

FINDING OF NO SIGNIFICANT IMPACT

LITTLE JUNIPER SPRINGS ALLOTMENT (#01000) - PACKSADDLE PASTURE LIVESTOCK GRAZING PERMIT RENEWAL

DOI-BLM-OR-L050-2013-0004-EA

The Bureau of Land Management, Lakeview Resource Area (BLM), has analyzed several alternative proposals related to renewing term grazing permit number 3601233, maintaining existing range improvements, and constructing new range improvements to allow for implementation of a rotational grazing system for the Packsaddle Pasture of the Little Juniper Springs Allotment. The Packsaddle Pasture is located approximately 65 air miles north of Lakeview, Oregon. There are about 35,410 acres of BLM-administered land within the pasture. The Little Juniper Springs Allotment is an "Improve" category allotment, which means that a high level of management effort should be given to maintain condition and/or affect change.

An environmental assessment (EA) was prepared that analyzed the potential direct, indirect, and cumulative environmental impacts of four alternatives. The alternatives included No Action (continue current grazing), Management Changes and Project Development, Pasture Use Every Other Year, and No Grazing (see pages 8-17 of attached EA).

The Council on Environmental Quality (CEQ) regulations state that the significance of impacts must be determined in terms of both context and intensity (40 CFR 1508.27). The context of the proposed project is the Little Juniper Springs Allotment-Packsaddle Pasture (1000). For this reason, the analysis of impacts in the attached Environmental Assessment (EA) is focused appropriately at this scale. The CEQ regulations also include the following ten considerations for evaluating the intensity of impacts:

- 1) Would any of the alternatives have significant beneficial or adverse impacts (40 CFR 1508.27(b)(1)?
() Yes (X) No

Rationale: Based on the analysis contained in the attached EA, none of the four alternatives would have either significant beneficial or adverse impacts on the human environment. There are no prime or unique farmlands, water resources, fish and aquatic habitat, forest or woodland habitat, wild horse management areas, wild and scenic rivers, significant caves, designated wilderness areas, wilderness study areas, other areas with wilderness characteristics, ACEC/RNAs, threatened or endangered plants and animals, hazardous waste sites, or low income or minority populations located in the project area. No measureable impacts would occur to climate air quality, floodplains, fire or fuels, land tenure, or mineral and energy resources (pages 17-19).

The potential impacts to existing soils, biological soil crusts, wetland and riparian vegetation, upland vegetation, wildlife, special status species, livestock grazing management, Native American traditional practices, cultural resources, recreation, visual resources, or social and economic values anticipated by the various alternatives have been analyzed in detail within Chapter 3 of the attached EA and found not to be significant (pages 17-48 and Appendix B).

- 2) Would any of the alternatives have significant adverse impacts on public health and safety (40 CFR 1508.27(b)(2)? () Yes (X) No

Rationale: None of the four alternatives analyzed in detail in the attached EA would have significant impacts on public health or safety because the project area is not located near any populated rural or urban area. For this reason, there would also be no impacts to low income or minority populations. Further, there are no known hazardous waste sites in the project area. There are no perennial streams or surface drinking water sources located in the project area. There would be no measureable impacts to air quality within and surrounding the project area (Table 3.1, pages 18-19).

- 3) Would any of the alternatives have significant adverse impacts on unique geographic characteristics (cultural or historic resources, park lands, prime and unique farmlands, wetlands, wild and scenic rivers, designated

wilderness or wilderness study areas, or ecologically critical areas (*ACECs, RNAs, significant caves*)) (40 CFR 1508.27(b)(3)? Yes No

Rationale: There are no park lands, prime or unique farmlands, wild and scenic rivers, significant caves, designated wilderness areas, WSAs, or ACEC/RNAs located in the project area (Table 3.1, pages 18-19). Impacts to riparian and wetland vegetation are not significant and are described in Chapter 3 of the attached EA (pages 23-24).

4) Would any of the alternatives have highly controversial effects (40 CFR 1508.27(b)(4)? Yes No

Rationale: The BLM has extensive expertise planning, analyzing impacts, and implementing range management actions such as those proposed by the four alternatives addressed in the attached EA. The potential impacts of these range management actions on soils, biological soil crusts, riparian and wetland vegetation, upland vegetation, wildlife, special status species, livestock grazing management, Native American traditional uses, cultural resources, recreation, visual resources, or social and economic values can be reasonably predicted based on existing science and professional expertise. The attached EA analyzed these impacts (pages 17-48 and Appendix B). The nature of these impacts is not highly controversial, nor is there substantial dispute within the scientific community regarding the nature of these effects.

The public has been given an opportunity to review and comment on the analysis of effects. The BLM is not currently aware of any potential highly controversial effects, as defined under 40 CFR 1508.27(b)(4), but will review any comments received and address any substantive comments prior to signing this FONSI.

