in a satisfactory condition. Livestock use

levels across the allotment have been found to be from no use up to light use with small areas of moderate levels of use. Current use is presently 493 cattle for about a 4 month period of time. Stock driveways are no longer used for sheep and cattle and season long livestock use does not occur.

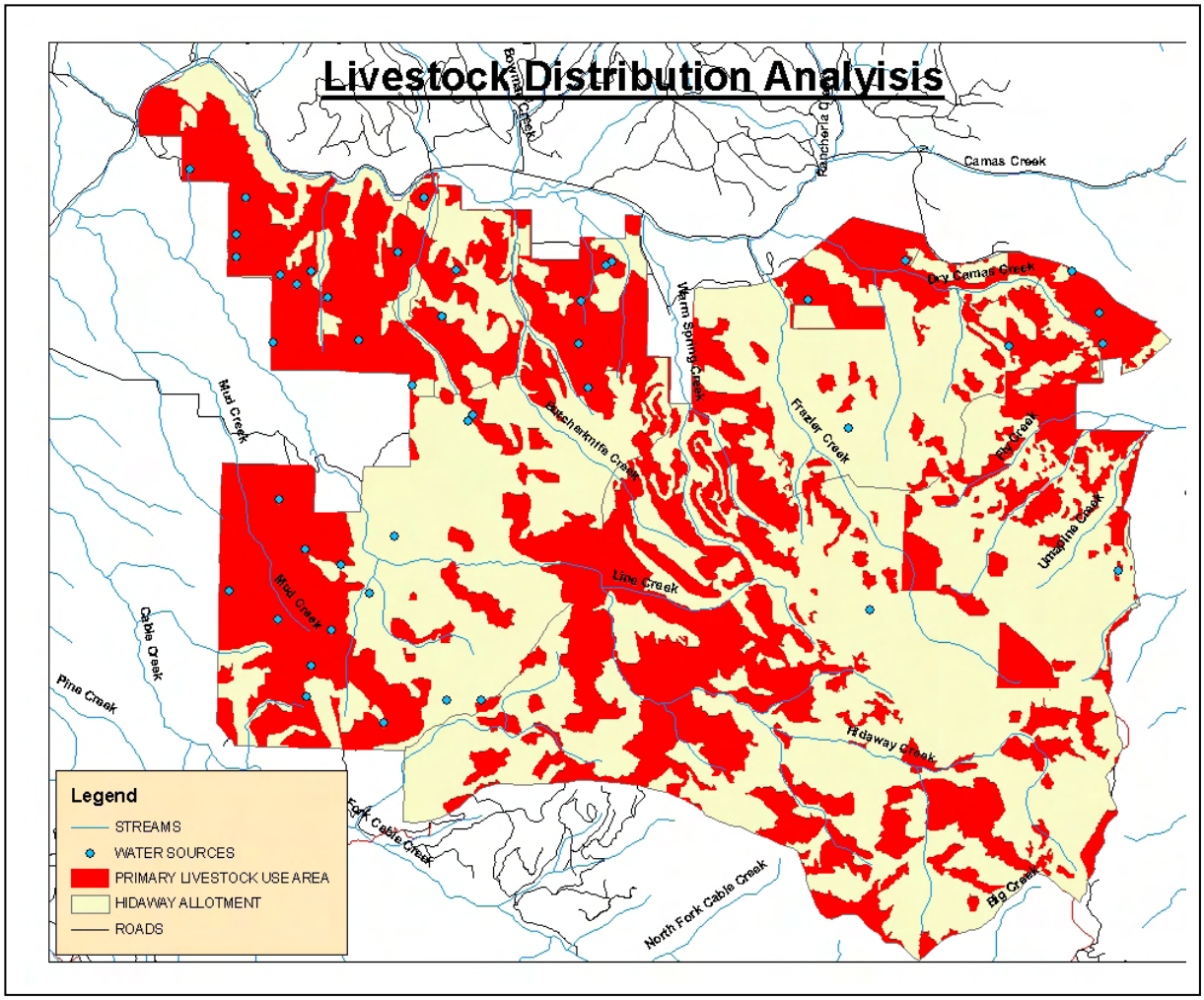
Forested communities that are currently outside the historic range of variability would need landscape level treatments or disturbances such as fire, fuel reduction projects, or harvests. These types of activities are not associated with the scope of this project. As a result, the issue of grazing effects on wildfire regimes would not be further analyzed in this document. It is recognized that historic livestock grazing contributed to current conditions and that current livestock grazing can reduce fine fuels during the grazing season and may actually reduce fire intensity and spread.

Livestock grazing can affect plant community composition, stability, and productivity due to defoliation and trampling. Changes in the composition of plant communities can affect productivity, resilience of plant communities to compete against exotic or invasive species, and soil stability.

Livestock do not use or do not spend substantial amounts of time in many areas across the allotment. Factors that normally limit livestock use are canopy cover, available forage, distance from water, down timber, and steepness of slope. Though livestock could be found in any location within the allotment, this analysis looked at where livestock spend most of their time to identify where livestock effects or concerns would primarily be found. Map 5 displays a map of where livestock would normally spend most of their time in the allotment.

The most limiting factor on Hidaway Allotment is canopy cover, which can be related to access (such as down wood and tree density), and available understory forage vegetation for livestock grazing. Transitory range can be created and become available for livestock use through wildfire events, prescribed fire, fuels reduction treatment projects, and commercial and noncommercial thinning treatments. This analysis used monitoring information to determine effects on plant communities where grazing primarily occurs throughout the allotment.

Map 5: Hidaway Allotment Livestock Distribution



Grand fir, subalpine fir, and lodgepole pine community types are found on approximately 18,400 acres or about 50 percent of the Hidaway Allotment. About 9,800 of those acres are found in the Tower Unit. These communities generally limit livestock use due to thick canopy cover and down wood that limits understory forage vegetation as well as livestock access. Livestock grazing has little effect to vegetation in these community types.

Ponderosa pine and/or Douglas fir plant community types are found on approximately 15,400 acres or about 40 percent of the allotment. These community types have historically been managed for timber. Understory vegetation that provides forage for livestock grazing. Grass species were often seeded after timber harvests resulting in an increase in forage and an increase in livestock use. Open grasslands and either ponderosa pine or Douglas fir plant communties, or both, provides a substantial amount of the the forage for livestock grazing in the Hidaway Allotment.

Open grassland vegetation accounts for approximately 2,100 acres of the allotment. Open grassland communities in the allotment are dominated by Sandberg's bluegrass and onespike oatgrass on shallow soil sites. Where soil depths allow, Idaho fescue, bluebunch wheatgrass, and prairie junegrass communities are present. Shrub communities are generally not present on the allotment (greater than 10 percent cover).

Riparian communtiy types accounts for less than 5 percent of the allotment. Riparian communities can be found along streams as well as at seeps, springs, and meadows throughout the allotment. Livestock utilize many riparian community types due to the amount of forage produced, available water, and cool air temperatures. The riparian communities where concentrated livestock use can occur are primarily along low gradient stream systems where herbaceous or shrub vegetation dominates and where conifer canopy cover is low. These areas are attractive to livestock grazing due to the amount of available forage and water, and access is not limited. Management on the Hidaway Allotment has focused on limiting the amount of use in those riparian areas where livestock could concentrate and cause a movement away from desired conditions. Dry Camas Creek and portions of Hidaway Creek, Butcherknife Creek, and Camp Creek are those areas where livestock use has been a concern and where management has focused.

Livestock management during the late 1980s to present within the Hidaway Allotment has focused on improving riparian conditions. Riparian corridor fencing, herding, salting, and implementing utilization standards has resulted in substantial reductions in livestock use in riparian areas and substantial improvements of riparian conditions.

Approximately 6 miles of portions of Butcherknife, Camp, and Dry Camas Creeks within the allotment have been fenced to exclude or limit livestock grazing to restore riparian vegetation. All of the fenced reaches are relatively low gradient streams dominated by herbaceous vegetation, few if any riparian shrubs, and light to moderate canopy cover from conifers. These areas provided herbaceous forage for livestock and water resulting in past concentrated use. Hoof shearing and trampling was often a concern in causing bank instability in these reaches. The existing riparian exclosures and riparian pastures have excluded or limited livestock use in those areas where livestock grazing has been a concern in the past (low gradient, herbaceous vegetation dominated), and where it would be expected to continue to occur.

Rangeland Vegetation Condition and Trend (CT) Analysis

Livestock grazing on the uplands primarily occurs on open grasslands and ponderosa pine/Douglas fir communities within the allotment, though transitory range can increase use in other forested community types. Long term monitoring points have been established and analyzed since the 1960s. These points monitor the trend of plant communities by evaluating changes in species composition and ground cover to manage livestock grazing to meet desired vegetation conditions. These monitoring points are located where livestock grazing primarily occurs and where grazing effects to plant communities can be evaluated.

Long term monitoring has found that current vegetation conditions on the allotment, using a deferred pasture rotation system, range readiness observations, or June through September season of use since at least the 1970s, are in a satisfactory condition as defined in the Forest Plan. All monitoring data supports that management has been effective in meeting or moving toward desired conditions and the proposed action is expected to continue this outcome.

Five Condition and Trend (CT) Clusters (Table 9) were read within the Hidaway Allotment in 2003. Four of the five Clusters were established in the mid 1950s and were read six times including once in 2003. One Cluster was established in 1981 and was read three times including once in 2003. All Units within this allotment were represented except the Tower Unit.

Four Clusters are located on Sandberg's bluegrass/ one-spike oatgrass plant communities that are typical of this allotment. These sites represent the rangeland vegetation associations that occur on this allotment. These plant communities do not change significantly over time due to the limiting nature of

the soil. The soils where these plant communities exist are very shallow soils over unfractured basalt. As a result of shallow soils, deep soil native bunchgrass species are usually not present.

The CT monitoring data shows that these sites are in Satisfactory Condition and the trend is static. Sandberg's bluegrass and one-spike oatgrass (late seral plant community) dominated these sites when the CT clusters were established and are still dominated by these species today. Due to the soil types, this is understandable. It should be noted that *Ventenata dubia* (Ventenata) is present on these sites. Ventenata is an aggressive introduced annual grass that generally grows on shallow or moderately deep soil types associated with grassland vegetation types. Monitoring shows that this invasive grass can invade areas where soil disturbance occurs when soils are wet or saturated. These sites are still in satisfactory condition because the desirable native species associated with these plant communities are still present in adequate frequency. Livestock have been managed to reduce soil impacts when soils are saturated and should continue to do so.

Cluster # 12 was located in a typical dry meadow type. Data shows these sites are in satisfactory condition. The current trend is static, as no significant changes have occurred since establishment. Range readiness standards, particularly soil standards, should continue to be used in determining when livestock can be turned onto the allotment. Table 9 displays the trends of the range and soil conditions as determined from monitoring the condition and trend plots.

Table 9: Hidaway Allotment Condition and Trend (CT) Analysis

Condition and Trend Plot (CT) and Unit	Indicator	Range and Soil Condition and Year Monitored	Trend
CT #1 Nine Sections Unit	Range	Excellent: 1957, 1963, 1968, 1980, 1993, 2003	Stable
	Soil	Excellent: 1957, 1963, 1968, 1980 Good: 1993, 2003	Stable
CT #2 West Trough Unit	Range	Excellent: 1957, 1963 Good: 1968, 1980, 1993, 2003	Stable
	Soil	Excellent: 1957, 1963, 1968, 1980, 1993, 2003	Stable
CT #11 Dry Camas Unit	Range	Excellent: 1957, 1968, 1980, 1993, 2003 Good: 1963	Stable
	Soil	Excellent: 1957, 1963, 1968, 1980, 1993, 2003	Stable
CT #12 Dry Camas Unit	Range	Fair: 1957, 1963, 1968, 1980, 1993, 2003	Stable
	Soil	Excellent: 1957, 1963, 1968, 1980, 2003 Good: 1993	Stable
CT #13 West Trough Unit	Range	Excellent: 1981, 1989, 2003	Stable
	Soil	Excellent: 1981, 1989, 2003	Stable

Existing Riparian Vegetation Condition

Table 10 describes the streams that are presently fenced to exclude livestock grazing (riparian exclosures).

Table 10: Existing Riparian Exclosure Fences

Pasture	Stream Name	Year Constructed	Miles of Stream

Dry Camas	Dry Camas	1990 and 1997	2.5 Miles
East Trough	Butcherknife	1999	1.0 Miles
East Trough	Camp Creek	1999	2.5 Miles

Dry Camas Creek

All of Dry Camas Creek is located within the Dry Camas Unit. Livestock management along Dry Camas Creek has been designed to limit or exclude the amount of livestock use.

- **Reach 1:** The lower approximately 1 mile of Dry Camas Creek has been excluded from livestock grazing with a riparian corridor fence. Monitoring has focused on how effective the fence is in restricting livestock access to this reach. Riparian photo point monitoring along this reach since 1981 has shown an upward trend in riparian vegetation and bank stability. Recent monitoring indicates that trend may be stable.
- **Reach 2:** The next reach, approximately 1 mile in length, has been managed within a relatively small riparian pasture. This pasture is designed to closely manage the number of and duration that livestock are along this reach to improve and/or maintain riparian conditions. This riparian pasture has been excluded from livestock grazing for over 5 years. Riparian photo point monitoring along this reach since 1981 has shown an upward trend in riparian vegetation and bank stability. Monitoring has shown a substantial increase in lodgepole pine and ponderosa pine overstory.
- **Reach 3:** The upper reach of Dry Camas Creek has historically been grazed. Vegetation monitoring in the upper reaches of Dry Camas Creek has found that vegetation conditions are in a satisfactory condition.

Frazier Creek

Past monitoring has found that livestock access to Frazier Creek is limited due to down wood, dense shrubs, and in the upper reaches steep slopes. Due to the limited access, Frazier Creek has not been a high priority area to monitor.

Hidaway Creek

All of Hidaway Creek on National Forest land is located within the Hidaway Allotment. Past monitoring has found that livestock access to this stream within the Nine-Sections Unit and portions of the stream in the Tower Unit is extremely limited due to down wood as a result of tree mortality. Monitoring has found small localized areas of livestock use.

Camp Creek

Approximately 2.5 miles of Camp Creek has been excluded from livestock grazing with riparian corridor fences.

Butcherknife Creek

Approximately 1 mile of Butcherknife Creek has been excluded from livestock grazing. A DMA has been established on the unfenced reach of Butcherknife Creek.

Riparian Photo points

Permanent riparian photo points (Figures 1 through 4) have shown that streams have been improving in condition over the last 20 years inside and outside of riparian exclosures on this allotment. Stream channels have narrowed due to the establishment of grasses and sedges allowing for sediments to be filtered. Many streams that have been fenced from livestock still show heavy browse use by big game and a lack of age structure diversity. Monitoring has shown substantial improvements in bank stability since the late 1980s and improvements in vegetation structure and composition.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Grazing)

The no grazing alternative would discontinue authorizing livestock grazing within the Hidaway Allotment.

Direct and Indirect Effects

- **Range Structural Improvements:** Boundary fences may continue to be maintained to keep adjacent livestock out of the Hidaway Allotment. All existing interior fences would be removed as funding allowed. Troughs and ponds would not be maintained. Ponds would be allowed to silt in or would be left for wildlife, recreation, or other uses.

- **Management Feasibility:** The no grazing alternative would discontinue livestock grazing within the allotment. The permit would be canceled and the permittee would be displaced.

- **Upland and Riparian Vegetation:** Eliminating livestock grazing in the Hidaway Allotment would eliminate the direct and indirect effects from grazing to upland and riparian vegetation. Upland and riparian vegetation would be allowed to respond to annual weather conditions and events such as wildfire without the effects of livestock grazing. Riparian and upland vegetation in early to mid seral status would slowly improve over time. Late seral vegetation communities would continue to be maintained.

Alternative 2 (Proposed Action)

Direct and Indirect Effects

- **Range Structural Improvements:** To exclude livestock, approximately 0.5 mile of fence would be constructed along Butcherknife Creek. To add riparian pasture, approximately 1.0 miles of fence would be constructed along Dry Camas Creek. These additional fences would not be anticipated to increase maintenance requirements to a level where maintenance would not be able to be performed. Excluding or limiting cattle use within riparian areas would allow riparian vegetation to improve in quantity and quality. Riparian vegetation would also begin to help stabilize those areas of streambank erosion.

- **Management Feasibility:** The proposed action would authorize livestock grazing within the entire current boundary of the allotment from June 1st through September 30th, with the exception of riparian exclosures. The Tower Unit is approximately 18,000 acres in size, resulting in management feasibility issues for the permittee. The Tower Unit includes the higher elevation zones of the allotment where the forested communities can be more densely stocked, have a denser canopy cover, and have large amounts of down wood. Due to the large size and nature of the Tower Unit, gathering and herding livestock within the Tower Unit can be labor intensive for the permittee. As a result, the Tower Unit has often been rested for long periods of time to meet the permittees needs. Periodic rest of the Tower Unit may be used, as it has in the past, and an adjustment in season of use would be made (June 16th turn-on).

This alternative offers more flexibility to meet desired future conditions from a management standpoint. The authorized use of the Tower Unit would allow for adjustments to be made due to wildfire events, weather conditions, vegetation and soil conditions, and other yearly conditions or events to meet both permittee and management needs.

Trespass livestock have not been a concern in the last five years. The Hidaway Allotment borders a sheep allotment as well as a state highway to the north, which limits the potential for trespass livestock. The allotment also borders an area to the south that is not grazed by livestock. Private land to the west and FS land to the east are managed for livestock grazing. Trespass livestock from these areas has not been documented as a problem in recent years. For these reasons, trespass livestock is not anticipated to be a problem.

- **Upland Vegetation:** The proposed action would authorize up to 493 animal units (cow/calf pairs) within the entire Hidaway Allotment boundary from June 1st through September 30th. Livestock grazing would be managed with a pasture rotation system, with early season use (turn-on) being rotated among lower elevation units, deferring grazing use where appropriate.

  Saturated soil conditions can exist within the Hidaway Allotment in spring or early summer. Range readiness standards would continue to be implemented to avoid turning livestock onto saturated soil conditions. Winter and spring livestock grazing effects would not occur on this allotment due to normal turn-on dates and range readiness standards.

  The proposed action, authorizing the described numbers and season and implementing "design features" including utilization standards, is expected to result in continuing to maintain or improve existing vegetation conditions.

- **Riparian Vegetation:** The headwaters of Dry Camas are proposed to be fenced to closely manage livestock use along this reach within a riparian pasture. The result would be the entire reach of Dry Camas Creek within the Hidaway Allotment would be managed within riparian exclosures or riparian pastures to limit livestock use to promote riparian vegetation restoration. This management is expected to improve riparian vegetation conditions on this reach of Dry Camas Creek as it has along the lower reaches of Dry Camas Creek (Figures 1 through 4).

Figures 1 and 2: Dry Camas Creek Riparian photo point from 1984 (left) and 2003 (right).

Much of Hidaway Creek and Line Creek is heavily timbered with numerous down logs from disease and insect mortality, resulting in limited livestock access. Livestock access is available in meadow system reaches in the upper reaches of Hidaway Creek and lower Line Creek as well as relatively

small areas of herbaceous dominated vegetation along these streams. Livestock use would be expected to be the highest in these areas. Riparian photo points and Designated Monitoring Areas (DMAs) would be established in these areas to manage livestock grazing within implementation standards and to monitor long term trend.

Figures 3 and 4: Dry Camas Creek Riparian photo point from 1984 (left) and 2003 (right).

The remaining unfenced portions of the streams within the allotment have higher gradients (Figure 6), rock-armored stream banks, down wood (Figure 5) and/or thick canopy (Figure 6) cover that limit livestock access. Livestock use along these reaches is usually in small localized areas with access and forage and are generally in a satisfactory condition. The remaining portions of these reaches are generally not affected by livestock grazing. These areas of localized use are normally where DMAs are located to monitor and manage livestock grazing to sustain or improve riparian conditions. These conditions can be found along the unfenced reaches of Butcherknife Creek, Camp Creek, Frazier Creek, Umapine Creek, and Fly Creek.

Figures 5 and 6: Frazier Creek (left) and Fly Creek (right) – Areas of Limited Livestock Access

The proposed action is expected to result in maintenance of or continued upward trends in the condition of riparian vegetation within the Hidaway Allotment. Riparian vegetation within riparian exclosures or pastures is expected to continue to have stable or upward trends due to the limited amount of livestock use. Localized use on streams such as Fly Creek, Frazier Creek, Hidaway Creek and Butcherknife Creek would occur. Monitoring implementation standards and managing the number of days and season of use within Units would be expected to continue to improve or maintain riparian conditions within the allotment.

Cumulative Effects: The future Weasel vegetation management project plans to treat forested communities in portions of the Dry Camas and Tower Units. This project would likely include commercial and noncommercial thinning, fuels treatment, and prescribed fire. The project activities would decrease the density and cover of forests and create transitory range (increases understory vegetation). Livestock distribution would be expected to increase, thereby distributing utilization of forage across a larger area. With an increase in the distribution of livestock, there would be a reducing potential of localized effects to riparian and upland communities. As density and cover increases over time, this change in livestock distribution would be reduced.

Recreational use of trails and dispersed campgrounds occur within and adjacent to the Hidaway Allotment. Maintenance or continued use of these sites would not have a further effect to vegetation within the Hidaway Allotment. As a result, there would be no cumulative effects with Alternative 2.

Alternative 3

This alternative would authorize livestock grazing within the Dry Camas, Nine-sections, and East and west Trough Units of the allotment from June 16th through September 30th for 493 cow/calf pairs. This would be similar to the maximum authorized use from 1994 through 2006 due to the resting of the Tower Unit. The Tower Unit (approximately 18,000 acres) would be eliminated from the allotment.

Direct and Indirect Effects

- **Range Structural Improvements:** Permittees are responsible to maintain all assigned improvements to FS specifications. Two ponds in the Tower Unit would not be maintained for livestock grazing use but would be maintained for recreation and wildlife use. There are no existing fences that are associated only with the Tower Unit. No fence changes would be needed.

- All other existing improvements within the allotment would continue to have routine maintenance or be reconstructed. To exclude livestock, approximately 0.5 mile of fence would be constructed along Butcherknife Creek. To add riparian pasture, approximately 1.0 miles of fence would be constructed along Dry Camas Creek. These additional fences would not be anticipated to increase maintenance requirements to a level where maintenance would not be able to be performed.

- **Management Feasibility:** Not authorizing the Tower Unit for livestock grazing would affect management. The intensive labor required to gather and herd livestock within the Tower Unit would not be a concern for the permittee. Management flexibility would be reduced because the 18,000 acre Tower Unit would not be an option to utilize for grazing in the event of wildfire or yearly variation in weather and conditions in the remaining allotment units.

  Permittee management (herding, salting, and monitoring) would remain the same as prior management of these units to respond to utilization levels due to yearly variations in weather or other events such as wildfire. Less overall labor would be required for the permittee due to the elimination of 18,000 acres. Approximately 247 fewer head months than Alternative 2 (Proposed Action) would be authorized.

  Trespass livestock have not been a concern in the last five years. The Hidaway Allotment borders a sheep allotment as well as a state highway to the north, which limits the potential for trespass livestock. The allotment also borders an area to the south that is not grazed by livestock. Private land to the west and FS land to the east are managed for livestock grazing. Trespass livestock

from these areas has not been documented as a problem in recent years. For these reasons, trespass livestock is not anticipated to be a problem.

- **Upland Vegetation:** By removing the Tower Unit from the allotment, there would be no effects to upland vegetation from livestock grazing on those 18,000 removed acres. Proposed authorized use is the same as the maximum amount of use that has been authorized since 1994. The direct and indirect effects to upland vegetation in Alternative 3 would be the same as to what has occurred since 1994, a stable or upward trend.

  Even though Alternative 3 would eliminate the 18,000 acres from the allotment, the majority of the forage within the allotment is located in the remaining units. Utilization of forage within the allotment would be expected to be slightly higher than Alternative 2 because the same numbers of cow/calf pairs would be authorized over approximately one-half of the acres for approximately two weeks less time. This would be very similar to what is presently occurring. Utilization levels would remain within Forest Plan Standards.

  A later turn-on date of June 16th would reduce the potential effects to soils and vegetation by allowing two weeks for soils to dry and vegetation to grow and be more tolerant to livestock grazing.

  Long term monitoring of plant communities on the Hidaway Allotment occurred prior to 1993, and in 1993 and in 2003. During this period of time, the maximum authorized period of use was the same as this alternative. Monitoring displayed that range condition did not substantially change from 1993 to 2003 indicating a stable trend. Range condition was in a satisfactory condition and met the Forest Plan objectives. Implementing Alternative 3 would result in higher utilization levels than Alternative 1 and 2, however, vegetation would continue to meet Forest Plan Objectives.

- ***Riparian Vegetation:*** There would be no direct effects to riparian vegetation within the Tower Unit from livestock because livestock grazing would no longer occur in this unit with implementation of this alternative.

  Direct and indirect effects to riparian vegetation within the rest of the allotment would be similar to Alternative 2, although utilization levels would be expected to be higher in Alternative 3 than Alternative 2.

  The existing and proposed riparian exclosures and riparian pastures are located on Dry Camas Creek, Camp Creek, and Butcherknife Creek. The exclosures and riparian pastures are located along stream reaches that have been shown to receive more livestock use. These streams are lower gradient streams with access, forage, and available water that cumulatively cause an increase in livestock use in these riparian areas that are not fenced to exclude or limit grazing. The remaining streams, with the exception of small localized areas, have limited use due to heavy canopy cover and down logs that limits available forage and access. As a result, the effects to riparian vegetation in the authorized area of Alternative 3 would be similar to Alternative 2.

Cumulative Effects: The cumulative effects would be the same as Alternative 2, with the exception of those future vegetation activities that would occur in the Tower Unit. Livestock grazing would not occur in the Tower Unit, so there would be no cumulative effects on upland or riparian vegetation located in the Tower Unit as related to livestock grazing effects.

FISHERIES

Kristy Groves, Fisheries Specialist
Aquatic Specialist Report, Project Record

SCALE OF ANALYSIS

The scale used for analysis includes five sub-watersheds (Lower Hidaway, Upper Camas, Lower Cable Creek, Bowman Creek, and Upper Fly Creek). The Upper Camas watershed (1707020205) covers about 61,194 acres, of which 52,430 acres are within the National Forest boundary. The Upper Fly Creek subwatershed (170601040107) covers approximately 11,644 acres. This scale was selected because effects from the proposed projects would not be distinguishable at a larger scale.

METHODOLOGY

Water quality, habitat quality, and the ability of the watershed and riparian areas to act as a buffer for stream systems are components of aquatic habitat considered in this analysis. These factors determine the complexity of habitat available for fish within the analysis area. Effects of the proposal to these components were measured as follows:

- Water quality
  Water temperature (as represented by stream shade)
  Sediment or fines in the system (as measured by embeddedness)
- Habitat quality
  Width to depth ratio

Aquatic habitat surveys (following the Hankin and Reeves protocol) were completed for Butcherknife Creek in 1990, Umapine Creek in 1991, Line Creek in 1992, Hidaway Creek in 1992 and 2003, Frazier Creek in 1995 and 1997, Fly Creek in 1996, and Dry Camas Creek in 1998. Water temperature data came from Umatilla National Forest monitoring records. Effects to fish by way of changes in habitat components were estimated by comparison to PACFISH objectives, the Interior Columbia Basin Ecosystem Management Project (ICBEMP) summary values, and reports in published scientific literature. For further methodology protocol, refer to the Project Record, Fisheries Biological Evaluation, pages one through three.

EXISTING CONDITIONS

Several Miles of designated critical habitat along steelhead streams remain unfenced. Table 11 displays the remaining unfenced areas.

Table 11: Miles of Steelhead Streams (Designated Critical Habitat)

Stream	Fenced	Unfenced
Dry Camas	1.0 Mile	1.5 Miles (riparian pasture; proposed approximately 1.0 mile)
Butcherknife	1.0 Mile	1.5 Miles (riparian exclosure; proposed approximately 0.5 mile)
Frazier	0	3 Miles (occupied habitat grazed after 7/15)
Hidaway	0	10 Miles (3 miles grazed early every other year- rest after 7/15)
Line	0	0.9 Miles (grazed after 7/15)
Fly	0	1.5 Miles (grazed after 7/15)
Umapine	0	1.6 Miles (grazed after 7/15)

Upper Camas Watershed

Named streams in this watershed include: Dry Camas, Butcherknife, Warm Springs, Frazier, Hidaway, Mud, Line, and Neeves creeks. Streams survey data is available for Dry Camas, Butcherknife, Frazier, Line, and Hidaway creeks.

Aquatic Habitat Data

The majority of Dry Camas Creek, Butcherknife Creek and Frazier Creek are within this allotment. Only the upper head waters of Warm Springs Creek are within the allotment. The lower three quarters of Dry Camas Creek supports steelhead, the rest of the stream is intermittent.

Temperature

Most sites exceeded 64 degrees Fahrenheit every year they were monitored. Temperatures have been recorded in Hidaway Creek since 1991. The Oregon State temperature standard for rearing steelhead is less than 64 degrees Fahrenheit (ºF). Hidaway Creek meets this standard for only the uppermost section of creek. The seven-day averages of the maximum temperature are presented in Table 12.

Table 12: Seven-day Average Stream Temperatures For Hidaway Creek

Year	Frazier at Mouth	Hidaway at Mouth	Hidaway at FS Boundary	Hidaway Above Hot Spring	Hidaway at Chimney Trail
1991		73			
1992	74	72			
1993	67	71			
1994	71		70		
1995	71	78			59
1996	71	75	69		60
1997	68	77	71		66
1998	71	78	71		64
1999	69	75			63
2000	72	77			63
2001	71			71	63
2002	74			74	65
2003	74			74	64
2004	69			70	62
2005	71			72	61

Sediment

Wolman pebble counts taken during 1997 and 1998 stream surveys are available for Frazier and Dry Camas Creeks respectively, and for Hidaway Creek in 2003. Each reported value represents 2 Wolman pebble counts, averaged. Table 13 displays the pebble counts for Dry Camas, Frazier, and Hidaway Creeks.

Table 13: Stream Pebble Counts

Stream Reach	Percent fines (less than 2mm)
Dry Camas Reach 1	14
Dry Camas Reach 2	30

Stream Reach	Percent fines (less than 2mm)
Frazier Reach 1	18
Frazier Reach 2	15
Frazier Reach 3	27
2003 Hidaway R1	20
2003 Hidaway R2	13.5
2003 Hidaway R3	5
2003 Hidaway R4	9
2003 Hidaway R5	17.5

The three reaches of Frazier Creek, both reaches of Dry Camas Creek, and three of the five reaches of Hidaway Creek are above 12 percent fines (less than 2 millimeters in diameter). They are considered to be not functioning properly. According to both the Anadromous Fish (Snake River Basin) Guide for Section 7 Consultation (National Marine Fisheries Service, 1992), and the adaptation of that document by the U.S. Fish and Wildlife Service (1998), the maximum size for fine sediments used for classifying the functionality of the habitat element is 0.85 mm. Methods here do not differentiate any particles under 2mm.

All Wolman pebble counts were taken in riffles and across the entire bankfull channel width. Bankfull channel width is, in most cases, greater than the wetted width at the time these streams are inventoried. The wetted width of the channel will usually contain the part with highest flow velocity. In most cases, this part of the channel that is wetted at summer low flow will contain a smaller proportion of fine sediment than the bankfull width. The figures in Table 13 likely overestimate the percent surface fines in the wetted channel and would not be representative of that component of aquatic habitat in mid to late summer. Steelhead spawn in spring during higher flows. The Wolman pebble count values might better represent habitat available at that time.

On Butcherknife Creek, surveyed in 1990, only substrate embeddedness was recorded. Embeddedness is the degree to which larger particles are surrounded by or covered by fine sediments. Of the four reaches, only reach 4 was observed as having embeddedness greater than 35 percent.

Large Woody Debris (LWD)

Large woody debris (LWD) information was collected during stream surveys using the Forest Service Region 6 protocol. LWD is defined as a minimum of 35 feet long and a 12 inch diameter or two times the bank full width and a 12 inch diameter. Six of the seventeen reaches surveyed did not meet the 20 pieces of large wood per mile standard.

Both reaches of Dry Camas Creek and the first reach of Butcherknife Creek did not meet the standard of 20 pieces of large woody debris per mile. All reaches except Hidaway Reach 1 met the standard of 20 pieces of large woody debris per mile in 1992. During the 1992 Hidaway survey, leaning trees were included in the LWD counts. In 2003, only reach 4 met the 20 pieces of large wood per mile standard in Hidaway Creek. Leaning trees were not included in the 2003 LWD counts. This would account for the change in numbers between 1992 and 2003 surveys in Hidaway Creek. The proportion of wood recorded in Table 14, which were standing trees is not known. Table 14 displays the pieces of large wood per mile in each reach.

Table 14: Large Woody Debris (LWD) Per Stream Reach or Tributary

Stream Reach	Large Woody Debris (LWD) per mile
Dry Camas Reach 1	14
Dry Camas Reach 2	16
Frazier Reach 1	20
Frazier Reach 2	52
Frazier Reach 3	26
Butcherknife Reach 1	5
Butcherknife Reach 2	44
Butcherknife Reach 3	21
Butcherknife Reach 4	57
Hidaway Reach 1	15.9/8.2
Hidaway Reach 2	49.6/5.3
Hidaway Reach 3	72.8/11.1
Hidaway Reach 4	45.4/27.1
Hidaway Reach 5	35.9/2.1
Hidaway Tributary 2	43.5
Hidaway Tributary 4	44.1
Hidaway Tributary 5	34.6

Though cattle would not affect this indicator, the presence or lack of large wood along the creek may affect access for cattle to the stream. The lack of large wood along a creek will allow easier access for cattle to the stream.

Pool Frequency And Quality

Pool frequency was assessed in streams listed using the Forest Service Region 6 protocol from 1992 through 2003. The results are displayed in Table 15.

Table 15: Pool Frequency Per Stream Reach and Tributary

Stream Reach	Pools per mile	ICBEMP standard[1]
Dry Camas Reach 1	23.2	29.6
Dry Camas Reach 2	15.7	32.8
Frazier Reach 1	31.7	20.2
Frazier Reach 2	34.1	19.7
Frazier Reach 3	37.8	31.4
Butcherknife Reach 1	0.5	22.4
Butcherknife Reach 2	1.4	39*
Butcherknife Reach 3	1.3	39*
Butcherknife Reach 4	0.2	39*
Hidaway Reach 1	5.2/28.8	12.3/11.4
Hidaway Reach 2	10/35	15.2/10.9
Hidaway Reach 3	12.9/27.5	18.0/9.5
Hidaway Reach 4	24.8/29.7	13.6/8.9
Hidaway Reach 5	4.9/21.6	25.5/14.5
Hidaway Tributary 2	15.6	39*
Hidaway Tributaty 4	6.9	39*
Hidaway Tributary 5	4.1	35.2

[1] Calculations using ICBEMP numbers do not work with small stream widths.

Large Pools

Large pool information was collected in 1992 in Hidaway Creek using the Forest Service Region 6 protocol. This standard only applies to streams greater than 10 feet wide (Hidaway Reach 1 and Reach 4). Table 16 displays the large pool information for these stream reaches.

Table 16: Pool Frequency Per Stream Reach

Stream Reach	Large Pools Per Mile	Total Large Pools
1992 Hidaway Reach 1	N/A	1
1992 Hidaway Reach 4	4.3	19

Wetted Width/Maximum Depth Ratio

Width to depth ratio was calculated for streams surveyed during 1992, 1998, and only Hidaway Creek during 2003. The ratios calculated are bankfull width to depth ratio in riffles. Actual calculations for wetted width to maximum depth of scour pools are not available. The bankfull width to depth ratios are displayed in Table 17.

Table 17: Stream Reach Width to Depth Ratios

Stream Reach	Bankfull Width to Depth (W:D) Ratio
Dry Camas Reach 1	11.0
Dry Camas Reach 2	10.8
Frazier Reach 1	9.1
Frazier Reach 2	13.0
Frazier Reach 3	8.9
2003 Hidaway Reach 1	22.8
2003 Hidaway Reach 2	33.0
2003 Hidaway Reach 3	17:1
2003 Hidaway Reach 4	3.1
2003 Hidaway Reach 5	8.5
1992 Line Creek	14.4

The wetted width presented in Table 18 is the average wetted width of riffles (pools widths were not available but are expected to be similar to riffles). The residual pool depth is the pool depth if no water was flowing out of the pool. To get actual pool depth, the pool tail crest depth needs to be added in. These data represent the maximum width to depth ratio for pools. All reaches meet the standard of wetted width to maximum pool depth of 10 or less.

Table 18: Stream Reach Wetted Width and Residual Depth Ratios

Stream Reach	Wetted Width	Residual Depth	Maximum W:D Rato
Dry Camas Reach 1	5.0	1.3	3.8
Dry Camas Reach 1	4.5	1.3	3.5
1992 Hidaway Reach 1	12.0	1.3	9.2
1992 Hidaway Reach 2	9.7	1.5	6.5
1992 Hidaway Reach 3	8.2	1.3	6.3
1992 Hidaway Reach 4	10.9	1.9	5.7
1992 Hidaway Reach 5	5.8	1.2	4.8

Stream Reach	Wetted Width	Residual Depth	Maximum W:D Rato
2003 Hidaway Reach 1	13.0	1.3	10.0
2003 Hidaway Reach 2	13.5	1.9	7.1
2003 Hidaway Reach 3	15.5	1.9	8.2
2003 Hidaway Reach 4	16.6	1.9	8.7
2003 Hidaway Reach 5	10.2	1.5	6.8
1992 Hidaway Tributary 2	2.5	0.9	2.8
1992 Hidaway Tributary 4	3.7	1.1	3.4
1992 Hidaway Tributary 5	4.2	1.3	3.2
1992 Line Reach 1	4.1	0.8	5.1

Streambank Condition

Bank stability was measured during stream surveys conducted from 1997 through 2003 for Hidaway Creek. Bank stability was measured as actively eroding banks at an elevation above the bankfull depth. An eroding bank was characterized by any one, or a combination of the following factors: bare exposed colluvial or alluvial substrates, exposed mineral soil, evidence of tension cracks, or active sloughing. Bank stability was excellent in the reaches surveyed (greater than 90 percent). Bank stability for streams is displayed in Table 19.

Table 19: Stream Bank Stability by Stream Reach

Stream Reach	Percent Stable Banks
Dry Camas Reach 1	100
Dry Camas Reach 2	95
Frazier Reach 1	99.4
Frazier Reach 2	100
Frazier Reach 3	99.3
2003 Hidaway Reach 1	98.8
2003 Hidaway Reach 2	98.5
2003 Hidaway Reach 3	94.4
2003 Hidaway Reach 4	100
2003 Hidaway Reach 5	93.8

Riparian Conservation Areas

Shade information was collected with a solar pathfinder during 1998 for Dry Camas and Frazier Creeks and in 2003 for Hidaway Creek. Shade data is displayed in Table 20.

Table 20: Percent shade for Stream Reaches

Stream Reach	Percent shade
1998 Dry Camas Reach 1	14
1998 Dry Camas Reach 2	21
1998 Frazier Reach 1	75
1998 Frazier Reach 2	54
1998 Frazier Reach 3	57
2003 Hidaway Reach 1	51.7
2003 Hidaway Reach 2	40.2
2003 Hidaway Reach 3	18.2
2003 Hidaway Reach 4	25.3
2003 Hidaway Reach 5	58.3

Aquatic Species

Mid-Columbia River Steelhead/ Interior Redband trout (Oncorhynchus mykiss gairdneri)

Mid-Columbia Steelhead were listed as Threatened by the National Marine Fisheries Service under authority of the Endangered Species Act (ESA) in 1999. Interior redband trout has been listed as Sensitive by the Forest Service in Region 6 and are on the State Sensitive/Critical list in Oregon. Steelhead and redband trout are also Management Indicator Species under the Umatilla Land and Resource Management Plan. For practical purposes, juvenile resident redband trout cannot be distinguished from the anadromous form (steelhead) where the two occur together. Steelhead are present throughout 2.9 miles of Dry Camas Creek and redband trout are found throughout the perennial portion of Dry Camas Creek. Approximately 2.5 miles of Dry Camas Creek is fenced, excluding grazing from the entire fish bearing portion of the creek is this allotment, except under controlled circumstances. Steelhead are present in the lower stretches of Frazier Creek, Warm Springs Creek, 1.4 miles of Butcherknife Creek and throughout the lower 10 miles of Hidaway Creek. Redband trout are also found throughout these creeks. Steelhead and redband are also found in the lower 0.9 miles of Line Creek.

Essential Fish Habitat and Designated Critical Habitat for Mid-Columbia Steelhead

All perennial streams below long-standing natural fish passage barriers in the John Day River system have been designated as essential fish habitat for spring Chinook salmon. This would include all perennial fish bearing streams within the project area. Critical habitat has been designated within the allotment. 2.3 miles of Dry Camas Creek, 3.1 miles of Frazier Creek, 1.3 miles of Butcherknife Creek, .9 miles of Line Creek, and 10 miles of Hidaway Creek have been designated critical habitat for steelhead within the allotment boundary.

Other Sensitive Species

No other sensitive aquatic species have been found within the project area. Sensitive Chinook salmon are located downstream of the project area in the Camas Creek. Columbia Dusky snail (*Lyogyrus* sp1) was listed in July 2004. A survey was done for this snail in the fall of 2004 within the analysis area and it was not found.

Fly Creek Subwatershed

Named streams in this subwatershed include: Fly Creek, Umapine Creek, Squaw Creek, Lookout Creek, Little Fly Creek, and East Fly. Only the upper headwaters of Fly Creek and Umapine Creek are within the Tower Unit. Stream survey data is available for Fly and Umapine creeks.

Aquatic Habitat Data

Temperature

Forest Service thermograph data is not available for this subwatershed.

Sediment

Percent fine sediments were not estimated during the 1996 stream survey for Fly Creek.

Substrate Embeddedness

Wolman pebble counts were not taken during the stream survey of the Umapine Creek system in 1991. Stream survey protocol at that time required estimating cobble embeddedness and dominant and subdominant substrate size. The only reach of the stream survey, Umapine Reach 1, was embedded (cobble embeddedness greater than 35 percent).

Large Woody Debris (LWD)

LWD information was collected in 1991 on Umapine and 1996 on Fly Creek using Forest Service Region 6 protocol. For the 1991 survey, trees which were leaning over the creek were included in the large woody debris count, unlike the 1996 survey. The results are displayed in Table 21:

Table 21: LWD in Stream Reaches of Fly Creek Subwatershed

Stream Reach	Pieces of Large Woody Debris per Mile of Stream
1996 Fly Reach 1	6.9
1996 Fly Reach 2	23.6
1996 Fly Reach 3	24.2
1996 Fly Reach 4	31.9
1991 Umapine Reach 1	34.0

Large wood is generally abundant in the upper reaches of Fly and Umapine Creeks. Though cattle will not affect this indicator, the abundant large wood along the creek will make access for cattle to the stream more difficult.

Pool Frequency And Quality

Pool frequency was assessed in 1991 on Umapine Creek and in 1996 in Fly Creek using Forest Service Region 6 protocol. Only Umapine Reach 1 did not meet standards for pools per mile. Table 22 displays the standard and the survey results of each reach surveyed.

