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BLM/OR/WA/AE-07/047+1792



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Baker Resource Area
PO Box 947
Baker City, OR 97814



IN REPLY REFER TO:
1400

November 18, 2008

Dear Interested Public:

Attached is the Pritchard Creek Geographic Unit Grazing Permit Renewal Environmental Assessment (EA) # OR-030-08-002 and the accompanying Finding of No Significant Impact (FONSI). Grazing decisions have been issued to four permittees, which will allow them to graze livestock under certain stipulations and schedules on public land in the Pritchard Creek geographic unit. The EA and FONSI have been slightly modified since the June 12, 2008 version to accommodate new information and public comment.

The attached analysis of alternative land management actions support grazing decisions that will implement the selected alternative, which will provide significant progress toward achievement of the Standards for Rangeland Health and management objectives of the Baker Resource Area Management Plan. Thank you for your interest and participation in the process, and I encourage your continued involvement in livestock management on public land.

Sincerely,

Nancy K. Lull
Baker Field Manager



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Baker Resource Area
PO Box 947
Baker City, OR 97814



FINDING OF NO SIGNIFICANT IMPACT (FONSI) Environmental Assessment No. OR-030-08-002 Pritchard Creek Geographic Unit Grazing Permit Renewal Environmental Assessment

The attached Environmental Assessment (EA) contains a description of the proposed action; an analysis of expected impacts on affected interests, land and resources; and measures to reduce negative impacts. The EA analyzes the impacts of a range of alternatives developed through scoping, and indicates that the proposed action with specific design criteria would not significantly affect the human environment.

During the initial phase of this project, BLM received comments and information from the public, permittees, and other parties interested in this area through public scoping processes and meetings. Where appropriate and pertinent, this information was included in the Rangeland Standards Assessment, Evaluation, and Determination, which was published on July 23, 2007.

In developing the EA, BLM worked with permittees and other interested individuals to build the alternatives. We held public meetings and provided a public comment period. We received written comments from the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), Hells Canyon Preservation Council (HCPC), Oregon Natural Desert Association (ONDA), and Western Watersheds Project (WWP). These comments were insightful, carefully thought out, and valuable. The comments and suggestions helped us fine-tune the standard design features and monitoring procedures, as well as clarify information in the final EA.

For example, CTUIR expressed concern about the health of First Foods, and compliance with Section 106 of the National Historic Preservation Act. The First Foods and the right to harvest them are protected in the Treaty of 1855. By fine-tuning aspects of design features and monitoring, we believe we have addressed CTUIR's concerns. We also feel confident that the selected alternative, which will make significant progress toward improved rangeland health, will help ensure the Tribes' continued access to First Foods.

There was particular interest in BLM's compliance with the Oregon Department of Fish and Wildlife's (ODFW) Sage-Grouse Conservation Assessment Strategy. BLM guidance in Instruction Memorandum OR-2007-073 indicates that each district should refer to the Greater Sage-Grouse Conservation Assessment and Strategy for Oregon 2005 (Oregon State Strategy) for district-specific management objectives. The Oregon State Strategy indicates on pages 75 and 76, that "Moderate levels of livestock use are generally considered compatible with maintenance of perennial bunchgrass, however level of sustainable use varies with a number of environmental factors." The reduction of AUMs and implementation of utilization standards described in the EA are consistent with moderate levels of use.

After the final EA and proposed grazing decisions were issued, BLM received two protest letters. The protests raised concerns about grazing seasons of use and trend data, the range of alternatives that were analyzed, sage-grouse and its habitat, and water quality. In response to the protests, BLM initiated additional coordination with ODFW to verify sage-grouse lek protection and management actions. BLM subsequently received new sage-grouse data from BLM's Oregon State Office and ODFW that indicated different lek locations from previous data included in the EA. BLM then modified the EA to accommodate the new data and recommendations from ODFW, as well as clarified sections of the EA to reflect other concerns raised in the protest letters. Also, based on public comment, BLM clarified the proposed action relative to the March 1- May 15 sage-grouse lek season.

Design Features Common to All Alternatives numbers 20 and 21 were modified to clarify the limitations of livestock use during the sage-grouse lek season. These revised stipulations will also be placed in the final grazing decisions. Alternative 4 has been revised with respect to livestock use between March 1-May 15. In one out of three years, use is allowed in pastures with leks, but livestock management actions such as riding or moving livestock, will prevent livestock concentration on the leks during the sage-grouse breeding season (March 1-May 15). Use of natural topography will contribute to the separation between livestock and leks.

Grazing rotations among pastures between April 15- May 15 have also changed slightly in Alternative 4: Holman pasture changed from three out of four years to one out of three years; Lawrence pasture changed from two out of four years to one out of three years; Upper pasture changed from one out of four years to one out of three years; and White Rock pasture changed from two out of four years to three out of four years. White Rock pasture has no active leks.

Narratives in Alternative 4 description, Wildlife, Vegetation and Rangeland Grazing Use as well as Table 2 were modified to reflect these changes to Alternative 4. Appendix 7 was added to show the grazing seasons of use. No additional or new effects are anticipated from this minor modification to the rotation schedules.

The changes made in the final EA (11/18/08) ensure BLM compliance with the sage-grouse guidelines, and defer grazing in the lek areas by preventing livestock concentrations in the lek areas two out of three years.

After careful review and consideration of impacts of the various alternatives, I have chosen the proposed action (Alternative 4). This alternative reduces animal unit months (AUMs) by a substantial 27% (for three of four permittees), changes season-of-use, implements utilization standards, allows four new gap fences to protect riparian areas, and includes consequences for exceeding utilization standards. This alternative will allow this allotment to make significant progress toward meeting standards for healthy rangelands. Four grazing decisions will be issued to implement this alternative.

Alternatives 1, 2, and 3 were not selected for the following reasons. Under Alternative 1, the No Action Alternative, the terms and conditions of the grazing use would remain unchanged. This would mean that standards would continue to be unmet, therefore, this alternative would not meet legal and land-use planning requirements. Although Alternative 2 contains valid suggestions, BLM cannot reasonably expect to receive funds necessary to implement the projects, and without changes in livestock distribution, meeting standards would require reductions in AUMs. Alternative 3 could help jump-start recovery by closing the pastures to grazing for the first three years; however, this alternative would cause significant economic stress on the permittees during the first three years of implementation. The socio-economic impacts of this alternative, combined with BLM's multiple-use mandate, make this alternative less viable than Alternative 4. Alternative 4 implements AUM reduction, livestock season-of-use changes, utilization standards, riparian gap fence construction, and multiple project-design features and monitoring requirements that BLM believes will result in significant progress toward meeting standards for healthy rangelands while reducing socio-economic impacts to the permittees.

The actions described in Alternative 4, the proposed action, would have local impacts on affected interests, land, and resources similar to and within the scope of those described and considered in the Final Ironside Grazing Management Environmental Impact Statement (USDI 1981) and the Baker Resource Management Plan Record of Decision (USDI 1989). There would be no substantial broad societal or regional impacts not previously considered in the preceding documents. The actions described represent anticipated minor program adjustments complying with those decision documents above, and implementing ongoing range management programs within the scope and context of those decisions. I have evaluated the effects of the proposed action, together with the proposed mitigating measures, against the tests of significance found at 40 CFR 1508.27. I find that:

Beneficial and adverse effects. The cumulative effects are positive and there will be no significant effects (positive or negative) as described by the CEQ definition. Rangeland and watershed health, ecological functions, productivity, upland wildlife habitat, and riparian habitat will be protected and improved by the combined benefits of the proposed actions. Cultural resources and special status species will be protected. Outstanding opportunities for primitive and unconfined recreation will remain, and naturalness will be enhanced. Grazing operations will be more costly to operate, but will remain sustainable.

Public health or safety. There will be no significant effects on public health or safety. The area is very remote, thus the chances of affecting members of the general public in any measurable way will also be remote. Herbicide use for weed treatments, will meet district and state requirements. The proposed gap fences and implementation of the new grazing systems will not significantly affect public health and safety. Any threats will be localized, limited to those involved with construction and maintenance activities, and within accepted norms for such work.

Unique areas. There are no unique, specially managed areas within the Pritchard Creek Geographic Unit, including WSAs, WSRs, and ACECs; thus, none would be significantly affected. Opportunities for primitive recreation and solitude will not be diminished. Fences can be removed and the physical impacts associated will be temporary in nature. Grazing systems with the supporting spring development and fence maintenance will allow for improved health of riparian systems and will maintain health and function of uplands.

Highly Controversial Effects. The new grazing systems will place new burdens on the affected ranchers, as livestock will be moved more often. The cost of project construction will be partially borne by the permittees and the maintenance responsibility will be totally borne by them. These new costs will be added to the operational costs they already bear and will certainly have negative impacts on their profits. Nevertheless, the grazing operations will remain sustainable, and rangeland health and productivity will be protected and enhanced. Similar measures have been successfully initiated by voluntary agreement with permittees (as under the interim grazing measures initiated in accordance with 43 CFR 4180 in the spring of 2003) and elsewhere on the Vale District. Therefore, they should not be considered controversial. Any effects on the human environment which are related to "land use" allocation issues were addressed and decided in the Baker RMP and Ironside EISs and the subsequent Records of Decision (ROD), and are outside the scope of this EA.

Unique or unknown risks. There are no unique or unknown risks associated with the implementation of the proposed action. The Baker RMP and Ironside EISs, and this EA, cover the anticipated impacts thoroughly. They rely on applicable scientific findings, monitoring, rangeland health assessments, published studies, professional contacts, and stated mitigation measures to address and/or preclude impacts.

Precedent for future actions. There are no precedents, relative to future actions with significant effects, which will be established. The specific actions involved in the proposed action have all been done before, separately and collectively, in the course of management of public lands over the past 50 years. There are no irreversible commitments of resources involved with the proposed action. The structural projects involved could be eliminated and the physical disturbance rehabilitated.

Cumulative Effects. The impact of proposed actions have been analyzed and considered, separately and cumulatively, at multiple scales of analysis by considering the ICBEMP science findings, Baker RMP and Ironside EISs, and this EA. Impacts are either not significant, are mitigated below significance, or were declared and addressed in the Baker RMP and Ironside EISs. The cumulative effect of implementation of the proposed action is also not significant and is within the scope of the cumulative effects analysis disclosed in the Baker RMP and Ironside EISs, which this EA specifically incorporates by reference.

Impacts to significant scientific, cultural, or historic resources.

Cultural, historical and/or scientific resources in the area are protected by design features and monitoring, and will not be adversely affected by the proposed action. The combination of management actions and design features under the proposed action will facilitate dispersed distribution of livestock, and reduce grazing effects on soils, riparian and upland vegetation, which would be beneficial for protection of cultural resources.

Design features, described on pages 14-15 and page 60 of the EA, include inventories prior to any surface disturbing development or project maintenance, continued sampling inventories, and consultation with the Oregon State Historic Preservation Office (SHPO) and Tribes on potential effects and appropriate mitigation measures for any identified eligible or potentially eligible historic properties. Cultural resource surveys have occurred and will be ongoing. The Oregon SHPO and the Confederated Tribes of the Umatilla Indian Reservation were consulted on the renewal of Pritchard Creek allotment grazing permits. The Oregon SHPO concurred that, with implementation of the design features, the proposed action would not adversely affect eligible or potentially eligible properties.

Federally listed endangered or threatened species. There are no known federally listed species in Pritchard Creek Geographic Unit. The proposed livestock management, which implements a timing and duration of livestock use that is appropriate for riparian areas, will be beneficial for all wildlife and aquatic species present. If special status species are discovered, additional mitigation measures such as inventory and avoidance of special status plants, and surveys prior to land treatment, would be done in conformance with Oregon/Washington special status species policy. Greater sage-grouse habitats will be protected as a result of livestock utilization limits, reduction of AUMs, changes in season-of-use, limited project development, project design features, specific mitigation measures associated with projects, and by improvement and maintenance of riparian and upland systems through vegetation treatments. These changes will assist in meeting moderate levels of livestock use as recommended by the Oregon Department of Fish and Wildlife's (ODFW) Sage-Grouse Conservation Assessment Strategy and the Greater Sage-Grouse Conservation Assessment and Strategy for Oregon 2005 (Oregon State Strategy).

Compliance with federal, state, or local law. The proposed action is in compliance with federal, state, and local law and requirements relative to environmental protection. Further, it is in conformance with the Baker RMP and Ironside EISs and RODs.

The proposed action allows BLM to strike a balance between natural values and commodity uses in a manner consistent with the principles of multiple use and applicable law. Specific resource objectives are identified in the Baker RMP. The proposed action provides the opportunity to achieve RMP objectives as well as meet The Standards for Rangeland Health (USDI 1997) through a variety of management actions, standard design features, and projects, without creating significant impacts.

Based on the analysis of potential environmental impacts contained in the Environmental Assessment and all other available information, I have determined that the proposed action does not constitute a major federal action that would significantly affect the quality of the human environment. Therefore, an Environmental Impact Statement (EIS) is unnecessary and will not be prepared.



Nancy K. Lull
Field Manager
Baker Field Office, Vale District

Date

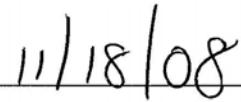


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1 INTRODUCTION

1.1 *Proposed Action*

The Bureau of Land Management (BLM) proposes to renew four 10-year grazing permits for livestock producers located in the Baker Resource Area, Vale District BLM. The Pritchard Creek grazing allotment (#02074) covers about 14,414 acres of public land as described in the “Rangeland Standards Assessment, Evaluation, and Determination: Pritchard Creek Geographic Unit, Pritchard Creek Grazing Allotment” (USDI 2007). See Map 1 and 2 in this document for locations of the Pritchard Creek Geographic Unit and allotment pastures. Permit terms and conditions for each grazing permit will be developed to conform with the “The Standards for Rangeland Health and Guidelines for Livestock Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington,” or S&Gs (USDI 1997); with the “Baker Resource Management Plan ROD,” or RMP (USDI 1989) management objectives; and with the decisions resulting from this document.

1.2 *Purpose and Need*

BLM has been directed to renew and reissue all 10-year public land livestock grazing permits by October of 2009. As a prerequisite to this renewal exercise, BLM must first determine whether current permitted grazing use conforms with two important legal requirements: (1) land use plan objectives in the RMP (USDI 1989), and (2) the “Standards for Rangeland Health and Guidelines for Livestock Management,” or S&Gs (USDI 1997). If current management does not conform, then alternative options that would be expected to meet these requirements must be explored.

The purpose of this environmental assessment (EA) is to analyze the environmental and socio-economic impacts of four different management alternatives, including continuation of current management, on the Pritchard Creek BLM allotment described in the “Rangeland Standards Assessment, Evaluation, and Determination: Pritchard Creek Geographic Unit” (USDI 2007). The grazing permit renewal is a federal action; therefore, it is subject to protest and appeal rights under existing grazing regulations and the National Environmental Policy Act (NEPA). BLM’s goal is to provide rational and well-supported explanations for its preferred choices regarding grazing systems and rangeland developments, for the permittees, tribes, and interested public. Based on the analyses herein, BLM will take appropriate management actions and reissue the affected 10-year grazing permits.

The Pritchard Creek Geographic Unit (PCGU) determination findings require adjustments to existing permit terms and conditions, including seasons-of-use and/or grazing preference¹. The 2007 PCGU evaluation disclosed that most standards are “not met” in the four pastures of the grazing allotment, and that current livestock grazing is considered to be a significant contributing factor in the failure to meet standards (USDI 2007,p 26). The purpose of this EA is to review the environmental and socio-economic impacts of all four alternatives considered herein, and to determine what grazing adjustments may be needed. The final grazing permit adjustments may be dependent upon the number and type of rangeland developments allowed, including fences, water developments, and land treatments. BLM will further analyze the alternatives and consider their potential impacts on multiple-use values. BLM may select several different management strategies as a means to address standard failures.

BLM has considered the following criteria as the basis for re-issuance of grazing permits:

1. What grazing system(s) and level(s) of grazing intensity should BLM authorize so it may promote sustainable ranching operations and healthy rangelands?
2. Which additional rangeland development projects, if any, are truly necessary for the long-term economic viability of affected livestock permittees?

¹ Grazing preference refers to the total number of animal unit months (AUMS) on public lands, apportioned and attached to base property owned or controlled by a permittee, lessee, or an applicant for a permit or lease. Grazing preference includes active and suspended use.

3. Are there any pastures or parts of pastures where permanent or temporary removal of livestock grazing is required in order to meet the S&Gs and the Baker RMP management objectives?
4. Are the alternatives designed to meet the S&Gs over time?
5. How will BLM grazing management practices and rangeland developments either benefit or diminish habitat quality for wildlife of management importance such as greater sage-grouse?

1.3 *Background*

In accordance with public land grazing regulations (Code of Federal Regulations [CFR] 43 CFR 4130.2), grazing permits authorize use on the public lands and other BLM-administered lands designated in land use plans as available for livestock grazing. Permits specify the grazing preference, including active and suspended use. Public land grazing permits also specify terms and conditions. The term of a grazing permit authorizing livestock grazing on the public lands is 10 years, unless exceptions apply.

The Bureau of Land Management has made the commitment to Congress to process fully all grazing permits and leases for renewal by 2009. In the interim, BLM has been given the authority to renew expiring permits in accordance with the Department of the Interior and related agencies appropriations act for 2004 (Public Law [PL] 108-108) without changes to the terms and conditions of the expiring permit, pending complete processing in compliance with all applicable laws and regulations. Upon complete processing of the permit in compliance with all applicable laws and regulations, the permit authorized in accordance with the appropriations act may be cancelled, suspended, or modified in whole or in part, to meet the requirements of the applicable laws and regulations.

A priority for completing coordinated activity plans for the Geographic Units (GUs) was established in the Baker RMP (USDI 1989). The schedule for conducting Standards and Guides (S&Gs) was prioritized by GU in the Baker Planning Update of February 2000. This initiated the evaluations/assessments of grazing authorizations within geographic management areas of Baker Resource Area. Based on recommendations from these assessments and evaluations, existing activity plans are revised/rewritten, new activity plans are developed, or specific terms and conditions of grazing authorizations are implemented to ensure consistency with laws, regulation, and land use plan objectives. New or revised activity plans, which identify terms and conditions of grazing authorizations, are incorporated into terms and conditions of offered grazing permits.

1.4 *Scoping and Responses to Assessment / Evaluation Comments*

BLM first disclosed the proposed sequence and methods for GU evaluations to the public, as part of the Baker RMP scoping process. GU evaluations were discussed with the public prior to the Pritchard Creek assessment through the Baker RMP public involvement process as described on page 7 of the Record of Decision document (USDI 1989).

Before fieldwork began on the Pritchard Creek S&Gs in 2002, BLM invited the permittees to participate in the S&Gs evaluation. Some permittees did participate. BLM met with the permittees in the fall of 2006 to discuss the preliminary findings from the assessment. BLM met again with the permittees in January 2007 to discuss the proposed recommendations for management actions.

Letters notifying the public, newspapers, permittees, other agencies, and tribal representatives regarding the process and the upcoming public meeting, were sent out in early May 2007. A public meeting was held on May 15, 2007 to provide an overview of the process, distribute the draft Assessment and Determinations document and to answer questions.

BLM accepted comments on the draft Assessment and Determinations document through June 15, 2007. One comment letter was received. This comment acknowledged the BLM process and provided input regarding livestock grazing impacts. It further stated an apparent contradiction regarding the BLM analysis of sage-grouse habitat. BLM modified the document to provide a clearer explanation of that issue. The

BLM offered to meet individually with the Tribes involved and subsequently met with the Confederated Tribes of the Umatilla and discussed the Pritchard creek EA on several occasions. Subject to Privacy Act limitations, the written comments and proposals provided to BLM are part of the public involvement record and may be obtained by the public upon request.

1.5 Conformance with Existing Resource Management Plan, Management Objectives

The following resource condition objectives for Pritchard Creek geographic unit and allotment vegetation were identified in the Baker RMP and guide this document.

Upland Objectives

- Manage upland grass-shrub vegetation to achieve a mid-seral stage plant community.
- Improve upland habitat conditions for sage-grouse, antelope, and mule deer.

Forestland Objectives

- Maintain woodlands to meet the vegetation needs of other resources, principally watershed and wildlife habitat.

Riparian Objectives

- Improve and maintain, where suitable, wet meadows for sage-grouse and antelope.
- Enhance fishery habitat for trout on Lawrence Creek and Pritchard Creek.
- Improve the condition of riparian habitats.

Allocations were identified as follows:

Upland

- Restrict livestock grazing.
- Restrict livestock grazing for three to five growing seasons or until treatment objectives are met on range rehabilitation project areas.
- Forestland contains approximately 900 acres of woodland. Exclude 900 acres of forest land from harvest of woodland products.

Riparian

- Exclude livestock grazing in identified stream segments, bogs, and spring overflows (e.g., Pritchard Creek, Lawrence Creek) where grazing is incompatible with riparian objectives.

Management actions were identified as follows:

Upland

- Monitor and evaluate the grazing system. Adjust the grazing system and stocking level as appropriate to maintain upland vegetation objectives.
- Modify the grazing system to increase vegetation in upland wildlife habitat areas.
- Defer livestock grazing three to five growing seasons on range rehabilitation project areas.

Forestland (900 acres of woodland)

- Inventory and determine the production capability.
- Manage for the protection of the watershed and suitable habitat for wildlife.

Riparian

- Continue riparian surveys.
- Fence selected bogs, seeps, streams, and meadows.
- Inventory the fishery resource.
- Install structures in selected streams.
- Plant shrubs in selected exclosures.

- Establish monitoring studies on vegetation and fisheries.
- Restore deteriorated habitat through modification of grazing systems.

These objectives have facilitated the development of specific actions required to make significant progress towards meeting the S&Gs for each of the five standards and four pastures.

The BLM proposed action is consistent with the Baker Resource Area RMP ROD (USDI 1989) because it conforms to the land use plan objectives, and results in environmental impacts similar to those already analyzed in the RMP.

2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Changes in AUMs for the four alternatives analyzed include:

Alternative 1 - Continue current management (no change).

Alternative 2 - Permittee proposal.

Alternative 3 - Eliminate livestock grazing for 3 years then implement Alternative 4.

Alternative 4 – Implement proposed action which includes reductions in AUMs, changes of seasons-of-use, project maintenance, gap fence construction, enforcement of current utilization standards and regular monitoring to ensure standards are being met.

See Table 1 for a summary of AUMs for permittees by alternative.

Table 1. Summary of AUM Changes for Permittees by Alternative

LIVESTOCK PERMITS	ALTERNATIVE 1 Active AUMs (No Change)	ALTERNATIVE 2 Changes in Active AUMs	ALTERNATIVE 3 Changes in Active AUMs	ALTERNATIVE 4 Changes in Active AUMs
Permittee K	750	750 0% change	0 active AUMs for 3 years (100% change) then 548 AUMs 27% change	548 27% change
Permittee T	676	676 0% change	0 active AUMs for 3 years (100% change) then 494 AUMs 27% change	494 27% change
Permittee S	676	676 0% change	0 active AUMs for 3 years (100% change) then 494 AUMs 27% change	494 27% change
Permittee J	200	200 0% change	0 active AUMs for 3 years (100% change) then 200 AUMs 0% change	200 0% change
Total Active AUMs by Alternative >>>	2,302 AUMs	2,302 AUMs	0 AUMs for 3 years then 1,736 AUMs	1,736 AUMs

2.1 Livestock Permit and Grazing Allotment Statistics

Table 2 shows the livestock use for each pasture by permittee and alternative. Note, the standards that are not met are shown in the column under the pasture name.

2.2 TABLE 2. LIVESTOCK PERMIT AND GRAZING ALLOTMENT STATISTICS

SEE LEGEND AT THE END OF THIS TABLE FOR FURTHER CLARIFICATION ABOUT THESE DATA

[U] = PASTURES THAT DID NOT MEET UPLAND STANDARDS DUE TO LIVESTOCK GRAZING AS REPORTED IN THE EVALUATION; [R] = PASTURES THAT DID NOT MEET RIPARIAN STANDARDS DUE TO LIVESTOCK GRAZING ;[EP]=PASTURES THAT DID NOT MEET ECOLOGICAL PROCESSES STANDARDS; [W] = PASTURES THAT DID NOT MEET WATER QUALITY STANDARDS DUE TO LIVESTOCK GRAZING; [H] = PASTURES THAT DID NOT MEET HABITATS FOR PLANTS AND ANIMALS STANDARDS DUE TO LIVESTOCK GRAZING

ALLOTMENT PASTURES AND TOTAL ACRES	PERMIT ID	ALTERNATIVE 1 – NO ACTION	ALTERNATIVE 2- PERMITTEE ALT	ALTERNATIVE 3- NO GRAZING	ALTERNATIVE 4 – BLM PROPOSED ACTION
PRITCHARD CREEK ALLOTMENT #02074					
HOLMAN PASTURE; [U,R,EP,W,H] 3668 ACRES	J	NON-USE	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	NON-USE
HOLMAN PASTURE; [U,R,EP,W,H] 3668 ACRES	K	NON-USE	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	NON-USE
HOLMAN PASTURE; [U,R,EP,W,H] 3668 ACRES	S	300 AUMS ANNUALY 10/01-11/30 YEAR 1 10/01-11/30 YEAR 2 10/10-11/30 YEAR 3	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	187 AUMS ANNUALLY 04/16-05/25 YEAR 1 261 AUMS ANNUALLY 10/01-11/22 YEAR 2 47 AUMS ANNUALLY 05/16-05/25 YEAR 3 212 AUMS ANNUALLY 10/01-11/12 YEAR 3
HOLMAN PASTURE; [U,R,EP,W,H] 3668 ACRES	T	300 AUMS ANNUALY 10/01-11/30 YEAR 1 10/01-11/30 YEAR 2 10/10-11/30 YEAR 3	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	187 AUMS ANNUALLY 04/16-05/25 YEAR 1 261 AUMS ANNUALLY 10/01-11/22 YEAR 2 47 AUMS ANNUALLY 05/16-05/25 AUMS ANNUALLY 212 AUMS ANNUALLY 10/01-11/12 YEAR 3

2.3 Livestock Permit and Grazing Allotment Statistics

LAWRENCE PASTURE; [R,EP,W, 4656 ACRES	J	173 AUMS ANNUALY 05/01-05/31 YEAR 2 06/01-06/02	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	201 AUMS ANNUALLY 05/01-05/31 YEAR 1, 2, 3,
LAWRENCE PASTURE; [R,EP,W, 4656 ACRES	K	207 AUMS ANNUALY 04/16-05/25 YEAR 1 419 AUMS ANNUALY 10/20-12/09 YEAR 1	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	NON-USE YEAR 1,2 168 AUMS ANNUALLY 10/28-11/16 YEAR 3,
LAWRENCE PASTURE; [R,EP,W, 4656 ACRES	S	375 AUMS ANNUALY 05/01-07/15 YEAR 3	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	172 AUMS ANNUALLY 10/01-11/04 YEAR 1,, 172 AUMS ANNUALLY 04/16-05/25 YEAR 2 93 AUMS ANNUALLY 11/17-12/01 YEAR 3
LAWRENCE PASTURE; [R,EP,W, 4656 ACRES	T	375 AUMS ANNUALY 05/01-07/15 YEAR 3	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	172 AUMS ANNUALLY 10/01-11/04 YEAR 1,, 172 AUMS ANNUALLY 04/16-05/25 YEAR 2 93 AUMS ANNUALLY 11/17-12/01 YEAR 3

UPPER PASTURE; [U,R,EP,W,H] 3173 ACRES	J	173 AUMS ANNUALY 05/01-05/31 YEAR 1, 3 06/01-06/02	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	NON-USE
UPPER PASTURE; [U,R,EP,W,H] 3173 ACRES	K	207 AUMS ANNUALY 04/16-05/25 YEAR 2 428 AUMS ANNUALY 10/20-12/09 YEAR 2	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	226 AUMS ANNUALLY 10/21-11/16 YEAR 1 226 AUMS ANNUALLY 10/21-11/16 YEAR 2 59 AUMS ANNUALLY 10/01-10/27 YEAR 3
UPPER PASTURE; [U,R,EP,W,H] 3173 ACRES	S	NON-USE	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	54 AUMS ANNUALLY 11/21-12/01 YEAR 1 44 AUMS ANNUALLY 11/23-12/01 YEAR 2 140 AUMS ANNUALLY 04/16-05/25 YEAR 3
UPPER PASTURE; [U,R,EP,W,H] 3173 ACRES	T	NON-USE	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	54 AUMS ANNUALLY 11/21-12/01 YEAR 1 44 AUMS ANNUALLY 11/23-12/01 YEAR 2 14094 AUMS ANNUALLY 04/16-05/25 YEAR 3

WHITE ROCK PASTURE; R,EP,W,H 2917 ACRES	J	NON-USE	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	NON-USE
WHITE ROCK PASTURE; R,EP,W,H 2917 ACRES	K	207 AUMS ANNUALY 04/16-05/25 YEAR 3 10/10-11/30	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	151 AUMS ANNUALLY 04/16-05/25 YEAR 1,2,3 168 AUMS ANNUALLY 10/01-10/20 YEAR 1,2,3
WHITE ROCK PASTURE; R,EP,W,H 2917 ACRES	S	375 AUMS ANNUALY 05/01-07/15 YEAR 1, 2	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	NON-USE
WHITE ROCK PASTURE; R,EP,W,H 2917 ACRES	T	375 AUMS ANNUALY 05/01-07/15 YEAR 1, 2	SAME AS #1	REST 3 YEARS THEN IMPLEMENT ALT #4 GRAZING SYSTEM	NON-USE

2.4 Alternative 1 - Continue Current Management (No Action Alternative)

The terms and conditions of grazing use would remain unchanged. The AUMs and season-of-use would remain at the current active use for each permittee. This would be as follows:

Permittee K-	750 AUMs
T-	676 AUMs
S-	676 AUMs
J-	<u>200 AUMs</u>
Total	2,302 AUMs

No new range improvement projects would be constructed. A maintenance schedule for projects assigned to permittees would be required for the existing projects; the proposed schedule is provided in Appendix 1. The actions required by the design elements common to all alternatives would also be implemented.