5) Would any of the alternatives have highly uncertain effects or involve unique or unknown risks (40 CFR 1508.27(b)(5)? Yes No

Rationale: The BLM has extensive expertise planning, analyzing impacts, and implementing range management actions such as those proposed by the four alternatives addressed in the attached EA. The potential impacts of these range management actions on soils, biological soil crusts, riparian and wetland vegetation, upland vegetation, wildlife, special status species, livestock grazing management, Native American concerns, cultural resources, recreation, visual resources, or social and economic values can be reasonably predicted based on existing science and professional expertise. The attached EA analyzed these impacts (pages 17-48). The nature of these impacts is not highly uncertain nor does it involve unique or unknown risks.

6) Would any of the alternatives establish a precedent for future actions with significant impacts (40 CFR 1508.27(b)(6)? Yes No

Rationale: The BLM has extensive expertise planning, analyzing impacts, and implementing range management actions such as those proposed by the four alternatives addressed in the attached EA. None of the alternative actions represents a new, precedent-setting range management technique or would establish a precedent for future similar actions with potentially significant effects.

7) Are any of the alternatives related to other actions with potentially significant cumulative impacts (40 CFR 1508.27(b)(7)? Yes No

Rationale: Based on the analysis contained within the Cumulative Effects section of Chapter 3 of the attached EA, none of the four alternatives would have significant cumulative effects within the project area, even when added to the effects of other past, present, and reasonably foreseeable future actions (pages 45-48).

8) Would any of the alternatives have significant adverse impacts on scientific, cultural, or historic resources, including those listed or eligible for listing on the National Register of Historic Resources (40 CFR 1508.27(b)(8)? Yes No

Rationale: The Packsaddle Pasture is located within an area which was used historically by Northern Paiute Tribe. However, there are no known native American religious or sacred sites, Traditional Cultural Properties, or plant collecting sites known within the pasture. Potential impacts to cultural resources have been analyzed in Chapter 3 of the attached EA and found not to be significant (pages 37-39).

9) Would any of the alternatives have significant adverse impacts on threatened or endangered species or their critical habitat (40 CFR 1508.27(b)(9)? () Yes (X) No

Rationale: There are no threatened or endangered species or designated critical habitat within the project area (Table 3.1, pages 17-19).

10) Would any of the alternatives have effects that threaten to violate Federal, State, or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)? () Yes (X) No

Rationale: All of the four alternatives analyzed in the attached EA comply with all Federal, State, and local environmental laws or other environmental requirements, including the requirements of the National Environmental Policy Act, Clean Water Act, Clean Air Act, and Endangered Species Act.

The Federal Land Policy and Management Act requires that any action that BLM implements must also conform with the current land use plan and other applicable plans and policies. The purpose and need for the proposed action conforms with the management direction contained in the *Lakeview Resource Management Plan/Record of Decision* (BLM 2003b). The alternatives analyzed in the EA conform to the management direction requirements of this plan and the *Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington* (BLM 1997), the *Greater Sage-Grouse Conservation Strategy and Assessment for Oregon* (ODFW 2005), the *Greater Sage-Grouse Interim Management Policies and Procedures* (BLM 2011c), and the grazing regulations (43 CFR Part 4100) in varying degrees (EA Chapter 1, pages 4-8 and Chapter 3, pages 17-45). Conformance with this direction will be addressed in more detail within the proposed decision as it represents important decision factors that I will consider in making my final decision (EA pages 4-5).

Finding

On the basis of the analysis contained in the attached EA, the consideration of intensity factors described above, and all other available information, my determination is that none of the alternatives analyzed would constitute a major federal action which would have significant adverse or beneficial impacts on the quality of the human environment. Therefore, an Environmental Impact Statement (EIS) is unnecessary and will not be prepared.

Thomas E. Rasmussen, Field Manager
Lakeview Resource Area

Date

**LITTLE JUNIPER SPRINGS
ALLOTMENT (#01000) -
PACKSADDLE PASTURE
GRAZING PERMIT RENEWAL**

ENVIRONMENTAL ASSESSMENT

DOI-BLM-OR-L050-2013-0004-EA

Bureau of Land Management
Lakeview Resource Area
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CHAPTER I - PURPOSE AND NEED FOR ACTION

A. Introduction

The Lakeview District, Bureau of Land Management (BLM) has prepared this Environmental Assessment (EA) to analyze the potential effects of renewing term grazing Permit #3601233 for a ten-year period. This permit addresses grazing management specifically within the Packsaddle Pasture of the Little Juniper Springs Allotment (#01000). This EA analyzes the potential direct, indirect, and cumulative impacts that may result with the implementation of the proposed alternatives. This EA also serves as the analytical basis for making the determination as to whether any significant impacts to the human environment would result from the proposal, as well as compliance with the National Environmental Policy Act of 1969 (NEPA).

The Packsaddle Pasture is located approximately 65 miles northeast of Lakeview, Oregon (Appendix C, Map1). There are about 35,410 acres of BLM-administered land within the Packsaddle Pasture. The Little Juniper Springs Allotment is an "Improve" category allotment, which means that a high level of management effort should be given to maintain condition and/or affect change.