Table 22: Pools per Mile for Surveyed Stream Reaches in Fly Creek Subwatershed

Stream Reach	Pools Per Mile	Standard
1996 Fly Reach 1	17.2	9.2
1996 Fly Reach 2	19	7.8
1996 Fly Reach 3	17.4	8.3
1996 Fly Reach 4	28.9	10
1991 Umapine Reach 1	14	39

Wetted Width/Maximum Depth Ratio

Width to depth ratios, Table 23, was calculated from data collected for Umapine Creek during 1991. The ratios calculated are wetted width to wetted depth ratio in riffles. Calculations for wetted width to maximum depth of scour pools are not available.

Table 23: Width to Depth Ratio of Umapine Creek of Fly Creek Subwatershed

Stream Reach	Wetted W:D Ratio
Umapine Reach 1	4.02

Streambank Condition

Bank stability was not measured during either the 1991 or 1996 surveys.

Riparian Conservation Areas

No shade information was collected during either the 1991 or 1996 surveys.

Aquatic Species

Snake River Steelhead/Interior Redband Trout (Oncorhynchus mykiss gairdneri)

Snake River Steelhead were listed as Threatened by the National Marine Fisheries Service under authority of the Endangered Species Act (ESA) in 1999. Interior redband trout had previously been listed as Sensitive by the Forest Service in Region 6 and are on the State Sensitive/Critical list in Oregon. Steelhead and redband trout are also Management Indicator Species under the Umatilla Land and Resource Management Plan. For practical purposes, juvenile resident redband trout cannot be distinguished from the anadromous form (steelhead) where the two occur together and so no distinction will be made here. Steelhead are known to be present throughout Fly Creek and Umapine Creek. Redband trout are found throughout both of these creeks. Approximately 3.2 miles of steelhead bearing streams are included in the project area of this subwatershed.

Designated Critical Habitat for Snake River Steelhead

Approximately 1.6 miles of Fly Creek and 1.6 miles of Umapine Creek have been proposed as designated critical habitat for steelhead in this allotment.

Snake River Spring/Summer Chinook Salmon (Oncorhynchus tshawytscha)

Snake River spring/summer Chinook Salmon were listed as Threatened by the National Marine Fisheries Service under authority of the Endangered Species Act (ESA) in 1992. Historically Snake River Chinook salmon were known to spawn in the lower 14 miles of Fly Creek. Today they are only found in the lower 2 miles of Fly Creek, 14 miles below the project area.

Designated Critical Habitat for Snake River Spring/Summer Chinook Salmon

All perennial streams below long-standing natural fish passage barriers in the Snake River system below the Hells Canyon Dam have been designated as critical habitat for Snake River spring/summer Chinook salmon. This would include all perennial fish bearing streams within the project area.

Other Sensitive Species

No other sensitive aquatic species have been found within the project area. There is also an aquatic spring snail that was listed as a sensitive species in 2004. Surveys were conducted for this snail and it was not found in this area.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Grazing)

Direct and Indirect Effects: There would be no direct impacts to streams or riparian habitat associated with cattle. Cattle grazing would no longer contribute impacts to vegetation or associated impacts to water temperature and sediment delivery. Indirect effects would include increased vegetation and reduced sediment delivery to streams that was attributed to cattle previously.

Cumulative Effects: Since there would be no direct effects associated with no grazing there would be no cumulative effects as well.

Alternative 2 (Proposed Action)

Determinations

Mid-Columbia Steelhead: The proposed grazing activities **may affect** but are **not likely to adversely affect** mid-Columbia Steelhead. ***Rationale:*** *Conditions of the streams within this allotment have continued to improve over the last ten years and stream banks are again mostly revegetated and are stable with continued grazing. By grazing the nine sections pasture early every other year, cattle are more likely to stay up on the ridges near ample water sources instead of venturing down into Hidaway Creek. Nine-Sections was grazed only in 2006 and monitoring indicated zero percent usage on Hidaway Creek. Fencing of upper Dry Camas and limiting the number of days use in this and lower dry Camas riparian areas would reduce impacts to the stream channel. The Tower unit would only be used after July 15th to reduce impacts to spawning steelhead in Hidaway Creek and conservation measures and close monitoring would ensure that grazing this pasture would not impact steelhead or its habitat.*

Snake River Steelhead: The proposed grazing activities **may affect** but are **not likely to adversely affect** Snake River Steelhead. ***Rationale:*** *Heavy downed wood and thick timber stands mostly excluded cattle from being able to access Fly and Umapine creeks. Conditions of the streams within this allotment have continued to improve over the last ten years and stream banks are again mostly revegetated and are stable with continued grazing. Fencing of upper Dry Camas and limiting the number of days use in this and lower dry Camas riparian areas would reduce impacts to the stream channels. The Tower unit would only be used after July 15th to reduce impacts to spawning steelhead in Fly or Umapine creeks and conservation measures and close monitoring would ensure that grazing this pasture would not impact steelhead or its habitat.*

Snake River spring/summer Chinook Salmon: The proposed grazing activities **may affect** but are **not likely to adversely affect** Snake River Chinook Salmon. ***Rationale:*** *Snake River Chinook Salmon are found 14 miles downstream of the allotment boundary. Heavy downed wood and thick timber stands mostly excluded cattle from being able to access Fly and Umapine creeks. Conditions of the streams within this allotment have continued to improve over the last ten years and stream banks are again mostly revegetated and are stable with continued grazing. Fencing of upper Dry Camas and limiting the number of days use in this and lower dry Camas riparian areas would reduce impacts to the stream channels. Conservation measures and close monitoring would ensure that grazing this pasture would not impact Chinook habitat.*

Designated Critical Habitat and Essential Fish Habitat: The proposed activities **may affect** but are **not likely to adversely affect** Designated Critical Habitat for steelhead or Essential Fish Habitat for

Chinook salmon. ***Rationale:*** *Conditions of the streams within this allotment have continued to improve over the last ten years and stream banks are again mostly revegetated and are stable with continued grazing. By grazing the nine sections pasture early every other year, cattle are more likely to stay up on the ridges near ample water sources instead of venturing down into Hidaway Creek. Nine-Sections was grazed only in 2006 and monitoring indicated zero percent usage on Hidaway Creek. Fencing of upper Dry Camas and limiting the number of days use in this and lower dry Camas riparian areas would reduce impacts to the stream channel. The Tower unit would only be used after July 15th to reduce impacts to spawning steelhead in Hidaway, Fly and Umapine creeks and conservation measures and close monitoring would ensure that grazing this pasture would not impact fish species or their habitat. In addition, heavy downed wood and thick timber stands mostly excluded cattle from being able to access Fly and Umapine creeks.*

Mid-Columbia Chinook salmon: The proposed activities will have **no impact** on individuals of sensitive Chinook salmon. ***Rationale:*** *Chinook salmon do not occur within the allotment boundary and effects to streams within the boundary would not carry down to occupied Chinook habitat.*

Redband trout: The proposed activities **may impact** individuals or habitat for this species, but will **not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.** ***Rationale:*** *Six miles of fish bearing streams in this subwatershed are excluded from grazing with hard fence. Conditions of the streams within this allotment have continued to improve over the last ten years and stream banks are again mostly revegetated and are stable with continued grazing. By grazing the nine sections pasture early every other year, cattle are more likely to stay up on the ridges near ample water sources instead of venturing down into Hidaway Creek. Fencing of upper Dry Camas and limiting the number of days use in this and lower dry Camas riparian areas would reduce impacts to the stream channel. The Tower unit would only be used after July 15th to reduce impacts to spawning steelhead and redband trout in Hidaway and Line Creeks and conservation measures and close monitoring would ensure that grazing this pasture would not impact fish species or their habitat.*

Columbia Duskysnails: The proposed activities will have **no impact** on individuals or habitat for this aquatic spring snail. ***Rationale:*** *Though grazing would occur near some springs where habitat for Columbia duskysnails exists, no actual snails have been found during surveys so grazing would not affect the species.*

Effects

Direct and Indirect Effects: Spence et al (1996) and Platts (1991) summarize the potential effects of livestock grazing on fish habitat. Based upon field reviews of the allotment and review of the mechanisms by which grazing may impact fish habitat, (Spence 1996) and (Platts 1991) determined the primary potential impacts to fish habitat due to management of these allotments is by grazing near and on stream banks which could remove and trample associated vegetation causing changes in plant community composition and structure, reductions in the amount of ground cover and shade present; unstable stream banks resulting in an increase in erosion and sediment delivery; channel widening and potential loss of pools and increases in stream temperatures.

Cattle grazing does not affect existing large wood and cattle do not graze on future large wood. No effects to large wood are expected and the riparian management objective for large wood will not be discussed further.

Habitat and watershed condition elements that may be affected by management of these allotments are Temperature, Sediment, Width/depth ratios, and Streambank Condition. The potential effects to these

habitat elements could be a direct result of the grazing, allowing determination of indirect effects to other elements such as pools.

Other physical barriers include heavy downed wood, steep slopes, and thick timber stands that restrict cattle access to several streams, including Fly, Umapine, and parts of Hidaway creeks.
Existing exclosure fencing, other physical barriers, and monitoring incorporated into the Term Grazing Permit reduce or eliminate potential effects from grazing. Grazing effects can include trampling incubating salmon eggs, removing or weakening riparian vegetation that anchor streambanks, sloughing or breaking down streambanks, increasing stream sedimentation, increasing stream temperature, and reducing stream depth and pool volume.

Cattle exclosures were constructed in the early 1990s in this allotment to exclude cattle from Camp Creek, and parts of Butcherknife and Dry Camas creeks. Another section of fence would be constructed to control cattle access to the rest of Dry Camas Creek and on lower Butcherknife Creek. The majority of sensitive riparian habitats is protected with fences or will have other conservation measures and monitoring in place that will prevent trailing and trampling of riparian vegetation.

With the construction of the new fence in the Dry Camas pasture two riparian pastures would be created. Both pastures would lie along Dry Camas Creek and would not be used until after July 15th. These riparian pastures would be used for gathering only and for a total of not more than 7 days between the two pastures. The lower riparian pasture has been excluded from grazing since riparian fences were constructed in the late 1990s. Monitoring would occur in both of these pastures to assure that the proposed action would not retard the attainment of PACFISH RMOs. Stream bank recovery has occurred in this area and is now meeting PACFISH standards. Stream banks would be monitored in these two riparian pastures to assure that streambank stability continues to meet PACFISH RMOs and are is not being degraded.

The Nine Sections pasture may be used early every other year. On years when it is used prior to July 15th cattle would be turned on to the pasture in the southwestern corner on the ridge where numerous water sources are located to encourage cattle to stay up on the ridge and away from Hidaway Creek. Should cattle be seen along Hidaway Creek, permittees would remove them within a week to prevent effects from cattle to spawning steelhead. A key area would also be established along stringer meadows along the creek where cattle would be likely to congregate to prevent overuse in the riparian area. On years when the Nine Sections pasture is used after July 15th the key area would continue to be monitored for overuse in the riparian area.

The Tower unit of the Hidaway allotment has been rested since 1994 due to difficulty in gathering cattle from this large pasture. The Tower unit would be added back in to the rotation and used as needed. The Tower unit would be grazed after July 15th to prevent effects to spawning steelhead. Monitoring sites would be established along stringer meadows on Hidaway Creek and on Line Creek (both steelhead streams) to prevent any over use in these riparian areas. Conservation measures would be put into place to keep cattle from destabilizing stream banks and removing riparian vegetation in critical areas. With conservation measures and monitoring in place it would not be expected that cattle would adversely affect steelhead or its critical habitat.

Effects to Threatened species and designated critical habitat in the Snake River basin were discussed within the Upper Grand Ronde River Assessment Area biological assessment for spring Chinook Salmon, summer steelhead, and bull trout. It was found that grazing in the Hidaway allotment would not adversely modify the critical habitat for spring/summer Chinook salmon or summer steelhead. This determination was based on a low magnitude and probability that grazing would have an adverse effect on the limiting factors for spring/summer Chinook salmon or summer steelhead. In addition,

heavy downed wood and thick timber stands mostly excluded cattle from being able to access Fly and Umapine creeks.

Cumulative Effects

Temperature: Some past activities including harvest, non-commercial thinning, and road construction in RHCAs, grazing, wildfires, fencing riparian areas, and road obliteration have all likely affected stream temperatures in the analysis area. Past harvest activities (2,266 acres) removed some trees that provided shade within Riparian Habitat Conservation Areas (RHCAs). Road construction along or crossing creeks removed all riparian vegetation along the roadbed. In some cases, this left long stretches of streams without shade. Past grazing of riparian areas removed vegetation that provided shade and caused higher stream width to depth ratios through bank trampling, creating a larger surface area versus depth that increased the efficiency of solar radiation heating up streams. With modifications with grazing most past effects to shade are recovering. Previous wildfires (8,027 acres within the allotment) left portions of streams without shade.

Other past activities have increased shade and contributed to lower stream temperatures. Non-commercial thinning in RHCAs allowed remaining trees and shrubs to grow larger, now providing more shade than the original stand. Fencing portions of Frazier, Camp, Butcherknife and Dry Camas creeks has allowed riparian vegetation to recover, providing more shade to the streams along 6 miles of stream. The construction of 46 upland water sources for cattle has diverted cattle from streams reducing the impact to riparian vegetation on unfenced stretches of stream. Vegetation is recovering on some former obliterated and decommissioned roads near streams or at crossings increasing the amount shade-providing vegetation.

Grazing on private land can contribute to an increase in stream temperature within the subwatersheds of the analysis area. Unfenced portions of streams within the subwatersheds continue to be impacted by private land grazing with a reduction in riparian vegetation. These areas may continue to be impacted by grazing on private lands.

Future foreseeable activities proposed for these subwatersheds that would affect stream temperatures include fuels treatments and aspen stand restoration. Mechanical fuels treatments may remove some riparian vegetation that currently provides shade but this activity will prevent a wildfire that would remove all shade from area streams. Aspen stand restoration, while it may remove some current shade, will allow aspen to recover in the stand increasing the amount of shade in the future.

All activities that reduce stream shade could potentially increase stream temperatures. Currently much of the past reduction in shade is recovering or will continue to recover in the future. Overall there would still be some roads that would contribute to a reduction in shade along some segments of streams. Grazing could cumulatively decrease the amount of shade on affected stream reaches. With current management little impact to stream temperatures should be seen.

Sediment: The subwatersheds within the analysis area could have experienced an increase in sediment load due to past management activities including road construction, timber harvest, wildfires, grazing and failure of instream fish structures. Road construction increased the drainage area with several stream crossings that allow sediment to be transported directly to the streams from roads. Grazing in the past caused bank destabilization, which contributed sediment to streams. Several instream structures were constructed in the 1980s within the analysis area, with some structures now beginning to fail and causing bank erosion, which is contributing sediment to the streams. Past activities that have reduced sediment input into streams include fencing of RHCAs. This has allowed riparian vegetation to recover, providing more structure for bank stability and less trampling of the stream bank. The construction of upland water sources for cattle has diverted cattle from streams,

reducing impacts to stream banks on unfenced stretches of stream. Road obliteration and decommissioning has also occurred, allowing vegetation to recover on some of these roads near streams or at stream crossings, reducing the amount of sediment that enters streams. Periodic road maintenance helps to reduce the amount of sediment that reaches streams.

Prescribed fire and mechanical fuels treatment would reduce the amount of standing and down fuels in the analysis area. This would reduce the likelihood of a stand replacing wildfire which could remove all existing ground cover and increase sediment transport to streams in RHCAs. Aspen stand restoration and fencing of aspen stands would help increase bank stability, reducing the amount of sediment entering streams at isolated locations along Dry Camas Creek.

Activities contributing sediment to streams, if left as is, would continue to impact aquatic habitats. Past actions of obliterating roads and fencing streams were taken to reduce the amount of sediment into streams. Only grazing on small sections of stream and existing roads still contribute sediment to streams. Future riparian fencing would help to further reduce this sediment input. The proposed project may cumulatively contribute to sediment in streams. Conservation measures and monitoring will help to keep any additional sediment inputs to analysis area streams to a level where it will be undetectable over background levels.

Pool Quantity and Quality: Past activities that have affected pool frequency include commercial harvest in RHCAs, non commercial thinning, wildfire, road construction, grazing, in-stream structures, and fencing of RHCAs to exclude cattle.

Large wood is one of the main contributing factors to pool formation. The loss of potential large wood from commercial harvest and wildfire has led to the loss of potential pools in these creeks. Road construction along creeks or crossing creeks can also reduce potential large wood in riparian areas. Bank destabilization from grazing can increase stream sediment, causing pools to fill and reducing overall pool quality.

Other activities have resulted in an increase the number of pools or potential for future pools in streams, including the installation of 98 in-stream structures in Hidaway Creek. These structures have increased the number of pools per mile. A small percentage of these structures have failed and are no longer functioning as pools. Non-commercial thinning in RHCAs in the past has allowed for the growth of larger trees that will become large wood in the future. Stream bank stability has improved in those areas of riparian fencing. This has reduced the amount of sediment entering creeks and has improved pool quality.

Grazing on private land and elsewhere within the analysis area and riparian roads are the only present activities that could impact pool quality. A few areas remain adjacent to perennial water that can be accessed by cattle. Bank destabilization from grazing and riparian roads can provide additional sediment to streams and reduce pool quality.

Future fencing of riparian areas would improve bank stability, reducing the amount of sediment entering streams and increasing pool quality. Fuels treatments would function similar to non-commercial thinning, removing the understory and allowing the remaining trees to grow larger, increasing the potential large wood and increasing the chance of natural pool formation. Aspen stand restoration would produce an increase in large wood near streams, increasing the potential for pool formation in the future.

The contribution to cumulative effects of activities under this alternative would be the potential increase in the amount of sediment though it is not expected that this amount would be of sufficient quantity to affect pool quality.

Large Woody Debris: Commercial harvest in RHCAs has reduced the overall potential large wood that can fall into creeks. Non-commercial thinning in RHCAs has reduced stand density, allowing for the growth of larger trees that will become future large wood, increasing the likelihood of natural pool formation by increasing potential in stream large wood. Road construction along creeks reduced potential large wood.

Future fuels treatments would remove the understory allowing the remaining trees to grow larger, increasing the potential large wood. Hazard tree felling along roads near streams may lead to an overall increase in large wood as these trees would be directionally felled toward the stream whenever possible. Aspen stand restoration may add additional large wood as conifers within the stand are felled, increasing the rate of large wood production. Increased downed large wood both instream and in the riparian area will restrict cattle access to streams.

Width to Depth Ratios: Past activities, including grazing on private land and other areas within the analysis area, and road construction have likely affected width-to-depth ratios through bank trampling and excessive sediment input to streams. Bank trampling may still be occurring, and could occur in the future, at some isolated locations resulting in excessive sediment input into streams, widening of streams and increasing width to depth ratios. The current project may cumulatively contribute to sediment in streams.

Riparian fencing has lead to an increase in stream bank stability reducing sediment input into streams. Aspen stand restoration and fencing of aspen stands will help to increase bank stability reducing the amount of sediment entering streams at isolated locations along Dry Camas Creek. Conservation measures and monitoring would help to keep any additional sediment inputs to analysis area streams to a level where it would be undetectable over background levels and would not cumulatively impact width to depth ratios.

Fish Populations: Threatened and Endangered species in the analysis area include Mid-Columbia Steelhead and Management Indicator Species include redband trout and steelhead. Most activities discussed under cumulative effects for aquatic habitat have affected fish populations in these streams. Increases in temperature can lead to increased stress to fish and reduction in spawning and rearing success. An increase in sediment yields could potentially add to degradation of aquatic habitat and fish populations by:

a) Increasing suspended sediment, which can have detrimental effects on fish health;
b) Filling interstitial spaces, which reduces escape and hiding cover for fish;
c) Increasing width/depth ratios, which can increase solar heating of water and also decrease fish hiding and escape cover and fish mobility;
d) Decreasing the quality of spawning substrate, which reduces reproductive success;
e) Reducing pool volumes, which decreases the amount of available hiding, escape and resting habitat and make fish more vulnerable to predators.

Increases in sediment can increase stress on fish reducing spawning success, although whether the changes would be biologically significant would depend on many factors. These include the amount and particle size of sediment produced, the size of the stream, amount of available refuge, including side channels and tributaries, and the conditions in the stream before the introduction of additional sediment. Fish in streams in good condition could tolerate more such changes than fish already stressed by poor habitat conditions. The contribution to cumulative effects of all action alternatives would be a potential for increased disturbance to redband and steelhead due to grazing cattle near streams and additional sediment to streams but the amounts entering streams would not likely cause a measurable response from fish species.

Alternative 3

Determinations

Mid-Columbia Steelhead: The proposed grazing activities **may affect** but are **not likely to adversely affect** mid-Columbia Steelhead. ***Rationale:*** *Conditions of the streams within this allotment have continued to improve over the last ten years and stream banks are again mostly revegetated and are stable with continued grazing. By grazing the nine sections pasture early every other year, cattle are more likely to stay up on the ridges near ample water sources instead of venturing down into Hidaway Creek. Fencing of upper Dry Camas Creek, limiting the number of days use in this and lower Dry Camas Creek riparian area, and monitoring will reduce impacts to the stream channel.*

Snake River Steelhead: The proposed grazing activities **may affect** but are **not likely to adversely affect** Snake River Steelhead. ***Rationale:*** *Only a small non fish bearing tributary to Fly Creek is included in this alternative in the Fly Creek subwatershed located in the Dry Camas pasture. Heavy downed wood and thick timber stands mostly excluded cattle from being able to access Fly and Umapine creeks and their tributaries. Conditions of the streams within this allotment have continued to improve over the last ten years and stream banks are again mostly revegetated and are stable with continued grazing. Fencing of upper Dry Camas and limiting the number of days use in this and lower Dry Camas riparian areas will reduce impacts to the stream channels.*

Snake River spring/summer Chinook Salmon: The proposed grazing activities **may affect** but are **not likely to adversely affect** Snake River Chinook. ***Rationale:*** *Snake River Chinook are found 14 miles downstream of the allotment boundary. Only a small non fish bearing tributary to Fly Creek is included in this alternative in the Fly Creek subwatershed located in the Dry Camas pasture. Heavy downed wood and thick timber stands mostly excluded cattle from being able to access Fly and Umapine creeks and their tributaries. Conditions of the streams within this allotment have continued to improve over the last ten years and stream banks are again mostly revegetated and are stable with continued grazing. Fencing of upper Dry Camas and limiting the number of days use in this and lower Dry Camas riparian areas will reduce impacts to the stream channels.*

Designated Critical Habitat and Essential Fish Habitat: The proposed activities **may affect** but are **not likely to adversely affect** Designated Critical Habitat for steelhead or Essential Fish Habitat for Chinook salmon. ***Rationale:*** *Conditions of the streams within this allotment have continued to improve over the last ten years and stream banks are again mostly revegetated and are stable with continued grazing. By grazing the nine sections pasture early every other year, cattle are more likely to stay up on the ridges near ample water sources instead of venturing down into Hidaway Creek. Fencing of upper Dry Camas Creek, limiting the number of days use in this and lower Dry Camas Creek riparian areas, and monitoring will reduce impacts to the stream channel.*

Mid-Columbia Chinook salmon: The proposed activities will have **no impact** on individuals of sensitive Chinook salmon. ***Rationale:*** *Chinook salmon do not occur within the allotment boundary and effects to streams within the boundary will not carry down to occupied Chinook habitat.*

Redband trout: The proposed activities **may impact** individuals or habitat for this species, but will **not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.** ***Rationale:*** *Six miles of fish bearing streams in this subwatershed are excluded from grazing with hard fence. Conditions of the streams within this allotment have continued to improve over the last ten years and stream banks are again mostly revegetated and are*

stable with continued grazing. By grazing the nine sections pasture early every other year, cattle are more likely to stay up on the ridges near ample water sources instead of venturing down into Hidaway Creek. Fencing of upper Dry Camas and limiting the number of days use in this and lower dry Camas riparian areas will reduce impacts to the stream channel.

Columbia Duskysnails: The proposed activities will have **no impact** on individuals or habitat for this aquatic spring snail**.** ***Rationale:*** *Though grazing will occur near some springs where habitat for Columbia duskysnails exists, no actual snails have been found during surveys so grazing will not affect the species.*

Direct, Indirect, and Cumulative Effects: The effects from implementation of Alternative 3 would be the same as Alternative 2 with the following exception: Line Creek, Umapine Creek, Fly Creek, and the upper portion of Hidaway Creek would not be affected by this project because the Tower Unit would have no livestock grazing.

PACFISH AND FOREST PLAN COMPLIANCE

Grazing of the Hidaway Allotment would be consistent with the standards and guidelines set forth under PACFISH. The Allotment Management Plan would be implemented to ensure continued consistency with PACFISH. Grazing under either alternative 2 or alternative 3 would not prevent the attainment of any PACFISH Riparian Management Objective currently not meeting standards and would not degrade Riparian Management Objectives meeting standards. Forest plan consistency is achieved by following best management practices for grazing.

HYDROLOGY

Ed Farren, Hydrologist
Hydrology Report, Project Record

INTRODUCTION

The Umatilla Forest Plan requires the Forest to follow the Clean Water Act, executive orders for the protection of floodplains and wetlands, and to protect municipal watersheds. The Clean Water Act of 1972 (CWA) and amendments require the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. This report identifies the streams in the Hidaway Allotment, explains the beneficial uses of the water that flows off the allotment, reports the streams on the 303(d) list, summarizes the Clean Water Act requirements for the protection of water quality, and describes the total maximum daily load (TMDL) process. The protection of wetlands under Executive Order 11990, the protection of floodplains under Executive Order 11988, and the protection of municipal watersheds under the Forest Plan are also described. Water resource conditions for the Hidaway Allotment area are presented in the Current Conditions section. Consistency with the Forest Plan is evaluated based on watershed condition and trend, and meeting requirements in the above regulations.

SCOPE OF THE ANALYSIS

The Hidaway Allotment is located on the divide between the Upper Camas Creek Watershed (HUC 1707020205) and the Upper Grande Ronde River Watershed (HUC 1706010401). Upper Fly Creek, Umapine Creek, and Squaw Creek headwaters are on the east central portion of the allotment and flow into Upper Fly Creek. Dry Camas, Frazier, Warm Springs, Butcherknife, Line, and Hidaway Creeks begin on the allotment and flow into Upper Camas Creek. Neeves Creek begins on the allotment and flows off before joining the North Fork of Cable Creek. These streams are perennial, at least in their lower reaches. All other streams in the allotment are ephemeral or intermittent, and flow seasonally as a result of snowmelt runoff.

The analysis area for water resources consists of the 5th field watersheds and 6th field sub-watersheds listed in Tables 24 and 25.

Table 24: Upper Camas Creek Watershed and Sub-Watersheds within Hidaway

HUC	Field	Name
1707020205	5th field	Upper Camas Creek Watershed
170702020501	6th field	Upper Camas Creek Sub-watershed
170702020502	6th field	Bowman Creek Sub-watershed
170702020503	6th field	Lower Hidaway Creek Sub-watershed
170702020504	6th field	Lower Cable Creek Sub-watershed

Table 25: Upper Grande Ronde River Watershed and Sub-Watersheds within Hidaway

HUC	Field	Name
1706010401	5th field	Upper Grande Ronde River Watershed
170601040107	6th field	Upper Fly Creek Sub-watershed

Beneficial Uses

In Oregon, surface and ground water are publicly owned resources whose use is regulated by the state. In order for a person, business, or agency to use the public water, it must be put to a beneficial use. The beneficial uses designated by the State of Oregon for the John Day River Basin and the Grande Ronde River Basin that are potentially affected by grazing the Hidaway Allotment are salmonid fish rearing, salmonid fish spawning, and resident fish and aquatic life.

303 (d) List

Section 303 of the Clean Water Act requires states to list streams whose use is impaired because they do not meet water quality standards. The water quality standards which may be affected by grazing are increases in stream temperature because of reduced shade in riparian areas and increases in sediment and turbidity from altered stream banks. Streams on the 303(d) list may not be further degraded by management activities.

There are five Hidaway Allotment Area streams in the John Day River Basin which are on the current Oregon 303(d) list for temperature. These streams are within the five subwatersheds (Tables 24 and 25) that were analyzed for the Hidaway Allotment. Only portions of Hidaway Creek and Frazier Creek are within the allotment. The reach of the North Fork John Day River is over 10 miles downstream of the area and is also listed for temperature. There are no Hidaway Allotment streams on the list for other impairments of beneficial uses. The listed streams are shown in Table 26. There are no Hidaway Allotment area streams in the Grande Ronde River Basin that are on the current Oregon 303(d) list for temperature or sediment.

Table 26: Hidaway Streams in the John Day Basin on 303(D) List for Water Temperature

Stream	Segment	Reason for listing, Stream Temperature	Season Impaired	Supporting Data
Cable Creek	0-7.1	Rearing above 17.8 C	summer	USFS data
Camas Creek	15.5-25	Spawning above 13.0 C	9/1-6/15	USFS data
Camas Creek	15.5-36.7	Core Habitat above 16.0 C	all year	LASAR 24446, 24.9
Frazier Creek	0-6.2	Rearing above 7.8 C	summer	USFS data
Hidaway Creek	0-16.2	Rearing 17.8 C	summer	USFS data
North Fork Cable Creek	0-7.5	Core Habitat above 16.0 C	all year	LASAR 27775, 24053
North Fork John Day River	0-56	Rearing and Migration, above 18 C	all year	USFS data

DESIRED CONDITION

The greatest water quality concern in the analysis area is stream temperatures that are above Oregon Department of Environmental Quality (DEQ) standards. The most effective method of reducing stream temperatures is to increase the riparian canopy to its potential abundance. This would increase

stream shade, and maintain water in the coolest condition. The desired future condition for stream temperature is "water temperature regimes will improve due to measures taken to promote recovery or enhancement of riparian vegetation" (Forest Plan, p. 4-9). The desired condition with regard to stream banks is to maintain stream bank stability and decrease sediment production (Forest Plan, p. 4-8).

EXISTING CONDITION

Summers are warm and dry in the analysis area. High air temperatures and low water flows cause stream temperatures to rise in late summer and fall. Stream temperatures are also influenced by hot springs, occurring on Warm Springs and Hidaway Creeks. Lehman Hot Spring is 158° F at the surface. Cable Creek is heavily influenced by the 1996 Tower Fire, which killed much of the canopy in the Cable Creek sub-watershed.

Past land management in riparian areas has contributed to high stream temperatures, reducing vegetation through timber harvesting, road building, and over-grazing. Several streams are currently listed as impaired for the beneficial use of fish habitat, because of temperatures that are higher than state standards (Table 26). The Forest Plan has largely ended activities which reduce riparian vegetation.

Over-grazing in riparian areas occurred until approximately 1970 and caused a reduction in riparian vegetation and a reduction in stream bank stability. Over a decade of photo monitoring shows improvement in vegetation conditions and bank stability. Earlier riparian photos (Figures 1 and 3, Range section) generally show a lack of riparian vegetation and less stable stream banks. Later riparian photos (Figures 2 and 4, Range section), from the same locations, generally show increased riparian vegetation and more stable stream banks. These photos are representative of riparian conditions on the allotment. Stream bank stability has been measured in surveys of 10 reaches of three Hidaway streams. Stability has been found to be excellent, greater than 90 percent stable in all reaches. These factors improve water quality downstream by increasing streamside shade and reducing sediment.

Design Feature Effectiveness

The existing Forest Plans, which use Best Management Practices (BMPs), were instituted in 1990. Management under the pre-1990 plans reduced shade and altered stream banks, which degraded water quality downstream. In order to halt the decline and ultimately to improve water quality, the 1990 Forest Plans and later amendments require the use and monitoring of design features such as BMPs and PACFISH to insure that water quality objectives are met. This section evaluates the effectiveness of design features at meeting water quality goals.

There are five types of riparian areas in the Hidaway Allotment. These are:
1. Perennial streams which could be reached by cattle.
2. Perennial streams which are not accessible to cattle.
3. Riparian meadows.
4. First and second order streams which are accessible to cattle.
5. Ephemeral tributaries in upland areas.

Reducing cattle impacts to riparian vegetation and stream banks was accomplished applying BMPs within these five types of areas. Representative time sequenced photo points, utilization photos, and recent incidental photos are used to show the change over time and the current conditions in the allotment.

Perennial streams which could be reached by cattle

A total of 6 miles of perennial streams are protected with exclosure and riparian pasture fences. The perennial lower reaches of Butcherknife, Camp, and Dry Camas Creeks are fenced to exclude cattle. Lower Neeves Creek is located near a boundary fence which prevents most cattle from reaching it. Reach 2 of Dry Camas is contained in a riparian pasture, which is closely monitored during a short period of grazing.

Since exclosure fencing occurred in 1990 along Dry Camas Creek within the Dry Camas Pasture, riparian vegetation has increased and stream banks have stabilized. Wherever fencing occurred, either for cattle exclusion or for short term grazing in riparian pastures, riparian vegetation is increasing and stream bank stability has substantially improved.

Perennial streams which can not be reached by cattle

Perennial reaches of other streams, such as upper Butcherknife Creek in the East Trough and Nine Section Pastures, upper Frazier Creek in the Dry Camas and Tower Pastures, and Hidaway Creek in the Nine Section and Tower Pastures and Fly and Umapine Creeks in the Tower Pasture are largely inaccessible to cattle, because of downed logs in the stream channels, floodplains, and on the canyon slopes. Localized use by small numbers of cattle occurs when roads and trails provide access to stream channels. Both inaccessible and accessible areas are well vegetated with stable stream banks.

Riparian Meadows

Riparian meadows are protected by fencing in the middle reach of Dry Camas Creek. The action alternatives propose to enclose the meadow along Upper Dry Camas Creek to manage grazing more closely. High country meadows in the Tower Unit would be protected from bank destabilization and reduction in riparian vegetation by BMPs, such as planning, utilization monitoring, and encouraging cattle to use less sensitive parts of the pasture.

First and Second Order Streams Which May Be Reached By Cattle

First and second order streams would be protected from bank destabilization and reduction in riparian vegetation by BMPs such as planning, utilization monitoring, limiting the number of cattle, distributing the cattle over the landscape, and encouraging cattle to use less sensitive parts of the pasture.

Ephemeral Tributaries In Upland Areas

Upland grass/timber mosaic areas are where cattle are encouraged to graze. Ephemeral tributaries are dry by the June 1 turn-on date. Condition and Trend sites from the Hidaway Allotment indicate that management maintained the range soils and vegetation in stable condition.

TOTAL MAXIMUM DAILY LOAD (TMDL) PROCESS

States use TMDLs to address streams that are impaired because they don not meet water quality standards. The TMDLs were completed for the Grande Ronde Basin in 2000. TMDLs are scheduled for completion by the State of Oregon for the John Day Basin in 2006.

The Upper Grande Ronde Sub-Basin TMDL contains a Water Quality Management Plan (WQMP) which “outlines the management steps necessary to attain TMDL targets.” The WQMP “describes the

actions that will be taken to reduce the pollutant loads identified in the TMDL." (Upper Grande Ronde TMDL cover letter). The WQMP then states that "management activities ... must follow standards and guidelines ... as listed in the respective Forest Land Use and Management Plans (LRMPs), as amended, for the Wallowa-Whitman and Umatilla National Forests." The same procedures, policies, and directions are used on both the Grande Ronde (east) and the John Day (west) sides of the Hidaway Area. When the John Day TMDL is complete, it is likely to contain a similar recommendation for meeting water quality objectives.

The standards and guidelines include PACFISH, Forest Plans, and Clean Water Act requirements (such as design elements, planning and application BMPs, and implementation and effectiveness monitoring). The recommendation in the Upper Grande Ronde WQMP indicates that the Forest Service's existing management requirements are considered sufficient to protect, maintain, and restore water quality.

ENVIRONMENTAL CONSEQUENCES

The environmental consequences section discusses the effects of the alternatives to stream shade and sedimentation. Canopy cover or stream shade (percent of the visible area over a stream which is covered by vegetation and measured at a certain moment in time) is used as an indicator of the amount of riparian vegetation which is available to shade a stream, which is related to stream temperature. The amount of sedimentation or turbidity is an indicator of stream bank erosion.

Water Quality

Alternative 1 (No Grazing)

Direct and Indirect Effects: There would be no direct or indirect effects from domestic livestock grazing to riparian vegetation or stream bank stability under this alternative. Vegetation and stream bank stability would continue to be affected by natural mechanisms (wind, insect infestation, wildlife, and wildfire), and public and administrative activity (use of roads, trails, and recreation). Changes in vegetation would be small and localized, such as cutting a seedling during road maintenance, or caging a hardwood during restoration activities. These effects are not likely to cause measurable changes in stream temperatures. Small, localized, short duration increases in stream sediment and turbidity could occur. Recovery of areas where sediment is entering streams would improve without livestock grazing. Recovery from past forest management would continue.

Alternative 2 (Proposed Action)

Management requirements, design features, and monitoring guidelines used on the Hidaway Allotment indicate that riparian vegetation, shade, and stream bank stability has been maintained or is improving. The Hidaway Allotment shows an improving trend between 1984 and 2003 (the last year prior to 2006 that the allotment was grazed).

Direct and Indirect Effects: Cattle grazing has the potential to reduce stream shade if cattle reduce the effectiveness of riparian shrubs and hardwoods. Reduced shade may lead to increased stream temperatures. There may be small, low intensity, localized reductions in stream shade. Reductions would not cause a measurable increase in stream temperatures, and would not impair any beneficial use. In order to avoid reductions in riparian vegetation and shade, the Forest Plan and the Hidaway Project contain management requirements, design features, and monitoring guidelines to track and respond to riparian vegetation if it is jeopardized.

Cattle grazing has the potential to destabilize stream banks. Banks may be directly destabilized from cattle trampling. Stream banks may be indirectly destabilized when riparian vegetation is eaten enough to reduce its stabilizing influence. Without the stabilizing influence of vegetation, exposed soil may erode into streams. Small amounts of low intensity, localized, short-term bank instability could occur with concurrent sedimentation and turbidity, but it would likely not impair any beneficial use.

Proposed fences would increase the riparian pasture in the upper reach of Dry Camas Creek and would increase the cattle exclosure along Butcherknife Creek. These fences would improve riparian vegetation and reduce the risk of sedimentation from stream bank erosion from grazing.

Cumulative Effects: Elk and deer can impact riparian vegetation and stream bank stability, except when the snow is deep. Riparian timber harvest, road construction, and wildfire have also reduced riparian vegetation and affected streambank stability. These activities have likely contributed to increasing stream temperatures and bank instability. Hot springs also contribute to elevated stream temperatures.

The construction of hundreds of fish habitat improvement structures, during the 1980s, generally decreased stream temperatures. Because data from prior to the 1980s era does not exist, the magnitude of the effects of these activities and natural conditions on temperature is not known.

Since 1982, design features that protect riparian areas have been incorporated into projects. The Forest Plan management requirements and monitoring guidelines requires the tracking of riparian vegetation and bank stability, response to over browsing of vegetation and destabilized stream banks, and the adjustment of management plans to ensure resource protection.

Monitoring photos show that the management requirements, design features, and monitoring guidelines have been effective at maintaining and improving riparian vegetation and shade and at reducing bank instability in the Hidaway Area. At the proposed stocking level, it is likely that this trend would continue as stocking levels would be maintained. Additional fencing of the upper reach of Dry Camas Creek and the cattle exclosure along Butcherknife Creek would allow a faster rate of recovery of riparian vegetation in these areas for shade and stabilizing stream banks.

Alternative 3

Alternative 3 proposes to graze 493 cattle from June 16 to September 30, on the Dry Camas, Nine Sections, East and West Trough Pastures. This Alternative proposes a stocking rate of 14 acres per head month, higher than Alternative 2.

Direct and Indirect Effects: Similar to the Proposed Action, this alternative also has the potential to reduce stream shade, increase stream temperatures, and increase bank instability. There could be small, low intensity, localized reductions in stream shade. With this alternative, less riparian habitat would be grazed because the Tower unit would not be included. These reductions would likely not cause a measurable increase in stream temperatures and sediment, and would not impair any beneficial use.

The Tower Unit has not been grazed since 1994. The effects would be similar to what is and has been occurring in the allotment. The other four units (Dry Camas, East Trough, West Trough, and Nine-Sections) provide the forage for the livestock grazing. This would not change.

The additional fencing, for increases in the existing Upper Camas Creek riparian pasture and Butcherknife Creek livestock exclosure, and the heavy downed wood that substantially limits livestock access to streams, would allow for the improvement of riparian shade and stream bank stability. Stream sediment and turbidity related to grazing are likely to decline.

Overall, the present grazing system has shown stable or improved vegetation and would be expected to continue with these trends. Monitoring photos show that past management requirements, design features, and monitoring guidelines have been effective at reducing bank instability in the Hidaway area. Since the proposed rate of stocking is the same as current management, it is likely that this trend would continue.

If grazing appears to interfere with beneficial uses, Range Conservationists have the discretion to adjust the season and numbers of livestock which use the Allotment

Cumulative Effects: The cumulative effects are similar to Alternative 2. These effects would be limited to 19,264 acres with the greatest effects within the primary livestock use areas that are displayed in Map 5 (not including the Tower Unit). Recovery from past forest management activities would continue.

Hydrology Alternative Summary

Table 27 displays the determinations for compliance with the Forest Plans. Alternative 1 (No Grazing) would allow for riparian vegetation, riparian shade, and stream bank stability to improve from current conditions. Alternative 2 (Proposed Action) would allow grazing to occur over 37,260 acres, distributing effects over a wider acreage with the same allotted number of livestock as Alternative 3. Alternative 3 would have more grazing over 19,264 acres, the same as is presently occurring with a stable or improving trend within the pastures. Increasing the number of acres for riparian pasture and livestock exclosure would be the same for either action alternative.

Table 27: Forest Plan Compliance Summary for the Hidaway Project

Alternative	Stocking Rate	Dry Camas and Butcherknife Creek Fencing	Meets Forest Plan Standards
Alternative 1 (No Grazing)	0	No	Yes
Alternative 2 (Proposed Action)	18 Acres Per Head Month	Yes	Yes
Alternative 3	14 Acres Per Head Month	Yes	Yes

FOREST PLAN AND CLEAN WATER ACT CONSISTENCY

The improvements in riparian conditions over time result from using planning and application BMPs, and monitoring to ensure that BMPs are implemented and effective at maintaining or improving water quality. The Umatilla and Wallowa Whitman National Forests abide by the memorandum of understanding (MOU) with the Department of Environmental Quality (DEQ) by participating in TMDLs and by sharing water quality monitoring. Because of using planning and application BMPs; monitoring the implementation and effectiveness of the BMPs; and following the MOU, the Hidaway Allotment Management Plan is in accordance with the Clean Water Act and complies with the Clean Water Act requirements of the 1990 Forest Plans.

SOILS

Ed Farren, Hydrologist
Soils Report, Project Record, Appendix D

SCOPE OF THE ANALYSIS

The analysis area for soil disturbance is the existing and proposed grazing pastures, including cattle trails along fences, around ponds, water troughs, and mineral sites. These pastures are in the Upper Camas Creek Watershed (HUC 1707020205) and the Upper Grande Ronde River Watershed (HUC 1706010401).

The analysis area for soil erosion potential is the 6 subwatersheds which contain activities proposed in this project (Tables 24 and 25 of the Hydrology section of this EA). The area of the subwatersheds is 116,226 acres, of which 37,260 are managed by the North Fork John Day Ranger District. Analysis of cumulative effects will include Forest Service activities which are believed to be currently affecting the soil resource of the human environment.