2.5 Alternative 2 - Permittee Proposal

Terms and conditions of grazing use would reflect permittee preferences as identified within the proposal submitted to BLM on June 12, 2007. Rangeland developments as proposed by permittees would be accomplished assuming funds were available for new construction, the project is feasible, and that it meets BLM guidelines. The AUMs for each permittee and season-of-use would remain the same as the current management in Alternative 1.

The permittees proposal includes construction of 15 miles of pipeline, 17 troughs, 2 storage tanks, and 1 well. All would be new. There would also be four new gap fences constructed by the permittees to restrict livestock grazing in Pritchard and Lawrence Creeks. The locations of all proposed new developments are found on Map 3.

The permittees proposal is as follows:

Permittee Proposal for Pritchard Creek Allotment

Goal:

To reduce livestock loitering on riparian zones of lower Pritchard and Lawrence Creeks and to improve or repair facilities to encourage upland use of these allotments.

These goals will be accomplished by joint agreement of permittees (T, S, J, K) and the Bureau of Land Management (BLM).

Permittee Proposal:

Reducing livestock use of riparian areas of lower Pritchard and Lawrence Creeks will be accomplished by increasing access to stock water in upland areas, first by improving and repairing existing developed water sources, followed by a cooperative venture with the BLM to locate and develop a well site.

Existing spring developments will be improved by permittees beginning with those in the poorest working order. Assignments are as follows: Permittee T – Tena Spring, Evelyn Spring, Dry Gulch Spring; Permittee S – Devil Spring, Leonard Spring; Permittee J – Carolyn Spring.

In addition to these repairs, permittees suggest a joint project with the BLM to locate and develop a well on Lawrence Creek ridge where several stock tanks will be positioned to improve upland livestock distribution. Permittees request assistance with the location and development of the well. The remainder of the project, including pipe and tank placement, would be the responsibility of the permittees.

Following the development of adequate upland stock water, permittees propose replacement and repair of drift fences located on Lawrence Creek (one) and the NW side

of Pritchard Creek (two). Drift fences will assist in the overall objective of using sheep to utilize steep sections of the allotment and cattle in the uplands.

Multi-species grazing will reduce cattle impact on riparian areas of Pritchard and Lawrence Creeks by positioning supervised sheep on otherwise un-utilized steep slopes and increasing stock rider presence in these areas.

Summary:

Permittees will provide improvements on existing fencing and springs, increase stock rider presence, and use supervised sheep grazing near waterways to reduce livestock usage of riparian areas in the Lawrence Creek, Pritchard Creek, and White Rock pastures. A joint venture between permittees and the BLM to locate and develop a well on Lawrence Creek ridge will provide stock water to further distribute livestock, thereby utilizing the total allotment.

2.6 Alternative 3 - Reduce or Eliminate Livestock Grazing in Selected Pastures and Emphasize Grazing Rest Prior to Initiating New Grazing Systems

The terms and conditions of grazing use would incorporate periods of grazing rest where standards were not met and grazing use was considered a significant contributing factor. Because the four pastures meet few of the standards, this alternative would close all four pastures to grazing use for 3 years before new grazing systems would be initiated. Alternate periods of rest may be required in subsequent years pending meeting of standards. A schedule for range improvement project maintenance would be required, as shown in Appendix 1. After 3 years of rest, the allotment would be managed using the grazing system described in Alternative 4.

2.7 Alternative 4 - BLM Proposed Action

The terms and conditions of grazing use would incorporate BLM preferred grazing systems including utilization standards, different seasons-of-use, and selected rangeland development projects. The grazing system proposed in this alternative would be a rest-rotation system that changes the frequency of use in key pastures during sensitive seasons, to benefit sage-grouse. The proposed action will comply with all standards required by the 2005 Greater Sage-Grouse Conservation Assessment and Strategy for Oregon. This alternative would also implement adaptive management utilizing the objectives below.

The Determination document establishes objectives and changes, based on the findings from the S&Gs. The following components represent the BLM proposed action for Pritchard Creek allotment based on the following identified objectives:

1. Implement deferred rotation pasture grazing system. See Table 1 for proposed changes in number of livestock by pasture and permittee. See Table 2 for changes in seasons-of-use by pasture and permittee.
2. Implement reduction of active use (livestock numbers) to accommodate available forage throughout the allotment. See Table 1.
3. Construct four new gap fences to facilitate reduced impacts to Pritchard and Lawrence Creek riparian areas.
4. If permittees' grazing use exceeds utilization standards in any pasture for more than 2 consecutive years, then their grazing use for that pasture will be suspended in year 3.

Upper pasture has a riparian fence that splits the pasture in two (see Map 4).

2.8 Alternative Considered But Not Analyzed in Detail

BLM has already considered full and partial removal of livestock grazing from the public lands within this area as part of the Ironside EIS (USDI 1981). This alternative in the Ironside EIS would have eliminated livestock grazing on all BLM-managed public lands in the Ironside area. This alternative was not adopted except in one allotment because, “such action is not in harmony with the provisions of the Taylor Grazing Act and would not enhance multiple use of the public lands as mandated by the Federal Land Management and Policy Act of 1976.” Therefore, the alternative to permanently eliminate livestock from the Pritchard Creek Geographic Unit will not be analyzed in detail for this EA.

2.9 Design Features Common to All Alternatives

Design features are various conservation actions listed in the Baker RMP (USDI 1989) and other BLM guidelines that specify how BLM will avoid degradation to public land resources when building projects or authorizing land uses. Design features are described in the Baker RMP, “Fencing” manual Handbook H-1741-1 (USDI 1989), and “Water Developments” manual H-1741-2 (USDI 1969) to establish BLM standard operating procedures. The environmental consequences described in this EA assume application of design features to each of the alternatives.

Environmental impacts described in this EA are written assuming that design features listed below have been applied to all proposed actions. Design features are a variety of conservation measures that allow BLM to practice multiple-use land management in conformance with the RMP while avoiding degradation to public land resource values.

Design features apply to land uses and rangeland development actions. The list below includes a combination of measures that are specific to this analysis area. Design features shown below are not a comprehensive list but address topics of concern to permittees, tribes, the interested public, and participating BLM staff.

1. Implement a range improvement project maintenance schedule to repair and maintain all existing range projects annually. For the first 5 years, complete 20% each year so all projects meet BLM standards. See Appendix 1 for the maintenance schedule and assignments by permittee. Twelve projects were maintained in 2007. Eleven will be maintained in 2008. Subsequent projects will be assigned 1 year in advance to the permittees, as identified in Appendix 1.
2. After 5 years, all projects must be maintained as assigned, prior to authorization of grazing for that year.
3. Implement utilization levels as follows: 50% on upland native bunchgrasses, 45% on riparian herbaceous plants, and 30% on riparian shrub component. If utilization levels indicate that the standard may be exceeded at anytime, the permittee will take action to prevent the standard from being exceeded. This type of action may include moving livestock from the pasture or allotment, shortening the season-of-use, more riding to move livestock for better distribution, or constructing fences to exclude livestock from the areas of concern. If permittees exceed utilization in any pasture for 2 consecutive years, then their use for that pasture will be suspended in year 3.
4. Based on monitoring results of the above prescriptions, additional changes shall be made as needed to length of grazing periods and livestock numbers to achieve the S&Gs.
5. Existing rangeland development projects will be maintained or reconstructed as needed, provided ground-disturbing activity occurs within original disturbance area and applicable design features are applied to the action. Existing range improvements will meet BLM requirements as they are maintained (for example, proper wire spacing for wildlife passage, wildlife escape ramps for troughs, etc.).

6. Fall grazing in each pasture will only occur when there is enough water in springs and troughs to supply water for grazing animals. Pritchard Creek and Lawrence Creek, fish bearing streams, should not be relied on for all the watering needs in the pasture. Reduce grazing times in the pastures to eliminate impacts to the fish bearing streams. All new spring developments will have the water sources fenced from livestock grazing.
7. Grazing will not be allowed on areas where vegetation manipulation such as fire, seeding, spraying, or other treatment occurs. Livestock will be deferred either by fencing treated areas, by resting the treated pasture for two to five growing seasons or until treatment objectives are met. If a pasture is rested for three growing seasons, cattle use will not be allowed until fall of the third year.
8. Cultural/paleontological and biological (plants and animals) surveys will be completed prior to initiation of all rangeland development projects. Project planning will incorporate funding for cultural resource surveys and any necessary mitigation measures. Where necessary, prior to rangeland development, plant and animal surveys will be completed at the proper season so absence or presence of special status species may be determined.
9. If it is determined that properties potentially eligible for the National Register cannot be avoided by a proposed project, then BLM will identify and evaluate the resource in consultation with the Oregon State Historic Preservation Office and Tribes to a) determine what makes the property potentially eligible or important, and b) determine what mitigation is appropriate. For archaeological properties that are determined potentially eligible for their information content, options for mitigation may include (but are not limited to) further documentation and data recovery (e.g., retrieval, mapping, excavation). For properties which are determined to have traditional and/or religious importance to Tribes, appropriate mitigation would be determined in consultation with the Tribes and Oregon SHPO.
10. When maintenance or reconstruction of existing rangeland development projects occur (such as springs, reservoirs, pipelines or fences) and the existing developments were installed without prior cultural surveys, then cultural surveys will be completed. Priority will be placed on surveys at existing water developments (for example, springs, and reservoirs). This will allow the BLM to identify sites and retrieve cultural resource information that would otherwise remain unknown. If eligible or potentially eligible archaeological sites with grazing impacts are identified during inventories for project maintenance or reconstruction, mitigation measures would be developed and implemented in consultation with Oregon SHPO and Tribes.
11. Cultural surveys for previously unsurveyed existing rangeland development projects will be accomplished over the next 5 years, in accordance with project maintenance schedules.
12. BLM actions in response to discovery of cultural/paleontological/biological (human, plant, and animal) resources may include a variety of conservation measures to avoid or reduce effects associated with livestock grazing. Conservation measures include (but are not limited to) avoidance, site stabilization, protective exclosure construction, or project relocation, redesign or abandonment. Cultural site evaluation and development of conservation measures will be accomplished in consultation with the Oregon SHPO and Tribes.
13. Existing rangeland management structures such as fences, cattleguards, stock tanks, reservoirs, spring developments, pipeline storage tanks and pipelines may be periodically maintained or reconstructed without further NEPA analysis provided that such activities occur within the original disturbance area, and also provided that cultural and biological surveys were completed for the project. Any planned surface disturbance outside of an original rangeland project impact area will require additional cultural and biological surveys and a signed NEPA document before actions will be authorized.

14. BLM range staff will work with and ensure that permittees locate salting/mineral stations at appropriate locations (such as existing, previously disturbed roads) to prevent or eliminate potential impacts to cultural resources.
15. During the 10-year term of the grazing permit, BLM will conduct cultural resource sampling inventories of un-surveyed stream reaches and springs in the allotment, including areas where livestock congregate. Locations where livestock congregate and which have high potential for cultural sites will be identified for inventory. These areas are often associated with water sources (such as springs), salt/mineral supplement stations, and low gradient riparian areas along stream reaches. Sampling inventories will be conducted opportunistically during other cultural inventories for rangeland project development, maintenance and site monitoring; and BLM will also seek to acquire additional funding for inventories.
16. The following condition will be incorporated in all grazing permits: Modifications may be made to the permit to protect historic properties under the National Historic Preservation Act.
17. Reports on the results of cultural resource monitoring and inventories will be prepared and provided to the Oregon SHPO and Tribes. Progress toward cultural resource inventory and monitoring will be assessed and reported in Baker Resource Management Plan updates.
18. New fences will be installed with proper wire spacing requirements necessary to allow safe passage of pronghorn, mule deer, and elk. All fences will be installed with wire stays to reduce incidence of entanglement and death. All fences will be installed with smooth wire bottom strands to reduce incidence of big game injury.
19. Wildlife escape ramps (also known as bird ladders) will be installed in all existing and proposed livestock water troughs to reduce incidence of small animal entrapment and drowning. Installation of escape ramps will be fully completed within 5 years after grazing decisions have been issued.
20. Spring and/or early summer livestock trailing, salting, and mineral supplements will be placed in a manner that will not overlap sage-grouse lek sites during the season of March 1-May 15. During this period, livestock concentrations on lek areas will be avoided by the use of additional range riders and permittee livestock monitoring. This will prevent disturbance to ongoing breeding activity. Lek locations will be provided to permittees so compliance of this conservation measure will be recognized and enforced. BLM will also monitor leks to ensure compliance.
21. New livestock facilities (such as fence construction or development of water troughs) in sage-grouse breeding habitat will be avoided during the peak of strutting and nesting activities (March 1-June 30) and will be located at least .6 of a mile away from established lek sites in accordance with “Greater Sage-Grouse Conservation Assessment and Strategy for Oregon: A Plan to Maintain and Enhance Population and Habitat” (Hagen 2005).
22. Noxious weed inventory, treatment, and monitoring will continue for all alternatives.
23. Actively seek funding through Clean Water and Watershed Restoration funding (CWWR) over the life of the grazing permit to fence all spring sources used for livestock watering facilities in Pritchard Creek and Lawrence Creek watersheds. All springs should have sources completely fenced to increase flow to streams, springs and wetlands, which will directly affect streamflow to fish-bearing Lawrence and Pritchard Creeks. Progress toward accomplishment of this will be reported in the Baker Resource Management Plan updates.
24. Make progress towards meeting all water quality parameters and standards that have a direct affect on fish habitat (temperature, sediment, dissolved oxygen, pH) in Pritchard and Lawrence Creek.

25. In accordance with BLM regulations at 43 CFR 4110.3, periodic reviews are conducted of the permitted grazing use. Increases in permitted use would be made if supported by monitoring, field observations, ecological site inventory, or other data acceptable to the authorized officer, and if rangeland health standards, guidelines for livestock management, land use plan objectives, and activity plan objectives were being met.
26. Any additional forage determined to be available on a sustained yield basis would be used first toward restoring suspended AUMs of the permittees in the allotment. Priority for restoring suspended AUMs would go first to permittees in proportion to their contribution or stewardship efforts which resulted in increased forage production, and secondly to permittees in proportion to the amount of their permitted use.

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section of the EA presents relevant resource components of the existing environment that will be analyzed in each alternative. The format of this section is consistent with resources analyzed in the Baker RMP (USDI 1989) to which this “fine scale” ecosystem-based management planning effort is tiered.

3.1 Critical Elements of the Human Environment

The following Council on Environmental Quality (CEQ)² elements of the human environment are subject to requirements found in statute, regulation, or executive order, and must be considered in all EAs and EISs. Table 3 below, shows critical elements as present or not, and which ones will be analyzed in the EA.

² The CEQ coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives. Congress established CEQ within the Executive Office of the President as part of the National Environmental Policy Act of 1969 (NEPA). Additional responsibilities were provided by the Environmental Quality Improvement Act of 1970.

Table 3. Critical Elements of the Human Environment

Element	Relevant Authority	BLM Manual	Do any of the alternatives affect this Element?
Air Quality	The Clean Air Act as amended (42 USC 7401 et seq.)	MS 7300	Not affected
Areas of Critical Environmental Concern	Federal Land Policy and Management Act of 1976 (43 USC 1701 et seq.)	MS 1617	No ACECs
Cultural Resources SHPO and Tribe consultation	National Historic Preservation Act as amended (16 USC 470)	MS 8100	Yes - Impacts to known cultural properties are discussed in the EA SHPO and CTUIR were consulted
Farm Lands (prime or unique)	Surface Mining Control and Reclamation Act of 1977 (30 USC 1201 et seq.)		No prime or unique farmlands are present
Floodplains	E.O. 11988, as amended, Floodplain Management, 5/24/77	MS 7260	Yes - Impacts to floodplains will be covered in the EA under wetland/riparian habitat
Native American Religious Concerns	American Indian Religious Freedom Act of 1978 (42 USC 1996)	MS 8100	No sacred sites have been identified or are known to be located within the allotment
Threatened or Endangered Species	Endangered Species Act of 1973 as amended (16 USC 1531)	MS 6840	Consultation under Section 7 of the Endangered Species Act was not necessary due to lack of federally listed species present
Wastes, Hazardous or Solid	Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.) Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended (42 USC 9615)	MS 9180 MS 9183	No known issues
Water Quality Drinking/Ground	Safe Drinking Water Act as amended (42 USC 300f et seq.) Clean Water Act of 1977 (33 USC 1251 et seq.)	MS 7240 MS 9184	Yes – Ground water is discussed in the EA
Wetlands/Riparian Zones	E.O. 11990, Protection of Wetlands, of May 24, 1977	MS 6740	Yes – Wetland and riparian area impacts will be covered in the EA
Wild and Scenic Rivers	Wild and Scenic Rivers Act as amended (16 USC 1271)	MS 8014	Wild and Scenic Rivers are not present
Wilderness and Wilderness Study Areas	Federal Land Policy and Management Act of 1976 (43 USC 1701 et seq.) Wilderness Act of 1964 (16 USC 1131 et seq.)	MS 8500	Wilderness characteristics and Wilderness Study Area s are not present
Environmental Justice	E.O. 12898 of February 11, 1994		Minority populations and low income populations are not affected
Actions to Expedite Energy Related Projects	E.O. 13212 of May 18, 2001		Proposed action is not energy related nor will it affect production, transmission, or conservation of energy

3.2 Subjects Excluded from the Analysis

Subject matter that will not be analyzed in this EA includes climate, air resources, Areas of Critical Environmental Concern (ACEC), geology, minerals, special status plants, forest and woodlands, wild and scenic rivers, animal damage control, caves, hazardous materials, environmental justice, or actions to expedite energy related projects. There are no known paleontological localities in the allotment.

These topics are not subject to analysis because of one or more of the following reasons: (1) the resource is not present within the analysis area, for example, wild and scenic rivers or forest and woodlands, (2) the alternatives considered would not be affected by BLM rangeland management authorizations, for example, air, farmlands, and climate, and/or (3) the potential impacts are not the result of BLM authorized actions, such as animal damage control.

3.3 Vegetation

3.3.1 Land Use Plan Objectives and Geographic Unit Resource Condition Objectives

The objectives for vegetation in the Pritchard Creek GU and allotment were identified in the Baker Resource RMP (USDI 1989), are found in Section 1.5 of this document, and guide this analysis.

3.3.2 Affected Environment

Dominant shrubs present in the uplands of Pritchard Creek GU include mountain big sagebrush, Wyoming big sagebrush, basin big sagebrush, rabbitbrush, and bitterbrush. The key grass species are bluebunch wheatgrass (*Pseudoroegneria spicata*), Idaho fescue (*Festuca idahoensis*), and needlegrass (*Stipa* sp.). In addition, Sandberg bluegrass (*Poa secunda*), cheatgrass (*Bromus tectorum*), and medusahead rye (*Taeniatherum* Nevsiki) are present on some sites. In each pasture, the health, productivity, and diversity of the plant communities were assessed and evaluated using Standard #1, relative to the ecological site descriptions which are directly tied to the soils discussed in Section 3.4.

Rangeland health S&Gs for vegetation were never met in Pritchard Creek allotment due to several factors. The establishment of the carrying capacity in 1965 was too high, resulting in over-allocation of livestock grazing in the allotment for 42 years. The utilization standards were not followed and livestock were not moved from key areas resulting in the riparian areas being used more heavily than the upland areas. This caused damage to riparian systems. The range projects were not maintained causing reduced livestock distribution in uplands and more use in the riparian areas. Finally, the allotment management plan of 1965 specified a reduction of AUMs. This reduction was never fully implemented so the allotment remained over- allocated for AUMs.

In the summer of 2006, a fire burned through the Pritchard Creek GU. This fire burned fairly hot and fast throughout the Upper pasture and White Rock pasture, and damaged shrubs and grasses. Most of the perennial grasses in the burned area are expected to recover fully without any rehabilitation due to intact root masses on most perennial grasses. However, sagebrush that burned twice in Upper pasture (1998 and 2006) is expected to take 30-50 years to recover. White Rock pasture experienced a fast burn in 2006 and the sagebrush is expected to re-establish. The affected pastures were rested 2 years subsequent to the fires, as required in the Baker RMP.

Holman Pasture

Thirty percent of the pasture consists of sites that contain bunchgrasses with low vigor, resulting from lower seed production and a higher density of shrubs. South slopes have a high percentage of annuals with reduced productivity of bunchgrasses. This is allowing annual grasses and weedy species to increase in existing locations and to spread to new areas. The abundance of annual grasses and weeds restrict the health and productivity of the site. Annual grasses are reducing production of perennial grass plants on existing sites. The diversity of riparian species is limited to a single species in some stream reaches.

Lawrence Pasture

Plants growing on the 45C soils are showing low vigor with resulting lower seed production of Idaho fescue because of wind erosion. Idaho fescue has an abnormally high incidence of dead centers, broken clump form, and mortality. 45C sites are partly shifted toward early-seral species (Sandberg bluegrass and low growing forbs). South and west slopes have a high percentage of annuals with reduced productivity of Idaho fescue. Annual grasses are reducing production of perennial grass plants on existing sites.

The high mortality of Idaho fescue, lower vigor of perennial grasses, and widespread infestations of meduas ahead rye indicates that other sites in this pasture are vulnerable to further change.

Evaluations concluded Standard 5 was met on the majority of the pasture, but the vegetation on the 47D soils (38% of pasture) was moderately altered. These soils are predominately on southern aspects that are hotter and drier.

Upper Pasture

Plants growing on the 45C soils are showing low vigor with resulting lower seed production of Idaho fescue because of wind erosion. Idaho fescue has an abnormally high incidence of dead centers, broken clump form, and mortality. 45C and 47D sites are partly shifted toward early-seral species (Sandberg bluegrass and low growing forbs). There was no reproduction of sagebrush. South slopes have a high percentage of annuals with reduced productivity of Idaho fescue. Annual grasses are reducing production of perennial grass plants on existing sites.

All trend studies indicated an upward trend. The results of trend studies may be found in Appendix 2.

Evaluations for Standards 1 and 3 concluded there was adequate diversity of plant species, but the low vigor of Idaho fescue and abundance of annual grasses and weeds restrict the health and production of the site.

The shrub habitat has been reduced and the amount of annual grasses has increased, which indicates a lower ecological condition. This is allowing annual grasses and weedy species to increase in existing locations and to spread to new areas. The spread of noxious weeds into the riparian areas is a serious threat. Evaluations of Standard 1 concluded the sagebrush habitat is limited in area because of fire and insects. The amount of bare ground will lead to an increase in weed species.

White Rock Pasture

Plants growing on the 45C soils are showing low vigor with resulting lower seed production of Idaho fescue because of wind erosion. Idaho fescue has an abnormally high incidence of dead centers, broken clump form, and mortality. 45C sites are partly shifted toward early-seral species (Sandberg bluegrass and low growing forbs). South slopes have a high percentage of annuals with reduced productivity of Idaho fescue. Annual grasses are reducing production of perennial grass plants on existing sites.

The perennial grasses are low in vigor, and there is a high incidence of mortality. This is allowing annual grasses and weedy species to increase in existing locations and to spread to new areas. The diversity of riparian species is limited to a single species in some stream reaches.

Evaluations of Standard 1 concluded that upland plants were showing signs of stress, and riparian species were lacking diversity.

3.3.3 Alternative 1

Alternative 1 would not change the current rangeland vegetative conditions on any of the ecological sites that are showing a downward trend. Livestock grazing would continue at the current levels with the riparian areas used the most. Under this alternative, the allotment would continue to not meet rangeland health S&Gs because the current AUMs are in excess of the carrying capacity, utilization standards were not met, many projects are in disrepair, and grazing distribution has caused heavy impact on the riparian areas.

A maintenance schedule for permittees would be required for the existing projects. Alternative 1 would implement a range improvement project maintenance schedule to repair and maintain all existing range projects annually. When all projects are functioning properly, livestock distribution will be dispersed.

3.3.4 Alternative 2

Alternative 2 would change the current vegetative conditions on riparian ecological sites that are showing a downward trend because it would reduce livestock grazing in the Lawrence and Pritchard Creek riparian areas with the installation of gap fences. The permittee proposed well, pipeline, and water troughs would improve livestock distribution. Under this alternative, rangeland health standards should start to show a slow upward trend. However, livestock grazing would continue at current levels. Since the allotment is over carrying capacity, the standards would not be met within a reasonable timeframe. Livestock use would continue to be the primary reason for preventing attainment of the standards. A maintenance schedule for permittees would be required for the existing projects. Twenty percent would be completed over the next 5 years. Consistent project maintenance should improve livestock distribution over the current situation. However, with no changes in the seasons-of-use by livestock, use of sagebrush communities would continue at the same time each year. This would not improve the condition or composition necessary to meet the needs of sage-grouse and other sagebrush dependent species.

3.3.5 Alternative 3

Alternative 3 would allow the whole allotment to move towards the desired range conditions on all ecological sites and towards the rangeland health S&Gs goals because of the 3 years of rest from grazing. After the 3 years of rest, the implementation of reduced AUMs, change in seasons-of-use, implementation of a deferred rotation system, and gap fence construction, would result in significant improvement towards meeting the standards. However, this alternative would also increase fuel loads, possibly increasing wildland fire intensity. A maintenance schedule for permittees would be required for the existing projects. Twenty percent would be completed over the next 5 years. Consistent project maintenance should improve livestock distribution over the current situation.

3.3.6 Alternative 4

Alternative 4 would allow for improvement in the vegetative conditions on all ecological sites. Under this alternative, the proposed livestock reductions addressed in the past 1965 Allotment Management Plan (AMP) would be implemented. Alternative 4 would reduce AUMs by 27% for three of the four permittees, would establish gap fences, change season-of-use, implement a deferred rotation system, and establish the range project maintenance schedule. Over time, this would allow movement towards rangeland health and meeting S&Gs, and meeting the desired range of future conditions (DRFC).

Monitoring will provide details needed to complete additional adjustments in livestock numbers and grazing season-of-use, over time. A maintenance schedule for permittees would be required for the existing projects. Twenty percent would be completed over the next 5 years. Consistent project maintenance should improve livestock distribution over the current situation.

3.4 Soil and Water Resources and Riparian/Wetland Areas

3.4.1 Land Use Plan Objectives and Geographic Unit Resource Condition Objectives

Land Use Plan Objectives – Riparian

The Baker RMP objectives for riparian management are displayed in Section 1.5.

Management Direction - Riparian

Management actions within riparian areas will include measures to protect or restore natural functions, as defined by Executive Orders 11988 and 11990.

The Baker RMP (USDI 1989) provides overall guidance and direction for management of riparian areas within the planning area. The overall goal of this plan is to maintain, restore, or improve riparian areas to achieve a healthy and productive ecological condition for maximum long-term multiple use benefits and values.

Land Use Plan Objectives - Soil and Water

The Baker RMP objectives for soil and water management are described below as management direction.

Management Direction - Soil and Water

Soils will be managed to maintain productivity and minimize erosion. Those watersheds or portions of watersheds, where potential for either significant improvement or further degradation exists, will be intensively managed to improve the soil, water, and air resources. Priority will be given to meeting emergency watershed needs due to flooding, drought, or fire.

Management actions will comply with EPA and DEQ requirements on water quality monitoring and reduction of non-point source pollution, as those regulations become established. Actions will manage for water quality improvement to meet riparian objectives.

Geographic Unit Resource Condition Objectives - Riparian

- Improve and maintain, where suitable, wet meadows for sage-grouse and antelope. Enhance fishery habitat for trout on Lawrence Creek and Pritchard Creek.
- Improve the condition of riparian habitats.

Allocation

- Exclude livestock grazing in identified stream segments, bogs and spring overflows such as Pritchard Creek and Lawrence Creek, where grazing is incompatible with riparian objectives.

Management Action for Riparian

- Continue riparian surveys.
- Fence selected bogs, seeps, streams, and meadows.
- Inventory the fishery resource.
- Install structures in selected streams.
- Plant shrubs in selected areas.
- Establish monitoring studies on vegetation and fisheries.
- Restore deteriorated habitat through modification of grazing systems.

Geographic Unit Resource Condition Objectives - Soil and Water

No specific resource condition objectives for soil and water in the Pritchard Creek GU are found in the Baker RMP (USDI 1989).

3.4.2 Affected Environment

Soils

There are three dominant soil types from the Durkee Series represented in the Pritchard Creek allotment. All of the soil types from the Durkee series are formed in colluvium derived from argillite and influenced from volcanic ash. Each of the four pastures has at least 70% of the Durkee Series soils dominating the landscape area. The soil types most dominant are 45C, 46D and 47D, all gravelly silty loam. White Rock pasture is 79% Durkee soil series, Holman pasture is 72%, Lawrence pasture is 73% and Upper pasture is 90%.

The Durkee gravelly silty loam soils are predominantly alike with few differences between the soil types. The main difference is their orientation and location on the slope. This soil is moderately deep, well-drained, and found on ridges and south and north slopes. Permeability is moderate to a depth of 10 inches in the Durkee soil, and slow below that depth (USDA 1997). Available water holding capacity is 3-5 inches. The effective rooting depth is 20-40 inches. Water runoff in the 45C soil type is slow to medium with the hazard of water erosion rated from slight to moderate. Soil types 46D and 47D however, have water runoff classified as “medium” and the hazard of water erosion is rated moderate to high. This is due to the steepness of the slopes in the 46D and 47D soils, which occur on slopes of 12-35%.

All of the soil types for this soil series have a potential plant community dominated by Idaho fescue and bunch grasses, with less dominant species of mountain big sagebrush and squaw apple. Squaw apple was not observed on two of the reference sites for soil types 46D and 47D.

A high percentage of these pastures are on slopes from 0-35%; 86% for White Rock, 85% for Holman, 54% for Lawrence, and 87% for the Upper pasture. The remainder of each pasture is over 36%. (See soil and slope information by pasture in the soils tables in Appendix 3.)

Holman Pasture

Water

Water quality data was not collected on the streams in this particular pasture but Proper Functioning Condition (PFC) stream surveys were completed on each of the perennial and intermittent streams. The streams in this pasture are tributaries to Alder Creek and Burnt River. Burnt River is currently listed on the Oregon 303(d) water quality limited list because of excessive temperature. Water quality and water quality function is tied to Standards 2 and 4, which are not being met.

PFC surveys on the southern portion showed increased width/depth ratio and a lack of native vegetation, which can lead to increased stream temperatures, increased sedimentation, and decreased dissolved oxygen levels. Evaluations concluded the surface water quality standard (Standard 4) was not being met.

Riparian/Wetland Areas

PFC surveys have been completed on 5.6 miles of perennial and intermittent stream in this pasture. An additional 7.5 miles of stream were determined to be ephemeral. The results are as follows:

- 40% properly functioning
- 20% functioning at risk with an upward trend
- 11% functioning at risk with a downward trend
- 27% functioning at risk with trend not apparent
- 2% nonfunctional

The reasons for the downward trend are:

- Small channel down-cutting and head-cutting.
- Springs are being dewatered because of lack of project maintenance.
- High utilization levels by livestock result in plant degradation (loss of annual growth). Continued grazing at the high levels will reduce plant vigor. This could result in loss of plants or replacement by annuals or weeds.

Lawrence Pasture

Water

Water quality data were collected on Pritchard and Lawrence Creeks in this pasture. Temperature exceeded the state water quality standards. Lawrence Creek is on the Oregon 303(d) list due to high temperature. This is tied with Standards 2 and 4, which are not being met.

BLM does not manage the upper headwaters of Pritchard, Lawrence, or Sardine Creeks, and their condition is unknown.

PFC surveys showed increased width/depth ratio, lack of vegetation, and bank trampling which can lead to increased stream temperatures, increased sedimentation, and decreased dissolved oxygen levels.

Riparian/Wetland Areas

PFC has been completed on 10.11 miles of perennial and intermittent streams in this pasture. An additional 5.5 miles of stream were determined to be ephemeral. The results are as follows:

- 22% properly functioning
- 26% functioning at risk with an upward trend

23% functioning at risk with a downward trend
21% functioning at risk with trend not apparent
8% nonfunctional

The reasons for the downward trend are:

- Active head-cutting and down-cutting of stream channels.
- Springs and seeps adjacent to stream channels are being dewatered.
- Low diversity of riparian species and lack of woody species.
- Riparian zone is not widening and channel width is not narrowing.
- High utilization levels by livestock result in plant degradation (loss of annual growth). Continued grazing at the high levels will reduce plant vigor. This could result in loss of plants or replacement by annuals or weeds.

Upper Pasture

Water

Water quality data were collected on the streams in this pasture and PFC stream surveys were completed on each of the perennial and ephemeral streams. The streams in this pasture are tributaries to Burnt River and Lawrence Creek, which are on the Oregon 303(d) list due to high temperatures. The headwaters of Pritchard Creek are not in public ownership, but water quality data collected at the confluence of Pritchard and Lawrence Creeks exceed state standards for temperature. This is tied with Standards 2 and 4, which are not being met.

PFC surveys showed increased width/depth ratio, lack of vegetation, and bank trampling, which can lead to increased stream temperatures, increased sedimentation, and decreased dissolved oxygen levels.

Riparian/Wetland Areas

PFC has been completed on 4.4 miles of stream in this pasture. An additional 5.6 miles of stream were determined to be ephemeral. The results are as follows:

- 22% properly functioning
- 6% functioning at risk with an upward trend
- 35% functioning at risk with a downward trend
- 37% functioning at risk with no apparent trend – adequate vegetation but with channel instability

The reasons for the downward trend are:

- Active head-cutting and down-cutting of stream channels.
- Springs and seeps adjacent to stream channels are being dewatered.
- Low diversity of riparian species and lack of woody species.
- Riparian zone not widening and channel width not narrowing.
- High utilization levels by livestock result in plant degradation (loss of annual growth). Continued grazing at the high levels will reduce plant vigor. This could result in loss of plants or replacement by annuals or weeds.

White Rock Pasture

Water

Water quality data was not collected on the streams in this particular pasture; however, PFC stream surveys were completed on each of the perennial and ephemeral streams. Water quality is tied with Standards 2 and 4, which are not being met.

PFC surveys showed increased width/depth ratio, lack of vegetation, and bank trampling, which can lead to increased stream temperatures, increased sedimentation, and decreased dissolved oxygen levels.

Evaluations concluded that surface water quality standards were not being met.

Riparian/Wetland Areas

PFC has been completed on 6.16 miles of stream in this pasture. In addition, 1.7 miles of stream were determined to be ephemeral. The results are as follows:

- 26% properly functioning
- 18% functioning at risk with an upward trend
- 56% functioning at risk with a downward trend

The reasons for the downward trend are:

- Active head-cutting and down-cutting of stream channels.
- Springs and seeps adjacent to stream channels are being dewatered.
- Low diversity of riparian species and lack of woody species.
- Riparian zone not widening and channel width is not narrowing.
- High utilization levels by livestock result in plant degradation (loss of annual growth). Continued grazing at the high levels will reduce plant vigor. This could result in loss of plants or replacement by annuals or weeds.

3.4.3 Alternative 1

Soils impacts that are currently occurring would continue. These impacts include an increase in bare ground over reference sites, increased risk to erosion because of lack of vegetation in some sites, risk of gullying, and increased risk of sedimentation to streams. This would increase the chance for annuals to be established on these sites. Standard 1 was not met in the Holman or Upper pasture, in part because adequate vegetation was not present for the stability of upland soils. The majority of the soils in the Holman and Upper pastures have soil water erosion hazards of slight to moderate or moderate to high. As such, when adequate vegetation is not available on site, the risk of soil erosion increases as is currently occurring. Upland forms completed during the S&G assessment also indicated pedestals and/or terracettes are evident, which indicates soil surface erosion. This would be expected to continue under this “no action” alternative.

Neither Standard 2 (Watershed Function – Riparian) nor Standard 4 (Water Quality) was met for any pasture. With Alternative 1 not reducing the AUMs available, riparian and water quality impacts that are currently occurring would continue. These impacts include bank trampling by livestock that increases sedimentation and active down-cutting of the stream channel, lack of shade-producing vegetation available to the streams resulting in increased stream temperature, and reduced diversity and amounts of riparian vegetation. Streams within the allotment, which are currently functioning at risk, would most likely continue to function at risk, with little change expected from the current condition.

3.4.4 Alternative 2

Alternative 2 would have the same affect to soils as Alternative 1 because the livestock stocking rates and seasons-of-use would not change. The allotment would still not be expected to meet the standards. There would be increased bare ground for the short term (1-2 years) in the area of the pipeline and holding tank construction, but vegetation recovery and placement of the pipeline would probably not result in increased soil erosion over the long term.

Under Alternative 2, improvement in the riparian habitat and water quality within the allotment would most likely occur in the Lawrence pasture. Construction of the well and pipeline along with the proposed gap fences should result in less grazing impact to Pritchard and Lawrence Creek. This would allow for recovery of riparian habitat and vegetation. In the long term (greater than 5 years), this alternative should result in more shade to the streams and improved water quality because with reduced livestock grazing riparian vegetation could be expected to re-establish. Riparian habitat and water quality impacts in the other three pastures would see limited improvement with additional livestock watering provided off-stream and the establishment of riparian utilization standards. However, with no reduction in AUMs or other projects to keep livestock from impacting the riparian habitat, measurable improvements would most likely not be seen in the short term (less than 5 years).

However, this alternative has the most potential to negatively impact ground water and springs. Well drilling has the potential to lower the ground water table in the area, which in turn could impact springs within the allotment. A search of the Oregon Water Resources Department website for existing wells within the vicinity of the proposed well revealed very few. The existing wells seem to be in the lower portion of the slopes or close to streams or drainages, not on ridge tops like the proposed well. Therefore, little information can be drawn from existing wells as to the depth to which the proposed well would need to be drilled or the expected production of water from the proposed well near the ridge top.

3.4.5 Alternative 3

With a short rest period of 3 years followed by a reduction in allowable AUMs in the allotment, a slow increase in native vegetation should occur, resulting in less bare ground, less chance of gullying, and a decrease in risk of sedimentation to the streams over the long term (greater than 5-10 years). Over the long term, this alternative should also reduce the amount of soil surface erosion that is currently occurring because vegetation would increase and cover the ground.

This alternative should have the most beneficial impacts to riparian habitat and water quality. No livestock grazing for 3 years, followed by a reduction in AUMs and implementation of utilization standards would allow riparian vegetation to recover and become established during the no grazing period, resulting in an upward trend for riparian habitat, which in turn would benefit water quality in the long term (greater than 5 years). After grazing is re-established, reduced livestock numbers or changes in timing would continue to allow the upward trend to occur. Although this would be at a slower rate than when grazing was excluded, riparian habitat and water quality improvement would be expected in the long term within the allotment. This would assist in meeting Standards 2 and 4.

3.4.6 Alternative 4

This alternative would not have a rest period, which would lengthen the time for soils to recover. There would be the same reduction in allowable AUMs in the allotment as proposed in Alternative 3. This would create a slow increase in native vegetation, which would result in less bare ground, less chance of gullying, and a decrease in risk of sedimentation to the streams over the long term (greater than 5-10 years).

Even though there is no rest period associated with this alternative, the impact of Alternative 4 would be virtually the same as Alternative 3 because over the long term the beneficial impacts to the soils resource would be realized through the reduction of AUMs. This alternative would result in vegetation covering the bare soil.

This alternative should also result in beneficial impacts to the riparian habitat and water quality within the Pritchard Creek allotment over time. Improvements will be slower than with implementation of Alternative 3, but quicker than Alternative 1 or 2. The reduction in AUMs for this alternative, establishment of gap fences to eliminate grazing in Pritchard and Lawrence Creek, and establishment of utilization standards, should result in an improvement of the riparian habitat. This would be accomplished because there would be a reduction of grazing in the riparian areas, thus allowing increases in riparian vegetation establishment. This in turn should result in less bank erosion, reduced sedimentation, increased shade, and increased species diversity in the long term (greater than 5 years) which in turn would also benefit water quality in the long term.

3.5 Fish and Aquatic Habitat

3.5.1 Land Use Plan Objectives and Geographic Unit Resource Condition Objectives

Land Use Plan Objectives

As established in the 1989 Baker RMP (USDI 1989, 18), Land Use Plan Objectives for Fish and Aquatic Habitat include:

- management actions shall “Maintain or enhance important anadromous and resident fisheries; increase habitat productivity; and emphasize coordinated management with other agencies and landowners.
- Restore, maintain, or enhance fish habitat on 155 miles of stream that have anadromous and resident fish or the potential to support fish. Approximately 83 miles of fish habitat have been inventoried. A summary of fish habitat condition and trend in the planning area is displayed in the geographic unit descriptions.
- Complete inventory of fishery habitat conditions.
- Improve fish habitat by a combination of projects and livestock grazing management, including adjustments to grazing seasons or systems to protect banks and vegetation and to reduce soil erosion.

Geographic Unit Resource Condition Objectives

- Enhance fishery habitat for trout on Pritchard and Lawrence Creeks.

Allocation

- Develop grazing systems that enhance fishery habitat.

Management Action

- Inventory the fishery resource, install structures in selected streams, establish monitoring studies on vegetation and fisheries, and restore deteriorated habitat through modification of grazing systems.
- Monitor fishery habitat condition and trend on Pritchard and Lawrence Creek, rated as being in “poor” condition (USDI 1989, 83).

3.5.2 Affected Environment

There are two perennial streams in narrow canyons located within the GU boundary (Pritchard Creek and Lawrence Creek), and three minor streams (Holman Creek, Straw Ranch Creek, and Unity Creek). Both Pritchard Creek and Lawrence Creek have redband trout populations. Four miles of Pritchard Creek and 3.5 miles of Lawrence Creek lie within the GU boundary, but the headwaters of both streams originate on private lands.

Pritchard Creek

Data and information have been gathered on Pritchard Creek from stream surveys monitoring water quality and stream temperature over the last 30 years. A physical and biological stream survey was completed by the BLM in 1977 and a stream habitat inventory was completed in 1991. Both surveys collected information on these parameters:

- Substrate
- Pools
- Gradient
- Width/depth ratio
- Bank cover
- Stream temperatures
- Erosion
- Riparian condition
- Species present

The results of these surveys may be found in Appendix 4.

Both stream surveys in 1977 and 1991 confirmed on-going problems, which have improved only slightly over the last 30 years. Each survey documented a presence of less than 10% pool habitat and adverse width to depth ratio with widening continuing and shallow stream depth. The riparian area is limited due to the steep terrain, and does not have the diversity of aquatic plants needed to maintain streambank stability. There is some revegetation on point bars but restoration is not occurring throughout the stream reach. There is some erosion and contribution of sediment from early high flows due to upland condition. This

contributes to down-cutting, widening, and unstable streambanks. Canopy cover is less than 10% on most of the stream, causing increases in water temperatures.

A PFC survey was completed in 2001. Water quality was monitored from 2001 to 2003 and stream temperatures were monitored throughout the grazing seasons in 2003 and 2004.

In the mid 1990s, this area had a flash flood from an isolated storm event. The storm was intense enough that all the channels flooded. Tons of material flowed into the streams from upland and riparian areas adjacent to Pritchard and Lawrence Creek. At the confluence of both streams, gravel was deposited approximately 6-10 feet deep and all vegetation in the flood plain was either buried or ripped out. After the event, a large gravel deposit stretched from the confluence of both streams to the Burnt River, a distance of about 3 miles. This eliminated much of the rearing and spawning habitat in both streams. The lower stream reaches in Pritchard and Lawrence Creeks were the most productive due to the lower gradient and available pool habitat; however, much of that habitat was destroyed and it will be years before fish habitat is restored for redband trout.

The presence of native redband trout has been verified in each of the stream surveys, from the confluence with Lawrence Creek upstream to the first main tributary, a distance of approximately 2.75 miles. Observations during late summer over several years have revealed water temperatures above 70 °F with fish stressed and near death. Many are isolated in pools with no adjoining habitat.

The present stream and riparian condition was re-confirmed with the PFC surveys that occurred in 2003 and 2004. Portions of the stream were rated as Functional-At-Risk in an upward or downward trend, or as Nonfunctional. All of these parameters are within standards for water quality and fish habitat. A total of 12.27 miles of Pritchard Creek and its tributaries were inventoried by the PFC stream inventory method. Of the 12.27 miles, 3.99 miles or 32.5% of Pritchard Creek and its tributaries were in PFC (Proper Functioning Condition) or FARU condition (Functioning-At-Risk in an upward trend); 67.5% were Functioning-At-Risk in a downward trend (FARD) or were nonfunctional (NF).

Stream temperatures on Pritchard Creek were recorded in 2003 and 2004. The 7-day maximum for both years was over 90 °F. In both years, stream temperature was over 68 °F for over 90 days. These high temperatures affect availability of dissolved oxygen, the redband trout growth rate, metabolic process, ability to capture and use food, and ability to withstand disease. The lethal temperature limit for trout is between 24 °C to 29.5 °C (75 °F to 85 °F). Therefore, redband trout populations are reduced or eliminated in some stream reaches due to the insufficient or poor quality habitat. This limited habitat is due to poor quality or non-existent riparian vegetation. The evaluations concluded that this is a result of the current livestock grazing system.

The water quality parameters of dissolved oxygen (DO), turbidity, and pH were measured for 3 years on Pritchard Creek, from 2001 to 2003. The range for DO in those 3 years was 8.45-11.35 milligrams per liter (mg/l), turbidity was 0.75-6.13 Nephelometric Turbidity Units (NTUs), and the pH range was 8.2-8.8. The lowest DO was late in the summer due to high temperatures and low flows. The highest turbidity was early in the spring during high flows.

Lawrence Creek

Data and information have been gathered on Lawrence Creek over the last 30 years, from stream surveys monitoring water quality and stream temperatures. A physical and biological stream survey was completed by the BLM in 1977 and stream habitat inventory was completed in 1991. Both surveys collected information on these parameters:

- Substrate
- Pools
- Gradient
- Width/depth ratio
- Bank cover
- Stream temperatures

- Erosion
- Riparian condition
- Species present

A PFC survey was completed in 2002. Water quality was monitored from 2001 to 2003 and stream temperatures were monitored all year long from 2000 to 2004. The results of these surveys may be found in Appendix 4.

The presence of native redband trout has been verified in each of the stream surveys, from the confluence with Pritchard Creek and upstream into main Lawrence Creek headwaters. They were also noted in Ayers Creek and Sardine Creek. Observers noted that the trout were very thin, indicating a shortage of food. Sampling showed a very poor aquatic insect population. Many fish were isolated in pools with no adjacent habitat.

Each of the surveys has confirmed recurring or on-going problems that have only slightly improved over the last 30 years. Each survey has confirmed a pool habitat of less than 10%. The width to depth ratio is out of balance with shallow stream depth and widening continuing. The riparian area is narrow but is in good condition. There is a diversity of shrubs and trees in the riparian areas, including willow, elderberry, mock orange, serviceberry, currant, aspen, alder, rose, birch, and cottonwood. Aquatic grasses that would help stabilize the stream banks are in limited supply. There is very little erosion or bank cutting in the lower reaches but the upper reach has a bank erosion component of 50-75%. The canopy cover ranges from 30-45% in the lower reaches, but is only 3% in the upper headwaters.

The present stream and riparian condition was re-confirmed with the PFC surveys that occurred in 2003 and 2004. Portions of the stream were rated as in Proper Functioning Condition or Functioning-At-Risk in an upward trend.

Stream temperatures on Lawrence Creek were recorded from 2000 to 2004. The 7-day maximum for those years was between 83.0 °F and 87.0 °F. During the monitoring period from 2000 to 2004, stream temperatures were over 68 °F for a minimum of 80 days each year. These high temperatures affect the availability of dissolved oxygen and the redband trout growth rate, metabolic process, ability to capture and use food, and ability to withstand disease. The lethal limit for trout is between 24 °C to 29.5 °C (75 °F to 85 °F).

The water quality parameters of DO, turbidity and pH were measured for 3 years on Lawrence Creek, from 2001 to 2003. The range for DO in those 3 years was 7.27-16.11 mg/l, turbidity was 1.25-17.2 NTUs, and the pH range was 8.3-8.9. The lowest DO was late in the summer due to high temperatures and low flows. The highest turbidity was early in the spring during high flows.

Appendix 4 displays historical stream data from surveys taken from 1977 to 1991 on Pritchard and Lawrence Creeks. This data summarizes the detailed information acquired during the stream surveys discussed in the summaries above.

3.5.3 Alternative 1

Impacts to fish and aquatic life, which are currently occurring, would continue. This alternative does not reduce the season-of-use or the AUMs in the allotment. Impacts to Pritchard Creek and Lawrence Creek, which support native redband trout, and to three minor streams (Holman Creek, Straw Ranch Creek, and Unity Creek) would continue to occur. Stream temperatures would continue to be high, impacting the availability of dissolved oxygen in the streams, the redband trout growth rate, metabolic process, ability to capture and use food, and the ability to withstand disease.

There would continue to be a loss of fish habitat with this alternative and a possibility that some age classes of fish could be eliminated due to conditions predicted above. There would be no improvement in bare soil, streambank stability, or to erosional processes that are creating sediment. There would be no

expectations of riparian vegetation restoration or an increase in canopy cover, because it has not occurred over the last 30 years. This alternative would continue to contribute to down-cutting, widening, and unstable streambanks.

Currently there are 31 springs and reservoirs on Pritchard Creek and Lawrence Creek (see Map 4). Most of these springs and/or catchments contribute to downstream flow into these fish producing streams. Many of the springs and/or reservoirs are impacted by current grazing and especially by mid-season and late fall grazing. Many of them have no protection from trampling, which has created compaction and loss of wetland habitat. These impacts are creating loss of water into the perennial streams that support native redband trout. The streams supporting native redband trout in this allotment would not be expected to change over time from the current conditions, with this alternative. Stream conditions would most likely continue to decline and not meet Standard 2, 3 and 4. This is partially due to the number and amount of mid-season and fall grazing that will be allowed, under this alternative. Fall grazing can be the most destructive time of the year for the stream and riparian resources. This is because many of the springs and troughs have dried up and fall grazing is reliant on the perennial fish-bearing streams for watering the animals. Streams that are already in a downward trend will not recover with continued fall grazing.

3.5.4 Alternative 2

This alternative may create some relief in current impacts to some of the springs in the watershed but may not result in improvements to the streams, because this alternative does not reduce the season-of-use or the AUMs in the allotment. Impacts to Pritchard Creek and Lawrence Creek, which support native redband trout, and three minor streams (Holman Creek, Straw Ranch Creek, and Unity Creek), may continue to occur. This alternative does propose to try to keep impacts more to the uplands and less to the lower portion of the streams by installing pipeline, and gap fences. However, if impacts to the uplands are increased this may promote more down-cutting, loss of bare soil, and widening of the stream channels, even further than presently is occurring. That could be detrimental to fish habitat again leading to a possibility that some age classes in fish could be eliminated.

There is a possibility under this alternative that there could be some improvement in the streams with less grazing impacts if drift fences and the well are established. If grazing pressure on the streams were reduced, improvement of stream habitat and water quality for fish would be expected. This alternative does not reduce current AUMs or the use period and impacts may continue to occur for many years before improvements occur, especially with mid-season and fall grazing when many of the impacts occur to the streams. This alternative has many of the same impacts as Alternative 1 because there is no reduction of mid-season and fall grazing. Fall grazing can be the most destructive time of the year for the stream and riparian resources. Streams that are already in a downward trend will not recover with continued fall grazing.