The method used to create this report involved review of the requirements and standards from the Forest Plan, gather data for and describe the current conditions, analyze the effects of the project on the current conditions, and determine if the project complies with the Forest Plan.

INDICATORS OF DETRIMENTAL SOIL DISTURBANCE

The indicators for detrimental soil disturbance, such as compaction, displacement, and scorching are "ruts greater than 6 inches deep; missing litter and duff layers; evidence of topsoil removal, gouging, and piling; soil displacement has removed the *majority* of the surface soil (surface soil may be mixed with subsoil, subsoil partially or totally exposed); burning has consumed the duff layer, root crowns, and surface roots of grasses (evidence of severely burned soils such as mineral surface soil is red in color)" (from Umatilla National Forest Soil Disturbance Protocol, 2002). Puddling is a subset of compaction, and is tallied as "rutting."

Effective ground cover is the indicator for soil erosion hazard. Loss of ground cover is usually short-lived (one to three years). The ground cover indicator depends on revegetation processes to determine how long the risk of erosion lasts. Erosion control measures or revegetation, or both, normally occur in the same season as the treatment with full effectiveness of new vegetation occurring in the first year or two.

Acres of reduced ground cover (including acres of native surface roads, cattle trails, and range improvements) and percentage of riparian areas where ground cover is reduced are used to analyze for soil erosion in the analysis area.

DESIRED CONDITIONS

The desired future condition for soil is to "maintain a minimum of 80 percent of a project area ... in a non-detrimental soil condition with respect to compaction, displacement, and erosion" (Forest Plan, p. 4-43). However, "a small percentage of the Forest soil in roads, trails, rock pits, and other allocations will be in a nonproductive state" (Forest Plan, p. 4-10).

EXISTING CONDITIONS

For general background conditions of climate, geology, and soils, see the Camas Ecosystem Analysis (1995). Approximately 55 percent of the base rock is Columbia River Basalt and 45 percent is tuffs and tuffaceous sediments which are likely to have erupted from the nearby Tower Mountain Caldera Complex. Wind borne volcanic ash from Mt. Mazama and other Cascade volcanoes blanketed the area approximately 10,000 years ago. Wind and water actions have redistributed these materials since the original deposition, so the depth of ash covering earlier soils and rock masses presently varies from zero to two feet or more (Table 28).

Table 28: Soil Descriptions by Unit

Unit	Soil Resource Inventory Map Units	Texture[1]	Setting[2]	Depth[3]
Dry Camas	1, 3-7, 12, 21-24, 31, 91	GR, AL	Sf, Sl	VS to D
Nine Sections	1,3,4,6,7, 21-24, 66-69, 81, 94	GR, AL	Dr, Rg, Sf	VS to D
Tower	1-7,21-24,46-48,66-69, 81, 91, 92, 94	GR, GAL, SAL	Dr, Rg, Sc, Sf	VS to D
Trough Springs E	1,3,4,6,7,21,23,31,66,91	GR, AL	Dg, Rg, Sf	VS to D
Trough Springs W	1, 3-8, 12, 31, 39, 91	GR, AL	Rg, Sf, St	VS to D

[1] **Texture codes:** AL = ash loam, GAL = gravelly ash loam, GR = gravelly residual, SAL = sandy ash loam.
[2] **Setting codes:** Dg = drainages, Dr = draws, Rg = ridges, Sc = scarps, Sf = scab flats, Sl = slopes, St = Stringers.
[3] **Depth codes:** D = deep, VS = very shallow.

Generally, all soils in the analysis area are capable of producing forage, and sustaining sufficient vegetation to maintain soil cover. The exceptions are the soils dedicated to purposes other than vegetation production, such as roads, timber harvest landings, recreation, cattle and wildlife trails, mineral sites, and rock pits. The pasture areas which are dedicated to non-productive uses of the soil range from four to five percent (Table 29).

Table 29: Soils Dedicated To Purposes Other Than Vegetative Production[1]

Unit	Area	Water Sites	Roads	Harvest	Burned	Mechanical Fuel	Total	%
Dry Camas	5,341	0.3	85	160	0	2	248	4.6 %
Nine-Sections	8,224	1.3	167	247	0	0	415	5.0 %
Tower	17,996	0.4	252	540	0	0	792	4.4 %
Trough Springs E	2,748	0.4	59	82	0	0	142	5.2 %
Trough Springs W	2,951	1.3	59	89	3	0	152	5.1 %
Totals	37,260	3.7	622	1,118	3	2	1,749	---

[1] The units referenced in this table are acres. Some ponds serve 2 pastures, but are only counted once in the table. Ponds and troughs count as 0.1 ac. Assumes roads = 100% detrimental soil condition (DSC), harvest = 6%, underburns = 3% DSC, wildfire = 3% DSC, mechanical fuel = 1 pass, 2.5% DSC.

Soil productivity refers to the soil's ability to sustain vegetation. When soil is damaged by compaction, displacement, or scorching, productivity is lost. When certain thresholds of compaction, displacement, or scorching are reached, the soil is assumed to have lost sufficient productive capacity to be in a detrimental condition. These thresholds are described in the Forest Plan (p. 4-80). The areas shown in Table 29 are believed to be in a detrimental condition, because of the effects of past management actions and natural events. Because the areas of soil in a detrimental condition are less than the maximum of 20 percent, they are in compliance with the Forest Plan.

The particular form of soil disturbance that is associated with domestic livestock, and big game, is puddling. This occurs when animal hooves push into soil which is softened by water. It results in the shearing by hooves of the pore spaces along the sides of the holes, which disrupts the soil's ability to absorb and transmit water. Some soil in the hole is compacted and displaced. After repeated trampling, holes become less apparent, and the location assumes the appearance of a trail with reduced or non-existent vegetation. These trails are measurably compacted.

Soil productivity may also be reduced by lowering effective ground cover. Ground cover is the vegetative canopy, vegetative crust, forest litter, duff, rocks, and gravel that protect soil from the erosive power of wind, precipitation, and overland flow. When soil is displaced by erosion, its productivity is reduced. Stream banks, native surface roads, trails, burned areas, overgrazed and trampled areas may have reduced ground cover. Table 30 shows the existing areas of reduced soil cover for this project. Because all pastures have at least 75 percent effective ground cover, they all comply with the Forest Plan.

Table 30: Existing Acres Of Exposed Soil By Pasture[1]

Unit	Area	Water Sites	Natural Surface Roads	Mechanical Fuel	Stream Bank	Total	Percent[2]
Dry Camas	5,341	0.3	0.3	2	0.6	3	0.060 %
Nine-Sections	8,224	1.3	0	0	unknown	1	0.016 %
Trough Springs E	2,748	0.4	0.1	0	unknown	0	0.017 %
Trough Springs W	2,951	1.3	0	0	unknown	1	0.044 %
Tower	17,996	0.4	0.2	0	unknown	1	0.004 %
Totals	37,260	3.7	0.6	2	---	6	---

[1] The units displayed in this table are acres. Some ponds serve 2 pastures, but are only counted once in the table. Each pond or trough is assumed to cause 0.1 acre exposed soil.

[2] Excess figures to right of decimal are included to show difference between alternatives.

ASSUMPTIONS

There are currently puddled areas around ponds and water troughs in the analysis area (Table 29 and Table 30). It is assumed that this puddling is primarily caused by wildlife use of the ponds and troughs during the wet season, when cattle are not on the allotment. There is also some bank instability along upper Dry Camas Creek which is related to puddling (Table 29 and Table 30). This is assumed to be a remnant of pre-1990 grazing. To allow recovery of this reach, Alternative 2 proposes to regulate cattle use by fencing. When cattle return to the allotment (they have been absent for 3 years), it is assumed that they will form some trails by trampling. These trails are locations of reduced ground cover, and are displayed in Tables 31 and 32.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Grazing)

Direct and Indirect Effects: Soil disturbance and effective ground cover within the project area would only occur due to natural mechanisms (wind, water, wildlife, and wildfire), ongoing projects, and public and administrative activity, such as the use of roads and trails. Slightly increased soil recovery rates would be expected in higher use areas, though existing conditions would remain the same in the short-term (1 to 3 years). Trails, water sources, and bedding areas would recover from livestock compaction and puddling effects. Unstable stream banks along upper Dry Camas Creek would remain unprotected.

Effects Common to Alternative 2 (Proposed Action) and Alternative 3

Direct and Indirect Effects: Pastures are currently used during most of the year by deer and elk, even when the soil is wet. Cattle grazing is proposed for the dry season, June 1 to September 30. Cattle are not allowed to turn onto the allotment if the soil is too wet.

Cattle would use ponds, troughs, cattle trails, and salt sites under this alternative. It is expected that this use would result in increases in detrimental soil conditions because of compaction. The increases are shown in Table 31. For Alternative 2, the increase would be approximately 16 acres across the 37,260 acres. For Alternative 3, the increase would be approximately 9 acres across the 19,264 acres. The percentages of unit soils in a detrimental condition would increase by a tenth of a percent or less.

Table 31: Estimated Increase in Detrimental Soil Condition

Unit	Area	Existing Acres And Percent		Trail Acres	Salt Acres	Alternative Acres And Percent	
Dry Camas	5,341	248	4.6 %	3.5	1	253	4.7 %
Nine-Sections	8,224	415	5.0 %	2.2	1	418	5.1 %
Trough Springs E	2,748	142	5.2 %	1.6	1	144	5.3 %
Trough Springs W	2,951	152	5.1 %	1.7	1	155	5.2 %
Totals – Alternative 3	19,264	957	---	9.0	4	970	---
Tower	17,996	792	4.4 %	2.1	1	795	4.4 %
Totals – Alternative 2	37,260	1,749	---	11.1	5	1,765	---

Cattle trail along fences as they search for forage. Wildlife usually do not trail along fences, but jump over them. The trampling action of cattle hooves on the trails is not expected to increase compaction and displacement above the levels caused by wildlife, since the cattle would only be present during the dry season. However, the trampling is expected to reduce soil cover in the treadway, and eliminate vegetative growth for the season. Cattle trails average one foot wide, and roughly parallel the fences. The expected reductions in soil cover are shown in Table 32.

Table 32: Estimated Acres of Soil Exposure by Pasture

Unit	Area	Existing Acres And Percent[1]		Trail Acres	Salt Acres	Alternative Acres And Percent[1]	
Dry Camas	5,341	3	0.060 %	3.5	1	8	0.14 %
Nine-Sections	8,224	1	0.016 %	2.2	1	4	0.05 %
Trough Springs E	2,748	0	0.017 %	1.6	1	3	0.09 %
Trough Springs W	2,951	1	0.044 %	1.7	1	4	0.13 %
Total Alternative 3	19,264	5	---	9.0	4	18-19	---
Tower	17,996	1	0.004 %	2.1	1	4	0.02 %
Total Alternative 2	37,260	6	---	11.1	5	22-23	---

[1] Excess figures to right of decimal provided to show difference between pastures.

Permittees would place salt blocks in strategic locations within pastures, to encourage cattle use in the uplands. Approximately 10 salt sites would be used on each pasture. A salt site may result in 0.1 acre of unproductive soil, which increases soil in detrimental condition by approximately one acre per pasture.

Areas around ponds and troughs are used throughout the year by wildlife, and would also be used by cattle during the dry season. Use is accounted for in the current conditions. Because the trails around these water sources are already in detrimental condition from wet-season wildlife use, they are included in the current condition, but do not increase the detrimental total under the action alternatives.

The Alternative 2 (Proposed Action) calls for grazing 493 cattle for four months on five pastures, which is a stocking rate of 18.6 acres per head month. Grazing at 18.6 acres per head month has resulted in very satisfactory soil conditions on the near-by Klondike and Lucky Strike Allotments. The soil conditions on those allotments resulted from the use of Design Features which are similar to the Design Features of this project. Alternative 3 calls for grazing 493 cattle for 3½ months on the 4 pastures, resulting in a stocking rate of 14.3 acres per head month, the present rate of use in the Hidaway Allotment. This represents a stable trend in range conditions. This is more intensive use than the rate of 18 acres per head month that has resulted in a stable trend in range conditions on the nearby Klondike and Lucky Strike Allotments.

Cumulative Effects: 1,749 acres are potentially in a detrimental condition in the five pastures of Alternative 2. If the proposed action were implemented, this would increase to approximately 1,765 acres, because of the concentration of animals around salt blocks and the increased use of cattle trails along fences. 957 acres are potentially in a detrimental condition in the four pastures of Alternative 3. This would increase to approximately 970 acres because of the animal concentrations and cattle trails.

Approximately 1,006 acres of mechanical fuel treatment are anticipated for the Weasel Fuel Reduction Project in the Dry Camas Pasture. When completed, it is estimated that approximately 36 additional acres would potentially be in a detrimental condition. Refer to Table 33 for a breakdown of the impacts by pasture.

Compacted roads are not expected to recover until they are decommissioned. Old landings, skid trails, and mechanical fuel treatment trails are expected to recover in approximately 25 to 100 years. Scorched areas are expected to recover within three years of the fire. The water sources and unstable stream banks are not expected to fully recover as long as big game have access to them.

Table 33: Cumulative Effects on Soil Disturbance

Unit	Area	Existing Acres And Percent		Trail Acres	Salt Acres	Mechanical Fuel	Alternative Acres And Percent	
Dry Camas	5,341	248	4.6 %	3.5	1	36	289	5.4 %
Nine-Sections	8,224	415	5.0 %	2.2	1	0	418	5.1 %
Trough Springs E	2,748	142	5.2 %	1.6	1	0	144	5.3 %
Trough Springs W	2,951	152	5.1 %	1.7	1	0	155	5.2 %
Totals Alternative 3	19,264	957	---	9.0	4	36	1,006	---
Tower	17,996	792	4.4 %	2.1	1	0	795	4.4 %
Totals Alternative 2	37,260	1,749	---	11.1	5	36	1,801	---

Currently, there are six acres (Table 32) of exposed soil on the five pastures in Alternative 2 and five acres of exposed soil on the four pastures in Alternative 3. If the proposed action were implemented, this would increase to 22 to 23 acres (Table 32) and to 18 to 19 acres if Alternative 3 was implemented. This would be due to the concentration of animals around salt blocks and the increased use of cattle trails along fences. One thousand more acres of mechanical fuel treatment are anticipated for the Weasel Fuel Reduction Project in the Dry Camas Pasture. When that is completed, it is estimated that approximately 36 additional acres (Table 33) would potentially have exposed soil from the treatment. Refer to Table 34 for a breakdown of the impacts by pasture.

The exposed soil around water sources is unlikely to recover unless big game is removed from the analysis area. The native surface roads are unlikely to recover unless they are closed and decommissioned. The cattle trails along fences and salt sites would begin to recover when the cows and salt are moved out in the fall, but probably would not completely recover vegetation before the cows returned each June. The bare stream banks are more likely to recover if they are fenced but big game would continue to impact them. The areas of mechanical fuel treatments are expected to recover within one to three years.

Table 34: Cumulative Effects on Soil Exposure

Unit	Area	Existing Acres And Percent[1]		Trail Acres	Salt Acres	Mechanical Fuel	Alternative Acres And Percent[1]	
Dry Camas	5,341	3	0.060 %	3.5	1	36	44	0.81 %
Nine-Sections	8,224	1	0.016 %	2.2	1	0	4	0.05 %
Trough Springs E	2,748	0	0.017 %	1.6	1	0	3	0.09 %
Trough Springs W	2,951	1	0.044 %	1.7	1	0	4	0.13 %
Totals Alternative 3	37,260	5	---	9.0	4	36	54-55	---
Tower	17,996	1	0.004 %	2.1	1	0	4	0.02 %
Totals Alternative 2	37,260	6	---	11.1	5	36	58-59	---

[1] Excess significant figures to right of decimal are provided to show difference between pastures.

FOREST PLAN CONSISTENCY

Productivity Potential

In the Hidaway analysis area, there are approximately 257 miles of roads. These roads cover an area of approximately 622 acres. They are dedicated to transportation and are considered to be in a 100 percent detrimental condition. There has also been harvest, mechanical fuel treatments, wildfire, and range related land uses in the area which could potentially have removed soils from vegetative production. The amount of these potentially affected soils is 1,127 acres. The detailed uses and ranges of DSC are shown in Table 29.

Adding road acres and the potential DSC acres to the acres proposed for range management gives a total of approximately 1,801 acres in the Hidaway Allotment. This is approximately 4.4 to 5.4 percent of each pasture, and is consistent with the Forest Plan's Management Requirement 1.

Long Term Soil Productivity

Condition and Trend Monitoring from 1957 to 2003 shows fair to excellent conditions with a stable trend of range vegetation and soil condition (Hidaway Range Report, 9/15/2006). This is consistent with the Forest Plan's requirement 2.

Minimum Effective Ground Cover

Hidaway stubble height monitoring from 1994 to 2005 showed that effective ground cover was maintained at the end of the grazing season. Condition and Trend monitoring indicates that upland ground cover is satisfactory and that erosion potential is low. This is consistent with the Forest Plan's requirement 3.

Limited Ground Disturbing Activities

There are approximately 184 acres of C5 Management Area and 13,996 acres of C7 Management Area. It is possible that ponds and cattle trails may be located within 250 feet of streams. Salt sites are not allowed within 250 feet of streams. The corral is not within 250 feet of streams. There are approximately 0.6 acres of native surface roads. The pasture area dedicated to ponds, troughs, cattle trails, and native surface roads varies between 3 and 5 acres. This equates to 0.02 to 0.14 percent of the pasture areas, and complies with Forest Plan standard #1. Table 35 (Alternative 2) provides a display of the number of acres of exposed soil from water sites, salt sites, trails, and natural surface roads.

Table 35: Soil Exposure in acres within 250 Feet of Streams

Unit	Acres	Water Site Acres	Natural Surface Road Acres	Trail Acres	Salt Acres	Total Acres And Percent[1]	
Dry Camas	5,341	0.3	0.3	3.5	1	5	0.10 %
Nine-Sections	8,224	1.3	0	2.2	1	5	0.05 %
Trough Springs E	2,748	0.4	0.1	1.6	1	3	0.11 %
Trough Springs W	2,951	1.3	0	1.7	1	4	0.14 %
Tower	17,,996	0.4	0.2	2.1	1	4	0.02 %
Totals	37,260	3.7	0.6	11.1	5	21	---

[1] Excess significant figures to the right of the decimal are provided to show the difference between pastures.

Because the Hidaway Allotment is consistent with the above 3 requirements and 1 standard, it is consistent with the soil guidance of the 1990 Umatilla National Forest Land and Resource Management Plan and amendments.

TERRESTRIAL WILDLIFE

Randy Scarlett, Wildlife Biologist
Terrestrial Wildlife Report and Biological Evaluation, Project Record

Key Issue 2: Lynx Habitat

Oregon Natural Resources Council (ONRC) commented that it is unclear how this project would affect lynx and lynx habitat. Their concern is that there is no comprehensive strategy for the identification of lynx habitat and the conserving of habitat for lynx and their prey species.

- Lynx habitat in the Tower Unit
- Predicted effects on federal status of listed species

ANALYSIS METHOD

The quantity and quality of wildlife habitat and the effects of the proposed activities on these habitats were assessed using:

- Notes, summaries, and other documents generated from field visits to the project area in 2005 and 2006.
- Covers, data tables, graphics, maps and other information within and/or generated from information stored within the corporate Geographic Information System (GIS) database on the North Fork John Day Ranger District and Umatilla National Forest. GIS queries used to identify potential wildlife habitats are available in Appendix G.
- FAUNA database and NFJD Ranger District Wildlife Database (sighting reports and locations within the analysis area).
- Publications, reports, scientific papers, and personal communications. Those utilized are documented and cited within the wildlife report, as well as the EA.

Where quantitative information is available, it is presented. Wallowa-Whitman National Forest data could not be used in quantitative queries. As a result, these data are not being used in this analysis. Only data from the Umatilla National Forest existing vegetation database was used to identify potential and suitable habitat for the species analyzed in the Hidaway allotment.

SCALE OF ANALYSIS

The scale of the analysis differs based on the species and habitats being considered. For this evaluation and analysis, the analysis area refers to Forest Service lands within the Hidaway allotment.

THREATENED, ENDANGERED, PROPOSED AND SENSITIVE SPECIES

This section constitutes the Terrestrial Wildlife Biological Evaluation for the Hidaway Allotment Environmental Assessment. Federally "listed" species (Table 37) include those identified as endangered, threatened, proposed, and candidate species by the Fish & Wildlife Service (USDI 1999 and USDI 2001). "Sensitive" species are those identified on the Regional Forester's (R6) Sensitive Animal List (USDA 2004). Sensitive species addressed on the Umatilla National Forest include those that have been documented (D) or suspected or likely (S) to occur, based on available habitat to support breeding pair/groups) occurring within or adjacent to the Umatilla National Forest boundary. Federally listed and sensitive species with a potential to occur in the analysis area are found in Table

36. The potential for species to occur is based on observation records, vegetative and wildlife species inventory and monitoring, published literature on the distribution and habitat utilization of wildlife species, and the experience and professional judgment of wildlife biologists on the Umatilla National Forest

Table 36: Summary Table of Federally listed and Sensitive Species with a Potential to Occur on the Umatilla National Forest

Species	U.S. Fish & Wildlife Service (1999 & 2004)	Regional Foresters Sensitive Animals (2004)	Occurrence on the Umatilla National Forest[1]
Columbia spotted frog	Candidate	Sensitive	D
Painted turtle		Sensitive	S
Bald eagle	Threatened		D
Peregrine falcon		Sensitive	S
Upland sandpiper		Sensitive	S
Gray flycatcher		Sensitive	S
Gray wolf	Endangered		D
California Wolverine		Sensitive	D
Canada lynx	Threatened		S
Yellow-billed cuckoo		Sensitive	S
Rocky Mountain Bighorn Sheep		Sensitive	D

[1] D = Documented, reliable, recorded observation within the Umatilla National Forest boundary. S = Suspected, likely to occur based on habitat availability to support breeding pairs/groups within the Umatilla National Forest boundary.

Table 37: Summary Table of Documented PETS Species that Occur or have the potential to Occur within the Hidaway allotment and Biological Evaluation Determinations

Species	Status	Determination[1]
Columbia spotted frog *(Rana luteiventris)*	Sensitive	MIIH
Bald eagle *(Haliaeetus leucocephalus)*	Threatened	NE
Gray wolf *(Canis lupus)*	Endangered	NE
California wolverine *(Gulo gulo)*	Sensitive	NI
Canada lynx *(Lynx canadensis)*	Threatened	NE

[1] **Determinations:** **NE** -No effect on a proposed or listed species or critical habitat
NI - No Impact to R6 sensitive species individuals, populations, or their habitat
MIIH - May Impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.

The impact of cattle grazing on the painted turtle, peregrine falcon, upland sandpiper, gray flycatcher, yellow-billed cuckoo, and Rocky Mountain bighorn sheep will not be analyzed because these species have not been observed in the allotment and/or suitable habitat for these species is not present in the allotment. Potential effects will be analyzed for the Columbia spotted frog, bald eagle, gray wolf, California wolverine, and Canada lynx. These species are either known to occur within the allotment or suitable habitat is present in the allotment, or both.

Existing Conditions

Columbia Spotted Frog

The Columbia spotted frog frequents waters and associated vegetated (grassy) shorelines of ponds, springs, marshes, and slow-flowing streams and appears to prefer waters with a bottom layer of dead and decaying vegetation (NatureServe Explorer 2006 and Csuti et al. 1997). They typically occur between 150 and 8,000 feet in elevation (Corkran and Thoms 1996). Spotted frogs breed in the spring in shallow water at pond edges, stream margins, and in inundated floodplain areas (Corkran and Thoms 1996). Springs may be used as over-wintering sites for local populations of spotted frogs.

The spotted frog has been observed in the analysis area, with suitable habitat found along perennial streams and ponds, wet meadows, and seeps. Most streams in the analysis area do not provide potential breeding habitat due to their moderate to high gradient, rocky substrate, and lack of instream aquatic vegetation. Larger streams and adjacent riparian vegetation would likely be used during the summer by adults, but are not suitable for breeding. Some perennial stock ponds would be considered suitable breeding habitat because they have sufficient depth and aquatic vegetation to support breeding.

Bald Eagle

Preferred habitat for the northern bald eagle occurs near large bodies of water (rivers, lakes, etc.) that support an adequate food supply (NatureServe Explorer 2006 and USDI 1986). In the Pacific Northwest recovery area, preferred nesting habitat for bald eagles is predominately uneven-aged, mature, coniferous stands (ponderosa pine and Douglas-fir) or large black-cottonwood trees along riparian corridors (NatureServe Explorer 2006 and USDI 1986). Eagles usually nest in mature conifers with gnarled limbs that provide ideal platforms for nests. The nest tree is characteristically one of the largest in the stand and usually provides an unobstructed view of a body of water (USDI 1986). In Oregon, the majority of nests are within 0.5 miles of the shoreline (Anthony and Isaacs 1989). Important prey species include fish, birds, mammals, and carrion. (NatureServe Explorer 2006 and USDI 1986).

Bald eagle wintering habitat is present on Camas Creek along the northern boundary of the allotment. Wintering bald eagles are generally present in the stream corridor between the months of November and March. No communal roosts are known to exist in or near the Hidaway allotment. Nesting bald eagles have not been observed in or near the allotment. The nearest bald eagle nest is located approximately 40 miles to the southwest near the town of Monument, Oregon.

California Wolverine

The wolverine prefers high elevation, conifer forest types, with limited exposure to human interference (Ruggiero et al. 1994, Wolverine Foundations (TWF) 2006). Natal denning (reproductive) habitat includes open rocky slopes (talus or boulders) surrounded or adjacent to high elevation forested habitat that maintains a snow depth greater than three feet into March and April (Ruggiero et al. 1994, TWF 2006). The wolverine is an opportunistic scavenger, with large mammal carrion the primary food source year-round. While foraging, they generally avoid large open areas and tend to stay within forested habitat at mid and high elevations (greater than 4,000 feet) and typically travel 18 to 24 miles to forage/hunt (Ruggiero et al. 1994, TWF 2006).

The wolverine is not currently known to occur in the Hidaway allotment. The analysis area does not contain open rocky slopes (talus or boulder fields) that would be used for denning by this species.

Potential denning habitat for the wolverine occurs about 20 miles southeast of the analysis area in the Elkhorn Mountains. Snow tracking surveys conducted across the District, since 1991, for wolverine, fisher, American marten, and lynx resulted in no confirmed wolverine tracks in the allotment or surrounding area. Unconfirmed reports/sightings of wolverine have occurred on the District in the past. Table 38 shows the existing suitable wolverine habitat in the allotment (Umatilla National Forest only). Portions of the allotment lying within the Wallowa-Whitman National forest would be considered suitable habitat, although the quantity of foraging habitat could not be determined. No potential denning habitat is present in this portion of the allotment.

Table 38: Existing Suitable Wolverine Habitat In The Hidaway Allotment

California Wolverine Foraging Habitat	Existing Condition	
	Acres	Percent[1]
Primary Foraging	1,337 acres	6%
Secondary Foraging	21,536 acres	94%
Total Habitat	**22,873 acres**	**100%**

[1] Percent of total habitat in habitat type.

Canada Lynx

The Canada lynx occurs in mesic coniferous forest that have cold, snowy winters and that provide a prey base of snowshoe hare. The primary vegetation that contributes to lynx habitat is the subalpine fir habitat type, where lodgepole pine is a major seral species, generally between 4,100 and 6,600 feet in elevation (NatureServe Explorer 2006, Ruediger et al. 2000, Ruggiero 2000, and Verts and Carraway 1998). When interspersed within subalpine forest, moist (cool) grand fir and moist Douglas-fir habitat types may also contribute to lynx habitat (Ruediger et al. 2000 and Ruggiero 2000). Snow tracking surveys conducted across the District, since 1991, for wolverine, fisher, American marten and lynx have failed to identify lynx tracks on the District. Field surveys in 1999, 2000, and 2001 also failed to detect lynx on the Forest. Unconfirmed sightings of lynx have occurred on the District. Lynx are not currently known to occur on the District or in the allotment.

Portions of two lynx analysis units (LAUs) are included within the Hidaway allotment. The Meadow Creek LAU (Umatilla National Forest) occupies a portion of the Tower and Dry Camas pastures. The Upper Grande Ronde River West (UGRRW) LAU (Wallowa-Whitman National Forest) also lies within the Tower and Dry Camas pastures. Although both these LAUs extend into the Dry Camas pasture, no potential lynx habitat is present in this pasture. All potential lynx habitat within the allotment is restricted to the Tower pasture. Currently, the Meadow Creek and UGRRW LAUs are 60 and 76.9 percent suitable, respectively. Table 39 shows the acres of foraging, denning, and unsuitable lynx habitat within those portions of the Meadow Creek and UGRRW LAUs lying within the Hidaway allotment.

Table 39: Lynx Habitat within the Hidaway Grazing Allotment by Lynx Analysis Unit (LAU) and Habitat Type

LAU	Habitat Type		
	Foraging[1]	Denning	Unsuitable
Meadow Creek	1,200	1,798	3,359
Upper Grande Ronde River West	372	913	408

[1] Foraging habitat is the sum of primary foraging and foraging habitat in the Meadow Creek LAU, and the sum of primary and marginal forage in the UGRRW LAU.

The Region 6 Regional Office issued updated direction on June 20, 2006 concerning the Canada lynx, the Lynx Conservation Assessment and Strategy (LCAS), and the Lynx Conservation Agreement (LCA). The Umatilla National Forest and the portion of the Wallowa-Whitman National Forest included in this analysis are considered unoccupied habitat and the revised Canada Lynx Conservation Agreement no longer applies. National Forests with unoccupied mapped lynx habitat are no longer required to amend their Forest Plan to incorporate LCAS guidance. Therefore, there will be no Forest Plan amendment under the Hidaway Allotment EA to incorporate standards and guides in the LCAS into this project.

Gray Wolf

Habitat preference for the gray wolf is prey-dependent rather than cover-dependent. The wolf is a habitat generalist inhabiting a variety of plant communities, typically containing a mix of forested and open areas with a variety of topographic features (Verts and Carraway 1998). Wolves are strongly territorial, with territory size and location strongly related to prey abundance. Wolves prey mainly on large ungulates, such as deer and elk, and to a lesser extent on small mammals. The gray wolf prefers areas with few roads, generally avoiding areas with an open road density greater than one mile per square mile (NatureServe Explorer 2006). Natal dens typically occur as underground burrows, but can also be caves or other types of shelter. Rendezvous sites are generally open areas. In 1999, a collared wolf from the experimental, non-essential Idaho population traveled to the Blue Mountains and stayed until she was captured and returned to Idaho (Cody 1999). In October 2000, a wolf was killed along US Highway 395, north of Ukiah. Also in 2000, a gray wolf was struck along Interstate 84 west of Baker City, Oregon. Several unconfirmed sightings of gray wolves have occurred in and near the Hidaway allotment in recent years. The Idaho wolf population has been increasing steadily, and dispersal into the Blue Mountains is expected to continue in the future.

Potential habitat for this species occurs throughout the analysis area; wolves are generalists that inhabit areas with adequate prey and a low level of human disturbance.

Species Of Interest

These are species that are “of interest” to the public at the local or regional level, or were identified as a species of concern by the Fish and Wildlife Service. Species of interest or concern usually come from state threatened, endangered, and sensitive species lists. Occurrence determinations are based on observation records, vegetative and wildlife species inventory and monitoring, published literature on the distribution and habitat utilization of wildlife species, and the experience and professional judgment of wildlife biologists on the Umatilla National Forest. Many of these species are considered uncommon or there status is unknown in the Pacific Northwest. Only the olive-sided flycatcher has the potential to occur in the allotment and be affected by cattle. All other species of interest would not be affected by grazing or grazing related activities.

Olive-Sided Flycatcher

Preferred habitat for the olive-sided flycatcher consists of coniferous forest associated with openings and edges near water (streams and wet areas (Marshall et al 2003). This includes burned areas with snags and scattered tall, live trees, riparian zones, at the edge of late and early-successional forests, and open or semi open forest stands with low canopy cover (Marshall et al 2003). Tall, prominent trees and snags, which serve as foraging and singing perches, are common feature of nesting habitat (Marshall et al 2003). Preferred habitat occurs in riparian corridors within the analysis area. This species has been documented on the Umatilla National Forest.

Neotropical Migratory Birds

Neotropical migratory birds are those that breed in the U.S. and winter in Central and South America. Continental and local declines in population trends for migratory and resident landbirds are an international concern. Causes for these declines include habitat degradation in winter and summer ranges and the continued use of toxic pesticides in Latin America. Numerous lists have been developed to identify birds of "concern." Currently, the most referenced list is The Birds of Conservation Concern 2002 (USDI 2002). This list takes into consideration other nationally recognized assessments, including Partners in Flight, the North American Waterfowl Conservation Plan, and the United States Shore Conservation Plan. Birds identified as a "conservation concern" are listed for each Bird Conservation Region (BCR) in North America. The Hidaway allotment is in the Northern Rockies BCR (#10), with species identified with the potential to occur in the allotment presented in Table 40. Species identified in the Birds of Conservation Concern 2002 (USDI 2002) are addressed in the various conservation plans either directly as a "focal species" or indirectly as "priority habitat."

Table 40: Birds of Conservation Concern (2002) With the Potential to Occur Within the Hidaway Allotment

Species	General Habitat	Occurrence[1]
Flammulated Owl	Coniferous Forest	D
Lewis' woodpecker	Riparian Woodland	D
Williamson's Sapsucker	Coniferous Forest	D
Red-naped Sapsucker	Aspen	D
White-headed woodpecker	Ponderosa Pine	D
Pygmy Nuthatch	Ponderosa Pine	D

[1]Documented, reliable sighting on the Umatilla National Forest

The Partners in Flight Bird Conservation Plan is used to address the requirements contained in Executive Order (EO) 13186 (January 10, 2001), *Responsibilities of Federal Agencies to Protect Migratory Birds*. Under Section 3(E)(6), through the National Environmental Policy Act, the Executive Order requires that agencies evaluate the effects of proposed actions on migratory birds, especially species of concern. Conservation planning for the Blue Mountains, Ochoco Mountains, and Wallowa Mountains sub-provinces is addressed in the *Conservation Strategy for Landbirds in the Northern Rocky Mountains of Eastern Oregon and Washington* (Altman 2000), hereafter referred to in this section as "the Strategy". For further discussion, refer to Wildlife Report, Appendix E, Project Record.

The Strategy discusses the migratory and landbird species of concern for the Northern Rocky Mountain Region and the Blue Mountain sub province. "Focal" species were selected and used to represent species of concern and priority habitats identified in the Strategy. Table 41 identifies priority habitats, habitat features, and focal species identified in the Strategy that occur in the allotment (Altman 2000).

Table 41: Habitat Types, Priority Habitat Features, and Associated Focal Species in Northern Rocky Mountain Landbird Conservation Region of Oregon and Washington (Altman 2000)

Habitat Type	Habitat Feature/Conservation Focus	Focal Species
Dry Forest	Large patches of old forest with large trees and snags	White-headed woodpecker

Habitat Type	Habitat Feature/Conservation Focus	Focal Species
	Old forest with interspersion of grassy openings and dense thickets	Flammulated owl
	Open understory with regenerating pines	Chipping sparrow
	Patches of burned old forest	Lewis' woodpecker
Mesic Mixed Conifer	Large snags	Vaux's swift
	Overstory canopy closure	Townsend's warbler
	Structurally diverse; multi-layered	Varied thrush
	Dense shrub layer in forest openings or understory	MacGillivray's warbler
	Edges and openings created by wildfire	Olive-sided flycatcher
Riparian Shrub	Willow/alder shrub patches	Willow flycatcher
Subalpine Fir Forest	Subalpine Forest	Hermit thrush
Aspen	Aspen stands	Red-naped sapsucker

No further analysis of the environmental effects will occur for the riparian woodland, montane meadow, steppe-shrubland, and alpine habitat types because they do not occur within the Hidaway allotment. Habitat types and features will be used to evaluate the effects of the proposed activities on migratory and landbird species.

ENVIRONMENTAL CONSEQUENCES

Columbia Spotted Frog

Alternative 1 (No Grazing)

Direct and Indirect Effects: Elimination of grazing would eliminate potential impacts to Columbia spotted frogs and their habitat from livestock. Trampling of tadpoles would not occur at potential breeding sites. A greater proportion of developing tadpoles would metamorphose into adults, although this difference would not be expected to be scientifically significant based on past research (see Bull and Hayes 2000). Inputs of feces and urine from cattle would be eliminated under this alternative, eliminating nutrification of ponds where these substances were deposited. The height of riparian and upland vegetation would increase with cessation of cattle grazing; spotted frogs may be less vulnerable to predators as a result.

In the long term, cessation of cattle grazing and associated pond cleaning would reduce potential habitat for this species; ultimately, small catchment ponds would fill with sediment, reducing their holding capacity and ultimately making them unusable.

Alternative 2 (Proposed Action)

Determination of Effects and Rationale: It has been determined that grazing of the Hidaway allotment during the proposed season of use and stocking levels (including the Tower Pasture) **may impact individuals or habitat for Columbia spotted frog**, **but would not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.** This determination is based on the following:

- The Columbia spotted frog is present in the allotment. Some ponds (and Hidaway Creek) that are accessible to cattle have the potential to provide breeding habitat for this species.
- Egg masses would not be impacted because livestock would enter the allotment after eggs have hatched. If breeding were to occur later in the spring, cattle would not affect egg masses because they do not congregate at ponds or other water sources during this period.

- Tadpoles could potentially be trampled, but the effect would be insignificant based on studies from Bull and Hayes (2000) and Bull et al. (2001).
- Potential contaminants in ponds would not adversely affect tadpoles because livestock numbers in the allotment are considered lower than studies that show deleterious effects to tadpoles (Jofre and Karasov 1998, Howard and Munger 2000).
- Adults would not be impacted because of their mobility and ability to avoid trampling.
- Forest Plan standards for vegetation utilization are being met. Adequate vegetation is present in the allotment after cattle are removed to provide hiding cover for spotted frogs.
- There would be no adverse cumulative effects on the spotted frog through continued cattle grazing. Resumption of grazing in the Tower pasture would increase the potential for direct and indirect effects on the spotted frog.

Direct and Indirect Effects: Cattle grazing within the Hidaway Allotment, including the Tower pasture, could affect this species and its habitat. Livestock would not trample or otherwise disturb egg masses in ponds and slow moving streams within the allotment because livestock would not enter the allotment until after eggs have hatched (Bull and Hayes 2000, personal observations elsewhere on the District). Egg masses do not require structure for attachment (they are free-floating), so the potential removal of aquatic and riparian vegetation in and along streams and ponds would not affect egg masses in breeding habitat. A single Columbia spotted frog egg mass was observed in the outflow of a hot spring along Hidaway Creek in 2004. The location along Hidaway Creek where the egg mass was noted is generally inaccessible to cattle due to steep hillsides and heavy downed wood accumulations. This area will be monitored for the spotted frog and cattle use.

Livestock exclosures along portions of Dry Camas, Butcherknife, and Camp Creeks exclude livestock from riparian areas. Hidaway Creek does not have an exclosure, but is generally inaccessible to cattle due to steep hillslopes along portions of the stream and heavy downed wood accumulations. The potential for spotted frog tadpoles in Hidaway Creek to be affected by grazing is very low. There is a potential that tadpoles in ponds and wet meadows could be injured or killed by cattle trampling. Research suggests that this potential impact would be minor. Bull and Hayes (2000) found no scientifically significant difference in the abundance of recently metamorphosed Columbia spotted frogs between grazed and ungrazed ponds in eastern Oregon. A similar study by Bull et al (2001), with other native amphibians (Pacific tree frog and long-toed salamander) with similar habitat requirements and mobility to the spotted frog, found no difference in the relative abundance of larval amphibians between fenced (excluded), partially fenced (excluded), and unfenced ponds in eastern Oregon. There is the possibility that tadpoles would be trampled in ponds, but the potential for injury is relatively small and limited to an occasional individual.

Livestock use of ponds has the potential to introduce sediment, increase turbidity, and introduce livestock feces and urine into potential spotted frog habitat. As a result, water quality (temperature, dissolved oxygen, contaminants) in these ponds could be affected, depending on the number of livestock and the amount of time livestock spend in and around the water source. Research by Howard and Munger (2000) has shown that increased nutrients (feces) in these habitats can have a positive effect on growth rates by stimulating production of algae and other vegetation consumed by larval spotted frogs. Bull and Hayes (2000) found that egg mass volume at grazed ponds was greater than that at ungrazed ponds, suggesting that grazed ponds may have greater food abundance or larger individuals. Research has also shown that spotted frog larvae exposed to high concentrations of cattle waste (1.7 fluid ounces of feces and 1 gram urea per gallon of water) experienced lower survival than those exposed to lower concentrations of waste (Howard and Munger 2000). Decreased dissolved oxygen concentrations resulting from high ammonia concentrations (urine) can cause reduced survival and growth of amphibians (Jofre and Karasov 1998) at high concentrations. Due to the low intensity of grazing (number of livestock relative to acres grazed) and the availability of water (quantity and distribution of stock ponds and streams) in the area, it is not expected that grazing would result in

excessively high concentrations of waste in any of the ponds and would not adversely impact potential tadpole populations or habitat.

It is unlikely that adult spotted frogs would be directly impacted during the grazing season due to their mobility. They would be able to avoid livestock trampling at ponds or other areas where they are encountered. Indirectly, removal of riparian vegetation through grazing may increase the susceptibility of spotted frogs to predation by reducing hiding cover. It is unlikely that reduced height of grasses in the allotment would adversely impact cover habitat for spotted frogs because PACFISH and Forest Plan stubble height monitoring has consistently met utilization standards at all designated management areas in the Hidaway Allotment. This monitoring indicates that although vegetation (height) is reduced during the grazing period, residual cover is present in the allotment after livestock graze the allotment.

Grazing would not affect the biomass of insects or insect diversity within the allotment. Several recent studies (Rambo and Faith 1999 and Howard and Munger 2000) found no scientifically significant difference in insect biomass or diversity between grazed and ungrazed segments of streams and ponds. Because insect diversity and abundance is not expected to change in response to grazing, there would be no impact on the spotted frog.

Cumulative Effects: Past activities, actions, and events that have affected the Columbia spotted frog and its habitat include timber harvest, cattle grazing, fencing, and gravel pit construction and other water developments. Past timber harvest within the allotment likely adversely impacted spotted frog habitat by causing disturbance in riparian habitat, particularly where timber harvest occurred up to stream channels. Frog habitats were likely adversely impacted through overgrazing. Overgrazing would have resulted in trampling at ponds and in streams used for breeding. High levels of contaminants entered ponds used for breeding. Fencing of riparian areas resulted in improved stream conditions and improved the quality of spotted frog habitat. Creation of gravel pits during road construction created potential breeding habitat for the spotted frog. Water developments and pond excavation to provide livestock watering areas have created potential breeding habitat in the allotment. These activities, actions, and events have combined to create the existing condition of spotted frog habitat and populations in the allotment.

Ongoing and reasonably foreseeable future activities with a potential to impact the spotted frog and their habitat include maintenance of water developments. Maintenance of water developments (ponds) has the potential to impact tadpoles in the short term, and spotted frog habitat in the long term. An excavator or backhoe is used to remove accumulated sediment from ponds. This activity could result in mortality of tadpoles. Pond cleaning also maintains these man-made structures in a condition that is usable by spotted frogs; if ponds were not periodically cleaned, they would fill with sediment and no longer provide potential breeding habitat.