3.5.5 Alternative 3

This alternative proposes to rest the pastures for 3 years before implementing a reduction in grazing season-of-use and AUMs. This alternative would be the most beneficial to improving stream habitat in all of the streams, especially Pritchard and Lawrence Creeks.

This alternative would give the allotment vegetation a chance to restore bare soil adjacent to the streams. It would also give time for stream stability to begin to increase, or at least be partially restored, by allowing sedges, rushes and other aquatic vegetation to establish. This would decrease sedimentation to the streams and help restore fish habitat.

This alternative would make the most improvements to water quality that is currently impacting redband trout. There would be expected improvements in temperature, DO, pH, and turbidity, which are currently impacting the overall health of redband trout in Pritchard and Lawrence Creeks. Eliminating livestock grazing for 3 years would allow the streams to start recovering before the reduction in AUMS and implementation of utilization standards were implemented.

This would result in an upward trend in stream habitat and a chance for some recovery of riparian areas. This alternative and Alternative 4, propose to eliminate all mid-season grazing and reduce fall grazing by half, as compared to Alternatives 1 and 2. This would reduce the impacts to water quality that are currently affecting fish and fish habitat, especially during the low-flow periods in the fall. This alternative has the most potential to improve fish habitat for redband trout in this allotment.

3.5.6 Alternative 4

This alternative proposes to implement a change of grazing season-of-use and a reduction in AUMs, but does not propose a rest period, as proposed in Alternative 3. This alternative would be beneficial to improving stream habitat in all of the streams through the proposed grazing reductions. This alternative and Alternative 4, propose to eliminate mid-season grazing and reduce fall grazing by half, as compared to Alternative 1 and 2. This would reduce the impacts to water quality that are currently affecting fish and fish habitat.

Without a rest period, the stream habitat would be restored much slower than under Alternative 3. Negative impacts would continue to occur in the first few years with an upward trend developing over time. The reductions and elimination of mid-season grazing and half of the fall grazing would be more beneficial than Alternative 1 and 2, but not as beneficial as Alternative 3.

This alternative would also create improvements to water quality over time, but would continue to drive fish populations downward until habitat improvements are realized. There would be expected improvements in temperature, DO, pH, and turbidity, which are currently impacting the overall health of redband trout in Pritchard and Lawrence Creeks, but at a slower rate than proposed in Alternative 3. This alternative has the potential to improve fish habitat for redband trout, but at a slower rate than Alternative 3.

3.6 Wildlife / Wildlife Habitat and Special Status Species

3.6.1 Land Use Plan Objectives and Geographic Unit Resource Condition Objectives

Land Use Plan Objectives

The Baker Resource Management Plan Record of Decision (ROD), directs BLM to “Continue identification of wildlife habitat requirements as other resource activity plans are prepared” (ROD page 18). This document will address wildlife habitat requirements in relation to grazing activity planning for Pritchard Creek Geographic Unit (GU). In addition, Pritchard Creek GU land use plan direction indicates the following:

- *Resource Condition Objective* (ROD page 82) - “achieve a mid-seral stage plant community and improve upland habitat for greater sage-grouse, pronghorn, and mule deer”.
- *Wildlife and Fisheries Habitat direction* (ROD page 83) - “Restrict livestock use through season-of-use, utilization levels and livestock numbers, and coordinate wildlife needs when modifying grazing system”.

3.6.2 Affected Environment

Endangered Species Act Considerations

According to the best available records and field observations, no federal or state listed species occur within the analysis area. Consequently, BLM will not consult with USFWS under section 7 of the federal Endangered Species Act (ESA). Several un-listed species present are of concern to the FWS. For a complete list of potential wildlife of management concern within the analysis area see Appendix 5. BLM

believes most of the species that could theoretically occupy Pritchard Creek GU are not there for a variety of reasons.

Wildlife habitat types present and management considerations

Pritchard Creek Allotment is comprised of Snake River Plain sagebrush steppe habitat and a network of streams with associated wetlands. No juniper woodland or conifer forest wildlife habitats are present. Given the dominance of sagebrush steppe habitat, the following upland wildlife habitat management documents provide important insight relevant to the analysis area: (1) BLM national sage-grouse habitat conservation strategy (USDI-BLM 2004) (2) Greater Sage-grouse Conservation Assessment and Strategy for Oregon (Hagen 2005) and (3) BLM Technical Note 417 Assessing Big Sagebrush at Multiple Spatial Scales (Karl and Sadowski 2005).

All three documents listed above describe desirable habitat conditions and they promote actions needed to conserve greater sage-grouse. In addition, each document highlights the importance of managing public land in a way that will support communities of sagebrush steppe species at the landscape level. According to Maser et al. (1984), about 100 to 190 species of rangeland wildlife either breed or feed within big sagebrush habitats, depending upon shrub structural character. Other published documents also indicate substantial wildlife reliance upon sagebrush for all or part of their life history requirements. For instance, even though black-tailed jackrabbits are not considered true sagebrush obligates, on public land they are often most often associated with sagebrush cover and they are an important prey species for raptors or other mammalian predators. Thus, the ecological web for wildlife in sagebrush steppe is quite complex and BLM management decisions must go beyond considerations that address true sagebrush-dependent species only.

Sagebrush dependent wildlife either known to occur or very likely to occur within the analysis area include the following:

- *Birds* – greater sage-grouse, sage sparrow, brewer's sparrow, vesper sparrow, black-throated sparrow, lark sparrow, loggerhead shrike, green-tailed towhee, and sage thrasher.
- *Mammals* - sagebrush vole and pronghorn. Sagebrush voles have a strong affinity for sagebrush but may occur in areas lacking sagebrush overstory if grass understories are dense and well developed.

By practicing good land use stewardship likely to benefit multiple species of wildlife, BLM may then avoid the future need for listing animals under protection of federal or state endangered species acts. For grazing permit renewal purposes, this objective to promote healthy wildlife communities may be met by accomplishing the following: (1) promote proper grazing use consistent with the S&Gs and (2) limit the geographic extent of grassland habitats, or those rangelands that support less than 5% sagebrush canopy cover. Sagebrush shrubland habitats, which support ($\geq 5\%$ sagebrush canopy cover) typically support much more diverse wildlife communities than grasslands (< 5% sagebrush canopy cover) (Karl and Sadowski 2005).

Currently, about 61% of the Pritchard Creek GU is made up of shrubland plant communities capable of supporting greater sage-grouse and other animals that occupy sagebrush steppe habitats. The remaining 39% of habitats present have been disturbed by wildfire or other events and thus they now generally appear as grassland communities.

Riparian habitats comprise a very small proportion of the analysis area. Nevertheless, riparian areas in general support a disproportionately large number of wildlife habitat requirements. For eastern Oregon, as many as 280 species are either directly dependent on riparian habitat or utilize them more than other habitats (Thomas et al. 1979).

Aside from localized and limited impacts from big game, the most important controllable riparian habitat disturbance activity is livestock grazing use. Properly scheduled grazing use is compatible with maintenance or improvement of habitat qualities for wildlife. Proper grazing use within riparian areas

normally includes some combination of rest and/or deferment. Woody and herbaceous riparian plants both offer forage, cover, and structure valuable for wildlife.

Relatively common wildlife species present

Game species present include American pronghorn (*Antilocapra americana*), mule deer (*Odocoileus hemionus*), elk (*Cervus canadensis*), and chukar (*Alectoris chukar*). Representative non-game species include red-tailed hawk (*Buteo jamaicensis*), golden eagle (*Aquila chrysaetos*), Luzuli bunting (*Passerina amoena*), yellow warbler (*Dendroica petechia*), common nighthawk (*Chordeiles minor*), and western meadowlark (*Sturnella neglecta*).

Special status species narratives

Special management status wildlife known to breed on public land or use public land for part of their life history requirements include western burrowing owl (*Athene cunicularia hypugea*), ferruginous hawk (*Buteo regalis*), and greater sage-grouse (*Centrocercus urophasianus*). Although suitable pygmy rabbit (*Brachylagus idahoensis*) habitat is probably present, no confirmed sightings are recorded within the analysis area.

Brief life history narratives for special status wildlife in Pritchard Creek allotment are as follows:

western burrowing owl

- Western burrowing owls are associated with open grasslands or sagebrush shrublands that (a) support good rodent populations and (b) support occupation by badgers. Badgers prey upon rodents and burrowing owls rely heavily on badger excavations for their underground nesting burrows. Loss of suitable habitat from fragmentation and urbanization has led to an overall decline of burrowing owl populations in the western US. Because of favorable soil conditions and badger occupation within the analysis area, burrowing owl habitat is present within the analysis area but it is not likely to be threatened by BLM authorizations. Grassland or shrubland habitats in virtually any ecological condition will support burrowing owls.

ferruginous hawk

- Ferruginous hawks prefer open grassland and shrubland habitats. Rock ledges or juniper trees often provide nesting sites. Rodents provide their main source of food. In general, ferruginous hawk populations have declined throughout their breeding range due to habitat loss, habitat fragmentation, urbanization, and conversion of native rangeland over to non-native communities. Pritchard Creek allotment provides hunting range for ferruginous hawks but no nesting habitat. Proper grazing use practices and careful application of land treatments can be expected to conserve and benefit ferruginous hawk habitat, including the prey species they are dependent upon.

pygmy rabbit

- There have been no systematic searches for pygmy rabbits in northeast Oregon, therefore, little is known about their distribution or abundance within Baker Resource Area. Pygmy rabbits require dense (normally >25% canopy cover) Wyoming, basin, or mountain big sagebrush for both shelter and food. They prefer soils that are loose enough to excavate burrows, but compact enough to keep their shape. Burrow systems are typically constructed at the base of big sagebrush plants, reinforcing the vital role of sagebrush to pygmy rabbit survival. Pygmy rabbits climb up into the canopy of sagebrush plants and eat sagebrush leaves as a primary food source. Although they eat more than just sagebrush, they are considered a sagebrush-dependent species.

Pygmy rabbits are in decline throughout their range due to habitat loss, habitat degradation, and fragmentation. Proper grazing use practices and careful application of land treatments can be expected to conserve and benefit pygmy rabbit habitat.

greater sage-grouse

- Greater sage-grouse occupy Pritchard Creek GU sagebrush steppe habitat yearlong. Holman, White Rock, and Lawrence pastures each include sage-grouse lek sites within their boundaries. Leks are locations where sage-grouse congregate annually for display and breeding purposes. Healthy nesting and brood rearing habitats support a good complement of deep-rooted perennial grasses plus a variety of annual and perennial forbs (wildflowers) that provide structure, food, cover, and scent barriers to potential predators. Insects provide important protein sources for early brood-rearing. Sage-grouse require sagebrush for their forage, cover, and nesting needs. Sagebrush canopy cover at 15% or more and with abundant herbaceous plant cover is associated with successful nesting efforts. Winter use areas and late brood-rearing habitats may successfully support sage-grouse use at lower sagebrush canopy cover values. Refer to Connelley et al. (2001) and Hagen (2005) for much more information about sage-grouse life history requirements and risk factors.

According to ODFW data, greater sage-grouse productivity has declined for the last 3 or 4 years within the Pritchard Creek GU. ODFW monitoring data suggest that Oregon sage-grouse productivity in general has declined for the last 3 or 4 years. Whether these trends are simply temporary cyclical patterns or a long term decline remains to be seen.

There are a wide variety of factors that account for sage grouse population fluctuations including; natural population cycles, sagebrush control, livestock grazing use, water and fence development, drought, cold/wet spring weather, crested wheatgrass seeding management, invasive annual plants, wildfire and prescribed fire, nest predation, predator control, alternate prey availability (for species such as coyotes that are known to prey upon sage grouse), power lines, energy development, West Nile Virus, and pesticide use.

A cautious approach to managing BLM authorizations that potentially alter forage, cover, and structural conditions, may be expected to help conserve sage-grouse habitat qualities:

- New pasture fences, water developments, salting areas, livestock herding practices, and pipelines in native range used for nesting;
- Authorization of temporary nonrenewable AUM's in native range used for nesting;
- General grazing season use in native range used for nesting;
- Prescribed fire or other treatments designed to reduce shrub competition within nesting and wintering habitat; especially Wyoming big sagebrush types (ICBEMP science reports; Miller and Eddleman 2000; Connelly et al. 2000).
- Retreatment of existing seedings for the purpose of reducing shrub competition and enhancing livestock forage production when it is within winter range or nesting habitat;
- Riparian/wetland area management
- Wildfire management, especially near or within remaining habitats exhibiting characteristics important to sage grouse.

For environmental impact analysis purposes, wildlife species, habitats, and seasons of use relevant to Pritchard Creek GU are as follows:

Wildlife of Management Importance within Pritchard Creek GU	Season of Use	Principal Habitat Dependency for Forage, Cover, Structure, and Security
American pronghorn Rocky Mountain mule deer ferruginous hawk	Spring through fall	Mixed shrublands and grasslands
*greater sage-grouse	Yearlong	Shrublands Winter use – at least 10% sagebrush canopy cover Nesting use – at least 15%-25% or more sagebrush canopy cover
*sagebrush vole, *Brewer's sparrow, *horned lark, *western meadowlark, *black-throated sparrow, *sage sparrow, *loggerhead shrike, *sage thrasher,	Spring through summer	Shrublands At least 10% sagebrush canopy cover
Rocky Mountain mule deer yellow warbler greater sage-grouse	Spring through fall	Woody riparian species such as willow and herbaceous species such as grasses, forbs, sedges, and rushes.
* Species associated with shrub steppe habitats that are at risk throughout the west that and have declined substantially in the Interior Columbia Basin area since historical times.		

Assumptions common to all alternatives

Primary wildlife species of management importance under all EA alternatives include the following:

- Sagebrush steppe at < 5% shrub canopy cover, or predominantly grassland communities:
American pronghorn, horned lark.
- Sagebrush steppe at \geq 5% shrub canopy cover, or predominantly shrubland communities: greater sage-grouse, brewer's sparrow, sage thrasher, green-tailed towhee, gray flycatcher, ferruginous hawk, sagebrush vole, pygmy rabbit (hypothetical), western meadowlark, black-tailed jackrabbit, western burrowing owls, and mule deer.

All alternatives will comply with the 2005 Greater Sage-Grouse Conservation Assessment and Strategy for Oregon standards for livestock management. Design Feature common to all alternatives, number 20 requires the permittee to avoid livestock concentrations on leks in the breeding season (March 1 – May 15). Alternative 3 and 4 would permit livestock use in pastures with leks (starting April 16) one in three years . However, the permittee will be notified of lek locations and required to prevent livestock concentrations by removing mineral blocks and using range riders and other means as appropriate.

3.6.3 Alternative 1

Under current management, wildlife objectives for species of management importance in Pritchard Creek Allotment would be partially met in a manner consistent with the Baker RMP, the OR/WA S&Gs, and the Oregon Greater Sage-grouse Management Strategy.

BLM Design Features and other characteristics of Alternative 1 would lead to attainment of wildlife objectives for the following reasons:

- Permittees would be required to herd their cattle and sheep in a way that would avoid direct disturbance to sage-grouse breeding activity. Thus, habitat security at sage-grouse leks would not be disrupted by livestock-caused disturbance (see Design Feature 20).

- Within 5 years, wildlife escape ramps would be installed in all existing livestock water troughs. Because of this action, sage-grouse and other small wildlife entrapment caused by improper livestock water development would be reduced substantially over time. Alternative 1 escape ramp placement would not eliminate wildlife entrapment or drowning, but the incidental mortalities that may occur would be consistent with BLM policy regarding wildlife protection and livestock water developments (see Design Feature 19).
- BLM would avoid additional fencing conflicts with wildlife activity because no new exclosure, pasture, or allotment subdivision projects would occur.
- Existing riparian exclosures would continue to maintain riparian habitat quality.
- Shrub-related wildlife habitat values would not change as a result of BLM action. Under current conditions, about 61% of the allotment would continue to exist as predominantly shrubland communities that provide shrub forage, cover, and structure values important to sage-grouse and many other animals that occupy sagebrush habitats. Remaining grassland habitat types would be expected to support species such as American pronghorn and horned larks that prefer low habitat structure.

Wildlife objectives for species of management importance in Pritchard Creek Allotment would not be met in accordance with the Baker RMP, the OR/WA S&Gs, and the Oregon Greater Sage-grouse Management Strategy for the following reasons:

- Even though about 61% of Pritchard Creek Allotment is made up of predominantly shrubland communities capable of supporting greater sage-grouse and other animals that occupy sagebrush habitat, continued weakness in grass and forb composition would result in failure to meet the S&Gs for wildlife (Standard 5). Good quality sagebrush steppe ecosystems for wildlife support sagebrush cover and a mix of deep rooted perennial grasses and native forbs. Shrubs, grasses, and forbs in combination provide the necessary forage, cover, structure, and security needs of wildlife.

Continuation of current grazing use would be expected to further diminish already weakened perennial grasses and likely invite further occupation by invasive annuals or noxious weeds. Because native grasses and forbs provide important lateral and overhead hiding cover for sage-grouse nest concealment, ongoing grazing use would, over time, further erode and diminish sage-grouse nesting habitat quality. It is probable that under current grazing management, sage-grouse recruitment and nesting success is being adversely effected by impacts related to livestock grazing use. The timing, intensity, and duration of upland livestock use would need to change in order to improve perennial grass conditions and meet the S&Gs for wildlife.

Existing exclosure fences would probably continue to cause some sage-grouse predator mortalities because steel and wooden fence posts both provide elevated raptor hunting perches. Sage-grouse often seek out riparian habitats during late brood-rearing because of the succulent green forage plants available. Furthermore, sage-grouse may collide with existing fences, often resulting in either injury or death. In spite of these potential adverse consequences, existing fencing impacts probably do not substantially threaten sage-grouse populations within the analysis area.

- Riparian wildlife habitat would continue to function improperly because of repeated late season grazing use. Under the influence of repeated late season grazing use, riparian wildlife habitat quality, structure, and composition would remain impaired as described in the evaluation. Although the necessary plant structural and functional groups are present within analysis area riparian habitats, ongoing grazing use is causing failure to meet the S&Gs. The timing, intensity, and duration of riparian livestock use would need to change in order to meet the S&Gs for wildlife.

3.6.4 Alternative 2

Under Alternative 2, wildlife objectives for species of management importance in Pritchard Creek Allotment would be partially met in a manner consistent with the Baker RMP, the OR/WA S&Gs, and the Oregon Greater Sage-grouse Management Strategy.

BLM Design Features including wildlife escape ramp installation and protection of sage-grouse breeding habitat security on leks would lead to partial attainment of wildlife objectives similar to Alternative 1. Alternative 2 would also result in the same amount of shrub-related wildlife habitat values as described under Alternative 1.

However, under Alternative 2, overall habitat quality for wildlife would be expected to decline substantially for species of management importance similar to what has been described for Alternative 1. Alternative 2 proposed grazing systems and project developments would be substantially inconsistent with the Baker RMP, the OR/WA S&Gs, or the Oregon Greater Sage-grouse Management Strategy for the following reasons:

- New gap fences and riparian exclosures would pose additional obstacles to wildlife freedom of movement and threats related to predation. Although proper fence design specifications can limit potential for wildlife mortality or injury, additional risks to wildlife can still be expected following addition of new fencing on public land.

Because of the location of proposed gap fences, additional sage-grouse mortalities would not be expected, but some new obstacles to mule deer freedom of movement may occur. Proposed gap fences may occur within well traveled mule deer travel corridors, but even if they do, deer would probably adjust to new fencing and find ways to move around new barriers.

- New and existing enclosure fencing around water sources would fully protect and enhance riparian habitat values. However, new fences would also be expected to increase sage-grouse predator mortalities because steel and wooden fence posts both provide elevated raptor hunting perches. Sage-grouse often seek out riparian habitats during late brood-rearing because of the succulent green forage plants available. Furthermore, sage-grouse may collide with fences, often resulting in either injury or death. In spite of these potential adverse consequences, new fencing impacts would probably not substantially threaten sage-grouse populations within the analysis area.
- Compared to current management, a substantial number of additional wildlife entrapment and drowning events would be expected under Alternative 2 in spite of installation of escape ramps in proposed livestock water troughs. Under Alternative 2, BLM would allow installation of 17 new livestock water troughs to facilitate livestock grazing use. Additional drinking water provided in livestock water troughs would not be expected to enhance wildlife habitat suitability or distributions of species of management importance in Pritchard Creek Allotment.
- Additional pipelines and livestock water troughs would be expected to re-distribute and intensify the amount of livestock grazing use impacts in sage-grouse nesting habitat. Neither BLM nor ODFW has no information on precisely where sage-grouse nesting activity occurs within Pritchard Creek Allotment. However, the landform and plant cover types that would be affected by proposed pipelines and troughs are consistent with what is considered preferred sage-grouse nesting sites; that is, flat to gently rolling sagebrush terrain within 12 miles or less of sage-grouse leks. The fact is, flat to gently rolling landforms are limited in Pritchard Creek Allotment and so is suitable sage-grouse nesting habitat. Because (1) ongoing adverse grazing-related impacts are occurring within sage-grouse nesting habitat and (2) grazing use would not change, Alternative 2 grazing impacts

on wildlife habitat would become even more pronounced and harmful compared to current management.

- The cumulative adverse impacts of Alternative 2 proposed grazing use, livestock water development, and additional fencing would lead to much lower wildlife habitat quality within Pritchard Creek upland habitats.
- Riparian wildlife habitats would continue to decline and function improperly for the same reasons already described under Alternative 1.

3.6.5 Alternative 3

Under Alternative 3, wildlife objectives for species of management importance in Pritchard Creek Allotment would be partially met in a manner consistent with the Baker RMP, the OR/WA S&Gs, and the Oregon Greater Sage-grouse Management Strategy

BLM Design Features including escape ramp installation in livestock water tanks and protection of sage-grouse breeding habitat security on leks would meet wildlife objectives for reasons described in Alternative 1. Also, Alternative 3 would result in the same amount of shrub-related wildlife habitat values as described under Alternative 1.

However, compared to current management, Alternative 3 proposed grazing systems and project developments would be substantially consistent with the Baker RMP, the OR/WA S&Gs, and the Oregon Greater Sage-grouse Management Strategy for the following reasons:

- Grazing rest for 3 years would be highly beneficial and lead to improvement in wildlife habitat composition and structure. Because this is the only alternative that considers three years of rest before initiation of new grazing systems, it would result in the most favorable outcomes for protection and enhancement of wildlife habitat. The “jump start” 3 year rest period would probably enhance the likelihood of improving weakened sagebrush steppe over the long term when combined with the proposed grazing system adjustments.
- Forage, cover, and structure values provided for wildlife by sagebrush would not change as described in Alternative 1. However, because available livestock AUMs would be reduced and the timing, intensity, and season of livestock use would be adjusted, Alternative 3 proposed grazing use would promote recovery of grasses currently weakened by improper grazing use (provided adequate temperature and moisture conditions occur during the rest period).

Grass and forb forage availability for wildlife would likely improve under Alternative 3. But more importantly, the structure, health, and distribution of deep rooted perennial grasses and forbs would likely improve. Thus, sage-grouse nesting habitat quality would be enhanced because vigorous grasses and forbs provide important lateral and overhead cover associated with successful nesting efforts. There is no guarantee that Alternative 3 improved habitat conditions would result in higher numbers of sage-grouse. However, the potential for enhanced sage-grouse recruitment and survival would definitely improve in contrast to current management. This alternative will allow the allotment to make significant progress toward meeting standards for healthy rangelands.

- Compared to current management, fewer years of spring livestock grazing use and impacts to sage-grouse nesting habitat would occur. Consequently, although BLM grazing management actions would not fully maximize protection of sage-grouse habitat values, the potentially harmful impacts of further degradation of grasses and forbs caused by current livestock use would be diminished.

- Because of gap fencing and long-term adjustment to the timing, intensity, and season of current livestock grazing use, Alternative 3 would be expected to improve riparian wildlife habitat quality, structure, and plant composition over time.
- New and existing enclosure fencing around water sources would fully protect and enhance riparian habitat values. However, potential adverse impacts to wildlife would occur in ways described under Alternative 2.

3.6.6 Alternative 4

Under Alternative 4, the proposed action, wildlife objectives for species of management importance in Pritchard Creek Allotment would be substantially met in a manner consistent with the Baker RMP, the OR/WA S&Gs, and the Oregon Greater Sage-grouse Management Strategy for the following reasons:]

- All resource needs are addressed.
- Permittees would be required to herd their cattle and sheep in a way that would avoid direct disturbance to sage-grouse breeding activity. Thus, habitat security at sage-grouse leks would not be disrupted by livestock-caused disturbance (see Design Feature 20).
- Within 5 years, wildlife escape ramps would be installed in all existing livestock water troughs. Because of this action, sage-grouse and other small wildlife entrapment caused by improper livestock water development would be reduced substantially over time. Escape ramp placement would not eliminate wildlife entrapment or drowning, but the incidental mortalities that may occur would be consistent with BLM policy regarding wildlife protection and livestock water developments (see Design Feature 19).
- New and existing enclosure fencing around water sources would fully protect and enhance riparian habitat values. However, new fences would also be expected to increase sage-grouse predator mortalities because steel and wooden fence posts both provide elevated raptor hunting perches. Sage-grouse often seek out riparian habitats during late brood-rearing because of the succulent green forage plants available. And finally, sage-grouse may collide with fences, often resulting in either injury or death. In spite of these potential adverse consequences, new fencing impacts would probably not substantially threaten sage-grouse populations within the analysis area (personal communication, Christian Hagen, ODFW sage-grouse coordinator, October 8, 2008).
- Shrub-related wildlife habitat values would not change as a result of BLM action. Under current conditions, about 61% of the allotment would continue to provide shrub-based forage, cover, and structure values important to sage-grouse and many other animals that occupy sagebrush habitats. Remaining grassland habitat types would be expected to support species such as American pronghorn and horned larks that prefer low habitat structure.
- Because under Alternative 4 available livestock AUMs would be reduced and the timing, intensity, and season of livestock use would be adjusted, BLM proposed grazing use would promote recovery of grasses currently weakened by improper grazing use.

Grass and forb-based forage availability for wildlife would likely improve under Alternative 4. But more importantly, the structure, health, and distribution of deep rooted perennial grasses and forbs would likely improve gradually over time. Thus, sage-grouse nesting habitat quality would be enhanced because vigorous grasses and forbs provide important lateral and overhead cover associated with successful nesting efforts. There is no guarantee that Alternative 4 improved habitat conditions would result in higher numbers of sage-grouse. However, the potential for enhanced sage-grouse recruitment and survival would definitely improve in contrast to current

management. This alternative will allow the allotment to make significant progress toward meeting standards for healthy rangelands.

- Compared to current management, fewer years of spring livestock grazing use and impacts to sage-grouse nesting habitat would occur. Consequently, although BLM grazing management actions would not fully maximize protection of sage-grouse habitat values, the potentially harmful impacts of further degradation of grasses and forbs caused by current livestock use would be diminished.

Because of gap fencing and long-term adjustment to the timing, intensity, and season of current livestock grazing use, Alternative 4 would be expected to gradually improve riparian wildlife habitat quality, structure, and plant component.

3.7 Rangeland/Grazing Use

3.7.1 Land Use Plan Objectives and Geographic Unit Resource Condition Objectives

Land Use Plan Objectives

The following objectives and management direction comes from the Baker RMP (USDI 1989):

Management Direction

- Continue to authorize grazing permits/leases for approximately 55,000 AUMs on 374 allotment/lease areas for livestock grazing. The level of authorized grazing will depend on future requirements of the associated resources for the land, including disposal, acreage being grazed, and the results of monitoring.
- Allow rangeland users to develop range improvement projects as long as they are consistent with BLM objectives and are subject to environmental analysis and approval by BLM.
- Livestock grazing will not be allowed on areas where vegetation manipulation occurs. Livestock will be deferred either by fencing treated areas or by resting the treated pasture for two to five growing seasons (i.e., if a pasture is rested for three growing seasons, cattle use would not be allowed until fall of the third year).

Implementation Priority

- Continue to authorize grazing on all grazeable land and implement grazing management systems. The priority will be dictated by the resource values, uses, user cooperation, and ease and cost of implementation.
- Develop activity plans on I category allotments, and develop Coordinated Activity Plans (CAPS) as needed by other resource activities by priority area as shown in the Baker RMP on Map 9, and as discussed under the section on CAPS. Map 11 in the RMP shows the established grazing allotments (USDI 1989).
- Evaluate and implement protection measures for identified relict vegetation areas in cooperation with the Soil Conservation Service.
- Monitor I category allotments.
- Monitor all other allotments. Search for, identify, and evaluate additional non-represented relict vegetation areas.

Geographic Unit Resource Condition Objectives

Upland

- Manage upland grass-shrub vegetation to achieve a mid-seral stage plant community.
- Improve upland habitat conditions for sage-grouse, antelope, and mule deer.
- Forestland - Maintain woodlands to meet the vegetation needs of other resources, principally watershed and wildlife habitat.

Riparian

- Improve and maintain, where suitable, wet meadows for sage-grouse and antelope. Enhance fishery habitat for trout on Lawrence Creek and Pritchard Creek.
- Improve the condition of riparian habitats.

3.7.2 Affected Environment

History

The Pritchard Creek allotment lies north of Interstate 84 between Baker City and Durkee, Oregon. It is a four pasture, native range allotment, in a rest-rotation grazing system since 1966. The annual use period was 4/16 to 8/31. The key grass species are bluebunch wheatgrass (*Pseudoroegneria spicata*), Idaho fescue (*Festuca idahoensis*), and needlegrass (*Stipa* sp). Sandberg bluegrass (*Poa secunda*), cheatgrass (*Bromus tectorum*), and medusahead rye (*Taeniatherum nevski*) are present on some sites. For the most part, it has south facing slopes and topography varies from rolling to steep and rugged.

A range survey was conducted on the allotment in 1963, which showed a carrying capacity as follows:

Acreage	Surveyed Carrying Capacity
Federal - 12,309	1,270 AUMs
Private - 2,812	213 AUMs
Total 15,121 acres	1,483 AUMs

$$\text{BLM acres/AUM} = 9.7$$

The allotment was adjudicated in 1965 and a 16% reduction was taken as the first step of a planned 62% reduction to meet the carrying capacity of 1,483 AUMs. An Allotment Management Plan (AMP) with a four-pasture rest rotation grazing system was implemented in 1966. The remainder of the scheduled reduction was never taken, apparently due to the implementation of the AMP. At this time, all use was made by cattle. According to BLM records, permittee (J) disliked the type of bulls the other operators ran so he was allowed to switch to sheep use in 1972. In 1982, he took a voluntary reduction from 385 AUMs to 200 AUMs. His sheep use was to be made on the steep slopes of Lawrence Creek that the cattle seldom used. The use was to alternate from the west side of Lawrence Creek in one year to the east side of Lawrence Creek the next. High water in Lawrence Creek prevented him from getting the sheep across to the east side in some years resulting in more use being made on the west side with a noticeable, but undocumented reduction in the amount of forbs in the Lawrence Creek pasture.

In 1986, permittee K acquired one of the existing permits and at their request, their season-of-use was changed to spring and fall (4/16 - 5/25 and 10/16 - 12/5). When permittee K gathered their cattle on 5/25 they had to sort them out from permittee T's cattle. This resulted in T's cattle being all bunched up and not getting properly distributed afterward. This caused some areas to be overgrazed while others were undergrazed.

To correct the problems above, some slight changes were made to the grazing schedule, starting in 1990. T and K were allowed to turn out in separate pastures in the spring to prevent the bunching up of cattle when K removed theirs on 5/25. J's sheep use rotated through the entire allotment, but used a different pasture each year. They were scheduled to use the same pasture that T turned out in each year. In 1993, K fenced out some of their private land and some BLM land from the Holman pasture on the lower end of Low Creek, thereby reducing their active use and exchange-of-use on the rest of the allotment.

Since 1996 permittee S has leased a portion of permittee T's AUMs. From 1996 to present, no significant changes have been made to permittee leases. See Appendix 6 for detailed information by pasture of AUMs and utilization used each year from 1978 through 2005.

A fire in 1998 resulted in part of Upper pasture being excluded from grazing to assist in range recovery. Another fire in 2006 affected much of Upper and White Rock, and a portion of Holman pastures. Due to

the 2006 fire and the requirements in the Baker RMP for 2 years rest from grazing subsequent to fire, 31% of the available AUMs were temporarily reduced for a minimum of two growing season. Therefore, in 2007 and 2008 AUMs totaled 1,494. The upper pasture is also divided in half by a riparian fence. This allows use in both sides by livestock and can be used at the same time in some years.

Range Improvement Projects

There are 55 projects on the allotment, not including fences. Condition of developments was rated as follows:

- 35 projects in good condition
- 3 projects in fair condition
- 7 projects in poor condition
- 10 projects in fail condition

Project inspections for all water development including springs and reservoirs were completed in 2004. A total of 55 projects were identified in the Pritchard Creek allotment. There were also three projects identified as water developments on this allotment that are actually located on private property. Of the 55 projects, 17 of these projects are in poor or failure condition. BLM plans to phase in maintenance by the permittees over the next 4 years to bring all of these projects up to functional condition. This will require repairing at least four projects each year and maintaining the rest of the projects as well. All fences on the exterior and interior of this allotment are in functional condition. Due to the 2006 fire, the BLM will need to replace 26 rock jacks that were destroyed in this fire.

3.7.3 Alternative 1

Alternative 1 would involve no change to the current grazing season-of-use or numbers of AUMs. It would not include any new range projects but would implement the project maintenance schedule. All pastures would continue to not meet Standards 1 through 5, except for Uplands (Standard 1) and Native, T&E, and Locally Important Species (Standard 5) in Lawrence pasture, and Uplands in White Rock pasture. However, those standards that are currently met may decline in trend with no change in livestock grazing management. Pastures would continue to fail to meet water quality Standard 4, and watershed function standards for wetlands/riparian zones (Standard 2) and for ecological processes (Standard 3).

3.7.4 Alternative 2

Alternative 2 would have the same design as Alternative 1 except for the addition of 15 miles of pipeline, 17 water troughs, 2 storage tanks, and 1 new well. There would also be four new gap fences, constructed by the permittees to restrict livestock grazing in Pritchard and Lawrence Creeks. Project maintenance for existing projects would also be required. Standards 1 through 5 for all pastures would continue to not be met except for Standard 1 and 5 in Lawrence pasture, and Standard 1 in White Rock pasture. However, those that are currently met may decline in trend with no change in livestock grazing management. Riparian/wetland areas (Standard 2) and water quality standards (Standard 4) would probably continue to fail to be met.

3.7.5 Alternative 3

Alternative 3 would rest all pastures for 3 years, and then would implement Alternative 4, which would include the range projects maintenance schedule, four gap fences constructed by BLM, and a 27% reduction in AUMs for three of the four permittees. The gap fences would eliminate cattle grazing within the Lawrence and Pritchard Creek drainages, although sheep grazing would continue. The reduction in AUMs coupled with the improved project maintenance and gap fences, would result in lighter use of the riparian areas and improved distribution of livestock on the uplands. Permittees would have to find alternative locations to graze their livestock while resting the allotment. The rest would help to move each pasture towards meeting all the S&Gs. The trend should improve in most upland areas and especially in the riparian areas.

3.7.6 Alternative 4

Alternative 4 would include the range projects maintenance schedule, four gap fences constructed by BLM, and a 27% reduction in AUMs for three of the four permittees. This alternative would implement the proposed livestock reductions addressed in the 1966 AMP. The gap fences would eliminate cattle grazing within the Lawrence and Pritchard Creek drainages, although sheep grazing would continue. The reduction in AUMs coupled with the improved project maintenance and gap fences would result in lighter use of the riparian areas, and improved distribution of livestock on the uplands.

3.8 Noxious Weeds

3.8.1 Land Use Plan Objectives and Geographic Unit Resource Condition Objectives

The Baker RMP (USDI 1989) states on page 50:

Infestations of noxious weeds are known to occur on some public lands in the planning area (refer to Figures 2 and 3). The most common noxious weeds are diffuse, spotted, and Russian knapweed, yellow starthistle, Canadian thistle, and yellow leafy spurge. Control methods will be proposed and subject to site-specific environmental analyses consistent with the Record of Decision on BLM's Northwest Area Noxious Weed Control Program EIS and EIS Supplement. Control methods will not be considered unless the weeds are confined to public lands or control efforts are coordinated with owners of adjoining infested non-public lands. Proper grazing management will be emphasized after control to minimize possible reinfestation. Coordination and cooperation with county weed control officers will continue on a regular basis.

There are no specific noxious weed objectives for the Pritchard Creek Geographic Unit other than as they relate to Upland, Forestland, and Riparian Vegetation Resource Condition Objectives.

3.8.2 Affected Environment

An intensive inventory for noxious weed species has not been conducted; however, there are several known sites within portions of the Pritchard Creek allotment. Leafy spurge (*Euphorbia esula*), a persistent perennial which is hard to control, is the species of most concern. Diffuse knapweed (*Centaurea diffusa*) occurs as well. Both of these species are primarily in the southern portions of the Holman and White Rock pastures. Small patches of Scotch thistle (*Onopordum acanthium*) are fairly common throughout the allotment, primarily near bedding areas and draw bottoms. Whitetop (hoary cress, *Cardaria Desv*), a perennial mustard (*Brassica* sp), and medusahead rye (*Taeniatherum caput-medusae*) are increasing in this allotment. One small site of rush skeletonweed (*Chondrilla juncea*) has been found recently in the Holman Creek pasture and is a priority for continued treatment. The spread of noxious weeds into riparian areas is a serious threat to the ecological health of the area.

Current treatment methods include hand pulling on small sites when appropriate, and spot treatments in the spring and fall with herbicides approved for use on the species being treated.

Holman Pasture

Diffuse knapweed, whitetop, Scotch thistle, and leafy spurge are the primary weed species in this pasture. Knapweed and spurge are treated each year. One small site with four or five plants of rush skeletonweed is also being treated in this pasture. Whitetop and thistle, mainly located in drainage bottoms, salting areas, and near developed water sources, are not being treated unless incidental to treatments on the other species.

Lawrence Pasture

There is no current, specific information for weed sites in this pasture. The Lawrence Creek pasture will be a priority when time and funding allow for an adequate weed survey.

Upper Pasture

Leafy spurge, whitetop, and Scotch thistle are the primary weed species in this pasture. Leafy spurge has been treated and treatment will continue as new areas are located. Whitetop and thistle are not being treated and are mainly located in drainage bottoms, salting areas, and near developed water sources.

White Rock Pasture

Leafy spurge, whitetop, and Scotch thistle are the primary weed species in this pasture. Leafy spurge has been treated and treatment will continue, as new areas are located. Whitetop and thistle are not being treated and are mainly located in drainage bottoms, salting areas, and near developed water sources.

3.8.3 Alternative 1

Noxious weeds would continue to be a problem in the same areas they are now. The continued amount of bare ground resulting from this alternative would offer ample establishment sites for weeds. Treatment would continue to necessary. Periodic inventory would be done as time and other priorities allowed.

3.8.4 Alternative 2

Alternative 2, if implemented, should reduce the spread of noxious weeds compared to Alternative 1 but probably at a slower rate than the other two alternatives. The gap fences and water developments should improve livestock distribution, which should help reduce noxious weeds spread in the riparian areas. Treatments and monitoring would still be necessary.

3.8.5 Alternative 3

Three years of complete rest would allow for increased improvement in vegetation condition thereby providing increased competition to reduce noxious weed establishment. At the same time, there would be increased need for inventory to make sure noxious species are not establishing under the taller vegetation and being missed.

3.8.6 Alternative 4

The proposed action would result in improvement of desired vegetation density and condition over time, providing increased competition to noxious weed establishment.

3.9 *Recreation, Off-Highway Vehicle, Visual Resources*

3.9.1 Land Use Plan Objectives and Geographic Unit Resource Condition Objectives

As identified in the Baker Resource Management Plan (USDI 1989), the management direction for recreation is to “Provide or enhance recreational opportunities for hunting, fishing, swimming, floating, boating, hiking, and sightseeing.”

The objectives for the Pritchard Creek GU are to maintain opportunities for identified recreation values and to maintain scenic quality.

3.9.2 Affected Environment

Recreation and Off-Highway Vehicle (OHV) Use

The Pritchard Creek area consists of arid uplands with some canyon slopes and basalt outcroppings that provide visitors with changing views ranging from simple desert sagebrush covered slopes, to entrenched draws of riparian vegetation. Although not unique to eastern Oregon, the planning area does consist of enough acreage to provide modest landscape changes over the area which benefits scenic enjoyment.

Recreation opportunities in the Pritchard Creek area include dispersed camping, hunting (upland bird/big game), scenic viewing, horseback riding, hiking, and OHV use, with hunting being the primary activity.

Recreation use data for the area are incomplete, as most uses occur seasonally and are “dispersed” in nature. There are no developed recreation facilities or activities within the planning area and all recreational use occurs randomly.

The recreational use of the area is directly correlated to the weather patterns of eastern Oregon, as well as to the established hunting seasons. Rain, cold, and drought conditions cause significant fluctuations in the activities seen in the Pritchard Creek area. Peak recreation use occurs primarily in the fall of the year from late August through late November, which coincides with the Oregon established hunting seasons.

Public access to the area is limited due to the surrounding private ownership. However, there is legal access to the area in the southern portion of the unit via county and state roads that access the BLM lands. The area is designated as “open” for OHV uses, and random trails have developed throughout the planning area. Most of the trails that have been created are a direct result of hunting activities. However, there are no BLM-designated or maintained trails within the Pritchard Creek planning area.

The quality of the recreation opportunities in the Pritchard Creek area is closely linked to the amount of use occurring within the area at any given time. Although there is a large amount of acreage associated with the unit, the amount of trails and potential for motorized use via roads/trails/ways in the area detracts from feelings of “solitude” for those users interested in a more remote outdoor experience. However, the large block of BLM ownership does provide good hunting opportunities for upland bird and big game species, as well as potential for remote OHV travel. OHV trails for recreational “point-to-point” travel do not exist within the area. The trail system that currently exists is a series of informal pathways that have been developed by motorized travel primarily associated with hunting endeavors.

Visual Resources

The Pritchard Creek area was identified in the Baker Resource Management Plan as consisting of Class IV visual resources. Class IV designation is defined in the RMP as “Primarily for general scenic landscapes throughout much of BLM,” and is managed as “Project work within a Class IV area can be a focal point on the landscape to the casual visitor” (USDI 1989, 49). This classification of lands can be better described as “non-unique” for the Baker Resource Area and is the primary classification for most of the BLM-managed lands within the Resource Area boundaries.

One small portion of limited acreage within the extreme northeast corner of Lawrence Creek does fall within a Class II designation, which is defined as “Primarily for areas of high scenic quality,” and is managed as “Any project work within a Class II area cannot be visible to a casual visitor from any travel route.” However, there are no proposed activities within the area, or within view of that portion of the area, that would violate the Class II designation.

Wilderness Characteristics

The Pritchard Creek area was not identified under the 1989 Baker Resource Management Plan as an area containing characteristics that would be consistent with wilderness or Wilderness Study Area definitions. Under current direction to re-assess project areas for Wilderness Characteristics, the Pritchard Creek planning area was reviewed and the resulting Characteristic Inventory is available at the Baker Resource Area Office upon request.

3.9.3 Alternative 1

Under the no action alternative, the recreation resources existing within the Pritchard Creek planning area would remain as they currently exist, with a slight downward trend due to the slow but continual decline of the vegetation quality. Hunting, hiking, horseback riding, and OHV use along with all other forms of dispersed recreation on public lands would occur as they have in the past; however, these recreational opportunities over time would decrease in quality as well as quantity.

3.9.4 Alternative 2

Under this alternative, the overall condition and structure of the vegetation, as well as improved water sources, would slightly enhance the variety and quality of the recreational experience of the area as well as improve the general view and aesthetics to the casual observer. The slow improvement of the vegetation/riparian condition over time would benefit the recreational use of the area by creating more diverse “edge” style vegetation between the arid uplands and the riparian/spring areas. This improvement to the habitat as well as the aesthetic view of the area would begin to enhance the recreational experience in general for all users of the area over time. In addition, some of the fencing and pipeline proposals may impact OHV trails in the area. However, this OHV use is dispersed and random due to the “Open” designation of the area and the public will adjust their uses and access points accordingly.

3.9.5 Alternative 3

Under this alternative, the impacts would be the same as Alternative 2 except that vegetation recovery would occur at a faster rate due to the elimination of grazing for a period of 3 years and reduced number of AUMs. Overall, the benefits to the recreation resource would be the same as Alternative 2 except that the benefits would occur at a faster rate, which would encourage recreational users to the area.

3.9.6 Alternative 4

Under this alternative, recreational uses of the area would be impacted the same as in Alternative 3.

3.10 Human Uses and Values (Socio-Economic Impacts)

3.10.1 Land Use Plan Objectives and Geographic Unit Resource Condition Objectives

The Baker RMP (USDI 1989, 14) provides direction to continue to authorize grazing permits/leases while restricting or excluding grazing in areas where livestock use results in significant resource damage.

3.10.2 Affected Environment

The Pritchard Creek allotment currently has cattle and sheep grazing authorized on four different pastures. Assessment of the rangeland health standards has indicated one or more of the standards are not being met in all four pastures. Current BLM regulations and guidance direct the BLM to make changes to livestock management in areas where standards are not being met. There are currently four different permittees grazing livestock within the allotment, and the implementation of changes in management could affect one or more of the permittees.

The four permits are held by relatively small, family-owned livestock operations. For smaller family operations, economic setbacks or other production limitations may greatly challenge their ability to remain viable and a part of the community in which they choose to live. The livestock industry is not alone in facing potential changes to preferred lifestyles and ways of generating income. The same type of economic pressures and concerns about maintaining a way of life that are affecting permittees, are also affecting other commodity producers and businesses.

Aside from the AUM changes described in this EA, ranch viability (e.g., sustainable ranching operations capable of supporting families and paying for necessary additional help) will likely be influenced by factors beyond BLM control. These factors may involve livestock price fluctuations, foreign competition, transportation and fuel costs, public land forage limitations due to drought, winter livestock feeding costs, private pasture rental fees, and other similarly unpredictable factors. These and other factors have already been affecting Baker County agriculture, as can be seen in the USDA “2002 Census of Agriculture for Baker County” (USDA 2002). According to this census, from 1997 to 2002, the number of farms decreased 7%, the land in farms decreased 9%, the average size of farms decrease 2%, and the market value of production decreased 8% in Baker County. The market value of production figures includes both crop and livestock sales with livestock sales accounting for approximately 76% of the total. The census also

indicates that almost 72% of the farmland in Baker County is for pasture, with approximately 17% in cropland and about 10% in woodland, and less than 1% in other uses, further highlighting the importance of the livestock industry to Baker County.

Although small or corporate classes of livestock operations both contribute social and economic benefits to eastern Oregon, economic challenge to smaller family operations is probably most likely to harm the social fabric of small communities such as Durkee. This would be especially true if permittees were forced to leave the area because of financial stress. Family operations are typically of great importance to county governments and even to some of the general public. BLM is concerned about and aware of the potential socio-economic consequences of grazing permit actions. Nevertheless, permit renewal decisions in this analysis area must balance the need to reasonably support the social fabric and economies of small communities as well as maintain the public land natural resource base upon which the livestock industry relies. Thus, BLM decisions must be crafted in light of the public land's capacity to support livestock herds. And where the livestock carrying capacity is limited by rangeland site potential or where studies indicate that AUMs need downward adjustment, BLM is compelled by law and by federal regulation to take actions that will result in sustainable grazing use and functioning rangelands, according to the S&Gs and 43 CFR§4180.

Government-issued permits to graze livestock on public land are an important factor of production for sheep and cattle ranchers in the West. Approximately 22% of western cattle producers and 19% of western sheep producers hold federal permits from the BLM or the USFS (USDI 1994). The permits are linked to privately-owned base property and enhance the productive capacity of private property by providing additional forage during certain seasons. This allows for rest, or production of hay or other forage on private property. A common practice is to produce alfalfa or grass hay on irrigated pastures during the summer when cattle are on public rangeland.

Ranch value and borrowing ability are usually based on cash flow. With additional production capacity, holders of federal permits often increase ranch value and borrowing ability. These values often persist when the base property is sold or passed on to heirs since historically, permits are reissued to the new owner of the base property. Although holding a federal permit can create additional cash flow and wealth for individual ranchers, permits have no legally recognized value as private property. Terms and conditions of permits are commonly changed, especially at times of re-issuance or renewal. Changes in the timing and amount of permitted grazing will affect individual ranchers.

3.10.3 Limitations to BLM Socioeconomic Impact Estimates and Assumptions for This EA

BLM has no access to individual permittee financial records. Further, the Vale District BLM does not intend to request financial records from ranchers for socio-economic analysis purposes. Consequently, this EA section estimating socio-economic impacts to permittees will only address 1) AUM changes, and 2) increased or decreased rangeland project maintenance costs.

Because BLM cannot conduct a thorough and accurate analysis of how permitted AUMs may affect individual ranchers economically, it is also not possible to predict accurately the consequences to ranches under AUM reductions. Nevertheless, for impact analysis purposes, BLM assumes in this EA that existing BLM permittee operations would probably be less profitable under Alternatives 3 or 4, if AUM reductions of 27% are implemented. This may or may not lead to existing ranches becoming economically unviable. The BLM also assumes that if existing ranches fail, some other corporation or individual may step in to purchase the base property and grazing privileges. It is not possible to foresee which base properties, if any, may change out of livestock production and into some other form of business. In the event that they do remain active for livestock production, the industry as a whole would continue to exist in and around the community of Durkee, but under different ownership and likely with reduced income.

Permanently reduced ranch income following base property sale may not be a certainty for several reasons:

- There may be avenues for supplementing livestock-generated income from ranch properties and adjoining public lands that have not been explored by existing permittees.
- There may be other opportunities possible that would allow permittees to remain within the community, but due to their nature, are unacceptable. Examples may include dude ranches, bed and breakfasts, or sale of hunting rights.
- Base property purchasers may not be under the same financial burden or income demand currently affecting existing permittees. Thus, reduced income may not necessarily mean conversion of base property away from livestock production.
- Reduced livestock herds do not always result in insufficient income generation over the long term. Some permittees in the county choose to run reduced livestock numbers and they still make adequate profits derived from increased livestock weight gains instead of relying upon higher livestock numbers or AUMs.

In conclusion, it is important to note that BLM is directed by the Taylor Grazing Act to take actions that will stabilize the livestock industry that is dependent upon public rangeland forage. In light of the Vale Project and other rangeland development actions taken over the last 40 years, the Vale District BLM has gone the extra mile to meet this goal of stabilizing the industry. However, it may not be possible for Vale BLM to guarantee that every existing livestock permittee will survive as an economic unit or in a manner to which existing ranchers are accustomed. Where substantial downward AUM adjustments are necessary to meet the objectives for livestock grazing management in the Baker RMP and the S&Gs in conformance with 43 CFR § 4180, some permittees could conceivably be forced into sale or lease of their base properties.

3.10.4 Alternative 1

This alternative would result in the smallest economic disruption to the permittees ranching operations in the short term (less than 2 years). The project maintenance schedule would impose additional costs to the permittees but the authorized AUMs would remain the same and timing of grazing would stay as currently authorized. Since the current management is not achieving rangeland health standards, it is reasonable to assume that over time authorized AUMs will probably need to be reduced if monitoring shows that the utilization standards and rangeland health standards cannot be achieved with the current level of AUMs, which would result in economic impact in the long term (3 years or more).

3.10.5 Alternative 2

This alternative would cause the permittees to incur more costs associated with range improvements and maintenance while allowing the current authorized number of AUMs. A large investment would be needed by the permittees and by the BLM to drill the proposed well and install the proposed tanks and pipeline. This system would also require maintenance, which would be the responsibility of the permittees. There is also uncertainty about the production capability of the proposed well. There are no current wells in the same vicinity and topography, so there is a chance that the well would not produce enough water to supply the entire 15 miles of proposed pipeline and associated tanks and troughs, which may lead to a negative return on the investment of the proposed well.

Additional unknown impacts associated with the well drilling could be positive or negative related to other resources within the allotment. For example, the well and pipeline may successfully reduce concentration of livestock in the riparian areas; however, increased congregation in the uplands may lead to impacts there, which may still require a reduction in the number of AUMs to successfully meet all rangeland health standards.

This alternative has the most unknown or un-quantifiable socio-economic impacts.

3.10.6 Alternative 3

This alternative would result in the greatest short-term economic impact to the permittees' ranching operations. Some permittees may have to find and pay for alternative grazing areas during the 3 years the BLM pastures are rested, or reduce their livestock herds during this time.

In the long term (3 years or more) the allowable AUMs would be reduced by 27% over what is currently authorized, resulting in the need for permittees to find additional grazing areas, to graze livestock on their base property for longer, reduce their herd size, and/or feed their cattle for longer periods each year.

3.10.7 Alternative 4

The proposed action would result in economic effects to the permittees' ranching operations in the form of reduced numbers of cattle or increased costs for alternative grazing areas. The short- and long-term impacts would be the same as the long-term impacts described in Alternative 3.

3.11 Cultural Resources

3.11.1 Land Use Plan Objectives and Geographic Unit Resource Condition Objectives

Cultural Resource Condition Objective

- Protect and preserve the information potential and public values of cultural resources (USDI 1989).

Management Direction

- Protect and enhance cultural resources through management of cultural properties for information potential, public values, and conservation in 10 management areas identified for high cultural values.

Pritchard Creek Geographic Unit Resource Condition Objectives

- Protect and preserve the information potential and public values of cultural resources (USDI 1989).

Management Actions

- Inventory and evaluate cultural properties in response to other resource project proposals and management actions. Conduct periodic patrols to discourage vandalism. Coordinate management of cultural properties with other resource activity plans (USDI 1989).