When the expected effects of the Proposed Action are combined with the residual and expected effects of past, present, and future actions, activities, and events in the analysis area, there would be no adverse impact on spotted frogs or their habitat. The Proposed Action would not contribute to past reductions in habitat quality through overgrazing; however, there would remain a small potential for direct mortality of tadpoles at breeding sites through implementation of this alternative. The Proposed Action would reauthorize grazing in the Tower pasture; grazing this pasture would reduce the number of days grazed in three of the other pastures in the allotment while maintaining existing stocking levels (493 cattle). As a result, disturbance at ponds used for breeding in these pastures could be reduced. Renewed grazing in the Tower pasture could result in trampling of an occasional tadpole, but would not cause deleterious impacts to potential habitat in the pasture.

Alternative 3

Determination and Rationale: Grazing the Hidaway allotment at the existing season of use and stocking levels (Tower pasture rested) **May Impact Individuals or Habitat** for the Columbia spotted frog, but **would not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species**. This determination is based on the following:

- The spotted frog is present in the allotment. Some ponds (and Hidaway Creek) that are accessible to cattle have the potential to provide breeding habitat for this species.
- Egg masses would not be impacted because livestock would enter the allotment after eggs have hatched. If breeding were to occur later in the spring, cattle would not affect egg masses because they do not congregate at ponds or other water sources during this period.
- Tadpoles could potentially be trampled, but the effect would be insignificant based on studies from Bull and Hayes (2000) and Bull et al. (2001). The potential effects would be greater under this alternative in the East Trough, West Trough, and Nine-Sections Units when compared to the Proposed Action because more days would be grazed in these units. The Tower Unit would not be grazed and there could be not impacts to the spotted frog or its habitat in this unit.
- Potential contaminants in ponds would not adversely affect tadpoles because livestock numbers in the allotment are considered lower than studies that show deleterious effects to tadpoles (Jofre and Karasov 1998, Howard and Munger 2000). The potential effects would be similar to those described under the Proposed Action. Although grazing would occur for longer periods in three of the pastures (when compared to the Proposed Action), inputs of feces, urine, and sediment are not expected to adversely impact the Columbia spotted frog or its habitat due to low stocking levels and the availability of water sources in the allotment.
- Adult spotted frogs would likely not be impacted because of their mobility and ability to avoid trampling.
- Forest Plan standards for vegetation utilization are being met. Adequate vegetation is present in the allotment after cattle are removed to provide hiding cover for spotted frogs.
- There would be no adverse cumulative effects on the spotted frog through continued cattle grazing under the existing management system.

Direct and Indirect Effects: The impacts under this alternative would be the same as those that are currently occurring under the existing condition in the East Trough, West Trough, Nine-Sections, and Dry Camas pastures. The Tower pasture has not been grazed since 1994 and would no longer be a part of the allotment; there would be no livestock-related effects on the Columbia spotted frog (tadpoles and adults) or potential breeding habitat in this pasture. The existing turn on date of June 16 (June 1 turn on under the Proposed Action) would continue to be used. As a result, there would be 15 fewer days of grazing under this alternative during the spring, as compared to the Proposed Action. With fewer days of spring grazing, there would be less chance of cattle trampling tadpoles at breeding sites. Within individual pastures, cattle would graze 5 days, 8 days, and 12 days more in the West Trough, East Trough, and Nine-Sections pastures, respectively, when compared to the Proposed Action. Due to the additional time spent grazing these pastures; it is assumed that potential breeding habitat would have greater inputs of sediment, feces, and urine.

Cumulative Effects: The cumulative effects of this alternative would be similar to those described under the Proposed Action. Potential effects on spotted frogs and their habitat would be virtually the same as those that are currently occurring. Because the Tower pasture would not be grazed under this alternative, there would be no impacts on spotted frogs or their habitat in this pasture; conversely, impacts in the other pastures (when compared to the Proposed Action) would be greater due to the fact that more time would be spent grazing in the East Trough, West Trough, and Nine-Sections pastures.

Bald Eagle

Alternative 1 (No Grazing)

Direct and Indirect Effects: With the elimination of grazing in the Hidaway allotment, there would be N**o Effect** to the quality or quantity of bald eagle wintering habitat in or adjacent to the allotment.

Alternative 2 (Proposed Action)

Determination and Rationale: Grazing of the Hidaway allotment under the Proposed Action (including the Tower pasture) would have N**o Effect** on the bald eagle and its habitat within the allotment. This determination is based on the following:

- The bald eagle is not present in the allotment during the grazing season; therefore, cattle grazing is having no direct effects on this species.
- Cattle do not impact potential roosting or nesting habitat along Camas Creek or elsewhere in the allotment. The quality or extent of these habitats is not affected by the presence of cattle or other activities associated with cattle grazing (riding, salting, etc.).
- Potential prey (and carrion) would not be adversely affected. Due to the abundance of forage available in the Tower Fire area, it is not expected that cattle grazing in the Tower pasture will measurably impact large ungulates such as deer and elk.

Direct and Indirect Effects: Cattle are not affecting the structure or composition of forested habitats in the allotment. Cattle grazing would not affect bald eagle habitat or individuals. Bald eagles are not present in the allotment during the period when cattle would be present. Nesting is not known to occur in the area; for these reasons, cattle grazing and activities associated with grazing (riding, salting) would not affect the quality or quantity of potential roosting or nesting habitat or directly impact the bald eagle.

No potential roosting or nesting habitat is present in the Tower pasture and effects to these habitats are not considered in this portion of the allotment.

Because cattle grazing and associated activities, such as riding and gathering, and bald eagle occupancy of the area are separated temporally from one another (they are not occurring at the same time), there would be no potential disturbance of individuals wintering along Camas Creek or individuals making forays south into the allotment. Grazing would not affect the availability of prey or carrion for eagles; impacts on big game (potential carrion) are expected to be minor (see Rocky Mountain elk section).

Cumulative Effects: Past activities, actions, and events that affected the bald eagle and bald eagle habitat include commercial timber harvest and salvage, and firewood cutting. Past timber harvest within the allotment impacted habitat by affecting riparian habitat quality and removing large trees and snags potentially used for roosting and nesting adjacent to Camas Creek. In some instances, harvest occurred up to stream channels. Firewood cutting also removed large snags that could potentially be used as roosts. These activities, actions, and events have combined to create the existing condition of bald eagle habitat and populations in the allotment.

There are no ongoing or reasonably foreseeable future activities in the allotment with a potential to impact the bald eagle or their habitat. Because there would be no direct or indirect effects on individuals or potential roosting or nesting habitat, there would be no cumulative impacts on this species.

Alternative 3

Determination and Rationale: Grazing of the Hidaway allotment under this alternative would have **No Effect** on the bald eagle and its habitat within the allotment. This determination is based on the following:

- The bald eagle is not present in the allotment during the grazing season; therefore, cattle grazing is having no direct effects on this species.
- Cattle do not impact potential roosting or nesting habitat along Camas Creek or elsewhere in the allotment. The quality or extent of these habitats is not affected by the presence of cattle or other activities associated with cattle grazing (riding, salting, etc.).
- Potential prey (and carrion) would not be adversely affected.

Direct and Indirect Effects: Under this alternative, the Tower pasture would not be grazed, and the existing rotation and duration of grazing would be maintained. Grazing under this alternative would have the same effects as those described under the Proposed Action because potential nesting habitat is not present in the allotment.

Cumulative Effects: The cumulative impacts of this alternative would be the same as those described under the Proposed Action. Because there would be no direct or indirect effects on individuals or potential roosting or nesting habitat, there would be no cumulative impacts on this species.

California Wolverine

Alternative 1 (No Grazing)

Direct and Indirect Effects: With the elimination of grazing in the Hidaway allotment, there would be no effect on the quality or quantity of potential wolverine habitat. Cattle are not affecting the structure or composition of potential wolverine habitat; therefore, the complete removal of cattle from the allotment would not impact habitat quality for the wolverine. Elimination of grazing would eliminate potential disturbance associated with grazing management activities (such as riding, vehicle use, gathering, transporting) if a wolverine were to pass through the allotment. The likelihood of this would be very small.

Alternative 2 (Proposed Action)

Determination and Rationale: The proposed activities under this alternative would have **No Impact** on the **California wolverine**. The rationale for this determination is as follows:

- The California wolverine is not known to occur in the analysis area. For this reason, the likelihood of a wolverine being disturbed by permittees during typical livestock management activities is very small.
- Grazing would not change the quality or quantity of potential wolverine foraging habitat in the allotment. There would be no reduction in suitable wolverine habitat through continued grazing within the allotment, or through reinitiation of grazing in the Tower pasture.
- Prey species abundance is not expected to change in response to grazing, and would continue to be adequate to support potential wolverine in the allotment.

Direct and Indirect Effects: Cattle grazing would not directly or indirectly affect the California wolverine. Wolverine are mid to high elevation generalists, typically avoiding large openings. Cattle

grazing would not alter stand structure or composition of, or create openings in, suitable wolverine habitat. In general, cattle would be unlikely to use dense mid and high-elevation forest due to high downed wood densities and lower forage availability. Potential prey for the wolverine would not be affected by grazing. Forest Plan and PACFISH standards for forage utilization have consistently been met in the allotment, indicating that sufficient cover and forage remains after grazing to support wild ungulates and other potential prey.

Grazing of the Tower pasture would increase potential human disturbance in this portion of the allotment; riders and or vehicles would be used to locate, gather, and move cattle within the allotment. If a wolverine were moving through the area during implementation, permittee presence and use of the road system could disturb the wolverine. The wolverine would respond by moving away from disturbance in the short term. The likelihood of this occurring is low because the wolverine is not currently known to occur in the allotment.

Cumulative Effects: Past activities, actions, and events that could have affected wolverine and their habitat include timber harvest, ATV trail system construction and use, OHV use, wildfire, and insect and disease infestations.

Past timber harvest within the allotment has impacted potential wolverine foraging habitat. Large blocks of contiguous forest have been fragmented and openings have been created. Wolverines avoid large openings when foraging.

Development of an ATV trail system in the allotment has increased disturbance through increased noise and human activity. Recent substantial increases in the popularity of ATV recreation has increased use of the trail and road system in the allotment.

The 1996 Tower Fire burned through the southern portion of the allotment, converting dense cover to open, grass and forb dominated habitats. These severely burned areas would not be used until overstory vegetation develops.

Insects and disease agents have also resulted in numerous openings in the forested canopy. Larger openings would be avoided by the wolverine; smaller openings would provide ideal foraging habitat and abundant prey for the wolverine.

These activities, actions, and events have combined to create the existing condition of wolverine habitat in the allotment.

Future activities with a potential to impact wolverine and their habitat include the Weasel hazardous fuels project. The Weasel hazardous fuels project will treat an estimated 2,300 acres. Fuels reduction activities would result in reductions in understory vegetation (cover and foraging habitat) and create openings through the removal of dead, dying, and diseased trees. Work during the project could disturb any potential wolverine that would pass through the area. The project would not likely reduce potential wolverine habitat.

When the expected effects of the Proposed Action are combined with the residual and expected effects of past, present, and future actions, activities, and events in the analysis area, there would be no impact on wolverine or potential wolverine habitat.

Alternative 3

Determination and Rationale: The proposed activities under this alternative would have **No Impact** on the **California wolverine**. The rationale for this determination is as follows:

- The California wolverine is not known to occur in the analysis area. For this reason, the likelihood of a wolverine being disturbed by permittees during typical livestock management activities is very small. Grazing would not occur in the Tower pasture, which contains the highest quality potential wolverine habitat in the allotment. Potential disturbance would be less under this alternative when compared to the Proposed Action; this is primarily due to the fact that the Tower pasture would not be grazed under this alternative.
- Grazing would not change the quality or quantity of potential wolverine foraging habitat in the allotment. There would be no reduction in suitable wolverine habitat through continued grazing within the allotment.
- Prey species abundance is not expected to change in response to grazing, and would continue to be adequate to support potential wolverine in the allotment.

Direct and Indirect Effects: Under this alternative, there would be less impact to potential wolverine habitat than the Proposed Action because the Tower unit would not be grazed. Because the wolverine is not known to occur in the analysis area, there would be no difference between this alternative and the Proposed Action with respects to disturbance.

Cumulative Effects: The cumulative effects of this alternative would be the same as those described under the Proposed Action.

Canada Lynx

Alternative 1 (No Grazing)

Determination and Rationale: Under this alternative, there would be **No Effect** to the **Canada lynx** or its habitat. No activities with a potential to disturb lynx or affect their habitat would occur under this alternative.

Direct and Indirect Effects: There is no potential lynx habitat within that portion of the Hidaway allotment that is currently grazed. Cessation of grazing activities in the allotment would eliminate potential disturbance associated with grazing and grazing management. This alternative would have no impact on lynx habitat or the lynx, if it were to pass through the area.

Alternative 2 (Proposed Action)

Determination and Rationale: The Proposed Action would have **No Effect** on the **Canada lynx** and potential lynx habitat within the Hidaway allotment. The reasons for this determination are as follows:

- There would be no direct or indirect effects on the lynx under this alternative. All mapped habitat on the Umatilla and Wallowa-Whitman National Forests has been classified as unoccupied lynx habitat (June 20, 2006 Memo). Disturbance to the lynx is not expected because mapped habitat is unoccupied and there are no ongoing or proposed activities identified as mortality risk factors (trapping, shooting, predator control, and highways) that would occur under the Proposed Action.
- Cattle grazing would not convert suitable lynx habitat (denning and foraging) to an unsuitable condition. The composition and structure of suitable foraging and denning habitat would not be affected by proposed grazing of the Tower pasture. Habitat suitability in the Meadow Creek and Upper Grande Ronde River West LAUs would not change in response to cattle grazing in the Tower pasture. Cattle would generally avoid foraging and denning habitat due to physical barriers present in these habitat areas.

- Grazing will not impede or delay the growth of currently unsuitable habitat into a suitable condition. Cattle grazing would not alter the composition or structure of the vegetative community in the Tower pasture or the allotment. The Meadow Creek and Upper Grande Ronde River West LAUs would continue to be 40 percent and 23.1 percent unsuitable in the short term with renewed grazing in the Tower pasture, respectively. In the mid and long term, habitat made unsuitable by the Tower Fire will become suitable foraging habitat for the lynx as succession moves these habitats toward a mid-seral condition.
- Grazing will not impede or delay the successful regeneration of the shrub and tree component within that portion of the Tower Fire lying within potential lynx habitat. Cattle have been excluded from the Tower pasture since 1994, two years prior to the Tower Fire (1996). Herbaceous vegetation, shrubs, and trees have become well established in the fire area. Introduction of cattle back into the pasture would result in utilization of herbaceous vegetation and shrubs; however, grazing management would ensure that Forest Plan standards for utilization are met, and that use by cattle would not exceed what is recoverable in the next growing season.
- Grazing in potential lynx habitat would not alter the composition or structure of native herbaceous and shrub plant communities. Due to the size of the Tower pasture, it is expected that utilization of herbaceous vegetation will be light and highly dispersed. Utilization of shrubs is also expected to be light. Grazing would be managed to meet Forest Plan standards for utilization. Meeting these standards indicates that the vegetative community is not being adversely affected or altered by grazing.
- Habitat preferences of cattle and snowshoe hare generally do not overlap. Cattle tend to occupy and utilize more open grass-dominated habitats, while snowshoe hare prefer dense regeneration thickets. Incidental interspecific competition may occur between cattle and snowshoe hare in the allotment; however, it is not anticipated that there would be any adverse effects on snowshoe hare habitat or populations. Secondary prey species and their habitats would not be adversely affected by grazing under this alternative. If a lynx were to pass through the area, sufficient forage (snowshoe hare and secondary prey species) would be present in the allotment (particularly the Tower pasture) to support this individual.
- There would be no adverse effect on potential lynx habitat when the residual effects of past, present, and reasonably foreseeable future activities, actions, and events are combined with the expected impacts of this alternative.

Direct and Indirect Effects: The Canada lynx does not occur within the Hidaway allotment, the North Fork John Day Ranger District, or that portion of the Wallowa-Whitman National Forest within the allotment. There have been no confirmed sightings in these areas since 1999, and there is no evidence that reproduction has ever occurred in these areas. These habitats are considered unoccupied by the Canada lynx (see June 20, 2006 revision of the Canada Lynx Conservation Agreement).

Cattle would not directly affect Canada lynx; cattle would not trample or otherwise impact the lynx. Resumption of grazing in the Tower pasture would not change suitable lynx habitat to an unsuitable condition; cattle grazing would not alter the composition or structure of existing lynx denning or foraging habitat. Cattle would avoid mapped lynx denning habitat due to high downed wood densities in these stands. Downed wood constitutes a physical barrier that cattle are either unable or unwilling to enter. Grazing of the Tower pasture would not slow or retard the growth of currently unsuitable habitat into a suitable condition. Cattle have been excluded from the Tower pasture since 1994, two years prior to the Tower Fire (1996). Herbaceous vegetation, shrubs, and trees have become established in the fire area. Introduction of cattle back into the pasture would result in utilization of herbaceous vegetation and shrubs. Grazing management would ensure that Forest Plan standards for utilization of herbaceous and shrub vegetation are met, and that use by cattle would not exceed what is recoverable in the next growing season.

There is potential that cattle could compete with lynx prey for forage. Snowshoe hare, the primary food source for the lynx, prefer dense conifer regeneration for foraging. Secondary prey species also utilize these habitats. Cattle prefer more open, herbaceous vegetation-dominated areas for foraging. Cattle would have difficulty accessing portions of the Tower burn due to dense lodgepole regeneration and downed wood; likewise, it is these habitats that are most preferred by the snowshoe hare for foraging and security/cover. Habitat preferences of cattle and snowshoe hare generally do not overlap. Although incidental interspecific competition between these two species may occur, it would not adversely impact snowshoe hare habitat or population levels. Grazing would be managed to meet Forest Plan standards for utilization, so incidental grazing of potential snowshoe hare habitat is not expected to adversely impact this species. By meeting standards contained in the Forest Plan, there would also be no adverse impacts on alternative prey species or their habitat; grass cover and shrubs would be available for small rodents and other potential prey after cattle leave the allotment.

Cumulative Effects: Past activities, actions, and events that affected potential lynx habitat include timber harvest, ATV use and trail system construction, OHV use, and wildfire.

Past timber harvest in high elevation areas reduced the amount of suitable habitat in the allotment and LAU. Foraging habitats were thinned, making them less suitable for snowshoe hare, the primary food source of the lynx. Denning habitats were also harvested; overstory cover was reduced and large wood required for denning was removed or burned.

Creation of an ATV trail system in the allotment has increased disturbance through increased noise and human activity. Recent increases in the popularity of ATV recreation have substantially increased use of the trail and road system in the allotment.

The 1996 Tower Fire burned through the southern portion of the allotment, converting suitable lynx habitat to an unsuitable, early seral condition. In the near future, regenerating lodgepole pine stands will provide suitable foraging habitat for the lynx; these habitats are favored habitats of the snowshoe hare. It will require as long as 80 to 100 years for severely burned stands to develop into suitable denning habitat. These activities, actions, and events have combined to create the existing condition of potential lynx habitat in the allotment.

Ongoing activities with a potential to impact potential lynx habitat include the Weasel hazardous fuels project. This project will treat an estimated 2,300 acres. No potential lynx habitat would be affected by this project; suitable lynx habitat lies adjacent to a portion of the project area. Potential disturbance associated with mechanical fuels treatment activities (mulching, processor-forwarder, or skyline operations) and transport of woody material out of the project area would increase human disturbance in the allotment. There are no other reasonably foreseeable future activities with a potential to affect potential lynx habitat.

When the expected effects of the Proposed Action are combined with the residual and expected effects of past, present, and future actions, activities, and events in the analysis area, there would be no impact on potential lynx habitat. The Proposed Action would have an incidental impact on snowshoe hare and their habitat; the Canada lynx would not be affected by this occurrence.

Alternative 3

Determination and Rationale: This alternative would have **No Effect** to the **Canada lynx**. The reasons for this determination are as follows:

- There would be no direct or indirect effects on the lynx under this alternative. The Umatilla and Wallowa-Whitman National Forests have been designated unoccupied lynx habitat (June 20, 2006

Memo). Mortality of individual lynx is not expected because mapped habitat is unoccupied and there are no ongoing or proposed activities identified as mortality risk factors (trapping, shooting, predator control, and highways) that would occur under this alternative.
- Cattle grazing would not convert suitable lynx habitat (denning and foraging) to an unsuitable condition. All potential lynx habitat in the Hidaway allotment is confined to the Tower pasture; this pasture would not be grazed under this alternative.

Direct and Indirect Effects: The Canada lynx does not occur within the Hidaway allotment, the North Fork John Day Ranger District, or that portion of the Wallowa-Whitman National Forest lying within the allotment. Grazing would not occur in potential lynx habitat (the Tower pasture) under this alternative. Grazing would occur within a portion of the Meadow Creek and Upper Grande Ronde River West LAUs. Grazing-related activities (such as riding, gathering, vehicle use) could disturb lynx if an individual were to pass through the allotment.

Cumulative Effects: The cumulative effects of this alternative would be similar to those described under the Proposed Action, with the exception that no grazing would occur in the Tower pasture or the Tower Fire area.

Gray Wolf

Alternative 1 (No Grazing)

Determination and Rationale: This alternative would have **No Effect** on the **gray wolf** or potential habitat for this species. Grazing-related disturbance and impacts on forage and habitat for potential prey would be eliminated through cessation of grazing.

Direct and Indirect Effects: Under this alternative, the elimination of cattle grazing in the allotment would result in the elimination of grazing-related disturbance and greater forage availability for potential wolf prey. Cessation of grazing would not affect potential denning or rendezvous sites or affect habitat quality or quantity for potential prey.

Alternative 2 (Proposed Action)

Determination and Rationale: The Proposed Action would have **No Effect** on the **gray wolf**. The rationale for this determination is as follows:

- The gray wolf is not currently known to occur in the allotment or that portion of the Umatilla and Wallowa-Whitman National Forests within the analysis area.
- Grazing would not reduce the quality of potential wolf habitat in the allotment.
- Prey species are not being adversely affected by grazing; utilization standards are consistently being met within the allotment, indicating that sufficient forage is present for wildlife after cattle are removed. Grazing of the Tower pasture is not expected to adversely impact potential prey species within the allotment.
- No denning or rendezvous sites have been identified on the District; therefore, there would be no impact on these habitats.

Direct and Indirect Effects: The gray wolf is currently not known to occur on the District or in the Hidaway allotment. Dens and rendezvous sites would not be affected by the proposed activities because neither of these habitats has been identified on the District.

Grazing would not affect the suitability of potential wolf habitat in the analysis area. There is potential that domestic cattle could compete with potential wolf prey (elk and deer) for forage within the allotment. Forest Plan and PACFISH utilization monitoring (herbaceous vegetation and shrubs) has consistently met standards in the Hidaway allotment. Management of the Tower pasture (rested since 1994) is expected to have similar success in regards to meeting monitoring standards. Compliance with Forest Plan standards (as indicated by Forest Plan and PACFISH monitoring) and the stocking levels in the allotment indicate that cattle are not adversely impacting potential wolf prey elsewhere in the allotment. There would be no increase in the number of cattle grazed in the allotment under this alternative despite the fact that grazing in the Tower unit would resume. Forage in the Tower pasture is currently extensive and high in quality due to the 1996 Tower Fire. Because stocking would remain low and forage is not expected to be lacking in the Tower pasture, it is expected that resumption of grazing in the Tower pasture would not affect potential wolf prey species.

Cumulative Effects: Past activities, actions, and events that affected wolf habitat include timber harvest, cattle grazing, ATV use and trail system construction, and wilderness designation (1984). See the Rocky Mountain elk section for a discussion of cumulative effect of past, present, and future activities for this species. Road construction associated with timber harvest increased road densities in the analysis area and reduced the size of unroaded blocks of habitat in the allotment. Wolves have been found to prefer habitat with few roads (less than one mile per square mile) and little human disturbance. Development of the ATV trail system in the analysis area has also increased human disturbance in the allotment. Recent increases in the popularity of ATV recreation have dramatically increased use of the trail and road system in the allotment. Wilderness designation (North Fork John Day Wilderness, 1984) just south of the allotment preserved a large block of unroaded habitat with the potential to support the gray wolf. The 1996 Tower Fire burned through the southern portion of the allotment, improving foraging habitat for elk while reducing cover habitat. These activities, actions, and events have combined to create the existing condition of gray wolf habitat and prey populations in the allotment.

Ongoing activities with a potential to impact gray wolf habitat and prey include ATV trail use and all activities that affect prey (see elk section for discussion of these activities, actions, and events). Potential prey (elk and deer) tend to avoid ATV trails when in use. The Weasel Fuels Reduction project could cause disturbance to potential gray wolf movement through the project area. Removal of dead trees may open the stand to make deer and elk more vulnerable as prey but would not likely have a substantial effect to the populations of these ungulates.

When the expected effects of the Proposed Action are combined with the residual and expected effects of past, present, and future actions, activities, and events in the analysis area, there would be no impact on potential gray wolf habitat. Grazing under the Proposed Action would not contribute to past reductions in habitat quality for elk. Elk and elk habitat would not be adversely affected by the Proposed Action.

Alternative 3

Determination and Rationale: This alternative would have **No Effect** on the **gray wolf**. The rationale for this determination is as follows:

- The gray wolf is not currently known to occur in the allotment or those portions of the Umatilla and Wallowa-Whitman National Forests lying within the analysis area.
- Grazing would not reduce the quality of potential wolf habitat in the allotment.

- Prey species would not be adversely affected by grazing; utilization standards are consistently being met within the allotment, indicating that sufficient forage is present for wildlife after cattle are removed.
- No denning or rendezvous sites have been identified on the District; therefore, there would be no impact on these habitats.

Direct and Indirect Effects: Grazing under this alternative would have similar effects as those described under the Proposed Action. The Tower unit would not be grazed under this alternative;, potential impacts on big game (potential prey) resulting from competition with domestic livestock would not occur in this pasture. As a result, grazing that would have been spread between five pastures under the Proposed Action would be confined to four pastures under this alternative (the current management situation in the allotment). Forest Plan and PACFISH utilization standards have been consistently met in the Nine Sections, Dry Camas, East Trough, and West Trough pastures. Compliance with Forest Plan standards indicates that cattle are not adversely impacting potential wolf prey (elk and deer) in the allotment.

Cumulative Effects: The cumulative effects of this alternative would be similar to those described under the Proposed Action, with the exception that the Tower unit would not be grazed under this alternative. Because the Tower unit would not be grazed, there would be no cumulative impacts of grazing in this unit.

Species Of Interest - Olive-Sided Flycatcher

Alternative 1 (No Grazing)

Direct and Indirect Effects: This species would not be directly affected by eliminating grazing in the Hidaway allotment. Elimination of grazing would improve habitat quality for this species. Riparian shrubs would not be affected by grazing under this alternative. Shrub communities would become more contiguous and widespread in the absence of grazing. Recruitment of young shrubs could also increase if grazing were to cease.

Alternative 2 (Proposed Action)

Direct and Indirect Effects: Cattle grazing would not directly affect the olive-sided flycatcher. Habitat quality in late and old structure would not be affected by cattle grazing. Portions of Dry Camas, Butcherknife, and Camp Creeks have been excluded from cattle; grazing would not affect riparian shrub communities along these portions of these streams. Cattle are currently able to access portions of Butcherknife, Line, and Hidaway Creeks; heavy downed wood accumulations and steep hillslopes decrease the likelihood of cattle accessing Hidaway and Line Creek. Where cattle do access streams, they browse riparian shrubs, especially late in the grazing season when forage in the uplands has cured out. Cattle grazing can reduce the abundance of riparian shrubs; young regenerating shrubs are particularly vulnerable to grazing. Proposed fences along lower Butcherknife and Dry Camas would exclude or limit the access of cattle to these streams. Although grazing of shrubs would meet Forest Plan utilization standards, potential nesting habitat for the olive-sided flycatcher would be reduced by grazing, but would not be different than current grazing out side of the Tower pasture. It is not expected that seasonal grazing of riparian shrubs within Forest Plan standards would adversely impact individual olive-sided flycatcher or the population in the analysis area.

Cumulative Effects: Past activities, actions, and events that affected the olive-sided flycatcher and their habitat include timber harvest and cattle grazing. Past timber harvest occurred within riparian areas, impacting shrub communities. Grazing adversely impacted olive-sided flycatcher habitat

through overgrazing during the early 1900s through the 1970s. Riparian vegetation was heavily grazed, resulting in reductions in potential nesting habitat. These activities, actions, and events have combined to create the existing condition of olive-sided flycatcher habitat and populations in the allotment.

Livestock grazing is the only reasonably foreseeable future activity with a potential to impact the olive-sided flycatcher and their habitat. When the expected effects of the Proposed Action are combined with the residual and expected effects of past, present, and future actions, activities, and events in the analysis area, there would be no adverse impact on the olive-sided flycatcher or their habitat. The Proposed Action would contribute to past reductions in riparian shrubs. These seasonal reductions would not adversely impact the olive-sided flycatcher or their habitat. Grazing in the Tower pasture would reduce the number of days grazed in three of the other pastures in the allotment while maintaining existing stocking levels (493 cattle). The effects to riparian vegetation in these pastures would be reduced. Because grazing has not occurred in the Tower pasture since 1994 riparian shrubs have had sufficient time to become established. Grazing would not reduce existing riparian shrubs in the fire area. Grazing could combine with wild ungulate grazing to reduce shrub recruitment.

Alternative 3

Direct and Indirect Effects: The direct and indirect effects of this alternative are similar to those described under the Proposed Action in areas outside of the Tower unit. Cattle grazing would not directly affect the olive-sided flycatcher. Under this alternative, the Tower unit would not be grazed; potential olive-sided flycatcher habitat in the Tower fire area would not be affected. Elsewhere within the allotment, cattle grazing can reduce the abundance of riparian shrubs; young regenerating shrubs are particularly vulnerable to grazing. The allotment is currently meeting Forest Plan and PACFISH standards for utilization of upland and riparian vegetation, indicating that seasonal grazing of riparian shrubs is not adversely impacting suitable habitat for the olive-sided flycatcher population in the allotment.

Cumulative Effects: The cumulative effects of this alternative would be similar to those described under the Proposed Action. Under this alternative, the Tower pasture would not be grazed. Livestock grazing would therefore have no impact on potential olive-sided flycatcher habitat in this pasture. Elsewhere in the allotment, the effects on potential olive-sided flycatcher habitat would be the same as those described under the Proposed Action.

Neotropical Migratory Birds

Alternative 1 (No Grazing)

Direct and Indirect Effects: Elimination of grazing would directly and indirectly impact neotropical migratory birds and their habitat. Cessation of cattle grazing would eliminate nest loss and potential mortality of neotropical migratory birds through grazing and grazing-related activities. The quality of riparian habitats affected by grazing, which include instream habitat, riparian shrub habitat, and aspen stands, would show an immediate response to the elimination of grazing. Recruitment of riparian shrubs would increase in the absence of grazing; riparian shrubs would become more dense and continuous along streams. Elimination of cattle from the allotment would increase recruitment of new aspen at the Blarney Springs aspen stand, although elk and deer would continue to graze this stand. There would be an immediate response to aspen with the elimination of cattle grazing, improving the quality and quantity of aspen habitat in the allotment. Improved riparian shrub and aspen habitat quality would positively impact neotropical migratory birds associated with these habitats.

Elimination of grazing would have no impact on the quality of dry forest or mesic mixed conifer forest habitat in the allotment.

Alternative 2 (Proposed Action)

Direct and Indirect Effects: Cattle grazing would reduce nesting cover (vegetation) for ground nesting birds within the allotment. There is also the potential that cattle could trample nests of ground nesting birds. Reduced nesting cover and trampling of potential nesting habitat could displace individual birds, causing them to leave nests unattended for longer periods of time than normal, or result in nest abandonment. There is potential for cattle to trample nests and young birds. The risk of displacement, nest abandonment, and trampling of nests and young would be small due to the low stocking levels and distribution of cattle grazing in the allotment. Studies by Bareiss et al. (1986) and Jensen (1990) note that stocking densities exceeding 1 animal unit per acre (2.5 animal units per hectare – AU/ha) can have a significant impact through trampling of nests. Stocking densities less than 1 animal unit per acre were reported to have insignificant impacts on ground nesting birds. Currently, there are 18 acres per head month (0.06 animal units per acres) in the allotment. According to the research, the potential impact to ground nesting neotropical birds under this alternative would be insignificant. Re-initiating grazing in the Tower unit would not result in an increase in the number of cattle grazed in the allotment. The amount of time spent grazing in early season pastures (East Trough, West Trough, and Nine-Sections) would be reduced under this alternative. There would be a reduced risk of displacing breeding birds and nest abandonment in these pastures, as a result. Only a portion of the land in the allotment is actually grazed by cattle. Ungrazed habitats are maintained in those areas that are inaccessible or undesirable to cattle and would result in no disturbance to neotropical migratory birds. Grazing is not expected to negatively affect productivity of migratory birds. Nest loss and trampling of young birds would be limited to an occasional individual. If nests or young are lost, birds would likely renest.

Cattle grazing is not adversely affecting any of the dry forest, mesic mixed conifer forest, or subalpine fir forest priority habitat features (Table 41) described in the Strategy (Altman 2000). Cattle grazing is not affecting the structure or composition of old forest with large trees and snags, old forest interspersed with grassy openings, single-stratum old forest with patches of regeneration, or patches of burned old forest in the dry upland forest habitat type. Cattle grazing is not affecting large snags, overstory canopy closure, multi-layered structure, or edges and openings created by wildfire in the mesic mixed conifer habitat type. Cattle have the potential to affect dense understory shrub layers in mesic mixed conifer habitats. Adverse impacts are unlikely in these habitats due to heavy downed wood accumulations that deter cattle use, the low stocking levels in the allotment, and cattle distribution. Grazing is not affecting the structure or composition of subalpine fir forest habitats, nor would it retard the recovery of these habitats in the Tower Fire area.

Cattle grazing is not causing adverse impacts to riparian shrub communities or directly impacting riparian shrub associated birds. Portions of Dry Camas, Butcherknife, and Camp Creeks are excluded from cattle grazing. Shrubs in these areas are only affected by wild ungulate grazing. Proposed fences along lower Butcherknife Creek and Dry Camas Creek would limit or exclude cattle grazing of riparian vegetation along portions of these streams. Monitoring indicates that riparian shrub communities in the grazed portions of the allotment are not being adversely affected by cattle grazing. Generally, these habitats are inaccessible to cattle due to heavy downed wood densities and steep hill slopes. Grazing can slow regeneration of riparian shrub communities through grazing of young shrubs. Utilization of shrubs is typically highest late in the grazing season after grass has cured. Grazing the Tower pasture would reduce potential impacts on riparian shrubs elsewhere in the

allotment by shifting cattle use and providing green, palatable grass late in the grazing season. The low stocking levels in the allotment also reduce the potential for adverse effects on riparian shrub habitat. Grazing of riparian shrub habitats would not reduce the productivity of neotropical migratory birds associated with this habitat type.

Cattle grazing has the potential to adversely impact aspen habitat where these stands are not fenced. Currently, there are two aspen stands in the allotment. A portion of one stand is currently grazed. The proposed expansion of the riparian pasture along Dry Camas Creek would include the aspen stand located near Blarney Springs. Because regeneration would continue to be retarded by cattle grazing (and wild ungulate grazing) in unfenced aspen stands, there would be an adverse future impact on these habitats and the birds associated with this habitat type. This unfenced aspen stand would only be grazed by cattle for a maximum of seven days during the grazing season. This would limit the effects of cattle grazing to this stand.

Cumulative Effects: Past activities, actions, and events that affected neotropical migratory birds and their habitat include commercial and non-commercial timber harvest, cattle grazing, fire suppression, woodcutting, wildfire, and prescribed underburning. Past timber harvest within the allotment impacted migratory bird habitat by causing changing the composition and structure of forested stands. Overgrazing during the early 1900s through the 1970s adversely impacted riparian shrub habitats. Riparian vegetation was heavily grazed, resulting in reductions in potential nesting habitat. Heavy grazing also impacted understory vegetation in dry forest and mesic mixed conifer habitats, resulting in trampling of nests. Nearly a century of fire suppression has resulted in changes in the structure and composition of forested stands. These changes have had the greatest impact on dry forest habitats. Open stands once dominated by large ponderosa pine with open understories have been invaded by shade tolerant tree species and the majority of large trees and snags were removed by timber harvest. Woodcutting has reduced the density of snags along open forest roads. Areas away from open roads or inaccessible to woodcutters have not been affected by this activity. Wildfire has had profound impacts on neotropical migratory bird habitat. The Tower Fire (1996) burned the majority of the Tower pasture at high and moderate fire intensities. Dense mesic mixed conifer and subalpine (lodgepole pine) habitats were converted to open, early seral habitats with high snag densities. Species adapted to dense habitats were displaced, and species requiring high snag and downed wood densities benefited. Prescribed burning has affected potential habitat by taking the place of periodic natural fire as a maintaining force in open and semi-open forested habitats. Prescribed fire has slowed the encroachment of shade tolerant vegetation and invigorated understory vegetation, maintaining dry forest habitat features. These activities, actions, and events have combined to create the existing condition for neotropical migratory bird habitat and populations in the allotment.

Ongoing activities with a potential to impact neotropical migratory bird habitat and populations include woodcutting and mechanical fuels treatments (Weasel HFR Project). Woodcutting would continue to reduce snag densities adjacent to open roads, reducing potential habitat for cavity excavating birds. The magnitude of this reduction would be small due to the limited area that would be affected by woodcutting. The Weasel HFR Project would reduce snag and downed wood densities in the analysis area. Approximately 2,300 acres are scheduled for treatment. Machinery could impact birds through nest loss and displacement to areas with little or no disturbance. All Forest Plan standards for snags and downed wood would be met in fuels treatment units following treatment.

Reasonably foreseeable future activities in the allotment include aspen fencing. Fencing of the Blarney Springs aspen stand would protect this stand from grazing, allowing for regeneration to occur, and improving habitat for aspen associated neotropical migration birds.

When the expected effects of the Proposed Action are combined with the residual and expected effects of past, present, and future actions, activities, and events in the analysis area, there would be no

adverse impact on dry forest, mesic mixed conifer, subalpine, or riparian shrub associated neotropical migratory birds or their habitat. The Proposed Action would contribute to past reductions in riparian shrubs; however, these seasonal reductions would not adversely impact habitat for neotropical migratory birds associated with this habitat type. The Proposed Action would reauthorize grazing in the Tower pasture; grazing this pasture would reduce the number of days grazed in three of the other pastures in the allotment while maintaining existing stocking levels (493 AUMs). As a result, effects on riparian vegetation in these pastures would be reduced. Because grazing has not occurred in the Tower pasture since prior to the Tower Fire, riparian shrubs have had sufficient time to become established in the fire area. Grazing would not adversely impact riparian shrubs in the fire area; however, cattle grazing could combine with wild ungulate grazing to reduce shrub recruitment. Grazing would have minimal impacts on dry forest, mesic mixed conifer, and subalpine habitats in the analysis area. Cattle grazing would have adverse impacts on unfenced aspen in the proposed Dry Camas Riparian Pasture. Future fencing of this stand would begin to reverse the impacts of past grazing on this aspen stand.

Alternative 3

Direct and Indirect Effects: The effects of this alternative would be similar to those described under the Proposed Action. The Tower pasture would not be grazed under this alternative, resulting in no effect to the subalpine fir forest habitat type. This alternative would not adversely affect priority habitat features in the dry forest, mesic mixed conifer, or riparian shrub habitat types or affect associated neotropical bird species. Monitoring indicates that riparian shrub communities in the allotment are not being adversely affected by cattle grazing. Proposed fencing would increase the size of a present riparian pasture that includes a portion of the Blarney Springs aspen stand. This pasture would be limited to seven days a season for grazing, reducing grazing impacts to this aspen stand.

Cumulative Effects: The cumulative effects of this alternative would be similar to those described under the Proposed Action. The Tower pasture would not be grazed under this alternative. When the expected effects are combined with the residual and expected effects of past, present, and future actions, activities, and events in the analysis area, there would be no adverse impact on dry forest, mesic mixed conifer, subalpine, or riparian shrub associated neotropical migratory birds or their habitat. Cattle grazing would have adverse impacts on unfenced aspen in the Dry Camas pasture. Future fencing of this aspen stand would begin to reverse the impacts of past grazing and allow regeneration to occur.

MANAGEMENT INDICATOR SPECIES

The Forest Plan designates Management Indicator Species to represent larger groups of animals associated with the major habitat types on the Forest. Habitat conditions for management indicator species, as well as for all other wildlife species on the Forest must be managed to maintain viable populations (USDA 1990, p. 2-9). MIS species for the Forest are presented in Table 42.

Table 42: Wildlife Management Indicator Species on the Umatilla National Forest

Species	Habitat Type
Rocky Mountain Elk	General forest habitat and winter range
Pileated woodpecker	Dead/down tree habitat (mixed conifer): mature and old stands
Northern three-toed woodpecker	Dead/down tree habitat (lodgepole pine): mature and old stands
Pine marten	Mature and old stands: high elevations (≥ 4,000 feet)
Primary cavity excavators	Dead/down tree (snag) habitat

The potential effects of livestock grazing in the Hidaway allotment on Rocky Mountain elk and elk habitat will be assessed in this document. Because cattle grazing would not directly or indirectly affect other MIS, or their habitat (refer to Project Record, Wildlife Existing Conditions Report), there will be no further analysis of effects for these species.

Rocky Mountain Elk

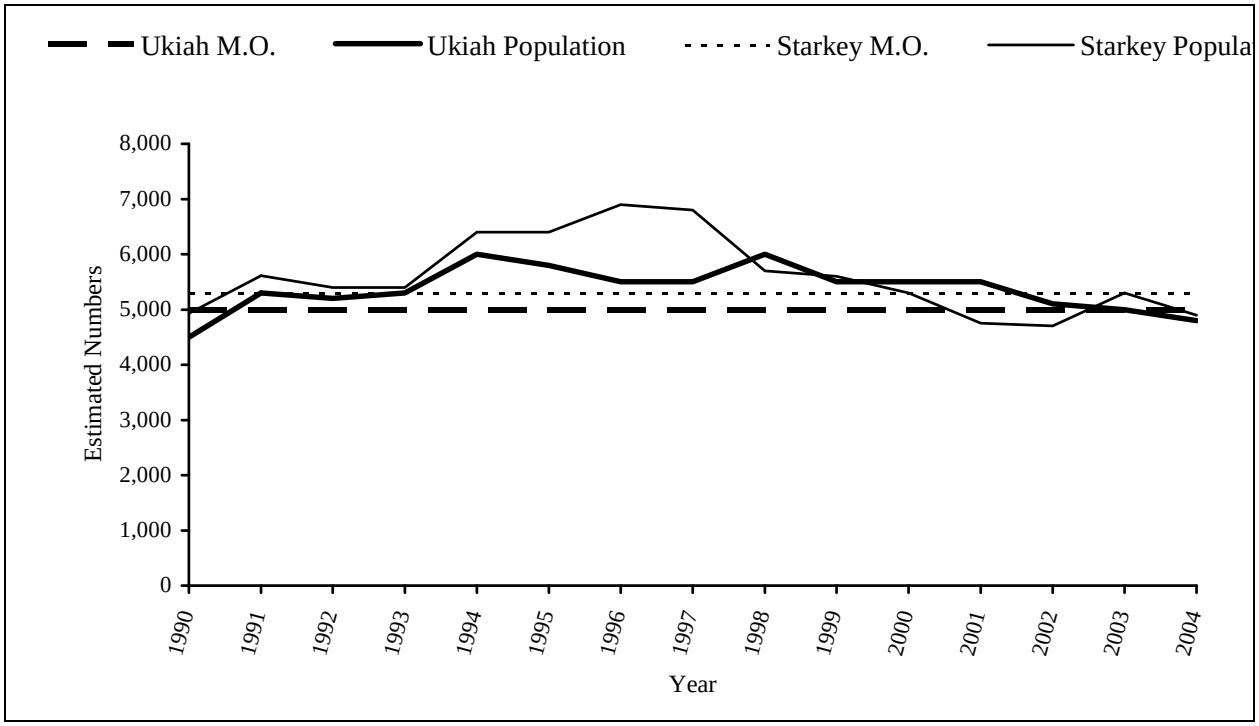
EXISTING CONDITIONS

The Hidaway allotment lies within the Ukiah and Starkey wildlife management units (WMU). The majority of the allotment lies within the Ukiah wildlife management unit.