3.11.2 Affected Environment

The Pritchard Creek geographic unit is located in the Blue Mountains physiographic province, at the interface of the Columbia Plateau and Northern Great Basin areas. Archaeological evidence indicates that northeast Oregon was inhabited by Native American people for millennia, with indications of use in the uplands of the Blue Mountains region dating back as early as 8-10,000 years before the present. Sites that date from the earliest occupation of the region include base camps for seasonal hunting and gathering, lithic procurement, and plant gathering and processing. Prehistoric inhabitants hunted bison, mountain sheep, pronghorn, deer and elk, and other large and small game. Sites near Ladd Canyon provide evidence of prehistoric camas bulb processing. Since about 5000 years ago, housepit villages and specialized hunting and gathering sites appear in the archaeological record for the region, with evidence for increased sedentism and reliance on fishing. At the time of early historic contact, the upland mountainous areas were occupied and used on a seasonal basis by tribes of both the Columbia Plateau and Great Basin areas. Tribal groups in the region included the Cayuse, Umatilla, Walla Walla, Nez Perce, Northern Paiute, and Shoshone. Descriptions of the ethnographic lifeways of these tribes are provided in Stern (1998), Walker (1998), Fowler and Liljeblad (1986) and Murphy and Murphy (1986).

The Burnt River watershed is situated in a zone where resources were exploited by tribes of both the Plateau and northern Great Basin. Generally, the Cayuse occupied and used the Blue Mountains, and the Burnt River and Malheur River areas were occupied and used by the Northern Paiute. The Cayuse, Umatilla, and Walla Walla had winter villages on mainstem rivers and tributaries of the Umatilla, Walla Walla, and Columbia Rivers. Paiute groups wintered in the Harney Valley and John Day Basin, and probably along the lower Malheur River. According to Blyth (1938, 403), Paiute people traveled as far east as Baker City in their seasonal rounds. Historic records mention encounters with the Cayuse in the Baker Valley. Accounts of usual and accustomed places used by the Cayuse, Umatilla, Walla Walla, and Nez Perce specify traditional use locations in the Powder River drainage (Suphan 1974), and Verne Ray argues that Cayuse traditional areas expanded south in the 19th century after the acquisition of the horse (Ray et al. 1938).

In the spring through fall, these tribes journeyed into the mountain uplands and into the Powder and Burnt River drainages for plant gathering, hunting, and fishing. Bands assembled at favored resource grounds, where socializing and trade occurred. The Grande Ronde Valley and Farewell Bend on the Snake River were gathering and trading places for many tribes. Plateau groups depended on salmon and roots for primary subsistence, and located their winter villages at low elevations on major rivers. In the late spring and summer, highly mobile family groups moved to higher elevations to gather root crops. Use of the uplands continued through summer and fall for fishing, hunting, gathering roots and berries, processing food for immediate use, and returning stores of food to lower elevation villages for winter use.

Many species of plants, game, and fish were important in the subsistence, lifeways, and economy of the tribes. Some important plants included root crops of camas, lomatiums, yampah, and bitterroot; and fruit plants such as serviceberry, chokecherry, huckleberry, current, hawthorn, and elderberry. Important terrestrial animals hunted by the tribes included bison (during precontact times), deer, elk, mountain sheep, pronghorn antelope, game birds, and small mammals such as rabbits and marmot. Anadromous and resident fish formed a significant part of the diet. Upland and riparian plants observed in the Pritchard Creek GU include serviceberry, chokecherry, current, elderberry, hawthorn, lomatiums, and yampah. The relative abundance of these plants has not been documented. Informal observation suggests that cultural fruit shrubs in the riparian areas are diminished in diversity and abundance relative to the potential of the stream drainages. Upland rangeland observations have noted the presence of lomatiums (species not documented), which could be common on gravelly ridges in the allotment. Yampah may be found in pockets along spring tributaries to Pritchard or Lawrence Creek. Game animals observed in the GU include pronghorn, deer, elk, and sage-grouse. The only resident fish in streams in the geographic unit are redband trout. Although BLM is not aware of current, ongoing tribal use of the allotment to procure traditional plants or hunt game animals, the potential for use might be inferred by the presence of resources of traditional interest.

Wilson Price Hunt, who crossed the Blue Mountains from the Snake River to the Columbia in the winter of 1811-1812, provided the first written record of travel through the area. In the Grande Ronde valley, Hunt stopped briefly at a winter camp of "Chochonnis," before proceeding over the mountains to the winter villages of the Cayuse and Umatilla bands on the Umatilla and Columbia Rivers. Robert Stuart passed near the Pritchard Creek area on his journey east in 1812 and probably followed the course of Alder Creek from the Baker Valley. Fur traders Peter Ogden, John Work, and Nathaniel Wyeth explored and trapped on reaches of the Snake, Burnt, and Powder Rivers in the 1820s and 1830s. A sketch map prepared by William Kitson in 1824-1825 shows a route followed by fur traders along the Burnt River (Brule) canyon to the Durkee valley area, and then over hills to the Powder River. In August 1834, naturalist John Kirk Townsend traveled through the Durkee valley area with fur trapper Nathaniel Wyeth. Townsend wrote of an encounter with a family of "Snake" Indians (probably Northern Paiute people) who were camped on the Burnt River and from whom they obtained dried chokecherries.

At least 60,000 emigrants traveled over the Oregon Trail through the Burnt River and Durkee valley between 1843 and the 1860s. Gold was discovered on a Powder River tributary near Auburn in 1861, launching a rush to placer mines on the Burnt and Powder Rivers. The probable route of the Oregon Trail from Alder Creek to the Powder River ascended Straw Ranch Creek to cross the hills to Virtue Flat (Evans

1990). As early as 1866, transportation routes from the Burnt River to the Powder River had been improved. An alternate route used by some emigrants in the 1860s ascended lower Pritchard Creek to cross the hills on a route to the middle Powder River valley and on to the early village at Union (Delila Wait Journal 1866). The main wagon and stage route through the Burnt River canyon and up Alder Creek to Baker City had been established as a toll road in the early 1860s. This route generally follows the route of present day Interstate 84. It was improved in the 1860s to the 1870s to serve as a regular stage and travel route connecting the Umatilla Landing on the Columbia River to Baker City and Boise.

The Burnt River valley near Durkee was settled shortly after the Express Ranch was established as a stage station in 1862 along the route of the Baker-Boise stage road. C.W. Durkee opened a post office at Express in 1865 and the location was renamed Durkee when the railroad bought a right of way in 1883. C.W. Durkee held one of the first water rights on Pritchard Creek. The railroad was built from Huntington through to Baker City 1884, and was routed on a curve north into lower Pritchard Creek near Durkee. The 1874 General Land Office surveys for townships in the Pritchard Creek area show the Uniontown road along Pritchard Creek. Except for the Baker-Boise stage road along Alder Creek and the Uniontown road up Pritchard Creek, no improvements or homesteads were identified in the Pritchard Creek GU during the 1874 General Land Office survey. The surveyor noted that the townships were covered with bunchgrass and was considered chiefly valuable for raising stock. Census records show that around the 1880s farming was an important economic activity in the Durkee valley and Burnt River canyon. Most farmers operated ranches, used the summer range of the surrounding mountains for grazing, and cultivated hay and other forage crops in the valley for livestock which included cattle, sheep, and hogs (Kirby 1989). Livestock grazing has been occurring in the Pritchard Creek allotment for 100 years.

Approximately 0.8% of the allotment has been inventoried for cultural resources. Most of the stream reaches, springs, and uplands of the allotment have not been surveyed. Two prehistoric lithic scatter sites, isolated finds, and one historic log trough site are in or adjacent to the geographic unit. The route of the Uniontown wagon road through the allotment has not been field verified. Some limited, preliminary field reconnaissance for early historic wagon routes has been undertaken by volunteers. The wagon road was probably along the course of present day unimproved roads through the allotment.. The route of the Oregon Trail on Straw Ranch Creek, as identified by the National Park Service, is located outside the allotment. Evidence for alternate emigrant routes could be identified by future reconnaissance or inventory.

The prehistoric evidence suggests upland hunting and limited lithic procurement were activities carried out in the allotment, with possible plant gathering suggested by one record for groundstone at a prehistoric site (site number, 35 BA 198). There are no known obsidian lithic sources in the allotment, but milky white cryptocrystalline silicate and quartzite raw material can be found. Most of the stock water projects (springs, reservoirs, and upland waterholes) were developed from the 1950s to 1970s and have not been surveyed for cultural resources. Impacts at the recorded lithic scatters include livestock trampling and probably trampling.

General Effects to Cultural Resources Common to All Alternatives

Although survey information is lacking for most of the allotment and existing water developments, it is assumed that there are unidentified prehistoric sites and isolated artifacts within the area, and that these are likely to be located at or near to natural perennial water sources. Since livestock tend to congregate at water sources, and congregation can result in surface and/or subsurface trampling, displacement of archaeological material and erosion effects to prehistoric sites, there are likely ongoing impacts to previously unidentified archaeological sites within the allotment. Known or potential cultural site locations adjacent to riparian areas are particularly vulnerable to direct or indirect effects associated with livestock use. Given the lack of inventories and definitive cultural resource information for most of the allotment, these assumptions are made for analysis of potential effects of grazing management alternatives.

Under all alternatives, utilization standards would be implemented, and should result in varying degrees of improvement for known and for previously unidentified cultural sites, compared to current conditions. It is assumed that utilization standards will facilitate maintenance or recovery of stabilizing vegetation in upland

and riparian areas, and would reduce potential for soil erosion that may affect cultural sites. Implementing utilization standards would facilitate better livestock distribution and reduce potential effects to sites because once the utilization standard is met it would be required to move livestock out of the pasture. Generally, well-dispersed and well-distributed livestock grazing should have little effect to archaeological resources.

New water developments, and ground disturbing maintenance or reconstruction of existing water developments (the latter includes at least 40 springs, reservoirs, or waterhole projects developed between 1950-1976) could directly disturb previously unidentified archaeological sites and have indirect effects where livestock congregate around the water source. Livestock congregation, trailing, and bank shearing along perennial streams and springs can directly disturb site context, and excessive grazing of grasses and forbs can promote erosion of site soils by removal of vegetative cover. Salting at prehistoric site locations can result in stock trampling and sheet erosion which disturbs site context. This can be minimized by locating salt/mineral stations on existing roads.

Effects to terrestrial wildlife and fish habitat are described under those sections of the EA.

Direct and Indirect Effects to Cultural Resources Common to all Alternatives

Potential effects to archaeological cultural properties include trampling leading to horizontal and vertical displacement of archaeological or historic remains, artifact breakage, depletion of vegetation which increases the potential for erosion of sites, and destabilization of streambanks at site locations used by livestock. Since grazing has occurred in the allotment for the past 100 years, it is likely that archaeological surfaces in the area have been affected. Effects are most likely to occur to sites around water sources or at salt stations, where livestock tend to congregate. To the extent that any alternative reduces grazing impacts in sensitive locations adjacent to riparian areas or water sources, reduces soil erosion, and results in better distribution of livestock, then the potential short- and long-term effects to cultural resources are reduced.

Use by sheep in the Lawrence pasture, with herding, could affect previously unidentified cultural sites if the sheep congregate in riparian areas. Herding the sheep would minimize potential impacts to the riparian zones. The nature and degree of effects to any previously unidentified sites in the Lawrence pasture would not be known until the area is inventoried for sites and current or potential condition under grazing use.

Under all alternatives spring grazing use of uplands would occur. Spring grazing use of the upland areas could reduce upland cultural plant visibility and vigor.

Maintenance of existing projects would help alleviate congregation of livestock along stream bottoms and improve livestock distribution. In cases where no cultural resources are located at or near to existing projects, maintenance would probably have no effect on sites. Where cultural resources may be present at existing projects and may be affected by stock use or maintenance, these effects would be ongoing until mitigation measures are applied. Inventories of water development projects prior to new ground disturbing maintenance or reconstruction would provide an opportunity to identify and develop measures to mitigate grazing effects at known water sources. Mitigation measures for existing projects may include project redesign, abandonment, or fencing to exclude livestock from site areas.

3.11.3 Alternative 1

Although the application of utilization standards should have a beneficial effect across the allotment landscape, there would be no reduction of overall AUMs and current grazing management may accentuate trampling effects on any sites that may be present in riparian areas or adjacent to perennial streams. The present number of AUMs has led to current conditions, which may have had an affect to previously undiscovered sites in high probability site location zones. Continuous grazing may intensify effects such as soil churning, displacement of artifacts, artifact breakage, and erosion of site matrix over the short term and long term. There is no specific information on the effects of the current grazing regime on cultural plant populations, except for the lack of diversity and limited distribution observed for riparian fruit bearing cultural plants. Upland plant evaluations provide a general indication of trends and effects of the current grazing regime, and are described elsewhere in this document. Cumulative and long-term grazing impacts Pritchard Creek Geographic Unit Environmental Assessment EA# OR-030-08-002

to soils, streams and riparian/wetland areas would continue, and cultural sites in those areas would not be stabilized or protected by actions to reduce livestock numbers (with potential for reducing congregation), reduce soil erosion, or facilitate vegetative recovery.

3.11.4 Alternative 2

Utilization standards will aid vegetative recovery, but this alternative would not reduce overall AUMs. The present number of AUMs has led to current conditions, which may have had an affect to previously undiscovered sites in high probability site location zones.

The permittee-proposed project to develop a well and 15 miles of pipeline with several upland water troughs has not been surveyed for cultural resources, and so the direct and indirect effects of the project are undetermined. If present, cultural resources in the proposed development could be affected by ground disturbance and indirectly affected by livestock use around troughs. Development of a major water facility in the uplands would require prior cultural inventory and may result in project design changes or abandonment of portions of the project to avoid any identified cultural resources.

Better upland distribution of livestock provided by well/pipeline/trough and fence placement could increase uniformity of livestock distribution, and reduce some of the tendency of livestock to congregate along streams where sites may be present. Inventories of water development projects prior to new ground disturbing maintenance or reconstruction would provide an opportunity to identify and develop measures to mitigate grazing effects.

Cumulative and long-term grazing impacts to sites near water sources may continue if the new project development does not alleviate livestock congregation or does not achieve reduced use of sensitive riparian or perennial stream areas by livestock.

3.11.5 Alternative 3

Implementing utilization standards and reductions in AUM could shorten the amount of time livestock would spend in congregation areas and could have less affect on cultural sites than Alternative 1 or Alternative 2. Improvement over the existing condition would occur more rapidly over the short term due to the 3 years of rest that would precede these changes.

Mitigation of grazing impacts at existing water projects should help stabilize site soils and vegetation. This should reduce potential trampling effects to cultural resources and could thus affect cultural resources at a lower intensity than Alternative 1 or Alternative 2.

Three years of rest and reduced overall numbers of livestock could increase the likelihood that cultural plants would improve in vigor. Three years of rest would also provide more opportunity for recovery of riparian and upland vegetation and reduction of erosion in bare soil areas.

Cumulative and long-term grazing impacts to sites in riparian and upland areas would likely be less intense than Alternative 1 or Alternative 2 partly because of reductions in livestock numbers and better distribution of livestock achieved through project maintenance and implementation of utilization standards. This alternative could facilitate preservation of sites through long-term improvement of riparian conditions and reducing soil erosion.

3.11.6 Alternative 4

Implementing utilization standards and reductions in AUM could shorten the amount of time livestock would spend in congregation areas and could have less intensity on cultural sites than Alternative 1 or Alternative 2. Improvement over the existing condition would occur less rapidly over the short term than in Alternative 3.

Reduced numbers of livestock, and better upland distribution and rotation of livestock across seasons could increase uniformity of livestock distribution, and reduce some of the tendency of livestock to congregate
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along perennial streams where sites may be present. These measures should reduce trampling effects to cultural resources and would thus affect cultural resources at a lower intensity than Alternative 1 or Alternative 2.

Cumulative and long-term impacts to sites in riparian and upland areas would likely be less intense than in Alternative 1 or Alternative 2 partly because of reductions in livestock numbers and better livestock distribution achieved through project maintenance and implementation of utilization standards. The alternative could facilitate preservation of sites through long-term improvement of riparian conditions and reducing soil erosion.

4 CUMULATIVE EFFECTS ANALYSIS

Table 4 shows the cumulative effect of the implementation of each alternative to the resources, by alternative.

Table 4. Cumulative Effects Expected to Resources from Each Alternative Compared to Existing Condition

Cumulative Effects Expected to Resources from Each Alternative Compared to Existing Condition				
- = NEGATIVE IMPACTS; -- = MOST NEGATIVE IMPACTS; 0 = NO EXPECTED IMPACTS; + = POSITIVE IMPACTS; ++ = MOST BENEFICIAL IMPACTS				
RESOURCE	ALTERNATIVE 1 No Action	ALTERNATIVE 2 Permittee Alternative	ALTERNATIVE 3 No Grazing	ALTERNATIVE 4 BLM Proposed Action
Pritchard Creek Allotment #02014				
Wildlife and Special Status Species	-	0	++	+
Fisheries	-	-	++	+
Water and Riparian/Wetland Resources	-	- or 0 or +	++	+
Cultural Resources	-	- or 0	++	+
Rangeland Vegetation	-	-	++	+
Socio-Economic Issues	0	- or 0 or +	--	-
Grazing	-	-	++	+
Weeds	-	-	+	+
Recreation	0	+	+	+

4.1 Vegetation

Alternative 1 and Alternative 2

To reissue the grazing permits without modifications to the current license would cause cumulative effects from the continuance of grazing practices that would result in the riparian zones continuing a downward trend, and it would continue to be detrimental to recovery of upland vegetation. Alternative 2 would result in similar cumulative effects because the number of AUMs would not be changed.

Alternative 3

The cumulative effects of no grazing (for the first 3 years) would allow for riparian zone recovery, increased bank stability, vegetative cover, and more shading of streams by woody vegetation, and would also improve upland vegetation. However, this rest from grazing would not return the area to its desired condition immediately. The natural process of reseeding from existing native plants could take up to 30 to 50 years and is dependent on good viable seed production, good germination of that seed and enough soil moisture to allow seedlings to become established. This alternative could also increase fuel loads, possibly increasing wildland fire intensity.

Implementation of an improved grazing management strategy after the rest would insure that trends towards meeting S&Gs would continue.

Alternative 4

The cumulative effects of this alternative would result in similar effects as described in Alternative 3, but would occur at a slower rate because there would be no immediate rest for the pastures.

4.2 Soil and Water and Riparian/Wetland Areas

Alternative 1

Cumulative impacts which may result from Alternative 1 could include an increase in bare ground over reference conditions, which in turn could lead to increased soil erosion and sedimentation. Additionally, cumulative impacts to the riparian resource could include decreased shade resulting in increased stream temperatures.

Alternative 2

Cumulative impacts to the soils resource identified in Alternative 1 would also occur in Alternative 2. In addition, impacts to the quantity of flow produced by area springs could occur because of the proposed well. Beneficial impacts to Pritchard and Lawrence Creek could include increased riparian vegetation and diversity which should result in slightly lower stream temperatures in the long term.

Alternative 3

Cumulative impacts which may result from Alternative 3 could include a slow reduction in bare ground as less AUMs are authorized and as more vegetation slowly becomes established in the allotment. This in turn could lead to a slight reduction in soil surface erosion over what is currently occurring. Beneficial impacts to riparian habitat and water quality are also expected, including increased riparian vegetation and diversity, which should result in slightly lower stream temperatures in the long term.

Alternative 4

Cumulative impacts are most likely observed over the long term, but not immediately, as may be the case with direct and indirect impacts. As such, although this alternative does not incorporate the 3-year rest period as in Alternative 3, cumulative impacts of Alternative 4 would essentially be the same as Alternative 3; the beneficial impacts for soils, riparian, and water quality would not be observed in the short term, but would most likely be seen in the long term (greater than 5-10 years).

4.3 Fish and Aquatic Habitat

Alternative 1

There would be no expectation of any improvement of the fish bearing streams, wetlands, or riparian areas in this allotment with Alternative 1. Current management has impacted the fish habitat, fish numbers, and age classes. With this alternative, the stream habitat would continue to degrade creating bare soil, sediment, high stream temperatures, and poor water quality for fish habitat. This alternative would continue cumulative impacts to fish habitat that has occurred over the years.

Alternative 2

Alternative 2 may create fewer impacts to Pritchard and Lawrence Creek with the construction of the well and proposed drift fences, as compared to Alternative 1. If the well was completed and the drift fences built, there could be some recovery of vegetation, some reduction in bare soil, and improved water quality. However, without reductions in AUMs extended over time, it is unlikely that the cumulative effects to fish habitat would continue to occur.

Alternative 3

Fish habitat and fish populations have the highest potential to improve with Alternative 3. Rest from livestock grazing for 3 years would allow some recovery of fish habitat, and would improve water quality the fastest. Alternative 3 would stop the current impacts from occurring and give the area a chance to start recovering. This would give an opportunity for recovery of stream habitat that does not meet any of the standards. The cumulative effects that have occurred from grazing over the years, will be restored the very fastest through implementing Alternative 3. Resting the pastures, the eventual reduction of AUMs, and time, would promote the fastest restoration to fish habitat and would promote an upward trend in fish populations.

Alternative 4

The reduction in livestock and implementation of utilization standards proposed in Alternative 4 would promote recovery of fish habitat and fish populations, but at a slower rate than Alternative 3. This alternative will start improving the habitat due to changes of season-of-use and the reductions of AUMs. The current condition of fish habitat may continue in a downward trend for a few years until some of the improved habitat is realized.

4.4 Wildlife/Wildlife Habitat and Special Status Species

All Alternatives

Continued use in the current manner may lead to cumulative effects such as, but not limited to:

- Vegetative cover is not conducive to sage-grouse needs. Sage-grouse population and habitat may suffer further decline in suitable habitat if current management is continued.
- Overgrazing and current fire regimen would cause a lack of shrubs/native vegetation needed for thermo-regulation/hiding cover, poor native residual vegetation, and the spread of annual/exotic vegetation throughout the allotment.
- Patches of weed species or disturbed areas would encourage further establishment of weedy species.
- Impacts of cattle gathering in loafing areas would lead to compaction, the spread of weeds, and the loss of vegetation.
- More presence (cattle/stock riders) on the pastures may lead to a harassment of the wildlife, new constructed projects may interfere with wildlife migration routes, and new disturbance may lead to a new vector of weed establishment.
- Continued cumulative effects would result in a downward trend in the riparian zones and would be detrimental to the health of the upland vegetation.

4.5 Rangeland/Grazing Use

Alternative 1 and Alternative 2

Historical grazing of livestock and sheep has had a negative impact to the riparian and upland vegetation in most of the area. A partial change in livestock grazing was implemented according to AMP in the 1960s, but the full reduction was not implemented. To reissue the grazing permits without modifications to the current license would cause cumulative effects to the riparian zones, continuing the downward trend and preventing the attainment of Standard 2. Alternative 1 would also continue to be detrimental to recovery of upland vegetation. Alternative 2 would have the same cumulative effects because it would not reduce the number of AUMs.

Alternative 3

The cumulative effects of the no grazing alternative would allow for riparian zone recovery, increased streambank stability and vegetative cover, and more shading of streams by woody vegetation and would improve upland vegetation. The cumulative effects on ranching operations would consist of further cutbacks on livestock use, which combined with other cutbacks over the years, could make the ranching business increasingly difficult.

Alternative 4

Decrease of livestock use in riparian zones, or springtime use in riparian zones allowing summer and fall regrowth, would result in most of the riparian zones starting an upward trend and would continue to provide good water quality. Cumulative effects on the ranching operations would again involve livestock use on private pastures at a higher expense. However, it would not be as problematic for the ranching business as Alternative 3.

4.6 Noxious Weeds

Noxious weed management is an ongoing activity and would continue under all four of the alternatives. The proposed action would over the long term, result in the need for less herbicide use compared to Alternatives 1 and 2. Alternative 3 could also require less herbicide over time, but would require an increased effort in inventory during the 3 years of rest to be certain established weed sites were not expanding and that new weeds were not going undiscovered in taller, thicker vegetation.

4.7 Recreation, Off-Highway Vehicles, Visual Resources

Recreational use of the Pritchard Creek planning area will continue under all four of the alternatives as it has in the past. However, under the proposed action, improvements to the quality of recreational experiences in the planning area would be the greatest when compared to the other alternatives. Although each alternative other than the No Action alternative would benefit recreation to some degree, the Proposed action would be expected to have the most significant improvement in the shortest amount of time. Under the No Action alternative, recreation conditions in the area would remain mostly unchanged over time and no significant improvement would be seen.

4.8 Human Uses and Values (Socio-Economics Impacts)

Cumulative effects to socio-economics could include additional reductions in AUMs or season-of-use if utilization standards are not met. For permittees who graze in other BLM allotments, if standards are also not being met in these allotments, further impact to permittees ranching operations may occur such as reducing herd size, increasing grazing time on private land, and/or increased feeding.

4.9 Cultural Resources

Livestock grazing has occurred in the allotment for the past 100 years, and cumulative effects to known or unidentified sites from livestock grazing would continue until mitigation measures are implemented. There is a potential for disturbance effects to previously unidentified archaeological sites at high potential livestock congregation areas such as springs and areas adjacent to perennial streams. If these sites are not identified by future inventories, and mitigation measures are not applied, then the effects will continue.

Coupled with the standard design features, Alternatives 3 and 4 have more potential to improve range and riparian conditions over the long term, which could reduce disturbance effects to cultural resources.

5 MITIGATING MEASURES

5.1 *Soil and Water Resources and Riparian/Wetland Areas*

Meet or make progress towards meeting all S&Gs for each pasture every year or grazing will be rested the following grazing season, to promote healing of bare soil and restoration of riparian and wetland vegetation.

6 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES

There are no known or expected irreversible or irretrievable commitments of resources for Alternatives 3 and 4. Alternative 1 and 2 could lead to a steady decline of resource conditions that may be irreversible. These resources could include all those evaluated for the S&Gs.

7 MONITORING

BLM will use approved interagency resource monitoring methods, as described in the Pritchard Creek Evaluation document, and apply professional judgment in determining if the short- and long-term rangeland resource objectives stated in this EA are being achieved. BLM monitoring data will be interpreted by an interdisciplinary team of professionals in light of the best available data. Results of monitoring and management changes will be addressed in the Baker Resource Management Planning updates. As funding and priorities allow, periodic monitoring for potential grazing effects to known sites or sites that may be identified during future inventories will be performed in conjunction with rangeland use monitoring.

Monitoring techniques would include:

- Utilization monitoring procedures found in Technical Reference 1734-3. End-of-season utilization targets for upland herbaceous vegetation use would be 50%; riparian herbaceous vegetation use would be 45%; and browse/shrubs use would be 30%. Utilization monitoring will be conducted at critical riparian areas using the key species method. To improve the overall conditions of riparian and aquatic habitat, carrying capacities (determined at periodic evaluations, ideally every 5 years) would be calculated using the desired riparian utilization versus the observed riparian utilization over the evaluation period. In addition, year-to-year changes in grazing use will be based on the observed riparian utilization percentages; if the target utilization were exceeded by more than 5%, the following year's use will be adjusted to try to meet the target. If it again exceeds the target by more than 5% the next year, then a year of rest will be required.
- At any time during the grazing period, if utilization indicates that the target is close to being achieved, the permittee would take appropriate and necessary action to prevent the target from being exceeded. This type of action may include moving livestock from the pasture or allotment, shortening the season-of-use, more riding to move livestock for better distribution, or constructing fences to exclude livestock from the areas of concern.
- Trend plots will be established in at least two areas in every perennial stream in each of the four pastures. A trend plot could be established by using photo points in at least two areas on each stream to look at change over time. Photos will be taken every 2 years or when overgrazing has occurred in any one season.