Elk populations in these units have remained relatively stable and above (Figure 7) the management objectives (MO) set by the Oregon Department of Fish and Wildlife (ODFW). Elk populations dropped below the management objective for the Starkey wildlife unit in 2000; the Ukiah unit dropped below management objectives in 2002. The elk population has slowly been declining in both units since that date. Elk herd composition has remained somewhat stable over the last 14 years in the Ukiah unit. The number of calves per 100 cows has ranged from a high of 46 (1991) to a low of 24 (2004). Calf ratios in the Starkey unit have ranged from 44 (1992) to 16 (2004) over the past 14 years. The bull ratio (bulls per 100 cows) in the Ukiah unit has varied greatly over the past 14 years. Bull ratio has ranged from a low of 2 bulls per 100 cows in 1995 to 9 bulls per 100 cows in 2004. Bull ratios in the Starkey unit have ranged from a low of 4 (1991) to a high of 12 in 1998. Currently (2004), there are 8 bulls per 100 cows in the Starkey unit.

Recent declines in the elk population, particularly the decrease in calf-to-cow ratios, are becoming a management concern in these units and northeast Oregon in general. Decreases are widely thought to be the result of increasing populations of cougars and subsequent increases in predation on calves. Additional concerns include changes in habitat conditions that affect winter survival of calves and pregnant cows.

Figure 7: Elk Population Trends for the Ukiah and Starkey Wildlife Management Units



Preferred habitat for elk consists of a mixture of forest and non-forest habitat types and a variety of forest structure to provide cover and forage for summer or winter usage (USDA 1990, FEIS 2006). The Hidaway allotment contains both summer range and winter range habitats. Summer range occurs throughout the allotment at mid and high elevations. Winter range (management area C3) occurs in the western portion of the allotment at lower elevations. Approximately 7 percent of the analysis area (2,662 acres) consists of winter range. Two winter ranges are represented in the analysis area; they are the Cable Creek and Albee winter ranges. The majority of elk graze private lands during the winter because of the lower elevations; in low-snow years or late spring, winter range habitat on National Forest lands are utilized to a greater degree. Calving occurs in the late spring in the allotment. Calving habitat is generally located at middle elevations where there is abundant forage, water, and hiding cover. Riparian areas are often used for calving and concealment of young.

Forest Plan

The big game habitat effectiveness indicator (HEI) model (Forest Plan, Appendix C) is used to predict the influence of forest management on elk and elk habitat. The model is biologically based using the distribution of cover and forage, cover quality, and road factors to help indicate how effective an area will be in supporting big game. Generally, a higher HEI value corresponds with higher quality elk habitat and good elk numbers. Cattle grazing would have no impact on the quality or distribution of cover habitat in the allotment. Cattle grazing would also not change the open road density in the analysis area. Because cattle would have no effect on the constituent elements of the HEI equation, HEI will not be calculated for this analysis and there will be no further analysis of grazing effects on HEI.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Grazing)

Direct and Indirect Effects: Elimination of grazing within the Hidaway allotment would result in more forage being available year-round for elk. This would be especially important on winter range habitats where forage can be limited during portions of the year. In the absence of cattle, elk may become more widely distributed through the allotment. Over time, riparian habitat conditions would improve in the absence of grazing; and recruitment of young shrubs would increase, providing replacements for decadent shrubs. As a result, potential calving habitat quality would be improved for elk.

Alternative 2 (Proposed Action)

Direct and Indirect Effects: Research at the Starkey Experimental Forest and Range shows that cattle and elk diets show a high degree of overlap during the grazing season. Livestock grazing could result in competition between cattle and elk, especially in the late summer when forage may be limiting.

Livestock grazing can leave winter/early spring range with insufficient forage reserves to carry the desired numbers of big game through the critical winter/early spring period. Winter range habitats within the allotment would not be grazed late in the summer, leaving more and better quality forage for elk.

Cattle use would be widely distributed in the Tower Pasture, primarily due to the size of this pasture, and would occur late in the grazing season. Grazing of this pasture would not impact winter range habitat or elk. Elk are generally not present in this pasture during the winter because of the higher elevation and snow depth.

Forest Plan and PACFISH utilization standards have been consistently met in the Hidaway allotment since this monitoring began. Reauthorization of grazing in the Tower pasture would contribute to the continued attainment of standards in the future. Adherence to the proposed season of use, forage utilization standards, and effective monitoring for compliance would reduce potential effects to elk.

Consistent attainment of standards indicates that adequate forage is being allocated to elk to meet or move towards big game management objectives. Use of the Tower pasture would reduce the number of days spent in three of the pastures in the allotment. One pasture (Dry Camas) would be used one more day than what is presently occurring. The current density of cattle would not be expected to result in adverse effects to elk in any of the grazed pastures.

Current research suggests that cattle grazing can affect habitat selection and distribution of elk in the summer (Coe et al. 2005). Elk would likely avoid cattle when they are encountered, choosing habitat elsewhere. Due to the size of the allotment, current cattle stocking densities, and the fact that cattle do not graze an entire pasture at any one time, it is unlikely that displacement (or selection of habitat without cattle) would adversely affect elk.

Grazing by cattle is not adversely affecting key big game winter range habitat within the allotment. Pastures with winter range habitat (West Trough and Nine Sections) have consistently met utilization standards, indicating that residual forage is present and that rangeland habitats are not being adversely affected by grazing. Proposed grazing of the Tower pasture would reduce the time spent in the Nine Sections and West Trough pastures by a total of 17 days; as a result, effects on winter range habitat would be reduced. Cattle would enter the allotment after elk have transitioned from winter to summer range habitats; there would be no competition between pregnant cow elk and cattle for forage on winter range habitats.

Cattle grazing is not adversely affecting big game migration corridors within the allotment. Cattle do not trample or otherwise affect habitat characteristics of migration corridors. Cover habitat (satisfactory and marginal) is not affected by the presence or use by cattle.

Grazing by cattle is not adversely affecting calving fawning areas within the allotment. Cattle grazing under the proposed June 1 turn-on date would not interfere with the critical elk calving period, elk generally calve during mid-May. Cattle would not graze Frazier, Hidaway (within the Tower Unit), or Line Creek until after July 15th, reducing the potential for disturbance of lactating cow elk or their calves that may be using riparian areas adjacent to these streams. Monitoring of utilization and stubble height indicates that grazing is not adversely affecting the quantity or quality of forage in the allotment; sufficient forage is being allocated to elk in this allotment. Cattle have the potential, to affect riparian vegetation that may contribute to concealment of newborn calves; reductions in days grazed (resulting from use of Tower pasture) and proposed fencing along riparian areas would reduce the potential for effects on calving habitat.

Range structural improvements (fences, ponds, spring developments, etc.) are not adversely affecting populations or the distribution of big game animals in the allotment. Construction of ponds and spring developments has reduced the distance elk must go to find water in the allotment. It can be assumed that a greater availability of water has improved the distribution of big game (and cattle) within the allotment. Allotment and pasture division fences do not constitute barriers to the movement of big game animals within or outside the allotment. Elk and deer are generally able to negotiate barbed wire fences with little trouble. Cattle have been excluded from approximately 4.5 miles of streams within the allotment. Within these exclosures, elk are able to utilize available forage; unlike cattle, they are able to go over or under these structures. Additional fences (Butcherknife and Dry Camas) proposed under this alternative would also not constitute a barrier to the movement of elk.

Cumulative Effects: Past activities, actions, and events that have affected elk and elk habitat include timber harvest, wildfire, insect and disease infestations, cattle grazing, water developments, and ATV trail system construction. These activities, actions, and events have combined to create the existing condition of elk habitat and populations in the allotment.

Past timber harvest within the allotment has had the greatest impact on elk and elk habitat due to the extent of these activities. Many cover stands have been converted to open, high-quality foraging areas. Large contiguous blocks of cover have been fragmented, in some cases improving habitat effectiveness by improving the distribution of cover and forage in the allotment. Reductions in cover have resulted in increased vulnerability to hunting. The 1996 Tower Fire burned through the southern portion of the allotment, converting dense cover to open, high-quality forage habitat. Reductions in cover have reduced habitat effectiveness in this portion of the allotment. Smaller wildfires have also impacted elk habitat, mostly in a positive way. Insects and disease agents have caused overstory mortality, reducing cover habitat and improving foraging habitat (where downed wood allows access) in the allotment.

Upland and riparian vegetation has been affected by past overgrazing. Stocking densities in the early 1900s were much higher than current grazing. Overgrazing may have reduced habitat capability for big game. Water and pond developments have reduced the distance wildlife must travel to find water and improved the distribution of livestock in the allotment by drawing them away from riparian habitats.

Recent increases in ATV recreation have dramatically increased use of the trail and road system in the allotment. Development of an ATV trail system in the allotment increased disturbance on big game through increased noise and human activity.

Ongoing activities with a potential to impact elk and elk habitat include the Weasel hazardous fuels project and private land timber harvest. The Weasel hazardous fuels project will treat an estimated 2,300 acres to reduce hazardous fuels. Fuels reduction activities would result in small reductions in hiding cover that is potentially used by elk. Removal of downed wood and understory vegetation could result in increased vulnerability of big game. The haul of private timber through the allotment would increase disturbance during the summer. This activity would not occur until after July 1, therefore impacts to elk calving habitat and newborn calves would be minimal.

Reasonably foreseeable future activities include road repair. Road repair and maintenance would occur on the 5445 road; a developing washout would be repaired and the road stabilized. This road accesses the Winom-Frazier ATV trail system. This activity would have minimal impacts on elk due to the location of the washout and the limited amount of time that would be required to repair the washout.

When the expected effects of the Proposed Action are combined with the residual and expected effects of past, present, and future actions, activities, and events in the analysis area, there would be no adverse impact on elk or elk habitat. The Proposed Action would not contribute to past reductions in habitat quality through grazing. The Proposed Action would reauthorize grazing in the Tower pasture; grazing this pasture would reduce the number of days grazed in three of the other pastures in the allotment while maintaining existing stocking levels. Due to the availability of forage in this pasture, there would be no expected negative interaction between cattle and elk in this unit.

Alternative 3

Direct and Indirect Effects: Effects of this alternative would be similar to those described under the Proposed Action. Elk and cattle would continue to have similar preferences for forage. The time spent within each pasture (West Trough, East Trough, Nine Sections, and Dry Camas) would not differ from present allowable gazing within the allotment; without grazing in the Tower pasture, cattle would spend more time in these pastures (with the exception of Dry Camas) when compared to the Proposed Action. As a result, expected impacts on winter range habitat would be greater than those under the Proposed Action, but not greater than what has most recently occurred. Forest Plan utilization standards have been consistently met in the Hidaway allotment since monitoring began. Consistent attainment of standards indicates that adequate forage is being allocated to elk to meet or move towards big game management objectives.

Cumulative Effects: The cumulative effects of this alternative would be the same as those described under the Proposed Action, with the exception that the Tower pasture would not be grazed; therefore, no cumulative effects would occur in this pasture.

INVASIVE PLANTS

Brad Lathrop, Range Specialist
Invasive Plant Report, Project Record

Invasive plants, as defined by the Pacific Northwest Region Final Environmental Impact Statement for the Invasive Plant Program, 2005, are non-native plants whose introduction do or are likely to cause economic or environmental harm or harm to human health. This analysis will focus on those species that are listed on the Oregon Department of Agriculture noxious weed list. Invasive species and noxious weeds will be used interchangeably in this report.

SCALE OF ANALYSIS, METHODOLOGY, AND ASSUMPTIONS

This analysis considers known infestations of invasive plants within the allotment or adjacent to the allotment. The North Fork John Day Ranger District annually monitors and inventories invasive plants within the project area. This analysis focuses on known inventoried invasive plant sites in the allotment and the potential for other weeds to be transported into the allotment. Other known weed species that occur in the analysis area that are not inventoried are also discussed. Known noxious weed sites, soil disturbance, and the potential spread of noxious weeds will be the foundation of the analysis. In rating the priority of noxious weeds for treatment and inventory, the Forest classification system was used.

This analysis is tiered to a broader scale analysis (the Pacific Northwest Region Final Environmental Impact Statement for the Invasive Plant Program, 2005, hereby referred to as the R6 FEIS 2005). The R6 FEIS 2005 culminated in a Record of Decision (R6 2005 ROD) that amended the Umatilla National Forest Plan by adding management direction relative to invasive plants. This project is intended to comply with the new management direction. The portions applicable to the Hidaway Allotment include the prevention standards that are detailed in the EIS, Appendix E.

EXISTING CONDITIONS

Priority Noxious Weeds

Table 43 displays the invasive plants of concern within the Hidaway Allotment analysis area and their associated priority category. Several categories are used to prioritize noxious weed species on the Forest list for treating and inventorying:

- **Potential Invaders:** Noxious weed species that occur on lands adjacent to the Umatilla National Forest but which have not been documented on lands administered by the Forest;
- **New Invaders:** Noxious weed species that occur sporadically on the Umatilla National Forest and which may be controlled by early treatment. This category has been split into two subcategories due to changes in weed populations on the Forest in the last two years:
  - **New Invaders:** Of limited distribution and can probably be eradicated if early treatment can be implemented.
  - **New Invaders/Established:** Those species that are presently controllable but which are approaching "Established" and which are prioritized for early treatment.
- **Established:** Species are widespread across the Forest in large populations and containment strategies are used to prevent their further spread.

Table 43: Noxious Weed Species and Treatment Priority

Species	Common Name	Treatment Priority
Centaurea biebersteinii	Spotted knapweed	New Invader/ Established
Centaurea diffusa	Diffuse knapweed	New Invader/ Established
Cynoglossum officinale	Houndstongue	New Invader/Established
Potentilla recta	Sulfur Cinquefoil	New Invader/Established
Hypericum perforatum	St. Johns Wort	Established
Cirsium arvense	Canada Thistle	Established
Cirsium vulgare	Bull Thistle	Established

Current Weed Populations

Past livestock grazing, road construction, timber harvest, recreational, and other ground disturbing activities have allowed noxious weeds to become established in the analysis area. As a result, noxious weeds exist within the Hidaway Allotment as described above. Noxious weeds are primarily found in managed timber stands and along roads in the Hidaway Allotment.

There are 10-inventoried high priority noxious weed sites occupying approximately 57 gross acres in the 37,260-acre project area (Table 44). The largest infestation has approximately 11 plants per acre. These sites will be used to discuss current weed populations as related to livestock grazing in the project area. Because there are few high priority weed infestations and low densities the risk of noxious weed spread within the project area is very low.

Table 44: Current Noxious Weed Sites in the Hidaway Allotment

Common Name	Number of Sites	Treatment Type	Average Plants/Acre	Acres
Spotted Knapweed	4	Manual/Chemical	10	40
Diffuse Knapweed	3	Manual	11	4
Houndstongue	1	Manual/Chemical	1	11
Sulfur Cinquefoil	2	None	1	2
St. Johnswort	NA	Biological	**	**
Canada Thistle	NA	Biological	**	**
Bull Thistle	NA	None	**	**

Low Priority Noxious Weeds

Three low priority “established” weeds (Canada thistle, bull thistle, and St. Johnswort) are so extensive Forest-wide that they are not generally inventoried. These weed species are less invasive and/or persistent than the high priority weed species and generally give way to or do not out-compete desirable vegetation. These three weed species can be found within the Hidaway Allotment at relatively low densities along road corridors and in past logging units. Biological Control Agents are currently being released in the analysis area to help control existing populations.

Spotted and Diffuse Knapweed

There are four small infestations of spotted knapweed in the Hidaway Allotment. These sites are being controlled using manual or chemical methods, or both. As of 2005 there were a total of about 400 individual plants found between the four sites. There are three diffuse knapweed populations within the Hidaway Allotment and as of 2005 there were a total of 45 individual plants.

Spotted knapweed and diffuse knapweed is of low concern in the Hidaway Allotment as related to livestock grazing. Spotted and diffuse knapweeds are primarily spread from vehicles with all known sites found along roads and right of ways. Livestock grazing can spread knapweed seed, but due to the low densities of knapweed in the allotment and adjacent to the allotment, knapweed is not a high concern in the analysis area as related to livestock grazing.

Houndstongue

There is 1 infestation of Houndstongue in the Hidaway Allotment. Houndstongue is toxic and can cause liver damage to livestock. Houndstongue is highly invasive where soils and plant associations have been disturbed and is primarily found in managed timber stands where soil has been disturbed (skid trails, landings, slash piles). Wildlife and livestock that use these areas can spread Houndstongue seed.

As of 2005, there were six individual plants found at the site in the Hidaway Allotment. Manual methods are being implemented to eradicate these sites and, as a result, Houndstongue is not a high concern in the analysis area.

Sulfur Cinquefoil

In surveys conducted from 2002 through 2004, two sulfur cinquefoil plants were found in the Hidaway Allotment. Both of these plants were found in the right of way of roads indicating that they most likely were associated with vehicle traffic. Due to the few plants found, sulfur cinquefoil is not a high current concern in the analysis area as related to livestock grazing.

Adjacent Ownership

Noxious weeds that exist on adjacent ownerships have the potential to be spread from wildlife, people, and vehicles into the project area. There is a low potential for these noxious weed species to be spread into the project area from activities associated with livestock grazing.

SUMMARY OF THE CURRENT CONDITIONS

Current known infestations of high priority noxious weeds total only 57 gross acres with the highest density of 11 plants per acre. These sites are primarily found along road systems. The Hidaway Allotment is not a high risk area for noxious weed infestations due to the few noxious weed infestations and low densities. Low priority weeds exist within the allotment, though they are generally not inventoried or mapped. These species are classified as low priority weeds because they normally due not pose a significant risk to competition with other plant species, are not as invasive as other plant species, and they may decrease over time due to plant succession.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Grazing)

Direct and Indirect Effects: This alternative would not authorize livestock grazing within the boundary of the Hidaway Allotment. There would be no environmental effects concerning noxious weeds as a result of livestock grazing. There would continue to be a potential of noxious weed establishment or spread caused by existing roads and associated vehicle use, recreational activities,

wildlife, and other future management activities. New noxious weed infestations would continue to be found along roads, trails, and campgrounds. Existing infestations would most likely be eradicated due to the number of sites and small number of plants.

Alternative 2 (Proposed Action)

Direct and Indirect Effects: The proposed action would authorize livestock grazing within the Hidaway Allotment from June 1st through September 30th. The proposed action would include the construction of approximately 1.5 miles of fence and the maintenance of existing fences and water systems (ponds and troughs).

Livestock grazing can promote noxious weed establishment or spread by transporting seed, causing soil disturbance, or by reducing the ability of existing plant communities to compete against invasion of noxious weeds. Those areas of most concern or that would be expected to have the highest risk for noxious weed infestations are areas where livestock grazing concentrate (corrals, salt locations, water sources). Design criteria that address noxious weed concerns are described in Chapter 2 and were considered in this analysis.

There are 10 known high priority noxious weed infestations found primarily along roads and densities are very low. There were 6 Houndstongue plants and 2 sulfur cinquefoil plants found within the allotment. The largest infestations are knapweed species found along roads, totaling about 400 plants. Manual treatments on these sites will most likely eradicate these sites over time due to the low number of plants. Though there is a potential that livestock grazing could transport seeds from these sites, the potential is low due to the small size and removing adult plants prior to producing seed (manual pulling and bagging plants) or herbicide treatment.

Livestock grazing can affect the ability of existing plant communities to compete against noxious weeds. Utilization standards described in the proposed action limits the amount of livestock use and was designed to manage for healthy plant communities to meet Forest Plan objectives. The range report also found that plant communities are currently in a satisfactory condition with stable to upward trends. These standards and existing conditions of plant communities is expected to reduce the potential of noxious weed establishment and spread. Livestock concentration areas are of most concern due to the amount of soil disturbance that occurs at these sites. Monitoring and inventory has found few noxious weed infestations at these concentration areas.

Low priority weed species may increase in small localized areas of disturbance such as along cattle trails, near salt locations, or other areas of concentrated use. This increase would be expected to be small and would not be to a level where treatment or control efforts of the sites would be considered.

Due to low densities of plants, few high priority sites within the allotment boundary, and few infestations found at livestock concentration areas, the risk of grazing causing an increased spread or establishment of noxious weeds is low. The additional design criteria described in Chapter 2 will reduce direct and indirect effects.

Cumulative Effects: Past and present activities within the allotment boundary have resulted in the current weed populations. Future activities (EA, Appendix E) along with grazing may result in an increased potential of noxious weed establishment and spread. Future management activities will be designed to minimize noxious weed establishment and spread by washing equipment to reduce the potential for transporting seed, using certified weed free hay or seed, and/or avoiding or designing activities around existing infestations. As a result, the potential cumulative effects of future activities within the allotment boundary, combined with implementing the proposed action, would be expected to be low.

Alternative 3

Direct and Indirect effects: Alternative 3 is the same as the proposed action with the exception that the approximately 18,000 acre Tower Unit would not be authorized for livestock use. The direct and indirect effects would be the same as the proposed alternative with the exception of the 18,000 acre Tower Unit.

Eliminating the Tower Unit would reduce the size of the allotment by almost 50 percent. Soil disturbance, effects to plant communities, or spreading noxious weed seeds would not occur due to livestock within the Tower Unit. As a result the risk of this activity causing the potential establishment and spread of noxious weeds would be reduced by almost half as compared to the proposed action based solely on the acres of the activity.

Five of the existing10 high priority noxious weed infestations within the allotment are within the Tower Unit, so the risk of this activity of spreading these sites would be lower than the proposed action but not significantly due to the small size of these infestations and the species of noxious weeds.

Cumulative Effects: The potential cumulative effects would be lower than the proposed action. This alternative would eliminate approximately 18,000 acres from the allotment. Most of the Tower Unit is forested communities that are more resistant to noxious weeds than drier, lower elevation community types. By eliminating the Tower Unit from the authorized boundary of the allotment, there would be a slight reduction in the potential cumulative effects.

The highest risk areas for noxious weeds in the Tower Unit are along road systems. There is a potential for noxious weeds to become established on the OHV trail system in the Tower Unit. By not authorizing livestock grazing in the Tower Unit the potential cumulative effect of grazing livestock in or around this trail system would be reduced. No noxious weed infestations have been found on or along this trail system.

Vegetation management activities, such as the Weasel Vegetation Management Project, can increase livestock grazing by increasing available forage and access in forested communities. Vegetation management activities can allow noxious weeds to become established in the activity area by causing soil disturbance or spreading noxious weed seeds. Removing the Tower Unit from future grazing activities would reduce the potential cumulative effects from vegetation management activities.

BOTANY

Jean Wood, Forest Botanist
Botany Report, Project Record

BIOLOGICAL EVALUATION FOR SENSITIVE PLANT SPECIES

Four sensitive plant species from the Regional Forester's Sensitive Species List (R6 List) have been documented within the Hidaway Allotment (Table 45). One species occurs in a portion of the allotment that is no longer being grazed. The other three include at least some plants subject to potential grazing impacts.

Table 45: Sensitive Plant Species Considered In The Analysis Of The Hidaway Allotment

Species	Scientific Name	Status[1]	Occurrence[2]	Effects[3]
Lance-leaf moonwort	***Botrychium lanceolatum***	**S**	**D**	**MIIH**
Mingan moonwort	***Botrychium minganense***	**S**	**D**	**MIIH**
Longbearded sego lily	***Calochortus longebarbatus* var. *longebarbatus***	**S**	**D**	**NI**
Douglas' clover	***Trifolium douglasii***	**S**	**D**	**MIIH**
Non-vascular species	**10 species** (4 bryophytes, 6 lichens)	**S**	**N**	**NI**

[1] Status

E	Federally Endangered
T	Federally Threatened
S	Sensitive species from Regional Forester's list
C	Candidate species under Endangered Species Act

[2] Occurrence

HD	**Habitat Documented** or suspected within the project area or near enough to be impacted by project activities
HN	**Habitat Not** within the project area or affected by its activities
D	Species **Documented** in general vicinity of project activities
S	Species **Suspected** in general vicinity of project activities
N	Species **Not documented** and not suspected in general vicinity of project activities

[3] Effects Determinations

NI	No Impact
MIIH	May Impact Individuals or Habitat, but Will Not Likely Contribute to a Trend Towards Federal Listing or Cause a Loss of Viability to the Population or Species
WIFV	Will Impact Individuals or Habitat with a Consequence that the Action May Contribute to a Trend Towards Federal Listing or Cause a Loss of Viability to the Population or Species
BI	Beneficial Impact

Complete species surveys have been conducted in the project area and adjacent subwatersheds as follows: 244 Corridor (1990); Lehman-Hunter (1991); Expanded Bughunter, Trough Creek Underburn (1992); Hidaway (1993); and Camas Creek, Frazier Creek, Hidaway Allotment (2000).

In addition, four surveys were conducted (1995, 1996, 1998, and 1999) targeting habitat for the longbearded sego lily and Douglas' clover. Thirty-seven subpopulations were documented as a result of these surveys, three of the sego lily and 34 of the clover.

Examination of the Umatilla National Forest sensitive plant coverage in GIS shows three Region 6-listed sensitive plant species within the Hidaway Allotment: *Botrychium lanceolatum* (lance-leaf moonwort), *Calochortus longebarbatus* var. *longebarbatus* (longbearded sego lily), and *Trifolium douglasii* (Douglas' clover). In addition, a fourth species, *Botrychium minganense* or Mingan moonwort, was recently documented in the allotment.

Moonworts *(Botrychium lanceolatum* and *Botrychium minganense)*

Botrychium lanceolatum occurs along Frazier Creek in the Tower pasture. *Botrychium minganense* was recently found in a roadside ditch in the Dry Camas pasture. The sensitive status of these two moonwort species has recently been lowered by the Oregon Heritage program, due to the numerous populations that have been documented in the last several years. With increased surveys focused on their habitats, both species are proving fairly widespread and appear to shift population locations by following disturbance. Both species are currently proposed for removal from the R6 Forester's Sensitive Species List in Oregon because of abundance and frequency of occurrence, especially east of the Cascades. Due to increased documentation of populations *Botrychium minganense* has recently been removed from the R6 list as a sensitive in the state of Washington. There are more than 30 documented occurrences of *B. minganense* on the Umatilla NF alone, many in *Festuca rubra/Pinus contorta* plant communities that are common across the forest above about 4200 feet elevation. *B. lanceolatum* has been found in similar habitats at 65 locations across the Umatilla National Forest, with 26 of those sites on the North Fork John Day district, all at elevations above 4500 feet.

Longbearded Sego Lily *(Calochortus longebarbatus* var. *longebarbatus)*

Calochortus longebarbatus var. *longebarbatus* grows along Dry Camas Creek within the Frazier Holding pasture. It is confined to the riparian exclosure that was recently fenced to exclude cattle, so the entire population is protected from grazing.

Douglas' Clover (*Trifolium douglassii*)

Douglas' clover is a locally endemic legume with a historic range "from Spokane County, Washington to Baker County, Oregon, east to adjacent Idaho" (WNHP). The species is currently known only from Garfield County, Washington, and Umatilla and Union counties in Oregon. Douglas' clover favors vernally moist to wet meadows, moist swales under light tree canopy, and stream banks. Because most of its habitat in the Palouse has been converted to agricultural use (Weddell, 2002), extant populations are mostly known from Forest Service land. The single known population in Washington State is on the Pomeroy Ranger District of the Umatilla National Forest. Informal monitoring has been conducted on the Washington population of Douglas' clover since 1993. Forty-three subpopulations have been found on the North Fork John Day Ranger District. There are eight subpopulations of Douglas' clover within the Hidaway Allotment. At least three subpopulations have been included within riparian exclosures that prevent cattle grazing since 1997.

Three of the subpopulations occur in fenced areas from which cattle are excluded: two in the Butcherknife Spring riparian exclosure of the Trough Springs Pasture and one in the Dry Camas Creek Exclosure. These populations would not be affected by grazing. One population occurs in the Blarney Springs Riparian Pasture that is used as a short-term (seven days) holding pasture. All of the sites are heavily infested with the exotic grasses meadow foxtail and timothy (*Phleum pratense*).

The Douglas' clover subpopulation covering the largest area, with 200 or more recorded blooming plants, as well as one nearby small subpopulation of about 70 flowering stems, occurs within the Frazier Holding Pasture. This pasture is proposed for brief use each year (less than a week) only after

July 15. Because of the late turn-on date, the clover plants will be dried and seeding out when the cattle are present. This pasture is large for such a brief use period, and it includes plentiful forage.

Two subpopulations of the Douglas clover occur in the main Dry Camas pasture. Cattle would graze this unit for 30 days any time between June 16th and September 30th. This is a large pasture with plentiful forage and some of these clover plants could be grazed or trampled by cattle. These two subpopulations have co-existed with this same grazing management for many years and would likely not be affected with continuation of grazing.

Non-Vascular Plants

There is no known habitat within the project area for any non-vascular plant species (bryophytes or lichens) that are currently on the Region 6 Regional Forester's Sensitive species list.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Grazing)

Moonworts (*Botrychium lanceolatum* and *Botrychium minganense*)

Direct and Indirect Effects: There would be no trampling or incidental consumption with other forage by cattle. There would be **No Impact (NI)** to the present populations from grazing.

Longbearded Sego Lily (*Calochortus longebarbatus var. longebarbatus*)

Direct and Indirect Effects: Because this species is confined to the riparian exclosure that excludes cattle, there would be no change to this population that is protected from grazing. There would be **No Impact (NI)** to this sego lily population from grazing**.**

Douglas' Clover (*Trifolium douglassii*)

Direct and Indirect Effects: The localized Washington population of Douglas clover, inhabiting three small vernally moist depressions within about a quarter of an acre, has been intensively grazed for a short period at least every other year. It appears that grazing has stimulated an increase in the population of this plant the year following grazing (Botany Report, pages 4 and 5). The exotic grasses (primarily *Alopecurus pratensis* or meadow foxtail) that also occupy the site make searching for understory forbs, such as the clover, difficult. In 1994 the Washington population was dominated by *Dactylis glomerata* (orchard grass). In 2005 meadow foxtail was dominant and orchard grass was scarce. Without grazing, the potential for competitive grasses to dominate sites with Douglas' clover would be likely. It is likely that without ground disturbance associated with grazing, Douglas' clover populations would not be as abundant.

Effects Common to Alternatives 2 (Proposed Action) And Alternative 3

Direct, Indirect, and Cumulative Effects

Moonworts *(Botrychium lanceolatum* and *Botrychium minganense)*

The proposed grazing management **May Impact Individuals but Will Not Likely Contribute to a Trend Towards Federal Listing or Cause a Loss of Viability to the Populations or to either Species. (MIIH**)

Moonwort plants, typically from one to three inches in height, are not especially palatable, but can be consumed with other forage, or, more commonly, be mechanically damaged by grazing ungulates. Therefore individual plants could be affected by cattle, either by herbivory or trampling.

Longbearded Sego Lily *(Calochortus longebarbatus* var. *longebarbatus)*

Because the sego lily population is confined to the riparian exclosure and the entire population is protected from grazing there will be **No Impact (NI)** from grazing under the proposed allotment management.

Douglas' Clover (*Trifolium douglassii*)

There is no published literature on Douglas' clover. Informal monitoring of this species on the Umatilla National Forest indicates it thrives under the current grazing regime. It is determined that proceeding with the proposed management of the Hidaway Allotment **May Impact Individuals (MIIH)** of *Trifolium douglasii*, but **Will Not Likely Contribute to a Trend Towards Federal Listing or Cause a Loss of Viability to the Population or Species.**

The four subpopulations that occur in fenced areas that exclude cattle are heavily infested with exotic grasses, meadow foxtail and timothy (*Phleum pratense*), and are no longer being grazed. These populations in the present exclosures would not be affected by the continuation of proposed grazing outside of the exclosures.

The Douglas' clover subpopulation occurring within the Frazier Holding Pasture would be affected by the proposed brief grazing use each year (less than a week) and only after July 15. Because of the late turn-on date, the clover plants will be dried and seeding out when the cattle are present. The possibility of the dry (and relatively unpalatable) clover plants being grazed is small, although some plants could be damaged by trampling. The vernally moist ground that supports the clover is dried and hardened by mid-July and cattle cause minimal ground disturbance to the soil on this site.

The two known subpopulations of the Douglas clover occurring in the main Dry Camas pasture have co-existed with this same grazing management for many years. These populations would likely not be affected with continuation of grazing.

Non-Vascular Plants (bryophytes or lichens)

Because there is no known habitat within the project area for any non-vascular plant species currently on the Region 6 Regional Forester's Sensitive species list there will be **No Impact (NI)** to sensitive non-vascular species from grazing under the proposed allotment management.

BIOLOGICAL ASSESSMENT FOR THREATENED PLANT SPECIES

Silene spaldingii is Federally Listed as Threatened and known to occur on the Umatilla and Wallowa-Whitman National Forests. *Silene spaldingii* occurs primarily in open grasslands with deep Palousian soils. There are not deep Palousian soils in this allotment. This project will have **No Effect (NE) on *Silene spaldingii*** .

This project complies with present Federal regulations pertaining to the management of Threatened, Endangered, and Sensitive plant species.

HERITAGE RESOURCES

Jill Bassett, Archaeologist

Heritage resource surveys have been conducted within portions of the allotment area, covering all but the southern-most Tower Pasture and small portions of the Dry Camas and Nine Sections Pastures. All were comprised of pedestrian inventories that covered 100 percent of high probability land within the allotment. Documentation review and monitoring was utilized to satisfy Section 106 requirements prior to re-issuance of this grazing permit. Monitoring focused on known archaeological sites within 100 meters of cattle congregation areas such as fence lines, corrals, and water developments, as well as site locations at which grazing impacts are documented or otherwise known. No impacts from grazing activities were noted.

A **No Adverse Effect** determination on any known archaeological resource was sent to the Oregon State Historic Preservation Office (SHPO) for review and concurrence under the terms of the 2004 Programmatic Agreement. Their office concurred with the determination April 3, 2007. Tribal consultation between the Umatilla National Forest and interested tribes has taken place. The Umatilla National Forest will continue working with the Confederated Tribes of the Umatilla Indian Reservation to resolve any issues or concerns.

Ground disturbing activities, such as construction of new structural improvements or re-construction of existing facilities, are not included with this undertaking. Any such proposals would require the necessary Tribal and State Historic Preservation Office (SHPO) consultation.

RECREATION

Janel Lacey, Recreation, Lands, and Minerals Staff
Recreation Report, Project Record

Key Issue 3: Roadless Areas

The Hidaway Allotment includes portions of two inventoried roadless areas: South Fork-Tower and Squaw. In addition, Oregon Natural Resources Council submitted a map of what they consider to be unroaded areas within the allotment. They are concerned that the "*unique value* [of the unroaded area] *associated with low road density must be preserved."* They proposed that analysis consider affects on roadless values such as dispersed non-motorized recreation, high water quality, and wildlife habitat. This issue will be measured using the following criteria:

- Qualitative discussion on effects to dispersed non-motorized recreation, such as camping, hiking, collection of mushrooms, etc.
- Qualitative discussion of effects on roadless area characteristics (natural appearance, integrity, solitude, remoteness, manageability).
- Effects to the wilderness eligibility of the roadless areas.
- See Hydrology section for discussion and measurement of water quality.
- See Wildlife section for discussion and measurement of habitat quality.

SCALE OF ANALYSIS

The scale of analysis for recreation resources is the boundary of the Hidaway Allotment.

METHODOLOGY AND ASSUMPTIONS

Information was integrated in part through Geographic Information Systems mapping to portray spatial relationships between recreation use areas and activities that could affect the continued use of the area.

EXISTING CONDITIONS

Recreation Opportunity Spectrum (ROS)

Each Forest Plan Management Area is assigned a class under the ROS (Table 46). Each class is defined by the degree certain recreation experience needs are satisfied. This is based on the extent that the natural environment has been modified, the type of facilities provided, the degree of outdoor skills needed to enjoy the area, and the relative density of recreation use.

Table 46: ROS Classes within the Hidaway Allotment

Management Area	ROS Class[1]
A3	Roaded Natural
C1, C2	Primitive to Road Natural. Roaded Natural to Roaded Modified
C3	Roaded Modified
C7	Roaded Modified and Roaded Natural
E2	Roaded Modified

[1] **ROS classes (Forest Plan GL 32-33):** ***Primitive –*** Area is characterized by an essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted; ***Roaded Natural –*** Area is characterized by predominantly natural-appearing environments with moderate evidence of the sights and sounds of humans. Such evidence usually harmonizes with the natural environment. Interaction between users may be moderate to high, with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is allowed and incorporated into construction standards and design of facilities; ***Roaded Modified –*** A considerably modified natural-appearing environment characterizes the area with considerable evidence of the sights and sounds of humans. Such evidence seldom harmonizes with the natural environment. Interaction between users may be low to moderate, but evidence of other users is prevalent. Resource modification and utilization practices are evident and seldom harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities.

Roadless Areas

Portions of two Inventoried Roadless Areas occur within the Hidaway Allotment:

South Fork-Tower Inventoried Roadless Area (5,137 acres)
Squaw Inventoried Roadless Area (46 acres)

The Forest Plan Final Environmental Impact Statement, Appendix C, pages C-185 to C-202 describes these areas in detail. Appendix C for the South Fork-Tower Inventoried Roadless Area states: *"There is no primary attraction within the South Fork-Tower Roadless Area. Its main attribute is its 7-mile stretch of common boundary with the North Fork John Day Wilderness…Due to its shape and the way the areas lies, the opportunities for a feeling of solitude, the spirit of adventure and awareness, serenity, and self-reliance do not really exist within this area. Roads and timber harvest activities to the north, west, and southwest present nonconforming sights and sounds to nearly the entire roadless area."* (page C-188). The description for the Squaw Inventoried Roadless Area is similar.

Camping

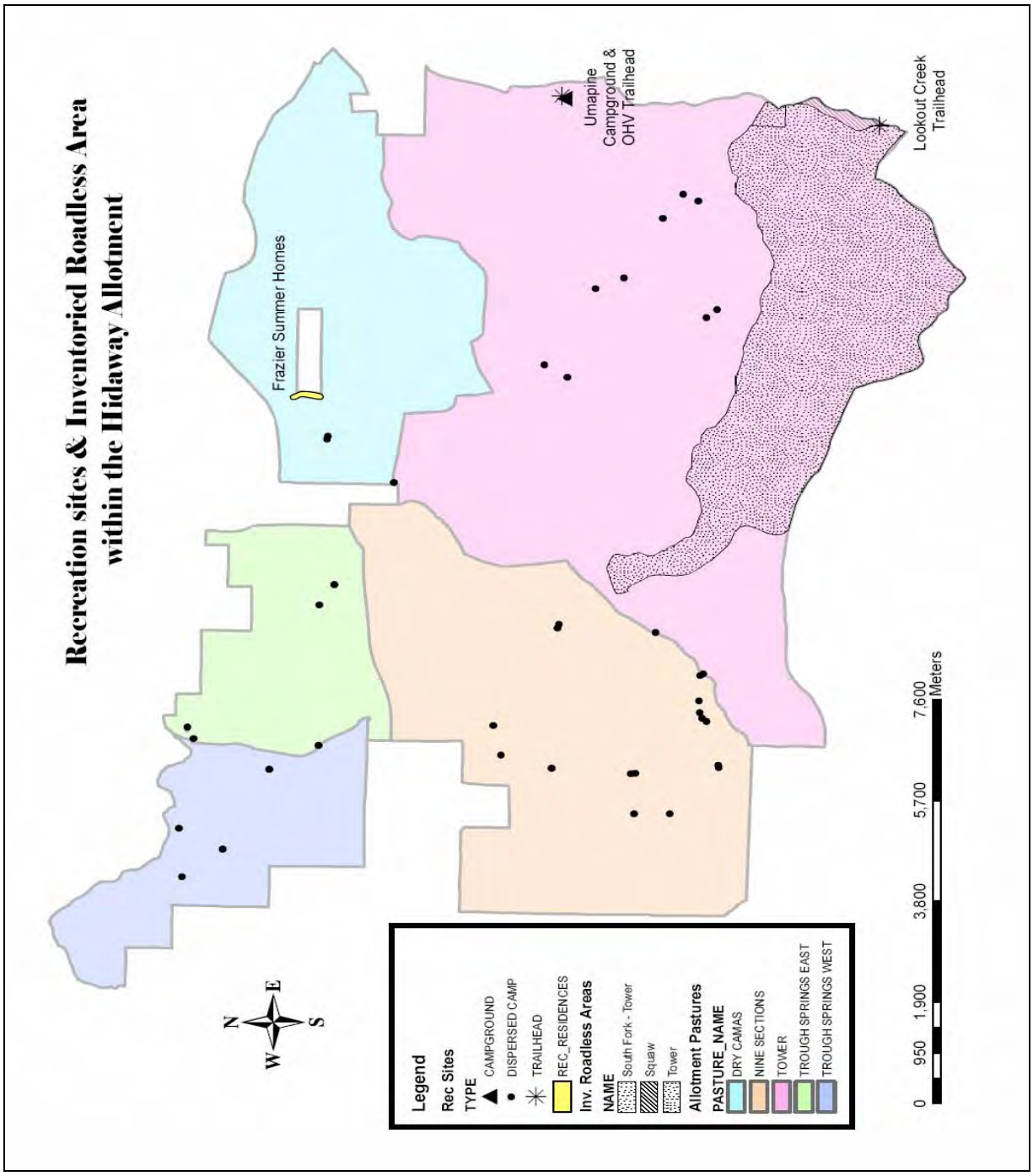
There is one developed campground and 40 inventoried dispersed camping sites within the analysis area (Refer to Table 47 and Map 6). Umapine Campground is located on Forest Road 5160 on the Wallowa-Whitman National Forest, approximately 40 miles west of La Grande. This developed campground has seven campsites and one toilet facility. OHV riders are the primary users of the campground. The campground is not fenced, no complaints regarding cattle have been reported, and there is little sign of cattle presence.

Dispersed camping has traditionally been a popular activity in the area, particularly during the big game hunting seasons. A generic description of a dispersed campsite consists of a user-made area that is generally adjacent to a developed road. The site often has a meat pole in the trees, a rock fire ring and a hardened parking/camping surface for one to three families.