- If after 5-10 years upward trend is not apparent, then stream surveys will be established on the perennial streams to evaluate changes that have occurred. If there is no improvement to bare soil with potential vegetation cover, riparian areas, or wetlands, then appropriate adjustments to AUMs and use will be reduced appropriately.
- An ODFW fish survey (funded by BLM) should occur on the fish-bearing streams every 5-10 years to document changes that have occurred. If there is no change in fish habitat or an increase in fish populations, then appropriate adjustments will be made to AUMs and season-of-use.
- Known noxious weed sites will continue to be treated, rehab as priorities and funding allow, under all four alternatives. Periodic inventory for new sites will occur as funding allows. Monitoring for treatment effectiveness will occur annually.
- Monitoring procedures are found in Technical Reference 1734-3. Monitoring livestock grazing would be done to ensure that management objectives and utilization targets for upland and riparian systems are met or moving in the right direction for restoration of the desired conditions, to prevent any degradation of these systems, and to improve the overall conditions of riparian and aquatic habitat. Thresholds for upland herbaceous vegetation use would be 50%; riparian herbaceous vegetation use would be 45%; and browse/shrubs use would be 30%.
- Rangeland trend plots will be monitored according to procedures in Technical Reference 1734-4.
- At any time during the grazing period, if utilization indicates that the target is close to being achieved, the permittee would take appropriate and necessary action to prevent the target from being exceeded. This type of action may include removing livestock from the pasture or allotment, shortening the season-of-use, more riding to move livestock for better distribution, or constructing fences to exclude livestock from the areas of concern.
- In accordance with BLM regulations at 43 CFR 4110.3, periodic reviews of the permitted grazing use will be conducted. Increases in permitted use can be made if supported by monitoring, field observations, ecological site inventory, or other data acceptable to the authorized officer, and if rangeland health standards, guidelines for livestock management, land use plan objectives, and activity plan objectives were being met.
- Any additional forage determined to be available on a sustained-yield basis would be used first toward restoring suspended AUMs of the permittees in the allotment. Priority for restoring suspended AUMs would go to permittees first in proportion to their contribution or stewardship efforts which resulted in increased forage production, and second to permittees in proportion to the amount of their permitted use.
- Periodic monitoring for livestock concentrations within known sage-grouse leks will be done to ensure permittee compliance with Design feature #20.
- Known or newly identified cultural sites will be monitored for grazing effects at least once during the 10-year term of the grazing permit. Additional monitoring may be conducted in conjunction with rangeland monitoring in the area. Monitoring to identify and document livestock grazing effects at known archaeological sites would be conducted by heritage staff and trained staff to be supervised in the field.

8 PEOPLE, AGENCIES, AND NATIVE AMERICAN TRIBES NOTIFIED

The following were notified regarding the actions proposed within this EA:

Permittees

Burns Paiute Tribe
Confederated Tribes of the Colville Reservation
Confederated Tribes of the Umatilla Indian Reservation
Confederated Tribes of the Warm Springs Reservation
Nez Perce Tribe
Fort McDermitt Shoshone-Paiute Tribes
Shoshone-Bannock Tribes of Fort Hall
Shoshone-Paiute Tribes of Duck Valley
Hells Canyon Preservation Council
Oregon State Historic Preservation Office
Oregon Department of Fish and Wildlife
Lydia Garvey

BLM provided a 30+ day comment period on the EA and held a public meeting to answer questions during this time period.

BLM received comments from the public and interested parties on this area at public scoping and EA meetings. During the preparation of the Rangeland Standards and Assessment, Evaluation and Determination process, permittees were involved and one public letter was received. Clarification of information within the Determination document resulted from this input.

During the public meeting on the EA, several questions and suggestions were offered by the public and permittees. Where appropriate, changes were made and points clarified to respond to the input provided.

Two letters were received providing comments on the EA. BLM has considered the comments carefully and made some clarifying edits to the document. Meetings with the individuals that commented were held, with information provided included into the final EA where appropriate.

9 EA AUTHORS

Staff Member	Profession	Education	Experience
Nancy Lull	Field Manager	B.A. Journalism, Boise State University	BLM 21 years
Gary Guymon	Rangeland Management Specialist	B.S. Range Science, Oregon State University	BLM 17 years
Craig Martell	Rangeland Management Specialist	B.S. Ag Production/Range Science, Montana State University	BLM 22 years
Pat Merrill	Range Technician	A.A.S. Range Management, Treasure Valley Community College	BLM 14 years
Melissa Yzquierdo	Wildlife Biologist	B.S. Wildlife Resource Management/ Rangeland Ecology Management, University of Idaho and Eastern Oregon University	BLM 8 years
Jon Sadowski	Wildlife Biologist (retired)	BS Wildlife Management, Humboldt State University, CA	BLM 32 years 2 years Environmental Contractor
Todd Kuck	Hydrologist / Soil Scientist / Supervisory NRS	B.S. Forest Resources Management, University of Montana	BLM 17 years
Mike Woods	District Noxious Weed Coordinator	B.S. Rangeland Resources, Oregon State University	BLM 34 years
Mary Oman	Archaeologist	M.A. Anthropology, University of Missouri	BLM 20 years
Dorothy Mason	Wildlife Biologist/ Document Preparer	B.S. Wildlife/Recreation/Range and Natural Resources, University of Nevada - Reno	BLM 33 years
Jackie Dougan	Fisheries Biologist	B.S. Fisheries, Oregon State University	BLM 10 years; USFS 20 years

10 LIST OF WORKS CITED

- Blyth, Beatrice. 1938. Northern Paiute bands in Oregon. In "Tribal distribution in eastern Oregon and adjacent regions," eds. Verne Ray et al. *American Anthropologist* 40:402-405.
- Clary, W.P., N.L. Shaw, J.G. Dudley, V. A. Saab, J.W. Kinney, and L.C. Smithman. 1996. Response of a depleted sagebrush steppe riparian system to grazing control and woody plantings. U.S.D.A. For. Serv., Gen. Tech. Rept. INT-RP-492.
- John A. Crawford, Olson R.A, West N. E, Mosley J. C, Schroeder M A, Whitson T.D, Miller R.F, Gregg M.A, and Boyd C.S. 2004. Synthesis Paper Ecology and Management of Sage-grouse and Sage-grouse Habitat. *Journal of Range Management*. Vol 57(1)
- Evans, John. 1990. Powerful Rockey: the Blue Mountains and the Oregon trail, 1811-1883. La Grande, Oregon: Eastern Oregon State College.
- Fowler, Catherine S., and Sven Liljeblad. 1986. Northern Paiute. In *Great Basin, handbook of North American Indians, volume 11*, ed. Warren L. D'Azevedo, 435-465. Washington DC: Smithsonian Institution.
- Hagen, C. A. 2005. Greater sage-grouse conservation assessment and strategy for Oregon: A plan to maintain and enhance populations and habitat. Salem, OR: Oregon Department of Fish and Wildlife.
- Hagen Christian 2008 ODFW State sage-grouse guidelines; lead author of *Greater Sage-Grouse Conservation Assessment and Strategy for Oregon: A Plan to Maintain and Enhance Populations and Habitat*. Communication of rotation schedule for Pritchard Creek Allotment [Personal Communication 5/21/08]
- Kirby, V. S. Skinner. 1989. True buckaroo tales from the vanishing West. Baker City, Oregon: Record Courier Printers.
- Kovalchick, B. L. and W. Elmore. 1992. Effects of cattle grazing systems on willow dominated plant associations in central Oregon, p. 111–119. In: W.P. Clary, E.D.
- McArthur, D. Bedunah, and C.L. Wambolt, (eds.) Proc. Symposium on Ecology and Management of Riparian Shrub Communities, U.S.D.A. For. Serv., Gen. Tech. Rept. INT-GTR-289.
- Mosley, J.C., P.S. Cook, A.J. Griffis, and J. O'Laughlin. 1997. Guidelines for managing cattle grazing in riparian areas to protect water quality: Review of research and best management practices policy. Univ. Idaho For., Wildl. and Range Policy Analysis Group Rept. 15
- Murphy, Robert F., and Yolanda Murphy. 1986. Northern Shoshone and Bannock. In *Great Basin, handbook of North American Indians, volume 11*, ed. Warren L. D'Azevedo, 284-307. Washington DC: Smithsonian Institution.
- Myers, L.H. 1989. Grazing and riparian management in southwestern Montana, p. 117–120. In: R.E. Gresswell, B.A. Barton, and J.L. Kershner (eds.) Practical Approaches to Riparian Resource Management—An Educational Workshop, U.S.D.I.-B.L.M., BLM-MT-PT-89-001- 4351.
- Oregon Department of Environmental Quality. 2006. DEQ's 303d list of water quality limited waterbodies and Oregon's criteria used for listing waterbodies. Portland, Oregon: Oregon Department of Environmental Quality.

Oregon Department of Environmental Quality. 2006. Oregon 2004/2006 integrated report. Portland, Oregon: Oregon Department of Environmental Quality.

Oregon Department of Fish and Wildlife. 1990-95. Oregon Department of Fish and Wildlife aquatic inventory project. Portland, Oregon: Oregon Department of Fish and Wildlife.

Oregon National Heritage Program. 2004. Rare, threatened, and endangered species of Oregon. Portland, Oregon: Oregon National Heritage Program.

Ray, Verne F., G. P. Murdock, B. Blyth, O. Stewart, J. Harris, E. Adamson Hoebel, D. B. Shimkin. 1938. Tribal distribution in eastern Oregon and adjacent regions. *American Anthropologist* 40: 384-415.

Mary M. Rowland, Michael J Wisdom, Lowell H Suring, Cara W Meinke. 2006. Greater sage-grouse as an umbrella species for sagebrush-associated vertebrates. *Biological Conservation*. Vol. 129 pg 323-335

Shaw, N.L. 1992. Recruitment and growth of Pacific willow and sandbar willow. seedlings in response to season and intensity of cattle grazing, p. 130–137. In: W.P. Clary, E.D. McArthur, D. Bedunah, and C.L. Wambolt (eds.) Proc. Symp. on Ecology and Management of Riparian Shrub Communities. U.S.D.A. For. Serv., Gen. Tech. Rept. INT-289.

Stern, Theodore. 1998. Cayuse, Umatilla, and Walla Walla. In *Plateau, handbook of North American Indians volume 12*, ed. Deward Walker, 395-419. Washington DC: Smithsonian Institution.

Suphan, Robert. 1974. Ethnological report on the Umatilla, Walla Walla, and Cayuse Indians relative to socio-political organization and land use. In *Oregon Indians II American Indian ethnohistory: Indians of the Northwest*, ed. David Agee Horr, 85-180. New York and London: Garland Publishing Company.

USDA National Agricultural Statistics Service. 2002. *2002 census of agriculture county profile. Baker, Oregon*. USDA. <http://www.nass.usda.gov/census/census02/profiles/or/cp41001.PDF>

USDA Natural Resources Conservation Service. 1997. Soil survey of Baker County area, Oregon. In cooperation with the Department of Interior, Bureau of Land Management, the Forest Service and the Oregon Agricultural Experiment Station. Baker City, Oregon.

USDI Bureau of Land Management. 1969. Manual H-1741-02, Water developments. Lakewood, CO: BLM National Business Center.

USDI Bureau of Land Management. 1981. Final Ironside grazing management environmental impact statement. Portland, OR: Oregon State Office BLM.

USDI Bureau of Land Management. 1989. Baker resource management plan record of decision. Baker City, OR: Vale District BLM, Baker Resource Area.

USDI Bureau of Land Management. 1989. Manual H-1741-01, Fencing. Lakewood, CO: BLM National Business Center.

USDI Bureau of Land Management. 1994. Rangeland reform '94, draft environmental impact statement. Washington DC: GPO.

USDI Bureau of Land Management. 1996. Technical Reference 1734-3. Utilization studies and residual measurements. Interagency Technical Reference 1734-3. National Applied Resource Sciences Center, Denver CO.

USDI Bureau of Land Management. 1996. Technical Reference 1734-4. Sampling vegetation attributes. BLM/RS/ST-96/002+1730.

USDI Bureau of Land Management. 1997. The standards for rangeland health and guidelines for livestock grazing management for public lands administered by the BLM in the states of Oregon and Washington. Portland, OR: BLM Oregon/Washington State Office.

USDI, Bureau of Land Management. 2004. Escape Ramps in Water Developments. Instruction Memorandum No. 2004-156.

USDI Bureau of Land Management. 2007. Rangeland standards assessment, evaluation, and determination. Pritchard Creek geographic unit, Pritchard Creek grazing allotment. Baker, OR: Vale District BLM, Baker Resource Area.

Wait, Delila. 1866. Journal. Typescript copy, Baker County Library. Baker County, Oregon.

Walker, Deward. 1998. Nez Perce. In *Plateau, handbook of North American Indians volume 12*, ed. Deward Walker, 420-438. Washington DC: Smithsonian Institution.

Winward A.H. 2000. Monitoring the vegetation resources in riparian areas. USDA For. Serv. Gen. Tech. Rept. RMRS-47.

11 APPENDICES

11.1 Appendix 1 - Project Maintenance Schedule

Appendix 1 Summary and Assignment of Maintenance Responsibility of Range Projects for Allotment #02074								
TBA= to be assigned								
Number	Name	Tnship	Range	Sec.	1/4,1/4	Condition	Responsibility	Maintenance Completion Date
400	Dry Gulch Spring	10 S	42 E	34	NENE	Poor	T,S	2008
478	A Reservoir	10 S	42 E	21	SWSE	Poor	T,S	2008
482	C Reservoir	10 S	42 E	22	NESE	Good	T,S	2008
500	K Spring	10 S	42 E	27	NENW	Poor	T,S	2008
501	Evelyn Spring	10 S	42 E	26	SENE	Failure	T,S	2008
502	R Spring	10 S	42 E	14	NENE	Poor	K	2008
503	Pamela Spring	10 S	42 E	13	NWSW	Poor	K	2008
505	Holman Spring	10 S	42 E	26	NESW	Fair	T,S	2008
506	I Spring	10 S	42 E	22	NENW	Fair	T,S	2008
507	Tina Spring	10 S	42 E	26	SWSE	Fair	T,S	2007
549	Leonard Spring #2	10 S	43 E	31	SESW	Failure	K	2008
3504	Carolyn Spring	10 S	43 E	7	SWSW	Good	J	2007
3507	Marihelen Spring	10 S	42 E	13	NWSE	Failure	T,S	TBA
4012	State Spring	10 S	42 E	10	NWNE	Poor	K	2008
4061	Ormand Spring	10 S	42 E	20	SESW	Failure	K	TBA
4076	Devils Spring	10 S	43 E	30	NESE	Failure	K	TBA
4126	NE Corner Spring	10 S	42 E	9	NESW	Failure	T,S	TBA
4158	Ant Waterhole	10 S	42 E	24	SWNE	Good	T,S	TBA
4159	Porcupine Waterhole	10 S	42 E	25	NENW	Good	T,S	TBA
4160	Cow Reservoir	10 S	42 E	14	NWSE	Good	K	2007
4161	G Reservoir	10 S	42 E	12	SENE	Fair	T,S	TBA

Appendix 1								
Summary and Assignment of Maintenance Responsibility of Range Projects for Allotment #02074								
TBA= to be assigned								
Number	Name	Tnship	Range	Sec.	1/4,1/4	Condition	Responsibility	Maintenance Completion Date
4162	O Reservoir	10 S	42 E	34	SENE	Fair	T,S	TBA
4163	P Reservoir	10 S	42 E	14	NENE	Good	T,S	TBA
4164	Q Reservoir	10 S	42 E	22	SWNW	Good	T,S	TBA
4165	S Reservoir	10 S	42 E	21	SWSW	Good	T,S	TBA
4166	E Reservoir	10 S	42 E	16	NESW	Good	T,S	TBA
4167	T Reservoir	10 S	42 E	15	NWSE	Good	T,S	TBA
4212	Wendt Reservoir	10 S	42 E	23	NWSE	Good	T,S	TBA
4213	F Spring	10 S	42 E	21	SENE	Failure	T,S	TBA
4214	E Spring	10 S	42 E	16	SWSE	Failure	T,S	TBA
4280	White Spring	10 S	41 E	17	NWNE	Good	T,S	TBA
4282	Straw Ranch Spring	10 S	42 E	21	NENW	Failure	T,S	TBA
4455	H Reservoir	10 S	42 E	16	SWNW	Good	T,S	TBA
4456	M Reservoir	10 S	42 E	16	NESE	Good	T,S	TBA
4457	Pierce Waterhole	10 S	42 E	10	SWSW	Good	K	2009
4458	Truscott Waterhole	10 S	42 E	15	SENE	Poor	K	TBA
4459	Section 15 Reservoir	10 S	42 E	15	NENE	Good	K	2007
4460	B Reservoir	10 S	42 E	23	SWNW	Good	T,S	TBA
4461	Grasshopper	10 S	42 E	23	SENE	Good	T,S	TBA
4462	D Reservoir	10 S	42 E	35	NWNW	Good	T,S	TBA
4463	R Reservoir	10 S	42 E	14	NENE	Good	K	TBA
4464	Unity Creek Spring	10 S	42 E	25	SWSE	Failure	T,S	TBA
4465	Sheep Waterhole	10 S	42 E	14	NWSE	Good	K	2007
4466	Horse Waterhole	10 S	42 E	14	SESE	Good	K	2007
4467	Bug Waterhole	10 S	42 E	13	NWNE	Good	K	TBA
4468	Fly Waterhole	10 S	42 E	24	NWNE	Good	K	TBA
4469	Chris Lee Waterhole	10 S	42 E	12	NENW	Good	J	2007

Appendix 1								
Summary and Assignment of Maintenance Responsibility of Range Projects for Allotment #02074								
TBA= to be assigned								
Number	Name	Tnship	Range	Sec.	1/4,1/4	Condition	Responsibility	Maintenance Completion Date
4470	Lower Widman Reservoir	10 S	42 E	12	NWNE	Good	J	2007
4471	Upper Widman Reservoir	10 S	42 E	1	SESW	Good	J	2007
4472	North End Reservoir	10 S	42 E	1	NESE	Good	J	2008
4474	W. Sardine Waterhole	10 S	43 E	7	SWNE	Good	J	2007
4475	N. Dorset Gulch Reservoir	10 S	43 E	7	SESE	Good	K	TBA
4476	Bedspring Reservoir	10 S	43 E	17	NWSW	Good	K	TBA
4477	S. Dorsett Gulch Waterhole	10 S	43 E	20	NWNW	Good	K	TBA
4478	S. Guzzler Waterhole	10 S	43 E	19	SWSW	Fair	K	TBA
4479	W. Guzzler Waterhole	10 S	43 E	19	NESE	Good	K	TBA
4620	Carolyn Spring Exclosure	10 S	43 E	7	SWSW	Good	J	2007
4621	State Spring Exclosure	10S	42E	10	NESW	Failure	K	TBA
110	G. Beber Fence	9S,10S	43E	1,6		Good	ALL	Annually
4521	Sardine Boundary Fence	10S	43E	7,8,17		Good	ALL	Annually
33	Vandecar Fence	10S	43E	17,21,28		Good	ALL	Annually
4051	Chris Lee Fence	10S	42E	12,11,10		Good	ALL	Annually
4173	Wellman Div Fence	10S	42E	8,9,10		Good	ALL	Annually
4174	South Whiterock Fence	10S	42E	28		Good	ALL	Annually
63	John Troy Fence	10S	42E	28		Good	ALL	Annually
4422	Troy Fence	10S	42E	34,35		Good	ALL	Annually
112	Pearce Fence	10S	42E	35,36		Good	ALL	Annually
		11S	43E	6				
288	Schuck Fence	10S	43E	31		Good	ALL	Annually
		11S	43E	6				

11.2 Appendix 2 - Trend Study Results for Pritchard Creek Allotment # 02074

Table 1
LAP Data
Pritchard Creek Unit – 2074-1

SPECIES	% Freq. 1985	% Freq. 1993	% Freq. 2002	% Cover Categories	% 1985	% 1993	% 2002
SIHY	8.5	22.0	33.5	Bare Soil	29.0	14.0	22.0
STTH	1.0	3.0		Rock	.5	5.0	6.5
AGSP	4.0	12.5	13.0	Persistent Litter	55.5		2.5
FEID	2.0	1.5		Non Persistent Litter	5.5	75.5	48.5
				Live Vegetation	9.5	5.0	20.0

Table 2
LAP Data
Pritchard Creek Unit – 2074-2

SPECIES	% Freq. 1985	% Freq. 1993	% Freq. 2002	% Cover Categories	% 1985	% 1993	% 2002
SIHY	23.0	35.5	36.5	Bare Soil	22.0	24.5	27.0
STTH	3.5			Rock	3.5	2.5	8.5
AGSP	10.0	22.0	34.0	Persistent Litter	63.5		6.0
FEID	31.5	35.5	54.0	Non Persistent Litter	3.0	59.5	29.0
ELGL	1.5			Live Vegetation	8.0	12.0	29.0
STIPA		8.5	1.0				

Table 3
LAP Data
Pritchard Creek Unit – 2074-8

SPECIES	% Freq. 1985	% Freq. 1993	% Freq. 2002	% Cover Categories	% 1985	% 1993	% 2002
SIHY	19.0	24.0	29.5	Bare Soil	17.5	33.0	26.5
STTH	15.5			Rock	3.0	5.0	5.0
AGSP	17.5	18.0	15.0	Persistent Litter	56.5	.5	3.5
FEID	5.0	6.0	9.0	Non Persistent Litter	4.0	51.5	45.0
STIPA		32.0	51.5	Live Vegetation	19.0	9.0	20.0

Appendix 2 - Trend Studies Results for Pritchard Creek Allotment # 02074 (continued)

Table 4
LAP Data
Pritchard Creek Unit – 2074-9

SPECIES	% Freq. 1987	% Freq. 1993	% Freq. 2002	% Cover Categories	% 1987	% 1993	% 2002
SIHY	26.0	37.5	38.0	Bare Soil	20.5	32.5	30.5
STTH	5.0			Rock	6.5	4.5	4.5
AGSP	5.0	7.0	5.5	Persistent Litter	46.5	.5	9.5
FEID	4.0	4.0	6.0	Non Persistent Litter	10.0	58.0	39.5
STIPA		10.0	13.0	Live Vegetation	12.5	4.5	16.5

Table 5
LAP Data
Pritchard Creek Unit – 2074-3

SPECIES	% Freq. 1985	% Freq. 1993	% Freq. 2002	% Cover Categories	% 1985	% 1993	% 2002
SIHY	15.5	12.5	24.5	Bare Soil	27.5	23.5	16.5
STTH	35.5			Rock	.5	2.0	20.0
AGSP	10.5	10.5	22.5	Persistent Litter	49.0	.5	10.5
FEID	25.0	28.5	60.0	Non Persistent Litter	6.0	66.5	23.0
STIPA		41.0		Live Vegetation	17.0	7.5	29.5

Table 6
LAP Data
Pritchard Creek Unit – 2074-5

SPECIES	% Freq. 1985	% Freq. 1993	% Freq. 2002	% Cover Categories	% 1985	% 1993	% 2002
SIHY	9.0	12.5		Bare Soil	36.5	31.0	
STTH	6.0			Rock		8.5	
AGSP	16.5	18.0		Persistent Litter	36.0		
FEID	12.0	9.5		Non Persistent Litter	17.5	49.5	
STIPA		10.0		Live Vegetation	10.0	10.5	

Table 7
LAP Data
Pritchard Creek Unit – 2074-6

SPECIES	% Freq. 1985	% Freq. 1993	% Freq. 2002	% Cover Categories	% 1985	% 1993	% 2002
SIHY	28.0	29.0	30.0	Bare Soil	23.5	23.0	6.5
STTH	32.5			Rock	4.5	8.0	25.0
AGSP	6.5	13.0		Persistent Litter	41.5	1.0	10.5
FEID	5.0	4.0		Non Persistent Litter	4.5	55.5	18.0
STIPA		41.5	36.5	Live Vegetation	26.0	12.5	40.5

Appendix 2 - Trend Studies Results for Pritchard Creek Allotment # 02074 (continued)

Table 8
LAP Data
Pritchard Creek Unit – 2074-7

SPECIES	% Freq. 1985	% Freq. 1993	% Freq. 2002	% Cover Categories	% 1985	% 1993	% 2002
SIHY	25.5	41.0	33.5	Bare Soil	31.0	24.0	19.5
STTH	17.0			Rock	3.5	7.0	27.5
AGSP	9.0	14.0	4.5	Persistent Litter	42.5	1.0	7.5
FEID	4.5	8.0	.5	Non Persistent Litter	9.5	59.0	18.5
ELGL	2.0			Live Vegetation	13.5	9.0	26.5
STIPA		20.5	27.0				

11.3 Appendix 3 - Soils

Pritchard Creek Allotment - Dominant Soils in Pasture and Slope

Pasture	Percent Soil Type 45C	Percent Soil Type 46D	Percent Soil Type 47D	Percent of Pasture in Soil Types 45C, 46D and 47D	Percent Slope Under 35%	Percent Slope Over 35%
White Rock	26%	23%	30%	79%	86%	14%
Holman	22%	14%	36%	72%	85%	15%
Lawrence	14%	21%	38%	73%	54%	46%
Upper	24	32%	34%	90%	87%	13%

Pritchard Creek Allotment Soil Characteristics Table

Soil Type	Permeability	Runoff Avail Water Holding Capacity	Effective Rooting Depth	Water Erosion Hazard	Annual Precipitation	Elevation	Potential Plant Community
45C	Moderate to a depth of 10" and slow below that depth	Slow to medium Capacity is 3-5"	20-40"	Slight to moderate	Mountain clayey 12-16"	3,600 to 5,000	Idaho fescue, bunch grasses, mountain big sage
46D	Moderate to a depth of 10" and slow below that depth	Slow to medium Capacity is 3-5"	20-40"	Moderate to high	Mountain north 12-16"	3,600 to 5,000	Idaho fescue, Squaw apple, bunch grasses, mountain big sage
47D	Moderate to a depth of 10" and slow below that depth	Slow to medium Capacity is 3-5"	20-40"	Moderate to high	Mountain south 12-16"	3,600 to 5,000	Bluebunch wheatgrass, Idaho fescue, mountain big sage

11.4 Appendix 4 - Stream Survey Results

**Standards and Guides Historical Information for the Pritchard Creek and Lawrence Creek.
Stream Surveys Summarized (Surveys from 1977 and 1991)**