Table 47: Inventoried Campsites by Management Area

Management Area	Number of Sites
A3	3
C1, C2	4
C3	1
C7	18
E2	14
Wallowa-Whitman	1
Total	**41**

Map 6: Recreation Sites and Inventoried Roadless Area within the Hidaway Allotment



Trails and Dispersed Recreation

There are a number of popular dispersed recreation activities within the analysis area. These include camping, hiking, horse riding, all terrain vehicle (ATV) riding, mushroom picking, firewood gathering, hunting, and sight seeing.

There are 96 miles of developed trails within the analysis area and two developed trailheads (Umapine OHV Trailhead and Lookout Creek Trailhead). Trails serve hikers, equestrians, motorcycles (Class III ATVs) and four-wheelers (Class I ATVs). ATV use also includes riding on open roads. All roads are considered open to ATV travel unless signed as closed under the District's Access and Travel Management Plan. There is no groomed snowmobile or cross-country ski trails.

The analysis area contains a portion of the Ukiah and Starkey Big Game Management Units designated by the Oregon Department of Fish and Wildlife (Wildlife Report). Hunting is one of the most popular recreation activities in this area. The primary hunting season typically begins in October and extends through November.

Visual Quality

There are 1,068 acres of the Hidaway Allotment in Forest Plan Management Area A3 – Viewshed 1 (along Forest Road 52). This road is also designated as the Blue Mountain Scenic Byway. The Forest Plan states that A3 is to be managed as a natural appearing landscape (Forest Plan 4-99). Visual quality objectives would be retention in the foreground and partial retention in the middle ground (Forest Plan 4-100). A moderate level of livestock grazing is permitted. Development and maintenance of range improvements are permitted. Range utilization standards, management practices, and improvements are to be designed and managed to meet visual quality objectives (Forest Plan 4-101).

ENVIRONMENTAL CONSEQUENCES

Recreation Opportunity Spectrum (ROS)

Effects Common to All Alternatives

Direct, Indirect, and Cumulative Effects: None of the alternatives would change the ROS class as described in the Forest Plan.

Camping

Alternative 1 (No Grazing)

Direct and Indirect Effects: Cattle and associated manure and flies would no longer affect campers within the allotment boundary. This would improve the recreation experience at a number of dispersed campsites. There should be little change at the Umapine Campground since cattle are presently not a concern there. The removal of pasture fences would not affect accessibility to dispersed campsites because such camps are accessed by roads.

Effects Common to Alternatives 2 (Proposed Action) and Alternative 3

Direct and Indirect Effects: Alternatives 2 and 3 could directly and indirectly affect dispersed camping. The presence of cattle and residual manure and flies within and adjacent to dispersed campsites could cause discomfort to recreationists, who may then use other sites. Livestock have used this area for at least 90 years, so they are an element that recreationists expect to encounter. The duration of disturbance in any one area would be brief. Alternative 3 would have less impact on campers than Alternative 2 because 11 dispersed campsites and the Umapine Developed Campground occur within the Tower Unit which would not be grazed under Alternative 3.

Cumulative Effects: There would be no cumulative effects on any developed recreation sites or any dispersed camping activity with any of the three alternatives based on a review of the Past, Present and Future projects (EA, Appendix E). The range structures are already in place, so impacts to recreationists have already occurred.

Trails and Dispersed Recreation

Alternative 1 (No Grazing)

Direct and Indirect Effects: Removal of cattle from the allotment would eliminate any discomfort the presence of cattle or their associated smell and flies produce for recreationists in this area. As budget permits, pasture fences would be removed, reducing obstacles for recreationists who are off trails or roads. This would likely occur over an extended period of time, since fence removal is not often a high priority. There could be a slight decline in fishing opportunities if unmaintained stock ponds containing fish silt in. This would occur over many years and it is possible that maintenance of such ponds would occur.

Effects Common to Alternative 2 (Proposed Action) and Alternative 3

Direct and Indirect Effects: Alternatives 2 and 3 could directly affect dispersed recreation activities, particularly between June 1 (or June 16 under Alternative 3) and September 30 when cattle are on the allotment. Cattle pose collision hazards to motorists and ATV riders. As with camping, the manure and flies can reduce the enjoyment of the recreation experience. The heaviest recreation use while cattle occupy the allotment occurs during archery and deer rifle hunting seasons, starting in late August and ending mid September. Livestock are sometimes mistakenly shot during hunting seasons and this hazard would continue. The presence of cattle could cause big game animals to temporarily shift to other nearby areas. This is unlikely to occur (Wildlife Report) because of the size of the allotment and low numbers of cattle grazed. The duration of disturbance in any one area would be brief. Alternative 3 would permit grazing on 18,000 fewer acres than Alternative 2, so effects to recreation would be less under Alternative 3.

Fences associated with control of cattle pose obstacles for cross-country travelers and are a particular hazard for snowmobile users (although there are no groomed snowmobile trails in the area). Existing fences would remain under both alternatives and an additional 1.5 miles of proposed new fence would be constructed along two streams.

Recreation use would remain near the same levels as previous years with implementation of Alternative 2 or 3. Gathering mushrooms or firewood, viewing scenery, hiking, hunting, horse riding, or ATV riding would not decline as a result of continued grazing. The quality of the recreation experience would be slightly less than under Alternative 1.

Cumulative Effects: In the long-term, the proposed grazing together with past harvest and prescribed burning and the ongoing Weasel Fuel Reduction project would benefit recreationists by creating a more open forest environment, with fewer obstructions on the ground. An open forest setting is important for many recreation activities and would contribute to the overall experience for a visitor. The range structures are already in place, so impacts to recreationists have already occurred. Even with extensive past management in the analysis area, outdoor recreation use, in general, has steadily increased over the years.

Visual Quality

Alternative 1 (No Grazing)

Direct, Indirect, and Cumulative Effects: Removal of livestock from the allotment would slightly improve the natural appearance of the A3 by removing the evidence of human influence. The potential for noxious weed spread would be reduced, which would protect visual integrity.

Effects Common to Alternative 2 (Proposed Action) and Alternative 3

Direct, Indirect, and Cumulative Effects: Visual quality would be slightly affected by grazing, by shortening grasses and some shrubs creating a more park-like appearance. If noxious weeds infest the Viewshed, the amount of native vegetation would be reduced. Depending on the weed species and population size, the casual observer may not notice. Presence of cattle would also detract from the naturalness of the area. However, cattle have been here historically and are part of the cultural experience most visitors expect. While grazing together with past, present and future projects in this allotment can change vegetation species compositions, this would still appear natural to the casual observer.

Roadless Areas

Alternative 1 (No Grazing)

Direct, Indirect, and Cumulative Effects: There is no proposed road construction, timber harvest, or prescribed fire associated with the proposed grazing. No changes in solitude, remoteness, or manageability[1] are anticipated with or without grazing.

Effects Common to Alternative 2 (Proposed Action) and Alternative 3

As discussed under Visual Quality, grazing under either of these alternatives can alter the appearance of the roadless area through shorter vegetation, changes in native plant species, and visual presence of cows. With the exception of livestock presence, the casual observer would not likely detect a change in natural appearance. The overall roadless character of either the South Fork-Tower or the Squaw Roadless areas would not be altered. As discussed under the Dispersed Recreation section, the quality of the dispersed recreation experience could decrease slightly with the presence of cows, and some localized areas used for dispersed camping could be avoided due to livestock feces. However, most

[1] Solitude is defined as isolation from sights, sounds, and presence of others and the development of man. Remoteness is the perceived condition of being secluded. Manageability relates to the ability of the Forest Service to manage an area to meet the size criteria for wilderness consideration (at least 5,000 acres) and maintain the items listed above.

visitors to eastern Oregon expect to encounter cattle as part of their recreation experience, since it is inherent to the culture of this part of the state. Also grazing would not prevent conversion of these areas to wilderness, since grazing is a permissible activity in wilderness areas.

ECONOMICS

Tom Thompson and Brad Lathrop, Range Specialists
Economics Report, Project Record

SCALE OF ANALYSIS

The impact zone for the Umatilla National Forest consists of Grant, Morrow, Umatilla, Union, Wallowa, and Wheeler counties in Oregon, and Asotin, Garfield, Columbia, and Walla Walla counties in Washington. These counties are included within the Pendleton and Spokane Bureau of Economic Analysis regions. The Umatilla National Forest, Land and Resource Management Plan, Final Environmental Impact Statement, Appendix B (Page B-46), also provides further detailed description of the main social and economic characteristics of the area.

METHODOLOGY AND ASSUMPTIONS

The social and economic effects of the management alternatives were assessed in terms of grazing viability, local employment supported, and income provided by the alternatives. Each alternative was analyzed under two scenarios or sets of assumptions.

Scenario 1 assumed the permittee would graze an annual total of 1,972 head months on National Forest or a combination of National Forest and private land, and assuming private land would be available as a substitute for lost federal grazing privileges. Alternative 1 assumed no grazing on National Forest with all grazing on private land. Alternative 2 assumed that all 1,972 annual head months of grazing would occur on National Forest land. Alternative 3 assumed that grazing 1,726 annual head months would occur on National Forest, with the remaining 246 head months on private land.

Scenario 2 assumed that the permittee would only graze cattle on National Forest, assuming that private land would not be available as a substitute for lost federal grazing privileges. Alternative 1 assumed that no grazing of 1,972 annual head months would occur on the National Forest. Alternative 2 assumed all 1,972 annual head months of grazing would occur on National Forest Land. Alternative 3 assumed 1,726 annual head months on National Forest, while the remaining 246 head months would not be grazed on National Forest Land.

Grazing Viability

The analysis of grazing viability for each scenario generated an estimate of net permittee income and grazing revenues to federal and county governments. These were used as units of measurement of this parameter. Grazing fees for cattle on National Forest and private land were assumed as shown in Table 49.

Table 48: Fees for National Forest and Private Land Grazing

Land Type	Cost per Head Month[1]
National Forest	$1.56
Private	$10.00 to $15.00

[1] Source: Tom Thompson, Range Management Specialist, North Fork John Day Ranger District.

Twenty-five percent of National Forest grazing fees is returned as payments to local counties. Estimations of net permittee income were based on cattle prices and grazing fees, but excluded all other revenue sources and costs of operation. Gross income to the permittee was assumed to be the

equivalent of operating income for the enterprise. Costs, such as salaries, fuel, labor, capital, veterinary, and herd maintenance, were not subtracted from gross operating income to determine net income in this analysis because operation specific information was not available. Only the cost of grazing privileges (grazing fees) was subtracted from gross operating income to determine net income in this analysis.

Information on permittee income was not available due to privacy. Estimated permittee income was derived from annual cow and calf prices in 2003 (Oregon State University Extension, 2003). These prices are for calves per hundredweight in 2003 was $94.30. The average weight of an Oregon calf brought to market was 500 pounds. The average price paid for a calf in Oregon was $471.50. The analysis assumed all calves on the allotment are sold each year.

Employment and Income

Employment estimates were based on the assumption of a direct relationship between changes in head months and grazing output. This means that a percentage change in grazing would result in an equal percentage change in grazing output and employment. Estimates provided by this analysis also did not include unpaid family workers or sole proprietors. The direct employment coefficient was 0.3 direct jobs per 200 head months.

EXISTING CONDITIONS

Grazing Viability

The economic viability of grazing is dependent upon the market prices for calves, and the costs of grazing. Market prices are determined by the supply and demand relationships that exist for cattle on a regional scale.

Employment and Income

Levels of grazing by alternative would affect employment and income in several ways:

- Directly - (employment associated with herding, shipping, and processing)
- Indirectly - (industries that supply materials, equipment, and services to these businesses)
- Induced - (personal spending by the permittees, employees, and related industries)

Several factors would influence the ability of any one county or community to experience the largest extent of the grazing-related employment and income effects. Both employment and income projections would depend on other factors such as market conditions, quality and quantity of the production offered for sale, timing of the offerings, and financial conditions of purchasers.

Agriculture, manufacturing (particularly wood products), and food processing are important sources of employment and income in this region. Reliance on timber and forage from federal lands is moderate to high in several counties in the impact zone (Haynes et al. 1997). Many communities in the impact zone are closely tied to the forest in both work activities and recreation. Several communities such as Heppner, Ukiah, Fossil, Canyon City, and Enterprise are geographically isolated from the closest larger cities such as Pendleton, Walla Walla, and La Grande (Reyna et al. 1998). This isolation limits options for local workforces. Refer to the *Umatilla National Forest, Land and Resource Management Plan, Final Environmental Impact Statement*, Appendix B for further detailed description of the main social and economic characteristics of the area (USDA 1990). Farming, fishing, and forestry employment in the 10-county impact zone was 3.7 percent of the total workforce in 2000 (State of Oregon, Office of Economic Analysis 2005).

ENVIRONMENTAL CONSEQUENCES

Grazing Viability – Effects Common to Action Alternatives

Direct and Indirect Effects: Table 49 and 50 show the results of the analysis of grazing viability for each alternative in the two scenarios. Both tables show that as the level of federal grazing decreases, the permittee's net income decreases. Under Scenario 1, this is a substitution effect due to the permittee's replacement of lost federal grazing opportunities with more expensive private land grazing. Under Scenario 2, this is due to an output effect as the permittee does not replace lost federal grazing opportunities and the total number of animals grazing decreases.

Cumulative Effects: No other past, ongoing, or foreseeable future activities of any alternative would affect, or be affected by any employment or income effects not already described.

Table 49: Estimated Annual Grazing Revenues (Scenario 1)

	Alternative		
	1	2	3
Cow/Calf Pairs	493	493	493
Annual Federal Accounting			
Federal Head Months	0	1972	1726
Total Federal Grazing Fee Payments	$0	$3076	$1692
Federal Payments to County	$0	$769	$673
Annual Non-Federal Accounting			
Non-Federal Head Months (SHM)	1972	0	246
Annual Private Accounting			
Minimum Private Total Fee Payments	$19,720	$0	$2,460
Maximum Private Total Fee Payments	$29,580	$0	$3,690
Total Annual Cost to Permittee			
Minimum Total Cost to Permittee	$19,720	$3,076.32	$4,152.56
Maximum Total Cost to Permittee	$29,580	$3,076.32	$5,382.56
Total Permittee Gross Income	$232,450	$232,450	$232,450
Minimum Permittee Net Income	$202,870	$229,373	$226,067
Maximum Permittee Net Income	$212,730	$229,373	$227,297

Table 50: Estimated Annual Grazing Revenues (Scenario 2)

	Alternative		
	1	2	3
Cow/Calf Pairs	0	493	493
Federal Head Months (HM)	0	1972	1726
Total Federal Grazing Fee Payments	$0.00	$3076.32	$1692.56
Federal Payments to County	$0.00	$769	$673
Head Months Lost	1972	0	246
Total Permittee Gross Income	$0.00	$232,450	$232,450
Permittee Net Income	$0.00	$229,373	$227,297

Alternative 1

Direct and Indirect effects: In Scenario 1, this alternative would graze all 1,972 head months on private land each year. Grazing fees would total between $19,720 and $29,580 for private land. No grazing fees would be paid to the federal government or local county. Annual income from the sale of all calves on private land was estimated at $232,450. The resulting estimated net income to the permittee was calculated to be between $202,870 and $212,730 per year, depending on the amount of grazing fees paid.

In Scenario 2, this alternative would not graze any cattle. The permittee would not realize any income or expenses from the enterprise.

Alternative 2

Direct and Indirect effects: This alternative would graze all 1,972 head months on federal land in both scenarios. Grazing fees would total $3,076 per year – all to the federal government. Payments to the county out of these fees would total $769 per year. Annual income from the sale of all calves on the allotment was estimated at $232,450. The resulting estimated net income to the permittee was calculated to be $229,373 per year.

Alternative 3

Direct and Indirect effects: In Scenario 1, this alternative would graze 1,726 head months on Forest Service land and 246 head months on private land each year. Grazing fees would total between $2,460 and $3,690 per year. Federal grazing receipts from these fees would total $1,692 per year, with $673 of these fees going to the local county. Annual income from the sale of all calves on the allotment was estimated at $232,450. The resulting estimated net income to the permittee was calculated to be between $226,067 and $227,297 per year, depending on the amount of grazing fees paid.

In Scenario 2, this alternative would graze 1,726 head months on Forest Service land only each year. Annual grazing fees would total $1,692 – all to the federal government with $673 of these fees going to the county. Since 493 cow/ calf pairs would still be on Forest Service land, the number of calves sold at market would be the same as alternative 2 resulting in the same gross income. Income from the sale of all calves on the allotment was estimated at $232,450 per year. The resulting estimated net income to the permittee was calculated to be $227,297 per year.

Employment and Income – Effects Common to All Action Alternatives

Direct and Indirect Effects: **The direct and indirect effects of each alternative on employment are shown on**

Table 51: Estimated Direct and Indirect Employment Effects under Scenario 1

and Table. In general, grazing employment under Scenario 1 did not vary by alternative because the same amount of cattle are grazed under each alternative under this scenario. The only difference is the change in the distribution of the herd between federal and non-federal land.

Cumulative Effects: No other past, ongoing, or foreseeable future activities of any alternative would affect, or be affected by any employment or income effects not already described.

Table 51: Estimated Direct and Indirect Employment Effects under Scenario 1

In general, grazing employment under Scenario 1 (Table 51) did not vary by alternative because the same amount of cattle are grazed under each alternative under this scenario. The only difference is the change in the distribution of the herd between federal and non-federal land.

Table 51: Estimated Direct and Indirect Employment Effects under Scenario 1

	Alternative		
	1	2	3
Head Months (HM)	1,972	1,972	1,972
Direct Employment Coefficient (Jobs/HM)	0.0015	0.0015	0.0015
Direct Employment (Jobs)	2.958	2.958	2.958
Indirect Employment Ratio	0.621	0.621	0.621
Indirect Employment (Jobs)	1.836	1.836	1.836
Total Employment (Jobs)	4.794	4.794	4.794

Under Scenario 2 (Table 52), grazing employment decreases in proportion to the decrease in head months.

Table 52: Estimated Direct and Indirect Employment Effects under Scenario 2

	Alternative		
	1	2	3
Head Months (SHM)	0	1,972	1726
Direct Employment Coefficient (Jobs/HM)	0.0015	0.0015	0.0015
Direct Employment (Jobs)	0	2.958	2.589
Indirect Employment Coefficient (Jobs/HM)	0.621	0.621	0.621
Indirect Employment (Jobs)	0	1.836	1.607
Total Employment (Jobs)	0	4.794	4.196

Alternative 1 (No Grazing)

Direct and Indirect effects: This alternative would directly and indirectly support either zero or 4.794 jobs, depending on the availability of non-federal land to replace grazing opportunities on federal land. If non-federal land were not available, this alternative would not support any jobs.

Direct and indirect income to the permittee, the permittee's workforce, and the economy of the impact area would also depend on whether the permittee grazed 1,972 (if non-federal land were available) or no head months. A reduction to no grazing on either federal or non-federal land would reduce income derived from this allotment in the impact area to zero.

Alternative 2 (Proposed Action)

Direct and Indirect effects: This alternative would not reduce the amount of grazing on Forest Service land under either scenario. Multiplying the number of head months by the employment coefficient

yielded about 4.8 jobs within the economic impact zone, directly and indirectly provided by the allotment.

Alternative 3

Direct and Indirect effects: This alternative would directly and indirectly support either 4.2 or 4.8 jobs, depending on the availability of non-federal land to replace grazing opportunities on federal land. If non-federal land were not available, 1,726 head months would support 4.2 jobs.

Direct and indirect income to the permittee, the permittee's workforce, and the economy of the impact area would also depend on whether the permittee grazed 1,972 (if non-federal land were available) or 1,726 head months. A reduction to 1,726 head months would reduce income derived from this allotment in the impact area annually as well as over the 10-year period.

SUMMARY

This economic analysis examined the grazing allotment management in two different aspects – grazing viability (measured in terms of net permittee income and grazing fees to the federal government and the county), and employment (measured in terms of direct and indirect jobs supported).
Of the two alternatives compared and the two scenarios (sets of assumptions) presented for each, Alternative 2 provides the largest benefit to all measurement parameters. Alternative 3 would provide a slightly less benefit in terms of income and possibly employment due to the 2 weeks of season difference. Alternative 1 provides the least amount of benefit in terms of income and if private land was not found for the loss of National Forest land, no employment benefits would be observed.

OTHER EFFECTS

Floodplains, Executive Order 11988

The Floodplains Executive Order requires the Forest Service to avoid "to the extent possible the long and short term adverse impacts associated with the ...occupancy or modification of floodplains..." The Hidaway Allotment complies with this Executive Order, because it does not propose to occupy or modify any floodplains.

Wetlands, Executive Order 11990

The Hidaway Allotment is consistent with Executive Order (EO) 11990 because it avoids to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands. There is no activity in this project which would destroy or adversely modify a wetland.

Municipal Watersheds

There are no de-facto or designated municipal watersheds in the Hidaway project area.

Prime Farmland, Rangeland, and Forestland

There are no lands within the planning area that are classified as prime farm or rangelands. Prime forestland is not applicable to lands within the National Forest System.

Civil Rights and Environmental Justice

Civil Rights legislation and Executive Order 12898 direct an analysis of the proposed alternatives as they relate to specific subsets of the American population. The subsets of the general population include ethnic minorities, people with disabilities, and low-income groups.

Effects on civil rights, including those of minorities and women, would be minimal. Activities associated with the action alternatives would be governed by Forest Service grazing permits, which are awarded to qualified permittees regardless of race, color, sex, religion, etc. Such permits also contain nondiscrimination requirements. While the activities identified here would affect employment and would provide consumer goods, no quantitative output, lack of output, or timing of output associated with these projects would affect the civil rights, privileges, or status quo of consumers, minority groups, and women.

With implementation of any of these alternatives, there would be no disproportionately high and adverse human health or environmental effects on minority or low-income populations. The actions would occur in a remote area and nearby communities would mainly be affected by economic impacts as related to the effects of alternatives on permittee income.

Racial and cultural minority groups are often prevalent in the work forces that would implement a grazing permit on the allotment. However, the size of the workforce directly affected by the alternatives would be small relative to the total number of persons of racial and cultural minority groups within the economic impact zone.

The effects of the proposal on the social context of the protected groups are within those described in the Umatilla and Wallowa-Whitman National Forest Plans. The benefits and risks associated with

implementation of the alternatives are provided to all members of the public. The action alternatives provide opportunities for the permittee, and ultimately, to all groups, regardless of racial and economic composition.

Irreversible and Irretrievable Commitments of Resources

Irreversible commitments of resources are those that cannot be regained, such as the extinction of a species or the removal of mined ore. Irretrievable commitments are those that are lost for a period of time such as the temporary loss of timber productivity in forested areas that are kept clear for use as a power line right of way or road.

The action alternatives would not be expected to create any impacts that would cause irreversible damage to soil productivity. There is low risk for the proposed actions to cause soil mass failures (landslides) due to the inherent stability of dominant landtypes and the lack of seasonally wet soils on steep slopes.

Soils dedicated to management facilities, such as water developments, the transportation system and cattleguards, are considered an irretrievable loss of soil productivity until their functions have been served and disturbed sites are returned back to a productive capacity. Under the action alternatives, the amount of land dedicated to structural improvements would be limited to the minimum necessary for management needs. Under all alternatives, the cumulative amount of detrimentally disturbed soil from all management facilities would remain within allowable Forest Plan standards and guidelines.

Wilderness

The project area does not contain any Wilderness. There would be no impacts from any alternative to this land allocation.

CHAPTER 4

COORDINATION AND CONSULTATION

CHAPTER 4 – COORDINATION AND CONSULTATION

INTERDISCIPLINARY TEAM MEMBERS

The following Forest Service individuals were involved in the preparation of this Environmental Assessment.

Tom Thompson	ID Team Leader
Brad Lathrop	Range Specialist
Randy Scarlett	Wildlife Biologist
Kristy Groves	Fisheries Biologist
Jean Wood	Forest Botanist
Ed Farren	Hydrologist
Janel Lacey	Recreation
Jill Bassett	Cultural Resource Specialist
Chris Helberg	Geographic Information Systems
David Frantz/ Katie Blazer	Writer/Editor

PUBLIC INVOLVEMENT

PUBLIC SCOPING (April 21, 2006)

The following headings provide lists of people, organizations, and agencies that were sent notification of the proposed action. The Forest Service also consulted with the Oregon Department of Fish and Wildlife and the U.S. Fish and Wildlife Service during project development.

In response to the scoping notification, two written comments were received. Comments were used to help develop issues, alternatives, and project design criteria. Those who contacted us include:
Oregon Natural Resources Council (ONRC – now Oregon Wild)
Oregon Natural Desert Association

Tribes

Columbia River Inter-Tribal Fish Commission, Jim Weber, Policy assistant
Confederated Tribes of the Umatilla Indian Reservation
Antone Minthorn, Chairman; John Barkley, General Council Chair; Eric Quaempts, Director, Department of Natural Resources; Carl Scheeler, Wildlife Program Director; Rick George, Environmental Planning Rights Protection Department; Teara Farrow, Cultural resource Protection Program; Armand Minthorn, Cultural resource Protection Program; Carey Miller, Cultural resource Protection Program; Gary James, Fisheries Program Director
Confederated Tribes of the Warm Springs Reservation of Oregon
Ron Suppah, Chairman, Tribal Council; Bobby Brunoe, Natural Resources; Scott Turo, Off Reservation Habitat Biologist; Sally Bird, Program manager, Cultural Resources Department; Joseph Moses; Nelson Wallulatum; Delvis Heath, Sr.
Nimiipuu Tribe
Rebecca Miles, Chairman; Randall Minthorn, Chairman, Natural Resources Subcommittee; John Degroot, Director, NPT Forestry; Aaron Miles, Natural Resources; Ira Jones, Watershed Management; Dave Johnson, Fisheries; Ryan Sudbury, Office of Legal Council

Federal, State, and Local Agencies

Bureau of Indian Affairs, Umatilla Agency, Forestry
Bureau of Indian Affairs, Jerry Lauer
Cooperative Extension Service, Umatilla County, Randy Mills, County Extension Agent
County Court of Grant County
Grant County Soil and Water Conservation District
Morrow County, Board of Commissioners, Ray Grace
National Marine Fisheries Service, Spencer Hovekamp
Oregon Department of Fish and Wildlife
Mark T. Kirsch; Tim Bailey; Bruce Eddy; Jeff Zakel; Tim Unterwegner; Russ Morgan; Habitat Conservation Division
Oregon Department of Environmental Quality
Oregon State Division of State Lands, Fern Shank
Umatilla Basin Watershed Council, Tracy Bosen
Umatilla County Watermaster, Tom Johnson
Union County Board of Commissioners
U.S. Environmental Protection Agency, Region 10, Environmental Review Coordinator
US Fish & Wildlife Service, John Kinney
US Fish & Wildlife Service, Portland Field Office, Field Supervisor

Interest Groups

Alliance for the Wild Rockies, Ecosystem Defense
Blue Mountain Biodiversity Project, Karen Coulter
Grant County Conservationists
Greystone, Amber Martin
Hells Canyon Preservation Council, Greg Dyson
Inland Northwest Wildlife Council, Robert D. Panther, Executive Director
Utah State University, Natural Resources Research Library, S.J. and Jessie E. Quinney
Northwest Environmental defense Center, Stephen Otto
Oregon Natural Desert Association, Peter M. lacy
Oregon Natural Resources Council (Now known as Oregon Wild), Eugene, OR office
Oregon Natural Resources Council (Now known as Oregon Wild), Tim Lillebo, Eastern Oregon Field Representative
Oregon Sheep Growers Association
Oregon Trout, Jim Myron
Pacific Rivers Council, Ken Rose and Mary Scurlock
Pat Harris, ATV-AAC, Chair
Sierra Club, Inland northwest Office, Chase C. Davis
University of Oregon, Student Director, Environmental Studies Center
Washington Wilderness Coalition, Tom Uniack
Western Washington University, Documents Department, Wilson Library, Robert Lopresti
Wilderness Society, Bob Friemark

Industry

Blue Mountain Lumber Products, Bill Cameron

Individuals

James P. Bailey
Chris Burford
Clint Decker
John Edmundson
John Edwards
Stan Foster
Ray French
Richard N. Isaacson
John Leonard
J. V. Lundsten
Roger Neufeldt
Dave Price
Erik Ryberg
M. Sharp
Don Stroeber
Scott Thygeson
Roberta Vandehey
M. L. Weseman
Jim and Wade West
Ron Yockim

Newspapers

Pendleton Record
East Oregonian, Barry Rockford

30-Day Comment Period (November 18, 2006 – December 18, 2006)

A review copy of the Environmental Assessment, Hidaway Allotment was made available for review following the legal notification in the East Oregonian, November 17, 2006. The following interested parties provided comment:

Doug Heiken, Oregon Wild
Kristen Ruether, Oregon Natural Desert Association
Rick and Bonnie Rose Ross
Larry McLaud, Hells Canyon Preservation Council

Comments/Responses for 30-Day Comment Period

The Forest Service received four letters of comments in response to the 30-day comment period for the Hidaway Grazing Allotment Permit Reauthorization. Substantive comments and responses to the comments are displayed in the following table.

Comments – 1. Doug Heiken, Oregon Wild	Response
1.1 The land allocation includes a lot of special fish habitat. Grazing is not really compatible with this objective.	Grazing has been identified as compatible with the special fish management area as long as it's done in a way that allows riparian goals to be met. These include Pacfish riparian management objectives – Umatilla National Forest Land and Resource Management Plan pg 4-168. Effects of the proposed action and Alternative 3 are addressed in the EA, starting on pages 66-68 (hydrology), pages 72-75 (soil exposure forest plan consistency), and pages 54-61 (environmental consequences of grazing on fisheries).
1.2 The EA is too quick to dismiss the impact of current grazing on forest health. *EA does not discuss how grazing might reduce or eliminate ecologically beneficial fires. *Grazing shifts the vegetation composition from palatable species (more likely to be surface fuels) to unpalatable species (ladder fuels) – discuss the ecological impact of this	The range analysis, which is summarized in the EA pp 33 – 43, identifies current vegetative conditions in the Hidaway Allotment as stable. Riparian areas have increased riparian vegetation and areas area "well vegetated"(hydrology Report). Best Management Practices and monitoring points in place will be used to track vegetative response to grazing. Past over-grazing has affected vegetation composition. Current grazing strategies have led to vast improvements in improving and maintaining desired vegetation. This includes the introduction of conifer species or shrubs displacing historic ecosystem components.

1.3 The EA was not clear on what kind of "active restoration" was rejected.	A request was made to analyze an active restoration without grazing alternative. This analysis was dropped as it did not address the need for and purpose of the project.
1.4 Grazing has undesired adverse impacts on soil, water, vegetation, fuels, weeds, fish & wildlife habitat, recreation, scenery, economics, and carbon. FS assumes mitigation will address these, but when considered together, elimination of grazing should be considered reasonable and compelling. Analysis methods sections of the EA are just descriptions of information sources but not a real explanation of how analysis was structured and executed.	The impacts of grazing and not grazing and the methods used to analyze those impacts are addressed fully in the Specialists' Reports and Biological Evaluations. Individual sections within the reports provide existing conditions information and additional explanations of how analyses were executed. The EA contains the effects analyses and the summary of those reports. Additional information about the methods used to analyze the soil impacts was added to the soil report and EA, p. 69. Carbon sequestration is beyond the scope of this project.
1.5 EA does not appear to analyze livestock grazing effects to populations of lynx prey species other that snowshoe hare. In recovering fire area, primary productivity should be allocated to rebuilding of prey populations.	Snowshoe hare are the primary prey resource of the lynx in this area. It is recognized that other prey species, including red/Douglas' squirrel, ruffed grouse, other rodents, etc. are important prey for the lynx, particularly in the summer and have been added to this discussion in the final wildlife specialist report. Potential grazing impacts on these species and their habitats are discussed in the Wildlife Specialist's Report and Biological Evaluation. The fire area has been rested since before the fire. Given that the pasture has not been grazed and that habitat is largely inaccessible to cattle, productivity in these areas is being allocated to vegetative growth and recovery of potential prey populations.
1.6 FS declaration that suitable lynx habitat is unoccupied does not mean there is no effect on lynx. The FS must manage lynx habitat to facilitate the reoccupation of its historic range. The FS's definition of lynx habitat and the determination of unoccupied habitat are inconsistent with best available science.	The fact that the Umatilla, Wallowa Whitman, and Malheur National Forests have been designated unoccupied habitat does in fact mean that project activities within and outside mapped lynx habitat would have no effect on the Canada lynx because this species is not present on these Forests. The US Forest Service does have the obligation to manage lynx habitat by providing and maintaining well-distributed snowshoe hare habitat within mapped lynx habitat, producing structural habitat conditions that provide lynx with prey during dispersal movements, and

	maintaining connectivity between lynx habitats. The best available science (the Lynx Conservation Assessment and Strategy) will be utilized to meet these obligations. The Wildlife Specialist's Report and Biological Evaluation has a full discussion of the impacts of grazing on potential lynx habitat in the Hidaway Allotment.
1.7 Roadless analysis should not be addressed as a subset of recreation. Roadless values range from watershed integrity and clean water to fish & wildlife habitat to carbon sequestration. These values should be considered.	Roadless areas are addressed on pages 114 - 120 and associated values are covered in the hydrology, fisheries and wildlife sections of the EA. Carbon sequestration is beyond the scope of this project.
Comments – 2. Kristen Ruether, Oregon Natural Desert Association	**Response**
2.1 The Forest Service should maintain the Tower Unit in nonuse by eliminating from the allotment. a. ONDA welcomes the inclusion of alternative 3 in the EA, which proposes closing the largest unit, the Tower unit to grazing. Selection of alternative 3 would be a strong positive step towards endangered fish stewardship. b. The newly designated steelhead critical habitat in the Tower Unit further supports selection of Alternative 3.	Comment noted
2.2 The EA proposes grazing activities that are inconsistent with the Forest Plan and PACFISH/INFISH. The proposed action fails to meet GM-1's mandate. The EA shows authorized grazing is retarding or preventing the attainment of RMOs, yet the "decision" fails to make meaningful modifications or suspend grazing. 2.2a Current conditions – Although	Grazing has been identified as compatible with the special fish management area as long as it's done in a way that allows riparian goals to be met. These include Pacfish riparian management objectives – Umatilla National Forest Land and Resource Management Plan pg 4-168. Modifications to grazing to meet GM1 are discussed in the Aquatics Specialist report pg 30. a. Current conditions in the analysis

monitoring is far from adequate, what monitoring has been done shows that many RMOs in the project area are not being met. 2.2b Rates of Recovery – ONDA does not find any trend data in the EA. The little monitoring that is presented is not collected at a frequency adequate to determine any trend. The EA states that no bank stability or shade data is available, and that width to depth data is only available for a single reach of a single creek. The EA's conclusion that grazing the Hidaway Allotment would be consistent with the standards and guidelines set for PACFISH is wholly unsupported. 2.2c Grazing Suspension – The Forest Service has failed under this EA to provide meaningful modifications to grazing management or grazing suspension to remedy the grazing system's effect of retarding and preventing attainment of RMOs. This will violate the GM-1 standard. The plain language of GM-1 does not permit an agency to continually make modifications that are unsuccessful in achieving RMOs.	area are discussed in Aquatic Specialist Report. Of RMOs that may be affected by grazing only the temperature RMO is not being met. Aquatics specialist report pages 3-11. b. Bank stability and shade data are presented for 10 reaches on 3 creeks on page 8 of Aquatics Specialist Report. Width to depth ratios are presented for 8 creeks and 19 reaches on page 7 and for 1 creek, 1 reach on page 11 of the Aquatics Specialist Report. Some of this data is presented for multiple surveys over a ten year period. c. Modifications to grazing to meet GM1 are discussed in the Aquatics Specialist report pg 30. A determination was made that continued grazing is not retarding attainment of any RMOs. Pg 21-23 Aquatic Specialists Report.
2.3 The EA demonstrates the Forest Service has failed to conduct the monitoring required under the Forest Plan and PACFISH/INFISH 2.3a The Forest Plan requires many types of monitoring that relate to grazing impacts (UNF Plan at 4-66, 4-77, 4-89, 4-90). The proposal does not contain evidence that any of these required monitoring items are being fulfilled. The most recent Monitoring and Evaluation Report posted on the Forest Website is for	The fish 'smolt' habitat capability index goal is met by meeting standards for fish pg 4-164 – Umatilla National Forest Land and Resource Management Plan. Monitoring results are mentioned in Soil Report, p. 11, #3.8.2; #3.8.3; and in Soil Photos. Monitoring activities are summarized or analyzed in Water Report, p. 3, #1.3.1.4; p. 7, #1.3.1.7; p. 8; #1.3.1.7; p. 9, #2.2; p. 11, #2.5.4.1; p. 12, #2.5.4.2; p. 13, #2.5.5.1; p. 14, #2.5.5.2; p. 15, #2.6.7.1; p. 16, #2.6.7.2 and #2.6.8; p. 17, #2.6.8.2; and the relationship between the monitoring, BMPs, and the Clean

2002. There is no evidence in any of the recent reports that "attainment of fish habitat capability desired future conditions" was assessed for this allotment. Thus, no information we have seen establishes that the Forest Plan and PACFISH/INFISH monitoring requirements are being met.	Water Act is summarized on p. 18, #2.6.9. Various monitoring photos are exemplified in the hydrology report. Additional monitoring is reflected in the description of current conditions for the different resources.
2.4 The EA violates other Forest Plan standards 2.4a Forest Plan water quality standards that are relevant to grazing reauthorization include meeting or exceeding state water quality standards, implementing and enforcing Best Management Practices, and adjusting BMP design standards and application when monitoring shoes that beneficial uses are not being protected and water quality standards are not being achieved. The proposal does not contain evidence of compliance with these water quality standards.	The EA acknowledges that temperature standards are not being met, however grazing is allowed as long as it does not contribute to an increase in water temperatures pg. 4-164 Umatilla National Forest Land and Resource Management Plan – analysis pg 22 Aquatic specialists report. Most RMOs are being met within this allotment pg 3-11 Aquatic Specialist report. Activities are allowed to occur on streams where a TMDL is not yet established as long as activities do further reduce water temperatures. "(T)o meet or exceed … water quality standards" is a Forest Plan goal (p. 4-77). The Forest Plan requirement is to "meet or exceed state requirements in accordance with the Clear Water Act through planning, application, and monitoring of Best Management Practices …" (p. 4-77). Pages 1-8 explain how the Hidaway Allotment Project meets the state requirements. Paragraph 2.6.9 on p. 18 explains why the Hidaway Allotment Project complies with the Forest Plan.
2.5 The EA violates NFMA by failing to assess the suitability and capability of the allotment. **2.5a** NFMA grazing regulations require the FS to determine the suitability and capability of national forest lands for forage production and for providing habitat for management indicator species. ONDA finds no suitability determination in either the EA or the Forest Plan. The failure to address this in the EA renders the decision in violation of NFMA.	The Umatilla National Forest Land and Resource Management Plan 1990 identifies the Hidaway C&H Allotment as active and currently implementing a Qualitative Intensive Management Objective which allows the allotment to be managed to obtain a high production of livestock through the best techniques of range management. The Forest Plan did evaluate suitability using a model of indicators such as slope, production etc. During the Hidaway allotment analysis the Forest Service analyzed vegetative trends and compliance with annual utilization standards,

	two measurements that can be used to determine proper stocking capacity. These analyses indicate the current and proposed permitted livestock numbers are within the carrying capacity of these allotments. NFMA does not require a suitability analysis be conducted at the project level. On August 24, 1999, the US Court of Appeals for the Ninth Circuit concluded the Forest Service had complied with NFMA by adopting the Forest Plans, including its allocation of acreage suitable for grazing. This analysis is to determine whether or not to authorize livestock grazing in the project area (*Wilderness Society v. Thomas* 188 F.3d 11(9th Cir. 1999)).
2.6 The FS violated the Clean Water Act by failing to ensure its authorized grazing complies with state water quality standards. 2.6a The EA does not establish that temperature standards are being met. 2.6b Chronic failures to meet RMOs and water quality standards on critical fish bearing streams throughout the planning area, the FS's authorization of grazing in these allotments is a violation of CWA until TMDLs are established.	The EA acknowledges that temperature standards are not being met, however grazing is allowed as long as it does not contribute to an increase in water temperatures pg. 4-164 Umatilla National Forest Land and Resource Management Plan – analysis pg 22 Aquatic specialists report Water Report. The Water Report discloses the streams that exceed temperature standards (paragraph 1.3.1.2).
2.7 ONDA recommends selection of Alternative 3.	Comment noted
Comments – 3. Rick and Bonnie Rose Ross, Regional Director of Ecology, Range, and Watershed Management for the Pacific Northwest Region, USFS - retired	**Response**
3.1 Grassland and meadow plant communities continue to exhibit species presence indicative of healthy communities handling well the impact of foraging animals, both domestic and wild, with one exception.	Comment noted

3.1a One plant association not demonstrating healthy conditions is the AGSP-POAS3-DAUN. These landscapes were virtually denuded by sheep grazing in the late 1800s, but once brought into the National Forest system; management offered a protection for improvement. Scientific literature leads to identification of organic and nutrient capital removal through biological mining by sheep and then consequently erosion. The proposed action poses no risk to these landscapes. They are in a recovery mode that may extend for centuries.	
3.2 Forage for livestock is a congressionally mandated purpose of these National Forest lands and they are well suited for grazing.	Comment noted
Comments – 4. Larry McLaud, Hells Canyon Preservation Council **Some comments from Mr. McLaud covered the following standards: RP3, RP6, RP7, RP8, AND M15-7. These standards are from the Deschutes National Forest Plan and pertain to the specific conditions and situations of that Forest. These standards do not apply on the Umatilla National Forest. We apologize that those standards were inadvertently included in this document.**	**Response**
4.1 Given riparian areas and streams are a management priority for the Forest, it seems unwise to continue to graze areas that are adversely impacted by grazing such as much of the Hidaway Allotment.	The Hidaway allotment is managed in such a way as it will not adversely affect riparian areas, streams or fish species. Aquatic Specialist Report, Biological Assessment for the Hidaway Allotment.
4.2 The Tower unit has not been grazed since 1993, at the permittee's request. The EA fails to make a clear case to include the Tower Unit. It would seem better management to change the Tower Allotment to include only areas generally used by cows, not including	Comment noted. Alternative 3 removes the Tower Unit from the Hidaway Allotment.

riparian zones.	
4.3 No condition and trend analysis for the Tower Unit is presented.	Comment noted. There is no condition or trend plot data for the Tower Unit. It has not been grazed in several years.
4.4 All potential lynx habitat within the allotment is restricted to the Tower Unit.	Comment noted. Alternative 3 removes the Tower Unit from the Hidaway Allotment.
4.5 Botrychium lanceolatum, a sensitive species occurs in the Tower Unit and should be protected from grazing.	The current status of *Botrychium lanceolatum* is discussed in the Hidaway Plant BE. The species no longer meets the criteria for inclusion on the R6 Regional Forester's Sensitive Species List, as it has recently been moved to a less rare category by the Oregon Heritage Program. With increasing sightings from recent surveys, as well as better understanding of the post-disturbance ecology of Botrychiums in general, this species and its habitat are now known to be fairly common. Short of severe degradation of the streamside habitat along both Frazier and Hidaway creeks, grazing is unlikely to affect the scattered plants that have been found in this allotment. While *B. lanceolatum* remains in "watch" status according to the Oregon Heritage Program, the loss of individual plants is not likely to contribute to a trend towards federal listing, or cause a loss in viability of the species.
4.6 Eleven dispersed campsites occur in the Tower Unit which would be impacted by manure and flies if grazed.	Comment noted. Alternative 3 removes the Tower Unit from the Hidaway Allotment. The impacts of manure and flies is covered in the Recreation Specialist's Report.
4.7 There has been past concerns of livestock impacts along Dry Camas Creek, Hidaway Creek, Butcherknife Creek and Camp Creek. Other than installing 1.5 miles of new fence, little has been proposed to address these concerns.	Existing fences – to restrict cattle access- and monitoring has been sufficient to address past concerns of livestock impacts. Pages 64 – 65 of the EA (Hydrology section) discusses design feature effectiveness. Water quality environmental consequences are presented on pages 66 – 68. The Water Report (pages 3 to 7) further discloses mitigations and proposals to reduce livestock impacts
4.8 The condition of the soils is not adequately addressed in the EA. Very shallow soils over unfractured basalt do not make for ideal grazing land.	Soil conditions are disclosed starting on page 69 of the EA. The determination of "all soils in the analysis area are capable of producing forage and sustaining sufficient vegetation to maintain soil cover

4.9 Non native species such as Ventenata crowd out native grasses in part due to grazing.	Sites of *Ventenata dubia* are considered in satisfactory condition because of the adequate frequency of desirable native species associated with the plant community types. Livestock have been managed to reduce soil impacts when soils are saturated (invasive trigger), and should continue to do so (EA p. 37).
4.10 Aquatic habitat surveys, many of which are over 10 years old, show an assortment of water quality problems. *Temperature data presented is spotty but it shows little change in temperature violations over a number of years *Most sites show a consistent pattern of violation well above the 64 degree F maximum standard of steelhead habitat. *Sediment is also a continuing problem for three segments. The EA suggests that the Wolman pebble count values might better represent habitat available but no Wolman pebble count data is presented. *Other water quality concerns include lack of large woody debris in six reaches, pool frequency per reach in violation of ICBEMP standard on at least 9 reaches, width to depth ratios and percent shade for stream segments. *The lack of data for Fly and Umapine Creeks in the Tower Unit does not encourage the public to support grazing in the Tower Unit. *There is no fish population data for any of the streams impacted by the Hidaway Allotment. Without fish population data, the public and decision makers have little information to judge whether or not grazing is having an adverse impact on anadromous fish or redband trout.	The three segments with higher sediment loads are meadow stretches that typically have more sediment naturally. Cattle do not affect large wood or pool frequencies, width to depth ratios are being met on all surveyed reaches (pg 7 Aquatic Specialists Report), and percent shade is low on all surveyed streams - one of the main monitoring items to ensure cattle do not further reduce shade. The lack of access to these streams by cattle will eliminate any effect cattle may have on these streams (p. 47 and 64 of the EA, and pp 13-14 of the Aquatic Specialist Report). Monitoring will also ensure that cattle do not affect these streams. Three pass electro-shocking population estimates in both Hidaway and Frazier creeks were done between 1996 and 2003. Data showed a population of steelhead redband trout fluctuating between 28.5 to 111 fish per 100 meters in Frazier Creek and between 46.7 to 107 fish per 100 meters in Hidaway Creek. These two streams are considered representative steelhead streams within this area of Upper Camas Creek.