Pritchard Creek Stream Survey 1977 – below confluence with Lawrence Creek

Stream habitat	Pools-riffles	Gradient	Width depth ratio	% cover shade	Bank cover	Cobble embedded.	Stream temps	Erosion	Riparian Condition	Riparian Species
Reach 1 P1	<10% pools	1-2.5%	Width 8.0 ft.	<10%	20-40% bank damage	Gravel/cobble	16.0 C	16-25% bare soil – 11-25% silt / sediment	Poor-Fair Livestock eliminating streamside vegetation and causing streambank damage	Herbaceous and sage
Reach 2 P1-P2	<10% pools	1-2.5%		<10%	34% of streambanks show livestock damage	Gravel/cobble			Poor- fair	

Limiting Factors - lack of pools, stream shade, and cover

P1 - very limited pool areas

P1 - P2 trout and bridgeliip suckers seen

Appendix 4 - Stream Survey Results (continued)

Pritchard Creek Stream Survey 1991										
Stream habitat	Pools-riffles	Gradient	Width and depth	% canopy cover shade	Bank cover	Cobble embedded.	Stream temps	erosion	Riparian Condition	Riparian Species
Reach 1	High percentage of riffles - <10% pools	1.5-6%	ave. width 4-4.5' ave. depth 0.2-0.3'	0% Boulder and rock with some grasses, a lot of exposed soil	No embeddedness Cobble/gravel/boulder substrate	57-65 F. 6-25-91	High 25-50%	Limited due to valley form	Mock orange, Wyoming big sage, antelope bitter brush, choke cherry, service berry, grasses, monkey flower	
Reach 2	Low % of pools - <10%	1-4%	ave. width 4-5' ave. depth 0.2-0.3'	0% No embeddedness Small and large gravel substrate	70-74 F. 6-27-91	25-50% Severe erosion last 600 feet	Woods rose, big basin sage, monkey flower, cheatgrass, milkweed, sedge			

Limiting Factors – valley form, bank erosion, limited water, shallow from widening of channel, sediment, limited pools

Reach 1 – From confluence with Lawrence Creek to approx. 2.75 miles north and junction with 1st trib. - fish verified, high use by cattle, trail to stream and bank erosion due to trampling

Reach 2 – From confluence with first trib., northwest to second trib. – approx. 1.25 miles - no fish

Appendix 4 - Stream Survey Results (continued)

Lawrence Creek Stream Survey 1977

Stream habitat	Pools-riffles	Gradient	Width depth ratio	% cover shade	Bank cover	Cobble embedded	Stream temps	erosion	Riparian Condition	Riparian Species
Reach 1 L1- L6	6.1% pools	>2.5 %	6.4' width	10% shade	Gravel and boulder 5% bare soil 0-10% bank damage	Some – a lot of silt reported	16.5 C.	Less than 10%	Very little due to V channel	Herbaceous sage
Reach 2 L7- L12	7.2 % in pools	>2.5 %	6.25' width	<10 % shade	6-25 % bare soil, 25% bank damage		16.5 C	10-55% bank erosion		Herbaceous Sage Cottonwood Mock orange
Reach 3 L13-L16	10.3% in pools	>2.5%	5.6' width	<10%	16-25% bare soil, 41% or more bank damage			51-72 % bank erosion		Herbaceous Sage Cottonwood Mock orange

Limiting Factors:

L1- L6 – lack of pools, low stream shade and cover, livestock trail creating bare soil, rainbow trout seen and young bridgelip suckers

L7- L12 – lack of pools, lack of stream shade and cover, livestock trailing

L13- L16 - lack of pools, lack of stream shade and cover, 3-12 " rainbow trout and young suckers

Appendix 4 - Stream Survey Results (continued)

Lawrence Creek Stream Survey 1991

Stream habitat	Pools-riffles	Gradient	Width depth ratio	% canopy cover shade	Bank cover	Cobble embedded	Stream temps	erosion	Riparian Condition	Riparian Species
Reach 1 High % of riffles Areas of pools to 1.0 depth	2-3%	Width 6.5-8' ave. depth 0.3-0.4'	30%	bedrock	Cobble/large and small gravel	65-79 F. 7-2-91	Little – no erosion	Very narrow – Good condition - no evidence of grazing	Juniper, alder, willow, service berry, ribes, mock orange, rose, elderberry and sumac	
Reach 2 High % of riffles pools to 1.0 depth to 1.0 depth	2.5-6%	Width 8-10' ave. depth 0.3-0.5'	45%		Gravel/ cobble, few boulders	64-71 F. 7-3-91	Good stability	Good condition - no evidence of grazing	Cottonwood water birch, juniper, red ozier dogwood, service berry, ribes, mock orange and rose	
Reach 3 High % of riffles pools to 1.0 depth to 1.0 depth	2.5-3%	Width 6.5-8' ave. depth 0.6-0.8'	3%		Small and large gravel	70-73 F. 7-12-91	High erosion 50-75%	Trailing evident-Poor-Fair condition	Willow, alder, water birch, aspen, ribes, cheatgrass, thistles	

Limiting Factors – lack of shade in some areas, size of gravels, lack of pools, lack of future LWD

Reach 1 – Few trout seen, no grazing use

Reach 2 – Many trout seen, no grazing use

Reach 3 – Few trout seen, grazing evident with heavy trailing

11.5 Appendix 5 - USFWS List of Potential Species of Concern for Pritchard Creek Allotment

Status of USFWS Identified Potential Species of Concern, June 2007, Pritchard Creek GU			
Species	Listed as	Present on Site	Description
<u>Bird Species</u>			
Bald eagle (<i>Haliaeetus Leucocephalus</i>)	T	No known occurrence	Inadequate habitat
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	CS	No known occurrence	Inadequate habitat
Northern goshawk (<i>Accipiter gentilis</i>)	SC	No known occurrence	Inadequate habitat
Western burrowing owl (<i>Athene cunicularia hypugea</i>)	SC	Possible	Supportive habitat
Ferruginous hawk (<i>Buteo regalis</i>)	SC	Possible	Supportive habitat
Greater sage-grouse (<i>Centrocercus urophasianus</i>)	SC	Yes	Supportive habitat
Olive-sided flycatcher (<i>Contopus cooperi</i>)	SC	No known occurrence	Inadequate habitat
Willow flycatcher (<i>Empidonax traillii adastus</i>)	SC	No known occurrence	Inadequate habitat
Yellow-breasted chat (<i>Icteria virens</i>)	SC	No known occurrence	Inadequate habitat
Lewis' woodpecker (<i>Melanerpes lewis</i>)	SC	No known occurrence	Inadequate habitat
Mountain quail (<i>Oreortyx pictus</i>)	SC	No known occurrence	Inadequate habitat
White-headed woodpecker (<i>Picoides albolarvatus</i>)	SC	No known occurrence	Inadequate habitat
<u>Mammal Species</u>			
Pygmy rabbit (<i>Brachylagus idahoensis</i>)	SC	Possible	Supportive habitat
Pale western big-eared bat (<i>Corynorhinus townsendii pallescens</i>)	SC	No known occurrence	Species occurrence not known
California wolverine (<i>Gulo gulo luteus</i>)	SC	No known occurrence	Inadequate habitat
Silver-haired bat (<i>Lasionycteris noctivagans</i>)	SC	No known occurrence	Potential habitat/ unsurveyed
Small-footed myotis (bat) (<i>Myotis ciliolabrum</i>)	SC	No known occurrence	Potential habitat/ unsurveyed
Long-eared myotis (bat) (<i>Myotis evotis</i>)	SC	No known occurrence	Potential habitat/ unsurveyed
Fringed myotis (bat) (<i>Myotis thysanodes</i>)	SC	No known occurrence	Potential habitat/ unsurveyed
Long-legged myotis (bat) (<i>Myotis volans</i>)	SC	No known occurrence	Potential habitat/ unsurveyed
Yuma myotis (bat) (<i>Myotis yumanensis</i>)	SC	No known occurrence	Potential habitat/ unsurveyed
California bighorn (<i>Ovis canadensis californiana</i>)	SC	No known occurrence	Inadequate habitat
Preble's shrew (<i>Sorex preblei</i>)	SC	No known occurrence	Supportive habitat

Status of USFWS Identified Potential Species of Concern, June 2007, Pritchard Creek GU			
Species	Listed as	Present on Site	Description
<u>Fish Species</u>			
Bull trout (Columbia River Basin) (<i>Salvelinus confluentus</i>)	T/CH	Historic/No known occurrence	Inadequate habitat
Interior redband trout (<i>Oncorhynchus mykiss gibbsi</i>)	SC	Yes	Supportive habitat
<u>Amphibian and Reptile Species</u>			
Columbia spotted frog (<i>Rana luteiventris</i>)	CS	No known occurrence	Inadequate habitat
Tailed frog (<i>Ascaphus truei</i>)	SC	No known occurrence	Inadequate habitat
Northern sagebrush lizard (<i>Sceloporus graciosus graciosus</i>)	SC	No known occurrence	Inadequate habitat
<u>Plant Species</u>			
Howell's spectacular thelypody (<i>Thelypodium howellii</i> ssp. <i>Spectabilis</i>)	T	No known occurrence	Inadequate habitat
Slender moonwort (<i>Botrychium lineare</i>)	CS	No known occurrence	Inadequate habitat
Wallowa ricegrass (<i>Achnatherum wallowaense</i>)	SC	No known occurrence	Inadequate habitat
Upward-lobed moonwort (<i>Botrychium ascendens</i>)	SC	No known occurrence	Inadequate habitat
Crenulate grape-fern (<i>Botrychium crenulatum</i>)	SC	No known occurrence	Inadequate habitat
Mountain grape-fern (<i>Botrychium montanum</i>)	SC	No known occurrence	Inadequate habitat
Twin spike moonwort (<i>Botrychium paradoxum</i>)	SC	No known occurrence	Inadequate habitat
Stalked moonwort (<i>Botrychium pedunculosum</i>)	SC	No known occurrence	Inadequate habitat
Clustered lady's-slipper (<i>Cypripedium fasciculatum</i>)	SC	No known occurrence	Inadequate habitat
Cronquist's stickseed (<i>Hackelia cronquistii</i>)	SC	No known occurrence	Inadequate habitat
Red-fruited desert parsley (<i>Lomatium erythrocarpum</i>)	SC	No known occurrence	Inadequate habitat
Cusick's lupine (<i>Lupinus lepidus</i> var. <i>cusickii</i>)	SC	No known occurrence	Inadequate habitat
Oregon semaphore grass (<i>Pleuropogon oregonus</i>)	SC	No known occurrence	Inadequate habitat
Snake River goldenweed (<i>Pyrrocoma radiata</i>)	SC	No known occurrence	Inadequate habitat
Biennial stanleya (<i>Stanleya confertifl</i>)	SC	No known occurrence	Inadequate habitat
(E) - Listed Endangered (T) - Listed Threatened (CH) - Critical Habitat has been designated for this species (CS) - Candidate Species (PE) - Proposed Endangered (PT) - Proposed Threatened (PCH) - Critical Habitat has been proposed for this species (SC) - Species of Concern			

11.6 Appendix 6 - AUMs Used and Utilization by Pasture

Pritchard Creek Allotment #02074 Holman Pasture AUMs & Utilization Information

Fiscal Year	Total AUMs Used	Percent Utilization
1978	811	35
1979	912	40
1980	755	45
1981	0	0
1982	804	-
1983	814	42
1984	998	47
1985	0	0
1986	482	25
1987	905	46
1988	447	19
1989	75	-
1990	1019	42
1991	698	24
1992	407	22
1993	170	-
1994	354	-
1995	642	38
1996	739	-
1997	360	36
1998	528	41
1999	549	38
2000	497	40
2001	690	-
2002	493	-
2003	509	40
2004	701	60
2005	572	-

Appendix 6 - continued

Pritchard Creek Allotment #02074
Lawrence Creek Pasture AUMs & Utilization Information

Fiscal Year	Total AUMs Used	Percent Utilization
1978	787	-
1979	846	58
1980	161	-
1981	475	-
1982	1063	-
1983	946	-
1984	306	-
1985	591	24
1986	1052	35
1987	1057	43
1988	0	0
1989	547	16
1990	712	13
1991	428	17
1992	0	0
1993	863	35
1994	522	50
1995	441	-
1996	0	0
1997	665	33
1998	605	26
1999	509	-
2000	497	31
2001	156	-
2002	275	-
2003	774	-
2004	629	-
2005	629	15

Appendix 6 - continued

Pritchard Creek Allotment #02074
Upper Pasture AUMs & Utilization Information

Fiscal Year	Total AUMs Used	Percent Utilization
1978	779	45
1979	0	0
1980	540	30
1981	997	-
1982	608	50
1983	0	0
1984	589	42
1985	623	30
1986	0	0
1987	420	30
1988	795	50
1989	868	30
1990	0	0
1991	708	24
1992	403	43
1993	568	-
1994	74	-
1995	714	45
1996	464	40
1997	394	22
1998	156	-
1999	189	-
2000	156	-
2001	642	-
2002	156	-
2003	158	-
2004	126	25
2005	819	-

Appendix 6 - continued**Pritchard Creek Allotment #02074
White Rock Pasture AUMs & Utilization Information**

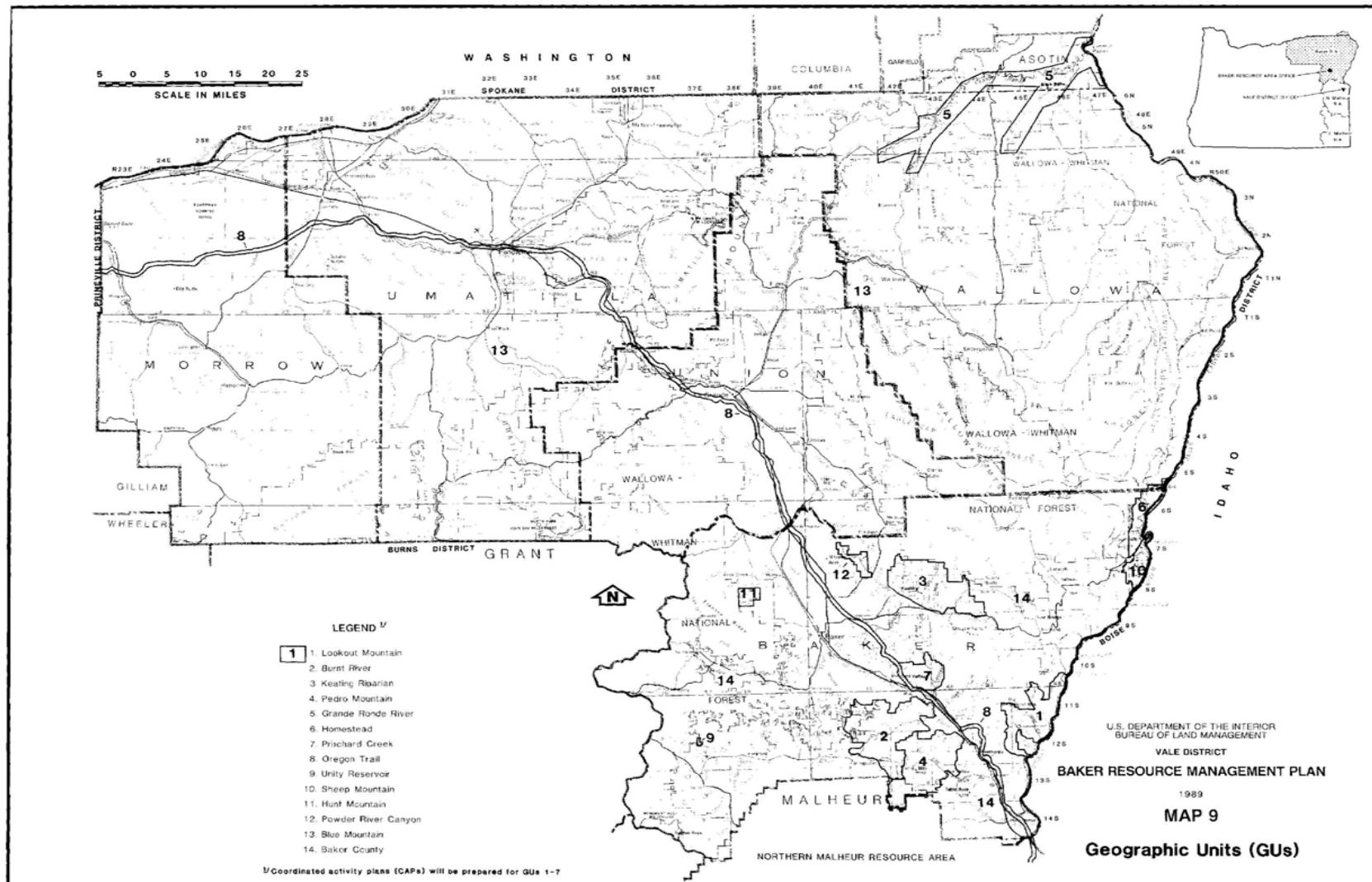
Fiscal Year	Total AUMs Used	Percent Utilization
1978	0	0
1979	545	45
1980	893	45
1981	1003	46
1982	0	0
1983	513	42
1984	626	53
1985	430	34
1986	257	32
1987	0	0
1988	340	55
1989	884	70
1990	361	40
1991	0	0
1992	646	65
1993	438	65
1994	400	22
1995	0	0
1996	649	-
1997	628	28
1998	681	37
1999	444	-
2000	589	50
2001	465	-
2002	958	-
2003	459	75
2004	623	-
2005	697	-

Appendix 7: Alternative 4 Grazing Use

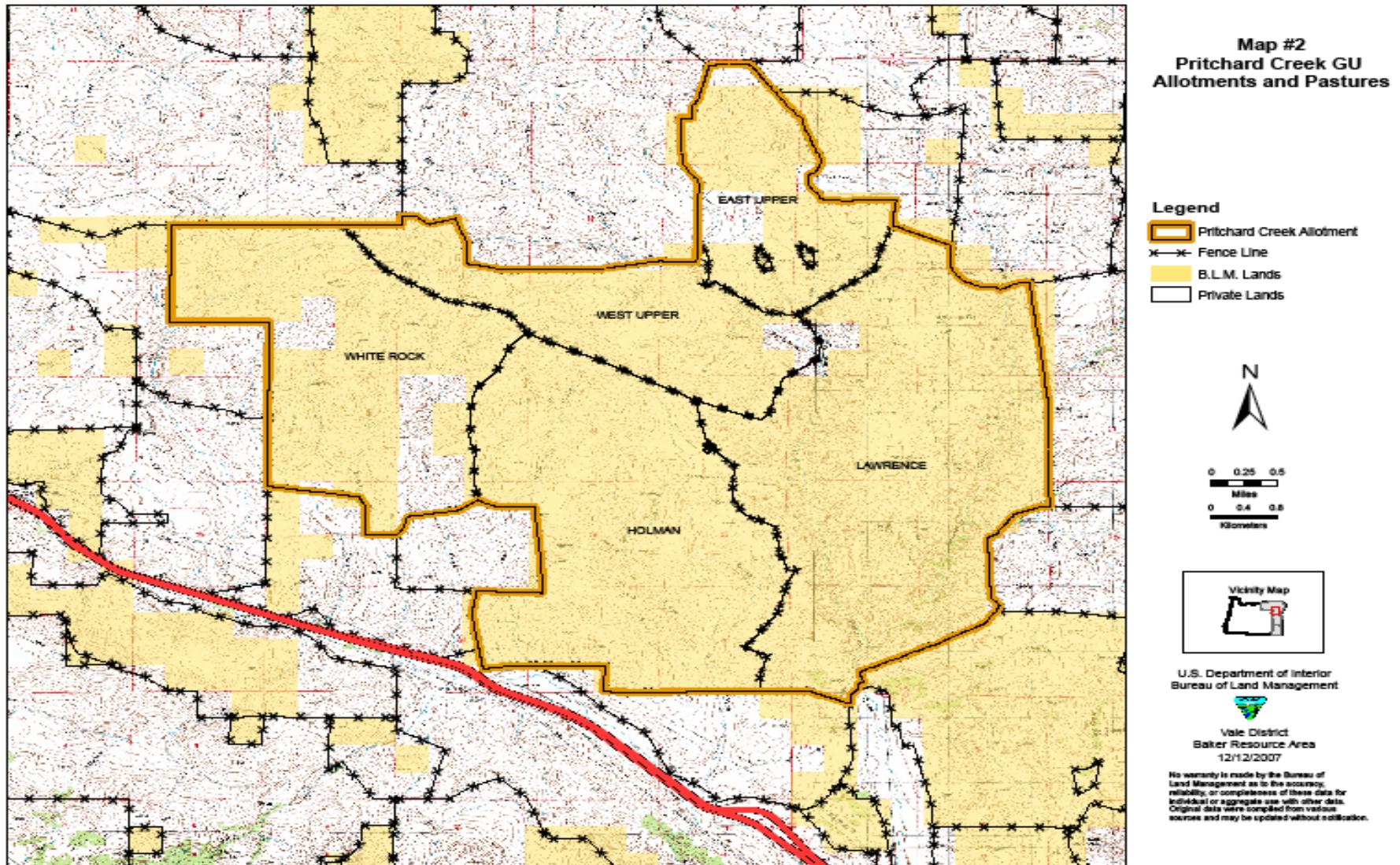
PASTURE	Livestock #	Kind 1=cows 2=yrlngs 3=sheep	*Beg Date	*End Date	%PL (enter as a decimal)	Type Use	AUMS
YEAR 1							
Lawrence Creek (J)	985	3	05/01/08	05/31/08	100%		201
White Rock (K)	135	1	04/16/08	05/25/08	85%		151
Holman (T,S)	285	1	04/16/08	05/25/08	100%		375
White Rock(K)	300	1	10/01/08	10/20/08	85%		168
Upper (K)	300	1	10/21/08	11/16/08	85%		226
Holman (T,S)	300	1	11/05/08	11/20/08	100%		158
Lawrence Creek(T,S)	300	1	10/01/08	11/04/08	100%		345
Upper(T,S)	300	1	11/21/08	12/01/08	100%		108
							1732
YEAR 2							
Lawrence Creek (J)	985	3	05/01/08	05/31/08	100%		201
White Rock (K)	135	1	04/16/08	05/25/08	85%		151
Lawrence Creek (T,S)	285	1	04/16/08	05/25/08	100%		375
White Rock(K)	300	1	10/01/08	10/20/08	85%		168
Upper (K)	300	1	10/21/08	11/16/08	85%		226
Holman (T,S)	300	1	10/01/08	11/22/08	100%		523
Upper (T,S)	300	1	11/23/08	12/01/08	100%		89
							1732
YEAR 3							
Lawrence Creek (J)	985	3	05/01/08	05/31/08	100%		201
White Rock (K)	135	1	04/16/08	05/25/08	85%		151
Upper(T,S)	285	1	04/16/08	05/15/08	100%		281
Holman (T,S)	285	1	05/16/08	05/25/08	100%		94
White Rock (K)	300	1	10/01/08	10/20/08	85%		168
Upper (K)	300	1	10/21/08	10/27/08	85%		59
Lawrence Creek (K)	300	1	10/28/08	11/16/08	85%		168
Holman (T,S)	300	1	10/01/08	11/12/08	100%		424
Lawrence Creek (T,S)	300	1	11/13/08	12/01/08	100%		83 187
							1732

12 MAPS

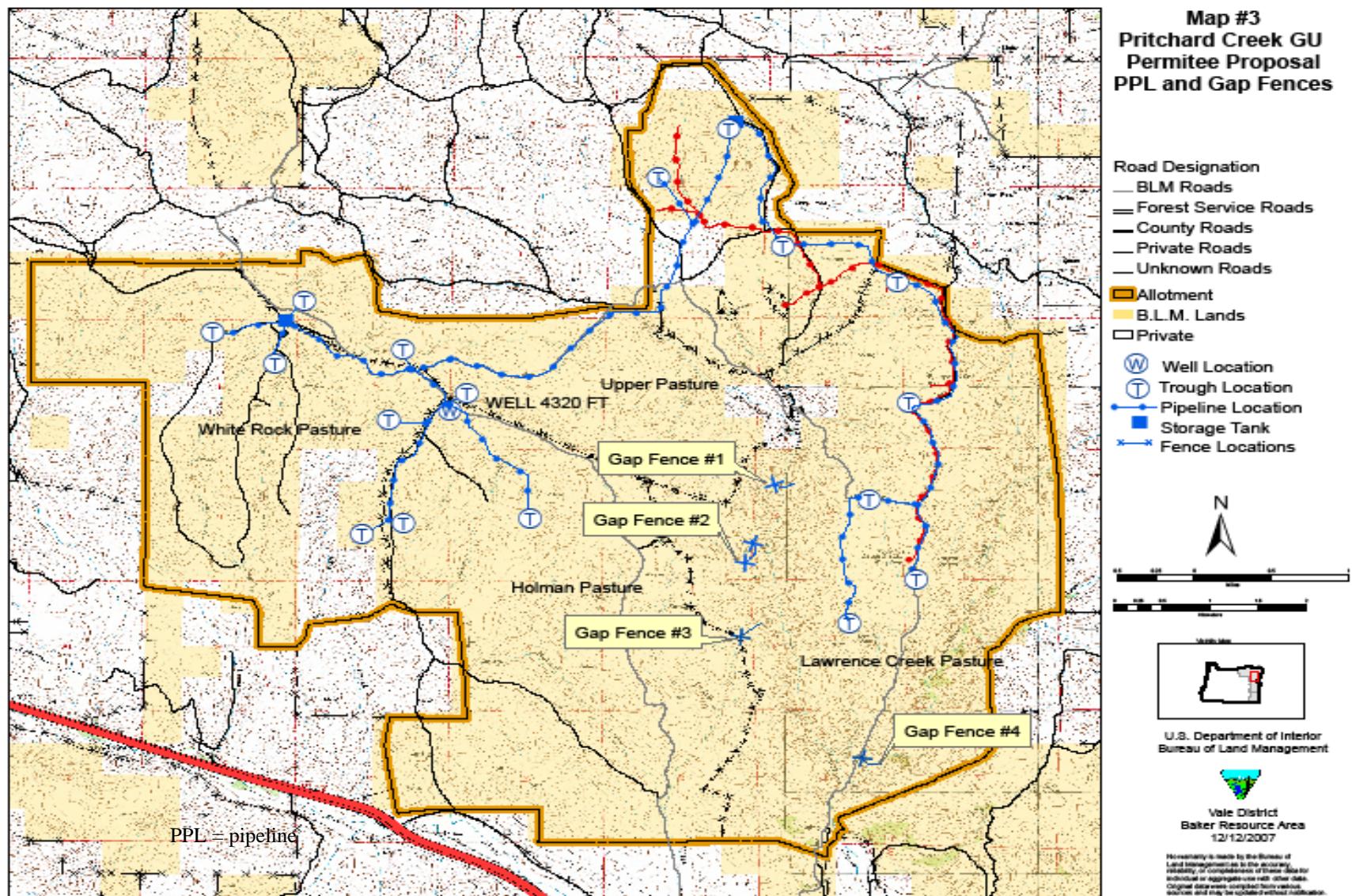
12.1 Map 1 - Baker Resource Area Geographic Units



12.2 Map 2 - Pritchard Creek Allotment and Pastures



12.3 Map 3 - Permittee PPL and Gap Fence Proposal



12.4 Map 4 - Pritchard Creek Allotment Projects