4.11 Several miles of designated critical steelhead habitat remain unfenced. *Fencing would allow faster recovery of riparian areas and water quality. Elimination of grazing altogether would recover the area even quicker, without the taxpayer expense for administration, "improvements" and monitoring.	Monitoring of streams without fencing is designed to effectively manage grazing so that it does not retard attainment of any riparian management objective. The Forest Plan and the Hidaway Project contain management requirements, design features, and monitoring guidelines to track and respond to riparian vegetation if it is jeopardized (p.65, EA).
4.12 Private land management in the Hidaway Allotment watersheds will also have an adverse effect on water quality and has not been analyzed in this EA.	Effects from private land activities were considered when analyzing cumulative effects to fish and aquatic habitat (pp55-58 EA and pp 65- 68 Cumulative effects section EA, and Aquatic specialist report). Subwatershed effects were also considered in the Hydrology analysis (pp 66-67, EA and the Water Resources Report, pp 13 -21).
4.13 Elk populations have not improved but declined. Recent declines have become a management concern. Elk are a Management Indicator Species and recent declines in elk population and the failure to meet the management objectives are likely connected to grazing.	Elk populations have been declining across the Blue Mountains for a number of years. These declines have been universal, across all habitat types and land uses. The decline in elk numbers (resulting primarily from low calf:cow ratios) is believed to have multiple sources, including increased predation, changing weather patterns, habitat changes (resulting from past bug-kill and large fires), over-liberal hunting seasons, and human factors. Preliminary research in northeast Oregon indicates that predators (primarily mountain lions) are responsible for the vast majority of calf mortality, and that increased predation is largely to blame for declines. Forest Plan standards for utilization are being met in the Hidaway allotment. Stubble height standards are a cumulative measure of grazing by cattle and elk within the allotment; meeting these standards indicates that cattle and grazing-related activities are not adversely affecting elk or their habitat. If these standards were not being met consistently, it would indicate that combined grazing by cattle and wild ungulates (including deer) was adversely impacting habitat, and that the portion of available forage allocated to cattle was too

	great. This is not the case in this allotment. See Wildlife Specialist's Report for a full discussion of grazing impacts on elk.
4.14 No HEI for elk was calculated which looks at cover, forage and motorized impacts. There is no forage analysis data or other data to adequately evaluate the impacts on elk or deer from grazing.	HEI was not calculated for this project because cattle grazing does not affect the amount or distribution of cover habitat or the transportation system (roads) within an area. Forage is generally not included in the calculation of HEI on the Umatilla National Forest. Forest Plan forage utilization standards have been consistently met in the allotment. Utilization is a cumulative measure of grazing by cattle and wild ungulates; grazing by both is accounted for when measuring utilization. Because these standards are being met, it is assumed that forage is not limited, and therefore not an issue in the allotment.
4.15 Given the cumulative adverse impacts on elk due to logging, ATV use and grazing, changes need to be made in management to stop the decline of the elk population.	Effects of grazing on elk are presented on pages 98 – 103 of the EA. Further analysis of the direct, indirect, and cumulative impacts is presented in the Wildlife Specialist's Report and Biological Evaluation. ATV use is outside the scope of the EA.
4.16 The EA has no analysis of the Wilderness characteristics other than suggesting they have none. *Roadless areas adjacent to a designated Wilderness are likely to have many be the same attributes as the Wilderness area. Grazing may be permissible in Wilderness areas but it will impact the Wilderness characteristics and is not compatible with wildlife abundance which as elk.	Wilderness areas are not part of the project area.
4.17 The economic analysis in the Hidaway EA in inadequate and incomplete for decision makers and the public to understand economic impacts on taxpayers, landowners or ranchers of this decision. *The minimum and maximum	Grazing fees are calculated in accordance with the Executive Order (EO 12548) issued February 14, 1986. The Executive Order specifies that the fee must not be less than $1.35 per month in any grazing fee year, and must be limited to not more than, plus or minus, 25 percent of the previous year's fee (FSH 2209.13 Chapter 82.1). This is an administrative

permittee net incomes displayed in Table 49 is unrealistic and misleads the public and decision makers as to the true effect of this grazing activity on the ranchers bottom line. *The net effect on employment and income is likely to be negligible to the County. The non market losses due to adversely impacted water quality and wildlife would likely more than offset any profits realized by the rancher. *If Alternative 1 is chosen, the economic impacts would likely be positive. *The EA does not give an account of what impacts the taxpayers would experience related to this grazing decision. For example what are the administrative, monitoring and "improvements" costs?	decision. The Forest Leadership Team, through the Budget Formulation and Executive System, designates administrative budgets. This is also an administrative decision.
4.18 The history of monitoring does not show an upward trend in condition of the range or water quality. The stubble height shown in Table A3 shows 3 violations when compared to allowable use.	Table A3, in Appendix A, displays the result of stubble height monitoring over the past several years. Allowable Use Stubble Height standards failed only four times over the last 14 years. As a result, livestock grazing was modified. Table 7 in the EA displays Interagency Implementation Team Standards of Median Stubble Height and Annual Growth Utilization. Existing Vegetation of the Hidaway Allotment is described on pages 34 through 40 of the EA. Data presented here shows current grazing management, and therefore current conditions, are in satisfactory condition.
4.19 The range management goal to manage for "long term sustained productivity through upward or stable vegetative trends, protection of the basic soil and water resources . . ." is not being met in the Hidaway EA. The data is not presented to confirm or deny that this goal is being met. This EA violates this requirement.	Monitoring data presented on pages 37 – 40 of the EA supports that management has been effective in meeting or moving towards desired conditions for vegetation on the allotment. Condition and trend data show the range and soil conditions have consistently been good to excellent over the past several decades. Riparian conditions (pages 38-40) have shown as upward trend to satisfactory conditions.
4.20 RP-3: This standard is being	This is a standard from the Deschutes National

violated as grazing is taking preference over riparian resources.	Forest. RP-3 does not pertain to the standards and guidelines of the Umatilla National Forest. Grazing within the Hidaway Allotment has met or exceeded standards for riparian resources as described in Chapter 3 of the EA, under the Range, Hydrology, and Fisheries sections.
4.21 RP-6 and RP- 7 are being violated by the adverse grazing impacts on water temperatures and State water quality standards.	RP-6 and RP-7 are standards on the Deschutes National Forest and do not pertain to the Umatilla National Forest. The EA acknowledges that temperature standards are not being met, however grazing is allowed as long as it does not contribute to an increase in water temperatures pg. 4-164 Umatilla National Forest Land and Resource Management Plan – analysis pg 22 Aquatic specialists report.
4.22 RP-8 Gives direction to evaluate cumulative effects including private lands in the watersheds. This is not in the Hidaway EA. Merely listing the possible cumulative effects as seen in Appendix F is not sufficient.	This is a standard from the Deschutes National Forest. RP-8 does not pertain to the standards and guidelines of the Umatilla National Forest. Effects from private land management is taken into consideration and discussed in the resource sections of the EA (Chapter 3) and the various specialist reports in the analysis file.
4.23 M15-7 "Livestock grazing is generally not compatible with old growth areas.". There is no information in the EA that provides reasons to allow grazing in old growth in the Hidaway Unit.	This is a standard from the Deschutes National Forest. M15-7 does not pertain to the standards and guidelines of the Umatilla National Forest. Moderate levels of livestock grazing are permitted in MA C-1 and C-2 of the Umatilla Forest Plan
4.24 HCPC encourages the decision maker to select Alternative 1 as it will manage public lands best for the land owners as a whole.	Comment noted

APPENDICES

APPENDIX A: RANGE HISTORY AND MONITORING

HISTORY OF LIVESTOCK GRAZING

Table A1: History of Use of the Camas-Hidaway Allotment

Year	*Permitted Use	Season	Head Months	**Acres
1917-1918	2,800	4/16-10/31	18,200	55,000
1919-1925	2,900	5/1-10-31	17,400	55,000
1926-1929	1,876	6/1-10/31	9,380	55,000
1930-1934	1,665	6/1-10/31	8,325	55,000
1935-1939	1,286	6/1-10/31	6,430	55,000
1940-1944	851	7/1-10/15	2,979	55,000
1945-1949	868	7/1-10/15	3,038	55,000
1950-1957	813	7/1-10/15	2,846	55,000
1958-1969	828	6/16-9/30	2,898	72,898

*The Camas Hidaway Allotment was separated in 1969 into the Hidaway and Lucky Strike Allotments.

Table A2: History of Use of the Hidaway Allotment

Year	Permitted Use	Season	Head Months	Acres
1970-1991	456	6/1-9/30	1824	32,631
1992-1993	495	5/29-9/27	2013	37,260
1994-1995	517	6/16-9/30	2102	19,264
1996	502	6/18-9/30	2041	19,264
1997	530	6/21-9/30	1784	19,264
1998-1999	517	6/16-9/30	1826	19,264
2000	900	7/1-8/27	513	19,264
2001-2002	517	6/16-9/30	2102	19,264
2003-2005	Non-use		0	19,264
2006	517	6/16-7/15	517	19,264

HISTORY OF IIT MONITORING

The following table (Table A3) displays the results of stubble height utilization monitoring. Only post-grazing (after cattle are out of the unit) measurements are recorded.

Table A3: History of ITT Monitoring for the Hidaway Allotment

Allotment	Unit	Key Area	Habitat Type	Year	Allowable Use Stubble Height	End Of Season Stubble Height
Hidaway	Trough	Camp Cr.	Riparian	1994	4	4.2
Hidaway	Trough	Camp Cr.	Riparian	1995	4	8.1
Hidaway	Trough	Camp Cr.	Riparian	1996	4	3.9
Hidaway	Trough	Camp Cr.	Riparian	1997	4	4.0
Hidaway	W. Trough	Camas Tributary	Upland	1998	3	4.0
Hidaway	W. Trough	Camas Tributary	Upland	1999	3	4.9
Hidaway	W. Trough	Camas Tributary	Upland	2000	3	6.0
Hidaway	W. Trough	Camas Tributary	Upland	2002	4	4.8
Hidaway	W. Trough	Camas Tributary	Upland	2005	4	6.0
Hidaway	E. Trough	Butcherknife Cr.	Sink	1998	3	3.6
Hidaway	E. Trough	Butcherknife Cr.	Sink	1999	3	4.3
Hidaway	E. Trough	Butcherknife Cr.	Greenline	2000	4	4.5
Hidaway	E. Trough	Butcherknife Cr.	Greenline	2001	4	4.5
Hidaway	E. Trough	Butcherknife Cr.	Greenline	2002	4	3.5
Hidaway	E. Trough	Butcherknife Cr.	Greenline	03-05	Rested	Rested
Hidaway	Dry Camas	Dry Camas Cr.	Sink	1998	3	3.1
Hidaway	Dry Camas	Dry Camas Cr.	Sink	1998	3	2.6
Hidaway	Dry Camas	Dry Camas Cr.	Greenline	1999	4	4.5
Hidaway	Dry Camas	Dry Camas Cr.	Greenline	2000	4	5.0
Hidaway	Dry Camas	Dry Camas Cr.	Greenline	2001	4	5.0
Hidaway	Dry Camas	Dry Camas Cr.	Greenline	2005	4	16.0
Hidaway	9-Sections	Hidaway Cr.	Riparian	1997	4	13.6
Hidaway	9-Sections	Hidaway Cr.	Sink	1999	3	3.9
Hidaway	9-Sections	Hidaway Cr.	Greenline	2002	4	3.5
Hidaway	9-Sections	Hidaway Cr.	Greenline	2005	4	23.0
Hidaway	9-Sections	Butcherknife Cr.	Greenline	2005	4	20.0

APPENDIX B: LITERATURE CITED

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APPENDIX C: GLOSSARY OF ACRONYMS AND TERMS

AMP – Allotment Management Plan
AOI – Annual Operating Instructions
ATV – All Terrain Vehicle
AU – Animal Unit
AUM – Animal unit month; based on the amount of forage required by an animal unit (one cow) for one month (26 pounds dry matter per day, LRMP).
BA – Biological Assessment
BCR – Bird Conservation Region
BE – Biological Evaluation
BLM –Bureau of Land Management
BMP - Best Management Practices
BO – Biological Opinion
CEQ – Council on Environmental Quality
CFR – Code of Federal Regulations
CT – Condition and Trend
CTUIR – Confederated Tribes of the Umatilla Indian Reservation
CWA – Clean Water Act
DMA – Designated Monitoring Area
DSC – Detrimental Soil Condition
EA – Environmental Assessment
EO – Executive Order
ESA – Endangered Species Act
FEIS – Final Environmental Impact Statement
FS – Forest Service
FSH – Forest Service Handbook
FSM – Forest Service Manual
GIS – Geographical Information System
HA – Hectare
HFI – Healthy Forest Initiative
HFRA – Healthy Forest Restoration Act
HEI – Habitat Effectiveness Indicator
HUC - Hydrologic Unit Code, as defined by the U.S. EPA
ICBEMP – Interior Columbia Basin Ecosystem Management Project
ITT – Interagency Implementation Team
IDT – Interdisciplinary Team
LCAS – Lynx Conservation Assessment and Strategy
LCA – Lynx Conservation Agreement
LAU – Lynx Analysis Unit
LRMP – Land and Resource Management Plan
MA – Management Area
MIS - Management Indicator Species
MO – Management Objectives
MOU –Memorandum of Understanding
NEPA – National Environment Policy Act
NFMA – National Forest Management Act
NHPA – National Historic Preservation Act
NLAA – Not Likely to Adversely Affect

NRHP – National Register of Historic Places
ODEQ – Oregon Department of Environment Quality
ODFW – Oregon Department of Fish & Wildlife
OHV – Off Highway Vehicle
PDC – Project Design Criteria
RHCA – Riparian Habitat Conservation Area
SHPO – State Historic Preservation Office
TMDL – Total Maximum Daily Load
UGRRW –Upper Grand Ronde River West
USDA - United States Department of Agriculture.
USDI – United States Department of Interior.
USFWS – United States Fish & Wildlife Service
WMU – Wildlife Management Unit
WNHP – Washington Natural Heritage Program
WQMP –Water Quality Management Plan

Allotment – A rangeland and/or forestland area designated for use by a prescribed number and kind of livestock under one plan of management.

Animal Month (AM) – One month's use and occupancy of the range by one animal. This phrase is synonymous with Head Month, which is used for billing purposes.

Allotment Management Plan - The document that contains the action program needed to manage the rangeland resource for livestock grazing with consideration given to soul, watershed, wildlife, recreation, timber, and other resources on lands within a range allotment.

Annual Operating Instructions (AOI) – Annual instructions that implement the Allotment Management Plan: specifying the current year's grazing program, including livestock numbers, season of use, pasture rotation, utilization standards, monitoring and specific instructions to the permittee.

Annual Plant - A plant that completes its life cycle and dies in one year or less.

Available Forage - Forage that can be grazed and still allow sustained forage production on rangeland. Available forage may or may not be authorized for grazing.

Best Management Practices (BMPs) - Practices designed to prevent or reduce water pollution, including sedimentation.

Canopy - In a forest, the branches from the uppermost layer of trees; in a shrub or grassland, the uppermost layer of shrubs; in a riparian area, the layers of vegetation that project over the stream.

Canopy Cover - The areas of the ground covered by a vertical projection of the canopy. Used to describe how open or dense a stand of trees is, often expressed in 10 percent increments.

Category 1 Pasture - Pasture that has streams which have or have the potential to support populations of bull trout or steelhead.

Compaction - Packing together soil particles by exerting force at the soil surface and increasing soil density. Making soil hard and dense, decreasing its ability to support vegetation because the soil can hold less water and air and because roots have trouble penetrating the soil.

Condition and Trend Studies (C&T) - Monitoring sites with permanent transect lines, which can be analyzed and compared to previous years to detect changes in range condition over time.

Connectivity - The arrangement of habitats that allows organisms and ecological processes to move across the landscape; patches of similar habitats are either close together or linked by corridors of appropriate vegetation (the opposite of fragmentation).

Cover - (1) Trees, shrubs, rocks, or other landscape features that allow an animal to partly or fully conceal itself. (2) The area of ground covered by plants, litter, and coarse fragments, including tree crowns and shrubs that are in direct contact with the ground.

Cumulative Effects - Impacts on the environment that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions. Cumulative effects can result from individually minor but collectively major actions taking place over a period of time.

Defoliation – The removal of vegetation as by herbivore consumption, clipping, and trampling.

Design Elements - measures taken to reduce the potential for negative impacts on a resource from a project activity.

Detrimental Soil Conditions - There are four categories describing detrimental soil conditions: compaction, displacement, puddling and severely burned soil or charring. Compaction is defined as an increase in soil bulk density of 20% or more from the undisturbed level for volcanic ash soils and 15% or more for residual soils. Displacement is often described as the removal or mixture of topsoil or humus from the A-horizon. Puddling is the breakdown of soil structure under wet conditions. Severely burned soil or charring can be described as having the top layer of mineral soil greatly changed in color, usually to red, and the next one-half inch blackened from organic matter charring by heat conducted through the top layer.

Dimension - Physical characteristics of a stream when a channel is viewed in cross-section.

Direct Effects - Impacts on the environment that are caused by an action and occur at the same time and place.

Diversity - The distribution and abundance of different plant and animal communities and species within an area.

Early Season Grazing - Early season grazing is defined in the terms of the phenology of the vegetation, and is limited to that period where upland vegetation is green but not drying.

Ecosystem - A complete, interacting system of living organisms and the land and water that make up their environment; the home places of all living things, including humans.

Effectiveness Monitoring - Measures whether progress is being made toward achieving a defined management objective generally over the long term (3-7 years).

Endangered Species - A plant or animal species listed under the Endangered Species Act that is in danger of extinction throughout all or a major portion of its range.

Endangered Species Act (ESA) - An act, passed by Congress in 1973 that directed all Federal departments and agencies to seek to conserve endangered and threatened species. Actions authorized, funded, or carried out by Federal departments and agencies should not jeopardize the continued

existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitat. The act also mandates conferencing with the appropriate agencies.

Environment - The combination of external physical, biological, social, and cultural conditions affecting the growth and development of organisms and the nature of an individual or community.

Environmental Consequences - Effects as a result of an action. Included are direct effects, which are caused by the action and occur at the same time and place; indirect effects, which are caused by the action and are later in time or further, removed in distance but which are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and the related effects on air, water, and other natural systems, including ecosystems. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if, on balance, the agency believes the effects would be beneficial.

Ephemeral Stream - A stream that flows only in direct response to heavy precipitation or snowmelt runoff, often appears as a depression or swale that exhibits no continuous scour channel.

Erosion - The detachment and removal of soil material from its original location.

Exclosure - A structure, generally a fence, that prohibits cattle and/or wildlife from a designated area.

Exotic Species - A species that is not native to the area where it is found.

Forest Plan (Land and Resource Management Plan) - A document that guides natural resource management and establishes standards and guidelines for a National Forest; required by the National Forest Management Act.

Fragmentation (habitat) - The breakup of a large land area (such as a forest) into smaller patches isolated by areas converted to a different land type (the opposite of connectivity).

Fuels - Includes living plants, dead, woody vegetative materials, materials capable of burning.

Functional Class - Condition class assigned to a management area based on the current condition of the natural resources.

General Forest Management Area - see Management Area.

Grass-like - A plant of the Cyperaceae or Juncaceae families which vegetatively resembles a true grass of the Poaceae family.

Grass - Members of the plant family Poaceae. **Grazing Permit** - A document authorizing livestock to use National Forest System or other lands under Forest Service control for the purpose of livestock production.

Greenline - The first perennial vegetation from the water’s edge.

Ground Cover - Perennial vegetation plus litter and coarse fragments (greater than 2 mm in size), including tree crowns and shrubs, that are in direct contact with the ground. Based on the erosion hazard class, effective ground cover is between 20% and 75% of ground covered the first year after management activities.

Growing Season - In temperate climates, that portion of the year when temperature and moisture permit plant growth. In tropical climates, it is determined by availability of moisture.

Gully - An erosional term used to describe concentrated erosion in the vertical direction. Gullies are generally deeper than they are wide. Streams that are "gullied" can be classified as Rosgen "G-type" channels.

Habitat - A place that provides seasonal or year-round food, water, shelter, and other environmental conditions for an organism, community, or population of plants or animals.

Head Month - Syn. Animal Month (AM).

Height-Weight Curve - Relationship of distribution of a plants weight with respect to its height which is used to estimate forage production or utilization of herbaceous species.

Herbaceous Species - Non-woody plant growth.

Historic Site - Site associated with the history, tradition, or cultural heritage of national, state, or local interest, and of enough significance to merit preservation or restoration.

Implementation Monitoring - Determines whether the management direction is being accurately interpreted and followed generally in the short term (i.e. annually).

Indirect Effects - Impacts on the environment that are caused by an action and are later in time or removed in distance.

INFISH - Interim Inland Native Fish Strategy for the Intermountain, Northern, and Pacific Northwest Regions (Forest Service). A strategy intended to provide interim direction to protect habitat and populations of resident fish outside of anadromous fish habitat in eastern Oregon, eastern Washington, Idaho, western Montana, and portions of Nevada. The Decision Notice/Finding of No Significant Impact for this strategy was signed July 28, 1995.

Interdisciplinary Team (IDT) - A team of people that collectively represent several disciplines and whose duty it is to coordinate and integrate the planning process.

Intermittent Stream - A stream that flows only at certain times of the year when it receives water from other streams or from surface sources such as melting snow; usually exhibits a continuous scour channel.

Irretrievable - A category of impacts that applies to losses of production or commitment of renewable resources. For example, while a linear piece of land is being used as a road, some or all of the timber production there is "irretrievably lost." If the road was rehabilitated after use and soil compaction was reduced, timber production could resume; therefore, the loss of timber production during the time the road was in use is irretrievable but not irreversible, because it is possible for timber production to resume if the piece of land is no longer used as a road.

Irreversible - A category of impacts that applies to non-renewable resources, such as minerals and archaeological sites. Losses of these resources cannot be reversed. Irreversible effects can also refer to effects of actions on resources that can be renewed only after a very long period, such as the loss of soil productivity.

Issue - A matter of controversy, dispute, or general concern over resource management activities or land uses. To be considered a "major " or "key" issue, it must be well defined, relevant to the proposed action, and within the ability of the agency to address through alternative management strategies.

Key Area - A portion of range, which because of its location, grazing or browsing value contains impacts that result principally from livestock grazing and has the potential to respond to and measure changes in grazing management.

Landtype - An inventory map unit with relatively uniform potential for a defined set of land uses. Properties of soils, landform, natural vegetation, and bedrock are commonly components of Landtype delineation used to evaluate potentials and limitations for land use.

Listed Species - A fish, wildlife, or plant species listed under the authorization of the Endangered Species Act as threatened or endangered.

Listed (Streams*)* – Streams contained on the 303(d) List by Oregon Department of Environmental Quality (ODEQ) as water quality limited. Data shows that these streams do not currently meet their designated beneficial use criteria.

Management Area (MA) - A unit of land allocated to emphasize a particular resource, based on the capability of the area.

Management Direction - A statement of goals and objectives, management prescriptions, and associated standards and guidelines for attaining them.

Management Indicator Species (MIS*)* - Vertebrate species whose population changes are believed to best serve as an index of a biological community's response to the effects of land management activities or are important for fishing, hunting and trapping.

Mitigation - Measures designed to counteract environmental impacts or to make impacts less severe.

National Environmental Policy Act (NEPA) - An act, passed by Congress in 1969 that declared a national policy to encourage productive harmony between humans and their environment. This act requires the preparation of environmental impact statements for Federal actions that are determined to be of major significance (see 40 CFR [Code of Federal Regulations] 1500-1508 for implementing regulations. See also FSH [Forest Service Handbook] 1909.15, the FS Environmental Policy and Procedures Handbook.)

No Action Alternative - The most likely condition expected to exist in the future if the project were not to occur.

Non-forest Land - Lands that have never had or that are incapable of having 10% or more of the area occupied by forest trees or lands previously having such cover and currently developed for non-forested use.

Noxious weed - A plant that interferes with management objectives for a given area of land at a given point in time.

Outstanding Remarkable Values - Term used in the National Wild and scenic Rivers Act of 1968 to describe a characteristic of a wild and scenic river that has been identified to be unique, significant, and/or rare.

Overstory - The upper canopy layer of trees.

PACFISH - Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (commonly referred to as PACFISH).The Decision Notice/Finding of No Significant Impact for this strategy was signed July 28, 1995.

Pasture - A grazing area enclosed and separated from other areas by fencing or other barriers; the management unit for grazing land.

Perennial - A plant that lives for three or more years.

Perennial Stream - A stream that flows year–round or past August 1st on an average water year.

Plant Associations - Climax plant community type.

Plant Association Group (PAG) - A group of plant associations that share similar productivities, disturbance regimes, and responses to disturbance. Eight major plant association groups have been described on the Ochoco National Forest.

Plant Communities - A homogeneous unit in respect to the number and relationship of plants in tree, shrub, and ground cover strata.

Prehistoric Site - An area that contains important evidence and remains of the life and activities of early societies that did not record their history.

Prescribed Fire - A wildland fire burning under specified conditions that would accomplish certain planned objectives. The fire may result from either planned or natural ignitions. The Regional Forester must approve proposals for use of natural ignitions for this purpose.

Post-holing - A term used to describe soil disturbance from wildlife and livestock that results in “post-hole like” depressions.

Proposed Action - A proposal made by the Forest Service to authorize, recommend, or implement an action on National Forest System lands to meet a specific purpose and need.

Puddling - A term used to describe standing water on the soil surface resulting from platiness or lack of structure.

Range Improvement - Any activity or program on or relating to the public lands that is designed to improve production of forage, change vegetation composition, control patterns of use, provide water, stabilize soil and water conditions, or provide habitat for livestock and wildlife. Range improvements may be structural or nonstructural.

Residual Vegetation/Stubble Height - Residual vegetation/stubble height is that stubble height remaining at the end of the growing season just prior to winter dormancy.

RHCA - Riparian Habitat Conservation Area

Riparian Area - An area with distinctive soil and vegetation between a stream or other body of water and the adjacent upland; includes wetlands and those portions of floodplains and valley bottoms that support riparian vegetation.

Riparian Habitat Conservation Area (RHCA) - A portion of a watershed where riparian-dependent resources receive primary emphasis and management activities are subject to specific standards and guidelines. RHCAs include traditional riparian corridors, wetlands, intermittent streams, and other areas that help maintain the integrity of aquatic ecosystems by (1) influencing the delivery of coarse sediment, organic matter, and woody debris to streams, (2) providing root strength for channel stability, (3) shading the stream, and (4) protecting water quality.

Scabland - Area having very shallow soils which are subject to severe water saturation and frost heaving during the winter, thus making revegetation virtually impossible.

Scoping - The early stages of preparation of an environmental assessment or environmental impact statement used to solicit public opinion, receive comments and suggestions, and determine the issues to be considered in the development and analysis of a range of alternatives. Scoping may involve public meetings, telephone conversations, mailings, letters, and other contacts.

Season of Use - The time during which livestock grazing is permitted on a given range area, as specified in the grazing permit.

Sediment - Solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity or ice and has come to rest on the earth's surface either above or below sea level.

Sedimentation - The action or process of depositing sediments.

Sediment Yield - Sediment that is eroded from adjacent land into a body of water.

Sensitive Species - Species identified by a Regional Forester for which population viability is a concern because (a) of substantial current or predicted downward trends in population numbers or density, or, (b) of substantial current or predicted downward trends in habitat capability that would reduce a species' existing distribution.

Short-Term Effects - For timber management planning, those effects which would not be substantial beyond the RPA planning horizon of 50 years. For DEQ water quality, short-term effects are defined as two days or less. Generally, short-term effects are within the planning period.

Soil Disturbance - Soil disturbance by livestock includes soil compaction, displacement, and postholing. Soil disturbance usually occurs when the soils are moist or wet. Soil disturbance may increase soil erosion, reduce productivity and contribute to changes in vegetation composition, stream function, and water quality (FSH 2209.21, R6 Amendment).

Subwatershed - An area mostly bounded by ridges or other similar topographic features contributing water, organic matter, dissolved nutrients, and sediments to a lake or stream. One or more subwatersheds make up one watershed. Also known as a 6th field (HUC).

Succession - A series of dynamic changes by which one group of organisms succeeds another through stages leading to potential natural community or climax. An example is the development or series of plant communities (called seral stages) following a major disturbance.

Term Grazing Permit - A document authorizing grazing for a stated number of years (usually 10).

Terrace – Floodplain above a stream.

Threatened Species - Species listed under the Endangered Species Act that are likely to become endangered within the foreseeable future throughout all or a major portion of their range.

Trailing – The active, on the ground movement of livestock from one area to another by the permittee.

Treadway – A type of trail used by livestock.

Understory - May include grass, forbs, shrubs, small trees (such as seedlings and saplings), and other plants found beneath the overstory tree canopy.

Upland Site - Referring to non-riparian sites.

Utilization Standards - The prescribed level of grazing by livestock, which would achieve specific objectives including maintenance of vegetation and soil condition. Expressed as the percent of the annual herbaceous production removed by grazing.

APPENDIX D: SCOPING COMMENTS AND 30-DAY REVIEW COMMENTS

Scoping, April 21, 2006

Oregon Natural Resources Council (ONRC) – Chandra LeGue – 5/26/06 ONRC is now known as Oregon Wild and to be referred to as Oregon Wild for future mailings and responses)	
ONRC Comment	**Forest Service Consideration**
This isn't a proposal; it appears to be rubber-stamping the current management without looking at (or at least without disclosing) if this management is getting desired results and if adjustments need to be made to allow for ecosystem recovery.	Monitoring has indicated that desired conditions are being met. Riparian areas are being fenced for either exclosure or short-term pasture.
The proposal should discuss how the allotment management meets or could be brought into compliance with the Forest Plan.	Forest Plan compliance in EA.
The proposal doesn't say if current livestock numbers and pasture movement are damaging non-grazing resources like old-growth habitat, native plant and wildlife species, or natural area values.	Effects analysis in EA.
You must disclose impacts of current practices before rubber stamping it for another period of time, and you must develop at least one alternative to the proposed action that would allow recovery of any environmental impacts.	A range of alternatives has been developed and analyzed and disclosed in the EA.
Do an analysis of how the proposed action affects roadless values such as dispersed non-motorized recreation.	A portion of the South Tower Roadless Area is located within the Tower Unit. Roadless values discussed in EA.
Do an analysis of how the proposed action affects roadless values such as high water quality.	Hydrology and Fisheries effects analysis.
Do an analysis of how the proposed action affects roadless values such as wildlife habitat.	The South Tower Roadless Area is located within the Tower Unit. Wildlife discussed in EA
The best way to preserve these values (roadless) may be to remove cows and fences.	Discussion for Alternative 3 and no grazing alternatives in EA.
In order to comply with the NFMA planning regulations, determinations of grazing suitability must address ecosystem considerations such as presence of sensitive species and habitats, sensitive soils, presence of cultural resources, conflicts with recreation, length of growing season, water quality effects, forest health, cumulative effects, and consistency with natural patterns of disturbance.	Grazing suitability was analyzed in the Forest Plan.
The Forest Service must balance all the multiple uses to determine which lands should be grazed.	Management Areas described in the Forest Plan address how livestock management are to be managed across the Forest. Forest Plan Compliance addressed.
Will monitoring be accomplished as necessary to inform us of thresholds of concerns?	Monitoring discussion in EA.
How can livestock be practicably excluded from unsuitable lands?	Suitability covered in the Forest Plan. Forest Plan Compliance addressed.
How many fences can an area tolerate before livestock management conflicts with wildlife movement?	Discussed in EA.
How many fences can an area tolerate before livestock management conflicts with scenic values?	Discussed in EA.
How many fences can an area tolerate before livestock management conflicts with recreation?	Discussed in EA
Can trespass be effectively controlled?	Fences are maintained in a condition that does not allow trespass. Gates left open with public use can provide a means for trespass.
Can fences be adequately maintained?	Fences are adequately maintained by the permittee with periodic inspections by the range specialists.
Grazing should not occur at all within certain management areas unless site specific data can be attained that shows livestock grazing enhances the management objective of these areas. This specifically	Management Area concerns. Forest Plan Compliance addressed.

Oregon Natural Resources Council (ONRC) – Chandra LeGue – 5/26/06 ONRC is now known as Oregon Wild and to be referred to as Oregon Wild for future mailings and responses)	
ONRC Comment	**Forest Service Consideration**
applies to MA-C3 (Wildlife Winter Range), MA-C5 (Riparian Fish and Wildlife) and MA-C1 and C2 (Old Growth). Currently there is no site-specific data that I am aware of that supports livestock grazing within these management areas. Grazing should cease until the data is obtained.	
Grazing has helped move the area's vegetation away from historic species associations, riparian and upland communities, and fire regimes.	Discussed in EA
Grazing reduces the density and vigor of grasses which usually out compete tree seedlings, leading to dense stands of fire-prone small trees.	Issue of how livestock grazing affects stand dynamics and fire regimes.
Cows also decrease the abundance of fine fuels which are necessary to carry periodic, low intensity ground fires. This reduces the frequency of fires, but increases severity. (See Belsky and Blumenthal).	Research/Literature to review during analysis.
Project analysis should separately discuss RMO's (PACFISH/INFISH) and how the proposed alternatives will impact these objectives.	PACFISH/INFISH RMOs will be addressed in Fish Report.
The NEPA analysis should discuss how steelhead spawning habitat will be impacted by the proposed action-both the continued grazing and the proposed fence addition. What condition is the habitat now? How will the proposed action lead to improvement? How will habitat improvement be measured?	Discussed in EA
A full range of alternatives should be considered for this project (as also noted above). These alternatives should include wildlife enhancement, restoration, a reduction in grazing access, and non motorized recreation.	Non motorized recreation and wildlife enhancement alternatives are outside the scope of the analysis. A reduction in grazing access is part of the proposed action and alternative 3. Restoration Alternative was considered.
The scoping document does not make it clear, however, how this project will affect lynx and lynx habitat, nor why you are proposing a Forest Plan amendment regarding lynx.	Discussed in EA.
Why can't you make the proposed action meet Forest Plan recommendations for management of in lynx habitat rather than doing an amendment? Please explain the need to do this amendment.	Discussed in EA No Forest Plan Amendment
The FS currently has no comprehensive strategy for identifying lynx habitat and conserving lynx and habitat for lynx and their prey species. The FS needs such a plan that complies with NEPA and NFMA. Please comply with the law and common sense by developing a credible plan before embarking on projects that could adversely affect lynx and their prey. You must analyze and disclose how the proposed project will impact lynx, habitat, and lynx prey.	Alternatives 1 and 3 and include lynx considerations.
Please send us a copy of the EA and any other NEPA documents as they become available.	

Oregon Natural Desert Association (ONDA) – Kristin F. Ruether – 5/26/06	
ONDA Comment	**Forest Service Consideration**
ONDA has several concerns with this project. One is the amount of information missing from the proposal.	Statement, no issue
ONDA has several concerns with this project…. another is that the use of a categorical exclusion (CE) for this project is inappropriate because of the lack of support in the proposal that the project is meeting or moving towards objectives in the Forest Plan. Therefore, because reauthorization of grazing on this allotment is a major federal action with significant effects on the environment, the Forest Service	A CE is not being used for this decision. Effects analysis in EA.

should prepare an EA or EIS.	
The proposal is exceedingly vague and missing key information.	Statement, no issue.
The public cannot provide comments for an amendment (Lynx FP Amendment) for which it does not know the content. What is the proposed language? We discourage you from weakening protections for this ESA-listed species through a FP amendment.	No Forest Plan Amendment. Alternatives and effects analysis discuss lynx and habitat..
The proposal letter cites a Figure 4, but only Figures 1 and 2 are attached to the letter. Is the proposal missing several figures?	Typographical error.
There is no map showing where the fence is proposed. Where is it proposed? The legend on the allotment map (Figure 2) contains no reference to a proposed fence. The public cannot provide detailed comments about a proposed fence at an unknown location. This proposal must be re-issued for public comment with appropriate detail.	The EA includes maps with the location of the proposed fences.
The section 339 rider CE provision does not apply here because the proposal lacks evidence that Forest Plan objectives are being met.	A CE is not being used for this decision.
The section 339 rider of the 2005 Consolidated Appropriations Act allows the Secretary of Agriculture to categorically exclude the authorization of grazing on an allotment if "monitoring indicates that current management is meeting, or satisfactorily moving toward, objectives in the land and resource management plan, as determined by the Secretary." The Forest Service must include its analysis or description of any such monitoring in the body of the NEPA document. (See Blue Mtns. Biodiversity Project v. Blackwood, 161 F.3d 1208, 1214 (9th Cir. 1998) (the environmental document itself "is where the Forest Service's defense of its position must be found.") But here, the Forest Service fails to provide any monitoring to meet the requirements of Section 339.	A CE is not being used for this decision.
The proposal letter does not support the conclusion that the allotment is meeting or moving towards attainment of PACFISH/INFISH RMO's.	PACFISH/INFISH RMOs will be discussed in the Fish Report.
The proposal fails to show PACFISH/INFISH compliance. The proposal letter contains no data whatsoever. Clearly this is inadequate to for the public to determine whether the project is consistent with Section 339.	A CE is not being used for this decision. Compliance with PACFISH/INFISH was discussed in the Fish Report
Monitoring presented in the Existing Management and Conditions of the Hidaway C&H Allotment Report fails to show PACFISH/INFISH compliance.	Compliance with PACFISH/INFISH was discussed in the Fish Report
From a previous FOIA request on this project, we have a report titled Existing Management and Conditions of the Hidaway C&H Allotment ("EMC report"). This report describes condition and trend monitoring and implementation monitoring. But neither have much relevance to GM-1.	Compliance with GM-1 is found in the Fish report.
…..Thus, the condition and trend monitoring fails to show compliance with the GM-1 standard. The failure to measure RMO's means that it is impossible for the FS to know whether RMOs are being met or are recovering at a natural rate. Even if the monitoring was an adequacy proxy for RMOs, the results showing static trends indicate a slower than natural rate of recovery which, in the absence of meaningful modifications, is a violation of GM-1.	C&T monitoring points are primarily located on upland vegetation. Compliance with GM-1 is discussed in the Fish Report.
Stubble height is not an adequate proxy for RMOs. Nowhere in PACFISH is stubble height mentioned as an indicator of functioning salmonid habitat. The height of riparian grasses at the end of the grazing season is simply not an adequate surrogate for pool frequency, temperature, width/depth ration, lower bank angle and bank stability, all of which the Forest Service has deemed strong indicators of healthy fish habitat. The U of I Stubble height Report State that....(see letter page 4)	RMOs addressed in fish report. Discussion of pool frequency, temperature, w/d ratio, sediment, and other habitat features are discussed in EA.
University of Idaho Stubble Height Report, Appendix B at 16. There is no evidence in the proposal or the EMC report indicating the FS tested the use of stubble height as a proxy for RMOs anywhere, much less in the project area. Thus, the stubble height monitoring fails to show compliance with GM-1 standard.	RMOs discussed in the fish report as well as GM-1

Monitoring presented in the 2004 End-of-Year Rangeland Management Report fails to show PACFISH/INFISH compliance.	PACFISH/INFISH compliance is discussed in the Fish Report.
The Umatilla NF 2004 End-of-Year Rangeland Management Report fails to show PACFISH/INFISH compliance.	PACFISH/INFISH compliance is discussed in the Fish Report.
Also, the current Biological Opinion for the North Fork John Day River Subbasin notes that "[t]he UNF provided information to NOAA Fisheries indicating that the Nine Sections unit of this allotment did not meet standards in 2002." BiOp at 28.	Stubble height discussed.
In summary, there is insufficient evidence presented that "monitoring indicates that current grazing management is meeting, or moving toward" PACFISH compliance, as required by Congress for Section 339 to apply.	A CE is not being used for this decision. PACFISH/INFISH compliance is discussed in the Fish Report
The proposal does not support the conclusion that the allotment is meeting or moving towards other Forest Plan Requirements.	FP compliance is discussed in the EA
Monitoring requirements are not being met. The Forest Plan requires many types of monitoring that relate to grazing impacts. For example. Categories of standards including mandatory monitoring provisions include: ecosystems and diversity; water quality; pest management; and threatened, endangered, and sensitive species. Umatilla Forest Plan at 4-66, 4-77, 4-89, 4-90.	Monitoring addressed in EA.
Monitoring requirements are not being met. The Forest Plan also includes a detailed list of issues, actions, and effects which are to be monitored periodically. It includes the following: (See letter page 5). The proposal does not contain evidence that any of these required monitoring items are being fulfilled. Nor do the Forest's monitoring and Evaluation reports. See Letter page 5. Thus , no information we have seen establishes that "monitoring indicates that current grazing management is meeting, or satisfactorily moving toward" monitoring requirements in the Forest Plan, as required by Congress for Section 339 to apply.	A CE is not being used for this decision. Monitoring addressed in EA
Water quality standards are not being met. Forest Plan water quality standards that are relevant to grazing reauthorization include meeting or exceeding state water quality standards, implementing and enforcing Best Management Practices, and adjusting BMP design standards and application when monitoring shows that beneficial uses are not being protected and water quality standards are not being achieved. Umatilla Forest Plant at 4-77. the proposal does not contain evidence of compliance with these water quality standards.	Planned monitoring is discussed in Chapter 2 of the EA. Results of past monitoring is discussed in Chapter 3 in the relevant sections.
Water quality standards are not being met. Note too that Section 313 of the Clean Water Act requires the Forest Service to adhere to state water quality standards. 33 U.S.C. 1323(a). See also Umatilla Forest Plan at 4-77. Adoption of allotment management plans and authorization of grazing practices fall within the gambit of "any activity resulting, or which may result, in the discharge of pollutants." 33 U.S.C. 1323(a). In order to comply with this mandate, the Forest Service must provide for more concrete compliance with water quality standards until such time as TMDLs and WQRPs are finalized throughout the planning area.	TMDLs are discussed in the EA.
It is not clear that Forest Plan "objectives" are being met. Umatilla Forest Plan at 4-15, 4-16. Neither the proposal nor the M&E reports state whether these objectives (see letter page 6) are being met at the Forest-wide or the allotment-specific level. Thus the project does not establish that "monitoring indicates that current grazing management is meeting, or moving toward, objectives in the land and resource management plan," as required by congress for section 339 to apply.	Monitoring has shown that the condition of the Units within the allotment is being maintained or improving.
The section 339 rider CE provision does not apply here because the proposal lacks evidence that the decision is consistent with agency policy concerning extraordinary circumstances.	A CE is not being used for this decision.
Another criterion required for the section 339 rider CE provision to apply is that "the decision is consistent with agency policy concerning extraordinary circumstances." The Forest Service Handbook states that "[i]t is the degree of the potential effect of a proposed action on these resource conditions that determines whether	A CE is not being used for this decision.

extraordinary circumstances exist." FSH 1909.15.30(2). This comes from the NEPA regulations requirement to "provide for extraordinary circumstances in which a normally excluded action may have a significant environmental effect." 40 C.F.R. 1508.4. The Ninth Circuit has recently stated the rule more broadly: that "[a] categorical exclusion cannot be used if extraordinary circumstances exist." High Sierra Hikers Ass'n v. Blackwell, 390 F.3d 630, 641 (9th Cir. 2004).	
Here, the proposal does not even state which extraordinary circumstances exist. To the best of our knowledge, the following extraordinary circumstances likely exist in the project area: Birch Creek Cove Research Natural Area; federally listed species or their habitat (MCR steelhead, lynx); sensitive species (redband); and floodplains and wetlands. The presence of the extraordinary circumstances should preclude the use of the CE under the Ninth Circuit's interpretation.	A CE is not being used for this decision. The Birch Creek Cove Research Natural Area is not located on the Hidaway Allotment. TES species are discussed in analysis.
Even if use of a CE is only prohibited in the face of significant effects on the extraordinary circumstances, here the proposal provides no proof of no significant effect.	A CE is not being used for this decision. An EA has been prepared..
An EIS or EA should be prepared pursuant to NEPA.	An EA has been prepared..
See Letter page 7 section IV. Because this decision includes broad-scale grazing, involves grazing management decisions for areas likely in violation of applicable Forest Plan standards, and affects populations of declining threatened species, this project requires an EIS. At the very least, an EA should be prepared to determine where there are significant impacts.	An EA has been prepared to determine significance of effects.
Ensure that the analysis adequately assesses and discusses the cumulative effects of continued grazing. The analysis should include quantifying previous and cumulative impacts when possible.	Cumulative effects have been analyzed
Ensure that the preferred alternative meets the mandatory standards in PACFISH/INFISH.	PACFISH/INFISH standards are discussed in the EA
Conduct viability assessments for regional fish, wildlife, and plant species populations most affected by livestock grazing.	Effects to various species have been discussed.
Evaluate the population trends of all management indicator species, based on field monitoring and relationships of populations to habitat changes caused by grazing.	Effects to various species have been discussed.
Disclose the numbers of livestock and AUMs allocated in each segment of the planning area.	Livestock use in the planning area.
Evaluate not only the effects of livestock grazing on riparian areas, but also on the health of upland areas.	An evaluation of upland vegetation has been conducted through monitoring.
Discuss all aspects of riparian conditions, including the presence of water quality-limited streams and whether livestock grazing contributes to non-complying water parameters such as temperature, turbidity, bank stability, and any changes in density or type of riparian vegetation that have occurred either due to previous grazing or that are likely to occur as a result of the proposed project.	The presence of livestock, riparian conditions and water quality are discussed in the EA.
Discuss how and when scheduled TMDLs will be integrated into allotment planning.	TMDL scheduling is discussed in the EA.
Discuss how far current soil conditions deviate from their potential natural conditions and how long the Forest Service anticipates it will take to restore soils to normal function. Also, please include a detailed discussion of the impacts of livestock grazing on soils, and the Forest Service's solutions to address these impacts.	Soils discussed in EA
Discuss the effectiveness of any BMP's	Effectiveness of BMPs and other standards discussed throughout.
If biological crusts are present in the project area, discuss their importance and include an inventory and evaluation of their current status over the entire planning area, the causes of their degradation, concomitant losses of ecosystem function, and how they will be recovered throughout the planning area.	Biological crusts are less extensive in the Hidaway Area than in arid areas such as the interior Columbia Basin. Grazing may impact crusts in cattle trails, and around watering holes, salt sites, and corrals. Areas of sustained impacts are described in Tables 30, 32, 34, and 35 in the EA, in the Soil Section. The intent of the Forest plans, annual permit, and monitoring is to provide maintenance of limited levels of

	higher disturbance to those areas.
Discuss the spread of noxious weeds by livestock, effects on native plants and ecosystems, the role of soil disturbance by livestock in the spread of weeds, and the role of biological soil crusts in preventing establishment of weeds.	Noxious weeds are discussed in the EA under Invasive Plants.
Analyze the projects area's suitability and capability for grazing, and how conditions have changed since the last assessment.	Suitability was completed during the Forest Plan development.
The decision violates NFMA by authorizing grazing on the allotment that is not consistent with the Forest Plan.	No decision has been made yet. The EA discusses FP compliance.
The project is not consistent with the mandatory monitoring duties in the Forest Plan. Under the Riparian/Fish Habitat standards section, the plan states: provide habitat to maintain steelhead and rainbow by meeting Best Management Practices and Clean Water Act standards (MR) and implementing fish habitat enhancement projects.	Consultation with NOAA has occurred regarding steelhead habitat.
The project is not consistent with the mandatory monitoring duties in the Forest Plan. ID at 4-59. Under the Water standards section, the plan states: monitor to ensure that practices are correctly applied as designed. Monitor to determine effectiveness of practices in meeting design expectations and in attaining water quality standards. Evaluate monitoring results and mitigate where necessary to minimize impacts from activities where BMP's do not perform as expected.....Adjust BMP design standards and application when monitoring shows that beneficial uses are not being protected and water quality standards are not being achieved to the desired level." ID at 4-77	Monitoring would occur with this project, as discussed in the EA.
The project is not consistent with the mandatory monitoring duties in the Forest Plan. ID at 4-77. Under the Threatened, Endangered, and Sensitive Species standards section, the plan states: For endangered, threatened and sensitive species, determine and monitor status of populations and habitats and the strategies implemented for protection. Inventories will include careful monitoring of the species and their habitats.	TES species are discussed in the EA under Wildlife.?
The project is not consistent with the mandatory monitoring duties in the Forest Plan. ID at 4-90. Elsewhere, the plan requires the UNF to "[d]etermine fish population trends for management indicator species" and "[a]ssess the attainment of fish habitat capability desired future conditions." ID at 5-13.	Monitoring is discussed in the EA in Chapter 2.
As described, the proposal and annual Monitoring and Evaluation reports fail to show that the Forest Service has monitored steelhead & redband or their habitat so as to meet the monitoring requirements listed above. An actual M&E report containing monitoring from that year has not been published since 2001. Because this decision is being made without required monitoring information, the decision is arbitrary, capricious, and contrary to NFMA.	The Forest Service has consulted with NOAA regarding steelhead.
The proxy on proxy approach is not appropriate here. See letter page 10. While that can be useful for certain purposes, it should not be used as a substitute for determining "population trends" and "status of populations." Umatilla Forest Plant at 4-90, 5-13.	The Forest Service has consulted with NOAA regarding steelhead. Water quality is discussed regarding steelhead. Wildlife species and habitat are discussed in Chapter 3, Wildlife.
Here, the Forest Service has made no determinations that monitoring steelhead populations is unreliable or not cost-effective based on the reclusive nature of the species or on any other basis. Moreover, the Forest Service has failed to consider the amount of suitable habitat needed by steelhead, to determine the effects of grazing on that habitat, analyze whether remaining suitable habitat, post-grazing, is sufficient to maintain a viable population, or analyze what effects the loss of habitat will have on steelhead populations.	The Forest Service has consulted with NOAA regarding steelhead.
The project is not consistent with the PACFISH and INFISH provisions of the Forest Plan. As described in Section II., the proposal does not establish that the GM-1 standard is being met.	PACFISH/INFISH compliance is discussed in the EA.
Because PACFISH and INFISH GM-1 standards are part of the Forest Plan, the failure of this project to meet them renders the project arbitrary, capricious, and not in accordance with NFMA	PACFISH/INFISH compliance is discussed in the EA.
The proposal does not establish that the GM-1 standard Is being met.	PACFISH/INFISH compliance is discussed in

Because PACFISH and INFISH GM-1 standards are part of the Forest Plan, the failure of this project to meet them renders the project arbitrary, capricious, and not in accordance with NFMA.	the EA.
Please retain ONDA on the project mailing list and continue to update us with any developments, such as the release of a final DM.	A CE is not being used for this decision. Copies of the Draft and Final EA and Decision Notice will be sent
Could you please send all portions of the Hidaway project file that have been added since June of 2005.	See email dated 06/04/06
After learning the project is now an EA, I think my questions are answered for now	

APPENDIX E: PAST, PRESENT, AND FUTURE ACTIONS

Project Name	Date	Size	Location/ SWS	Method	Expected Effects
Klondike C&H Allotment	Into foreseeable future	11,139	Bear Wallow Creek, Lane Creek	265 cattle from June 1st through September 30th.	Same as present
Lucky Strike C&H Allotment	Into foreseeable future	4,106	Lane Creek	228 cattle from June 1st through September 30th.	Same as present
Cunningham S&G Allotment	Into foreseeable future	18,252 Acres	Bowman Creek	1850 sheep from June 16th through September 30th.	Same as present
Riparian Corridor Fence Maintenance	as needed	6.5 Miles of stream fenced	Dry Camas, Butcherknife, and Camp Creeks	Dry Camas, Butcherknife, and Camp Creeks	Same as past activities
Water Source Maintenance	as needed	79 Ponds and 8 troughs	All	Cleaning, replacement of pipe or tank	Localized soil disturbance
Firewood Cutting	Annually		Throughout analysis area within 300 feet of open roads.	Cutting and dragging trees within 300 feet of open roads	Same as past activities
Mushroom Gathering	Annually		Analysis area	Hiking or driving ATVs to harvest mushrooms.	No ground impact. Growing sites continue to decrease unless fire occurs.
Maintenance of Existing Aspen Fence	Into foreseeable future	10 acres	Bowman Creek, Bowman Creek (UC), and Lane Creek	Rebuild fencing by replacing broken pieces; buck up any trees fallen across fence line.	Slight, localized disturbance of wildlife while maintenance is conducted. Increasing use by grouse and other birds due to dense aspen growth. Increasing presence of aspen in the analysis area and associated Increasing streambank vegetation, bank stability, and nutrients in streams.
Maintenance of Evaluation Plantations	Annually	80 acres	Bowman Creek, and Bowman Creek (UC)	Treatments have included: harvest, fencing, reforestation with genetic stock, herbicide application, hazard tree removal along fences, and gopher/vole baiting	Same as past activity
Dispersed Campsites	Annually	114 mapped	Analysis Area	Use of National Forest land outside of designated campgrounds for camping	Same as described for present activity. Effects would follow use trends.
Blue Mountain National and State Scenic Byway	Annually	4 miles	Potamus	Future use of Scenic Byway	Recreational use and local economic benefits would remain steady.
Road Maintenance	Annually	410 miles	Analysis Area	See description for Past Activities	Same as present

Project Name	Date	Size	Location/ SWS	Method	Expected Effects
Road Closures	Annually	177 miles	Analysis Area	See Roads Analysis. Would remove signs, construct barricades	Same as past activities
Road Decommissioning	Annually	34 miles of road identified within the planning area as candidates for decommissioning. Would require NEPA.	Analysis Area	See Roads Analysis. Would removed structures, remove culverts, stabilize, recontour, and plant vegetation	Same as past activities. **Note**: Declining budgets and the fact that not much is spent on the roads we are decommissioning probably would not translate to more dollars for other roads.
Noxious Weed Control	Annually	57 acres	Analysis Area	Sites will continue to be inventoried and/or treated unless the noxious weed site is eradicated or new direction for weed treatment is approved.	Noxious weed populations that are approved for treatment will continue to decline and be eradicated. New noxious weed populations not approved for treatment will continue to be inventoried and would be expected to increase in density and size due to no treatments.
Winom / Frazier OHV Complex	Annually	96 miles	Bowman Creek, Lower Hidaway Creek, and Upper Fly Creek	Trails were already existing, just administrative action and yearly maintenance.	ATV use restricted to Designate trails. Use is during the summer months. Official designated 2002 (?)
Weasel Fuels Reduction	2007-2009		Bowman Creek and Lower Hidaway Creek	Ground Based Equipment	Fuels reduction, dead and down component reduced allowing for a more open forest floor.
PU15 Land Exchange	2007	320 acres	Camas Creek	Formal Land exchange	Would transfer private land to Forest Service.
PU14 Land Exchange	2007	640 acres	Bear Wallow Creek	Formal Land exchange	Would transfer private land to Forest Service.
Road Side Hazard Tree Removal	2007-2008		Analysis Area	Removal of Hazard trees along the open (more frequently) traveled roads	Necessary removal for public safety concerns.
Developed Campgrounds Lane Bear Bear Wallow Frazier Umapine	pre 1900 to present	4 sites	 Lane Creek Bowman Creek Bowman Creek Upper Fly Creek	Use of National Forest land designated campgrounds for camping. (Note, only Umapine is in the Hidaway allotment)	Same as past activities. Vehicle travel to campgrounds could have interactions with cattle.
Frazier Private Summer Homes	pre 1900 to present	6(?) sites	Bowman Creek	Homes on Private Ground and Leased National Forest land.	Same as past activities. Vehicle travel to summer homes could have interactions with cattle.

Decision Notice
and Finding of No Significant Impact
Hidaway Allotment Management Plan

USDA Forest Service
Umatilla and Wallow-Whitman National Forests
North Fork John Day Ranger District
Umatilla and Union Counties, Oregon

T. 5 S., R 33 E., Sections 1-5, 8-15, 20-29, and 32-36; T. 5 S., R 33.5 E., Sections 1-3, 10-15, 22-27, and 34-36; T. 5 S., R 34 E., Sections 4-9, 16-21, and 28-33; T. 6 S., R 33 E., Sections 1 and 2; and T. 6 S., R 34 E., Sections 1-6 and 9-12; Willamette Meridian.

Introduction

The Hidaway Allotment is located approximately eight miles east of Ukiah, Oregon, south of State Highway 244. Private land borders the allotment along the western boundary and a portion of the southern boundary is bordered by the northernmost area of the North Fork John Day Wilderness. The eastern allotment boundary is slightly within the Wallowa-Whitman National Forest. The approximate elevation of the allotment is between 4,200 feet and 5,400 feet.

The allotment encompasses approximately 37,260 acres of National Forest system lands.
Although an estimated 5,500 acres are within the Wallowa-Whitman National Forest, the entire allotment is administered by the Umatilla National Forest and is addressed as such.

An Environmental Assessment (EA) was completed for this project. The Hidaway Grazing Allotment EA discusses proposals for grazing this allotment and the analyses of those actions on the forest resources.

Three alternatives (including No Action) were fully analyzed in the EA. The EA is available for review at the North Fork John Day Ranger District office in Ukiah, Oregon or on the Forest web site at:

www.fs.fed.us/r6/uma/projects/readroom/

This document presents the decision regarding which alternative from the Hidaway Grazing Allotment EA will be implemented, any conditions or limitations specific to the decision, and the rationale for the decision.

Purpose of and Need for Action

The North Fork John Day Ranger District provides summer range for local livestock through permits based on identified allotments. Within the Hidaway Allotment Management Plan project area, there are five individual pastures, or units, permitting grazing from June through September. The present allotment management plan was developed in 1981 and is considered outdated and in need of updates.

Forage vegetation is managed by grazing strategies developed over time that have proven effective. Stocking rates determined through range analyses have been adjusted through the years and are considered at an appropriate level for the current management strategies. Grazing permits require compliance with Terms and Conditions, including permitted numbers of animals and seasons, forage utilization standards, and maintenance of improvements. Fences control allotment and pasture management. Grazing seasons are adjusted to reflect annual variations in range conditions and forage readiness.

The purpose of this proposal is to continue authorization of livestock grazing in a manner that is consistent with the Umatilla and Wallowa –Whitman Forest Plans, as amended; facilitate livestock management by providing more control in riparian areas; and provide more flexibility when drought, fire or other natural events occur that would necessitate changes in management. The needs associated with this purpose are:

1. continued grazing in the Hidaway Allotment and therefore the Umatilla and Wallowa-Whitman National Forests as identified in the respective Forest Plans.
2. improved control of livestock resulting in better distribution, more controlled utilization of vegetation, and protection of other resources.
3. provision of a sustainable source of forage for livestock in the project area, thereby contributing to the local and regional agricultural economy.
4. obligations of Section 504 of the 1995 Rescissions Act, which requires NEPA analysis and decisions for all grazing allotments by 2010. There is a need to update the terms and conditions of the Allotment Management Plans and term grazing permits. The present allotment management plan was implemented in 1981, prior to the Forest Plan. The allotment management plan needs to be updated to reflect the most current laws, regulations, and management direction, and to incorporate new or changed conditions and recent science.

Livestock grazing within the Hidaway Allotment provides an income to the permittee, Forest Service, and associated counties, as well as assisting with economic stability to the local ranching community.

The purpose and need for this project reflects the direction and goals of and is in accordance with the Land and Resource Management Plan Umatilla National Forest (Forest Plan), and other Regional and National direction.

Public Involvement

Public involvement for the Hidaway Allotment began when 96 letters were sent on April 21, 2006 to Tribal governments, special interest organizations, individuals, and State and Federal resource management agencies. The proposal was listed in the Summer 2006 Schedule of Projects (SOP) for the Umatilla National Forest. The project has been consulted with representatives of the Confederated Tribes of the Umatilla Indian Reservation, National Marine Fisheries Service, and the permittee. Two responses to scoping were received: The Oregon Natural Desert Association (ONDA) and the Oregon Natural Resources Council (ONRC), now known as Oregon Wild. Responses were evaluated as to whether they presented an issue or alternative, indicated scope or method of analysis, referenced pertinent research, or provided an opinion. This evaluation is contained in Appendix D of the EA.

Using the comments received from the public, key issues were identified as a basis for the development of an additional action alternative.

Key Issue 1: Grazing Management Of The Tower Unit

For the past 12 years the Tower Unit has been rested from grazing by livestock. Difficulties associated with terrain and managing the movement and gathering of cattle was the primary reason for resting the Tower Unit. Forage production and availability limits the optimal use and weight production necessary for viable economic returns for the permittee.

- Management difficulties expressed by past permittees of managing livestock in the Tower Unit
- The amount of forage available to livestock in the Tower Unit.

Key Issue 2: Lynx Habitat

ONRC (Oregon Wild) commented that it is unclear how this project would affect lynx and lynx habitat. Their concern was there is no comprehensive strategy for the identification of lynx habitat and the conserving of habitat for lynx and their prey species.

- Lynx habitat in the Tower Unit.
- Predicted effects on federal status of listed species

Key Issue 3: Roadless Areas

The Hidaway Allotment includes portions of two inventoried roadless areas: South Fork-Tower and Squaw. In addition, ONRC (Oregon Wild) submitted a map of what they consider to be unroaded areas within the allotment. They are concerned that the "*unique value* [of the unroaded area] *associated with low road density must be preserved."* They proposed that analysis consider affects on roadless values such as dispersed non-motorized recreation, high water quality, and wildlife habitat. This issue will be measured using the following criteria:

- Qualitative discussion on effects to dispersed non-motorized recreation, such as camping, hiking, collection of mushrooms, etc.
- Qualitative discussion of effects on roadless area characteristics (natural appearance, integrity, solitude, remoteness, manageability).
- Effects to the wilderness eligibility of the roadless areas.
- See Hydrology section for discussion and measurement of water quality.
- See Wildlife section for discussion and measurement of habitat quality.

Decision and Decision Rationale

Based upon my review of the alternatives, I have decided to implement Alternative 3. This alternative would authorize 493 cattle (cow/calf pairs or the equivalent) from June 16th through September 30th (1742 Head Months) within the Hidaway Allotment boundary. Grazing would be adjusted annually, if conditions or events (fire, drought, saturated soil conditions) indicate a shortening of the season.

Livestock would be managed in a pasture rotation system within the East Trough, West Trough, Dry Camas, and Nine-Sections Units. The pasture rotation for a particular year would be determined based on range conditions, consistent with seasonal restrictions described below. Table 1 describes the approximate number of days livestock would be authorized in each Unit. The actual number of days livestock are authorized in each Unit would be modified annually based on Unit rotations, utilization levels, and annual conditions. Some Units may be rested in a particular year and adjustments to the season or numbers of livestock would be made to account for less acres being grazed. This will be reflected in the administration of the grazing permit.

Table 1

Unit	Permitted Numbers[1]	Days in Unit[2]	Head Months	Acres
Dry Camas	493	26	427	5341
Nine-sections	493	42	690	8224
East Trough	493	18	296	2748
West Trough	493	20	329	2951
Totals	493	106	1742	19264

[1]Permitted numbers are maximum numbers.

[2]Numbers are estimated. Actual use depends on annual variations in conditions, utilization levels, and pasture rotation.

The 18,000 acre Tower Unit would be eliminated from the Hidaway Allotment. The Tower Unit would not become its own allotment or a part of this or another allotment unless a separate analysis was completed in the future.

Actions connected to this decision include:
• Approximately one-half mile of fence would be constructed below, and connecting to, the existing Butcherknife Creek exclosure to restrict livestock access from approximately one-half mile of stream downstream to the Forest boundary.
• To improve livestock management and riparian habitat along Dry Camas Creek, approximately 1 mile of fence would be constructed prior to the 2010 grazing season. This fence would create a riparian pasture of approximately 603 acres adjacent to a 378 acre riparian pasture.

How the Decision Responds to the Project's Purpose of and Need for Action

This alternative meets the purpose of this analysis to continue authorization of livestock grazing in a manner that is consistent with the Umatilla Forest Plan, as amended, and facilitate livestock management by providing more control in riparian areas. It also identifies the appropriate management practices to implement on the allotment in this area.

Alternative 3 addresses the need for action by continuing grazing in the modified Hidaway Allotment and therefore on the Umatilla and Wallowa-Whitman National Forests as identified in the respective Forest Plans. It also allows for improved control of livestock resulting in better distribution, more controlled utilization of vegetation, and protection of other resources through the additional fences.

This Alternative provides a sustainable source of forage for livestock in the project area, thereby contributing to the local and regional agricultural economy. And it meets the requirement of Section 504 of the 1995 Rescissions Act, which requires NEPA analysis and decisions for all grazing allotments and updates the terms and conditions of the Allotment Management Plans and term grazing permits.

How the Decision Addresses Comments Received from Interested Parties

The public was notified on November 17, 2006 (East Oregonian Legal Advertisement) of a 30-day comment period on a review copy of the EA. The review copy was also sent to those expressing an earlier interest in the project. Comment responses were received until December 18, 2006. Four different parties responded within the legal timeframe for comment consideration: Larry McCloud of Hells Canyon Preservation Council (December 12, 2006), Doug Heiken of Oregon Wild (December 14, 2006), Kristen Ruether of Oregon Natural Desert Association (December 15, 2006), and Rick and Bonnie Rose Ross (December 18, 2006). Specific responses to the comments received are in Appendix D of the final EA.

Comments generally highlighted concerns with inclusion of the Tower Unit; various potential effects of grazing this unit, maintenance of unroaded areas, and grazing effects on lynx habitat. Potential lynx habitat within the Hidaway Allotment is restricted to the Tower Unit. This unit also includes the unroaded and roadless areas of concern. My decision removes the Tower Unit from the grazing allotment thereby alleviating the concerns of lynx habitat and unroaded characteristics.

The soils scientist described the soils in the Hidaway Allotment as capable of producing forage, and sustaining sufficient vegetation to maintain soil cover. The impacts of grazing at the intensity described in Alternative 3 would be minimal and relatively undistinguishable from wildlife use.

Ten known high priority noxious weed infestations are in the allotment, primarily along roads. Livestock grazing could transport seeds from these sites but the potential is low due to the small size of the infestations. Because five of these infestations are within the Tower Unit, the risk of this activity increasing the size of these sites would be lower than the Alternative 2.

Reviewing the specialists' reports and the EA, I feel the riparian protection measures and conditions were analyzed adequately and show the conditions are satisfactory.

The Hydrologist's and Fish Biologist's reports show any potential decrease in stream shading, increase in water temperatures, and/or additional sediment to streams would not likely cause a measurable response from fish species or would not impair any beneficial use of aquatic habitat.

Consistent attainment of standards indicates that adequate forage is being allocated to meet big game management objectives. Long term monitoring points have been established and analyzed since the 1960s. I have reviewed this data presented by the range management specialists, and find that vegetation conditions on the Hidaway Allotment are in satisfactory condition as defined in the Forest Plan and therefore in compliance with our Forest guidelines. Analysis by the wildlife biologist identifies pastures with winter range habitat (West Trough and Nine Sections) have consistently met utilization standards, indicating that residual forage is present and that rangeland habitats are not being adversely affected by grazing. Cattle grazing under the proposed June 16 turn-on date would not interfere with the critical elk calving period as elk generally calve during mid-May. Monitoring of utilization and stubble heights indicate that grazing is not adversely affecting the quantity or quality of forage in the allotment and sufficient forage is being allocated for elk. Though cattle have the potential to affect riparian vegetation that may contribute to concealment of newborn calves, reductions in days grazed and proposed fencing along riparian areas would reduce the potential for effects on calving habitat. Therefore, I can conclude that standards are being met and conditions are satisfactory.

The economic analysis was used to estimate economic effects to permittees and the local economy.

Rationale for Decision

I have reviewed the interdisciplinary analysis for this project area, the alternatives, the issues and comments from the public and the interdisciplinary team (IDT), the Forest Plan, and conditions in the project area. From this review, I have concluded there is sufficient information to provide a reasoned decision. In making my decision, I considered information related to the purpose and needs, the issues identified for this project, Forest Plan direction, conditions in the project area, and comments from the public and the Interdisciplinary Team. I find Alternative 3 provides for the best combination of results. Alternative 3 meets the purpose and need of this proposal, to evaluate grazing management within the Hidaway Allotment and addresses the issues and concerns associated with management regarding the range and other resources. It also evaluates management on the affected allotments, as provided in the Forest Plan, in such a manner as to ensure compliance with applicable laws, regulations, policies and direction. Forest Service policy and the Forest Plan provide management direction, including working towards the following goals and objectives:

- Provide land and resource management that achieves a more healthy and productive forest and assists in supplying lands, resources, uses, and values that meet local, regional, and national social and economic needs (Forest Plan, page 4-1).
- Manage the forage resources for an improving vegetative trend in areas in less than "fair" condition and for an upward or stable trend for areas in "fair" or better condition. Provide for forage

productivity and make suitable range available for livestock grazing. Increase the level of forage production where cost efficient and consistent with other resource goals (Forest Plan, page 4-63).

- Manage a moderate level of livestock grazing within viewshed 1 areas (Forest Plan, page 4-101).
- Provide moderate levels of livestock grazing in dedicated old growth areas without generally permitting additional structures (Forest Plan, page 4-145).
- Range management techniques that control livestock distribution and timing of use will be used to meet riparian goals (Forest Plan, page 4-164).
- Intensive range management that includes superior grazing systems, such as periodic rest, will be practiced to protect and improve riparian vegetation and anadromous fish habitat. Range improvements (and their maintenance) will be permitted, and should be located to encourage livestock use away from the riparian areas (Forest Plan, page 4-168).
- Manage forest lands to emphasize timber production of wood fiber (Timber) and encourage production of forage (Forest Plan, page 4-178).
- Manage range and livestock through Range Management Strategies C and D (Extensive and Intensive, respectively) with improved management systems. The full range of development and maintenance of structural and non structural improvements is permitted. Permit increased domestic livestock and big game grazing to capture forage increases on transitory range (Forest Plan, page 4-179 and 4-184).
- Manage forest lands to emphasize production of wood fiber (Timber), encourage forage production, and maintain a moderate level of big game and other wildlife habitat (Forest Plan, page 4-182).
- Manage the range vegetation to protect basic soil and water quality resources, provide for ecological diversity, improve or maintain environmental quality, and meet public need for interrelated resource use (Forest Service Manual [FSM] 2202.1 #1).
- Integrate management of range vegetation with other resource programs to achieve multiple use objectives contained in Forest land and resource plans (FSM 2202.1 #2).
- Provide livestock forage, wildlife food and habitat, outdoor recreation, and other resource values dependent on range vegetation (FSM 2202.1 #3).
- Contribute to the economic and social well being of people by providing opportunities for economic diversity and by promoting stability for communities that depend on range resources for their livelihood (FSM 2202.1 #4).
- Provide expertise on range ecology, botany, and management of grazing animals (FSM 2202.1 #5).

Congressional intent to allow grazing on suitable lands (Multiple Use Sustained Yield Act of 1960, Wilderness Act of 1964, Forest and Rangeland Renewable Resource Act of 1974, Federal Land Policy and Management Act of 1976, National Forest Management Act of 1976), where consistent with other multiple use goals and objectives, is met with this alternative.

Alternative 3 meets Forest Service policy to make forage available to qualified livestock operators from lands suitable for grazing, consistent with management plans; and to use appropriate methods, such as grazing use by livestock or wild ungulates, prescribed fire, and mechanical or chemical treatments, for managing range vegetation. (Forest Service Manual 2203.1).

This alternative identifies that forage-producing lands will be managed for grazing where consistent with land management plans (36 Code of Federal Regulations 222.2(c)).

This action will ensure compliance with the 1995 Rescission Bill, Public Law 104-19. A portion of this bill, Section 504, pertains to grazing on National Forest System lands, specifically allotment analysis, grazing permit issuance, and compliance with NEPA. This bill requires the Forest Service to complete an analysis and update allotment management plans on all Forest allotments over the next 15 years.

Alternative 3 addresses the key issues identified with the Tower Unit, thereby eliminating the difficulties associated with terrain and management of the cattle. Forage production and availability limits the optimal use and weight production necessary for viable economic returns for the permittee. Dropping the Tower Unit also decreases concern of possible lynx habitat, and Oregon Wild's identified unroaded areas would be outside the Hidaway Allotment.

Other Alternatives Considered

A total of 6 alternatives were considered in this analysis. Three alternatives were not analyzed in detail and included increasing the numbers of cattle authorized and/or the grazing season, a restoration alternative, and current management. The reasons these three alternatives were not analyzed in detail can be found of page 23 of the EA.

Alternative 1, No Action, would cancel the Term Grazing Permit within two years of implementation of the decision. No livestock grazing would be authorized. The requirement to implement this decision no sooner than two years following the project decision is pursuant to Forest Service Handbook (FSH) 2209.12 part 16.24, and the code of Federal Regulation 36 CFR 222.4(4)(1). No permit would be issued for the allotment unless a subsequent NEPA decision to restock the allotment was made. Maintenance of range developments on the allotments would no longer be the responsibility of the permittees. Range improvements would be removed or rehabilitated. All developments not needed for resource management would be removed. Water improvements could be naturally reclaimed, or measures such as ripping and planting could be implemented to restore the areas.

While providing possible accelerated successional response in riparian and upland areas, this alternative does not address the purpose and need elements, including the need for “continued grazing in the Hidaway Allotment and therefore the Umatilla and Wallowa-Whitman National Forests as identified in the respective Forest Plans (Forest Plan,).” I did not select this alternative because I see no reason to discontinue livestock grazing when monitoring indicates that rangeland conditions including riparian areas are in an overall improving trend, specialists' analyses indicate no adverse conditions exist, and Forest Plan standards and guidelines are being met.

Alternative 2, the proposed action, would authorize 493 cattle (cow/calf pairs or the equivalent) from June 1st through September 30th (2,007 Head Months) within the Hidaway Allotment boundary. Grazing would be adjusted, annually, if conditions or events indicate a shortening of the season. Livestock would be managed in a pasture rotation system within the East Trough, West Trough, Dry Camas, Nine-Sections, and Tower Units. The actual number of days livestock are authorized in each Unit would be modified annually based on Unit rotations, utilization levels, and annual conditions. Some Units may be rested in a particular year and adjustments to the season or numbers of livestock would be made to account for fewer acres being grazed.

This alternative would continue grazing management plans that have been in place for at least the last twelve years. Range and riparian condition and trend monitoring indicates satisfactory conditions and the permittee has been in compliance with annual operating instructions. Management under Alternative 2 would continue maintaining or improving resource conditions as described by the resource specialists. I did

not choose this alternative because it does not address the key issues identified by the IDT and/or the public. The Tower Unit would continue as a part of the Hidaway Allotment causing difficulties associated with terrain and managing the movement and gathering of cattle. Lynx habitat and competition between cattle forage and lynx prey species habitat was identified as a concern in the Tower Unit. Oregon Wild identified part of the Tower Unit as unroaded areas. This alternative does not consider these concerns.

Finding of No Significant Impact

Based on my review of the environmental effects of this project as analyzed in the EA and experience with similar proposals, I have determined this action will not significantly affect the quality of the human environment, considering the context and intensity of impacts (40 CFR 1508.27). Therefore, an Environmental Impact Statement is not necessary. This determination was made considering the following factors:

1. This action will be limited in scope (40 CFR 1508.27(a)) to the 37,260 acres of National Forest lands within the project area. This breaks down to approximately 2.3% of the total Umatilla National Forest acres and .24% of the total Wallowa-Whitman National Forest acres.
2. Significant impacts can be both beneficial and adverse. I find that my decision would have neither a significant beneficial or adverse impact because the project area is a small percentage of similar acres across the landscape, and the anticipated effects are similar to those in past livestock grazing allotments that have not proven to cause significant impacts. This is not a significant federal action.
3. My decision would not adversely affect public health or safety. This finding is based on past similar projects, and the fact that no effects to public health or safety have been identified either by the interdisciplinary team or through public comment in this site-specific analysis.
4. This action will not significantly affect unique areas such as wetlands, floodplains or prime farmlands because there are no such areas in the project area. This action, with implementation of monitoring and mitigation measures, will not significantly affect the North Fork John Day Wilderness as the Hidaway Allotment is outside the wilderness boundary and removal of the Tower Unit increases the distance to the Wilderness.
5. My decision falls within the scope of the analysis for both the Umatilla National Forest and the Wallowa-Whitman Forest Final Environmental Impact Statements and the Land and Resource Management Plans for each Forest. The desired future condition, standards and guidelines and the analysis for the Forest Plans support management of livestock grazing on lands allocated for such use. Effects on the quality of the human environment are not considered highly controversial because management of livestock grazing has taken place in this area and in similar areas across the Forest for many years and the resulting effects are well known and understood. My decision does not include activities that were not already addressed in the Forest planning process.
6. My decision does not involve highly uncertain, unique, or unknown risks. The activities proposed in this decision are well-established land management practices, and the risks are well known and understood. The allotments considered here have a grazing history dating to the 1880s. These allotments have been under grazing permits issued by the Forest Service since 1917 (establishment of the Camas-Hidaway Allotment). Range analysis indicated stable and improving conditions and this decision would not alter these trends.
7. My decision will not establish a precedent for future actions with significant effects nor does it represent a decision in principle about any future consideration because the actions being authorized by my decision at this time are limited in scope to the Hidaway Allotment Management

Plan area and to the action (grazing at proper levels) discussed in this Environmental Assessment. Actions beyond the scope of this project will require further analysis and a new decision.

8. Cultural, historical, and/or scientific resources in the area will not be adversely affected by this project. Cultural resource surveys were done across the area over the course of several years for various projects. Under the terms of the 1995 Programmatic Agreement (amended 2004) between ACHP, SHPO, and USFS R6, the Forest Archeologist has certified that the project will have no adverse effect on identified or possible cultural resources. Any ground disturbing activities such as construction of new structural improvements or reconstruction of existing facilities would require the necessary Tribal and State Historic Preservation Office (SHPO) consultation (except the two new fences covered under this analysis).

9. Biological evaluations were completed for threatened, endangered, and sensitive species of animals, fish, and plants. Determinations are as followed:

•no effect on *Silene spaldingii* (EA, p. 112)

•may impact individuals but will not likely contribute to a trend towards federal listing or cause a loss of viability to the populations or species for moonwarts (*Botrychium* sp.) and Douglas' clover (*Trifolium douglassii*) (EA, pp 111-112)

•no impact on longbearded Sego lily (*Calochortus longebarbatus* var. *longebarbatus*) (EA, pp 112)

•no impact on Columbia duskysnails (EA, p. 61)

• may impact individuals but will not likely contribute to a trend towards federal listing or cause a loss of viability to the populations or species for Columbia spotted frog (EA, p. 85)

•no impact on the California wolverine (EA, p. 87)

•no effect on the bald eagle, lynx, gray wolf or their habitats (EA, pp 86-92)

•may impact individuals but will not likely contribute to a trend towards federal listing or cause a loss of viability to the populations or species for redband trout (EA, p. 60-61)

•may affect but not likely to adversely affect Snake River Chinook, Snake River steelhead, or Mid-Columbia steelhead (EA, p. 60)

•may affect but not likely to adversely affect designated critical habitat for steelhead or essential fish habitat for Chinook salmon (EA, p. 60).

National Marine Fisheries Services has reviewed our findings and concurred with the 'not likely to adversely affect' call for Mid-Columbia Steelhead, Snake River Steelhead, their designated critical habitats and for essential fish habitat for Chinook salmon. The letter of concurrence was received on April 4, 2007.

10. I have examined this action and its relationship to the National Forest Management Act, Endangered Species Act, National Environmental Policy Act, National Historic Preservation Act and related laws and find that my decision will not violate any Federal, State, or local laws or other requirements for protection of the environment.
11. Water quality will not be adversely impacted with this project. Activities associated with this project will maintain or improve riparian/meadow vegetation and stream channels, thereby maintaining or improving water quality over time.
12. This project will have no known significant direct, indirect, cumulative, or unavoidable adverse effects on the environment based upon the analysis contained in Chapter 3 of the EA. There will be no significant irreversible or irretrievable commitments of resources.

Findings Required by Other Laws and Regulations

This decision to implement Alternative 3 is consistent with the intent of the Forest Plan's long term goals and objectives listed on pages 4-1 to 4-3. The project was designed in conformance with land and resource management plan standards and incorporates appropriate land and resource management plan guidelines for Range management and the Management Areas identified in the Hidaway Allotment (Land and Resource Management Plan, pages 4-99 to 4-186).

1. Federal regulations require that permits, contracts, cooperative agreements, and other activities carried out on the Forests are consistent with the National Forest Land and Resource Management Plans, as amended. I have reviewed my decision against Forest Plan direction, and I have determined this action is consistent with the goals, objectives, and direction contained in the Record of Decisions (RODs) for the Umatilla and Wallow-Whitman National Forest Final Environmental Impact Statements (1989) and the accompanying Land and Resource Management Plans.
2. Alternative 3 is fully compliant with all applicable direction, including both Management Area and Forest-Wide standards and guidelines and the Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho and Portions of California (PACFISH, 1995). Grazing of the Hidaway Allotment would be consistent with the standards and guidelines set forth under PACFISH. All annual operating instructions would be implemented to ensure continued consistency with PACFISH. Grazing under alternative 3 would not prevent the attainment of any PACFISH Riparian Management Objective currently not meeting standards and would not degrade Riparian Management Objectives presently meeting standards. Forest plan consistency is achieved by following best management practices for grazing.
3. The procedures used to initiate and complete the planning of the project are consistent with Section 106 of the National Historic Preservation of Act of 1966, as amended. The project has been consulted on with the Oregon State Historic Preservation Office (SHPO) and representatives of the Confederated Tribes of the Umatilla (CTUIR). The Umatilla National Forest will continue to work with the CTUIR to resolve any concerns that may arise with implementation of this project.
4. This decision is in compliance with Executive Order 12989 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations". No minority or low-income populations will be disproportionately affected with implementation of Alternative 3. The project also complies with Executive Orders 11988 and 11990 (floodplains and wetlands).

Implementation, Administrative Review and Appeal Opportunities

The notice of appeal must be filed hard copy with the Appeal Deciding Officer, ATTN: 1570 APPEALS, 333 S.W. First Avenue, P.O. Box 3623, Portland, Oregon, 97208-3623, faxed to (503) 808-2255, sent electronically to appeals-pacificnorthwest-regional-office@fs.fed.us, or hand delivered to the above address between 7:45AM and 4:30PM, Monday through Friday except legal holidays.

The appeal must be postmarked or delivered within 45 days of the date the legal notice for this decision appears in the East Oregonian, Pendleton, Oregon. The publication date of the legal notice in the East Oregonian is the exclusive means for calculating the time to file an appeal and those wishing to appeal should not rely on dates or timeframes provided by any other source.

Electronic appeals must be submitted as part of the actual e-mail message, or as an attachment in Microsoft Word, rich text format or portable document format only. E-mails submitted to e-mail addresses other than the one listed above or in other formats than those listed or containing viruses will be rejected.

Only individuals or organizations who submitted substantive comments during the comment period may appeal. The notice of appeal must meet the appeal content requirements at 36 CFR 215.14.

Implementation

If no appeals are filed within the 45-day time period, implementation of the decision may occur on, but not before, 5 business days from the close of the appeal filing period. When appeals are filed, implementation may occur on, but not before, the 15th business day following the date of the last appeal disposition.

Contact

Questions regarding this decision should be directed to Tom Thompson, Range Management Specialist, at the North Fork John Day Ranger District, P.O. Box 158, Ukiah, Oregon 97880 or phone (541) 427-5365.

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CRAIG SMITH-DIXON Date
District Ranger
North Fork John Day Ranger District