B. Purpose and Need for Action

One grazing permit (#3601233) exists for this pasture and it expires in early 2013. The permittee has already submitted a permit renewal application to the BLM for consideration. The primary purpose of this analysis is to respond to the permittee's permit renewal application and consider whether or not to reissue or modify the 10-year term livestock grazing permit in accordance with 43 CFR Part 4130. When issued, grazing permits must also address appropriate terms and conditions designed to "achieve management and resource condition objectives for the public lands... and to ensure conformance with part 4180" (43 CFR Part 4130.3).

A secondary purpose of this analysis is to consider the effects of range improvement project proposals within the pasture (Appendix C, Map 4).

C. Decision to be Made

The authorized officer will decide whether or not to renew the 10-year Term Grazing Permit, and if so, under what terms and conditions. The authorized officer will also determine whether or not the proposed range improvements should be constructed as part of a plan to improve livestock grazing management within the pasture.

D. Decision Factors

Decision factors are additional criteria used by the decision maker to choose the alternative that best meet the purpose and need for the proposal. These include:

- a) How well does the decision conform to laws, regulations, and policies related to grazing use and protecting other resource values?
- b) How well does the decision conform to the resource management plan?
- c) How well does the decision promote maintenance of rangeland health standards?
- d) How well does the decision conform with ODFW (2005) guidelines?
- e) How well does the decision conform with IM 2012-043 regarding interim Sage-grouse management?

Conformance with Laws and Regulations

This EA has been prepared in conformance with National Environmental Policy Act of 1969. Grazing permits are issued or renewed in accordance with the provisions of the Taylor Grazing Act (1934), Federal Land Policy and Management Act (FLPMA, 1976), Public Rangelands Improvement Act (1978), and applicable grazing regulations at 43 Code of Federal Regulations (CFR) Part 4100.

In order for an applicant to lawfully graze livestock on public land, the party must obtain a valid grazing permit or lease. The grazing regulations, 43 CFR 4130.2(a), state “grazing permits or leases shall be issued to qualified applicants to authorize use on the public lands and other lands under the administration of the Bureau of Land Management that are designated as available for livestock grazing through land use plans.” The permit renewal applicant (current permittee) controls the base property associated with the grazing preference on the pasture and has been determined to be a qualified applicant.

A performance review of the permittee’s past use was completed and BLM found the permittee’s record of performance, pursuant to 43 CFR 4110.1(b), to be in compliance. This conclusion was based on: grazing utilization at acceptable levels, bills were paid on time, actual use information was turned in yearly, use was within permitted dates (90% of the last 10 years), permit terms and conditions were adhered to, base property requirements were met, and history of trespass or unauthorized use has been minimal. Forage consumption has been within authorized AUM’s for the last ten years. There is one unauthorized use case that was documented within the last 10 years. This was resolved in a timely manner, and there has been no reoccurrence.

Conformance with Land Use Plan

Approved management actions or project decisions must conform to the appropriate land use plan. The *Lakeview Resource Management Plan/Record of Decision* (BLM 2003b, as maintained) is the governing land use plan for the area and provides the following goals and management direction related to livestock grazing use:

Livestock Grazing Management Goal - provide for a sustainable level of livestock grazing consistent with other resource objectives and public land-use allocations (page 52).

The current licensed grazing levels (Appendix E1) will be maintained until analysis or evaluation of monitoring data or rangeland health assessments identify a need for adjustments to meet objectives. Applicable activity plans (including existing allotment management plans, agreements, decisions and/or terms and conditions of grazing use authorizations) will be developed, revised where necessary, and implemented to ensure that resource objectives are met. The full permitted use level for each allotment has been and continues to be analyzed through individual allotment assessments, such as rangeland health and livestock grazing guidelines.... (Page 52).

The Little Juniper Springs Allotment is currently open or available for grazing use and is allocated livestock forage as listed in Table 5 (page 49, as maintained).

Appendix E1 – Allotment Specific Management Direction (page A-131, as maintained)

Livestock distribution/management - *Improve livestock management and distribution through improved management practices, installation of livestock management facilities (such as fences and water sources), and/or other actions as opportunities arise.*

Improve/maintain range condition - *Use management practices and/or better animal distribution; develop range improvements when appropriate: adjust permitted use as needed.*

Maintain/improve forage production – *Continue to manage for forage production in seeded areas through season of use adjustments, possible vegetation treatments, fencing, water developments, and/or other actions.*

Noxious Weed Encroachment – *Manage for noxious weeds.*

Special Status plant species and habitat present: . ***Cymopterus nivalis and Ivesia rhypara var. shellyi** – Protect Special Status plant species/habitat from BLM-authorized activities.*

Wildlife/wildlife habitat: Special Status animal species occurs within the allotment: greater sage grouse – *Implement interim greater sage grouse guidelines. Follow the greater sage-grouse Livestock Grazing guidelines (pages 75-76 of ODFW 2005), where appropriate (see sage-grouse section below).*

General – *Maintain current forage allocations of 5,418 AUMs for livestock (Little Juniper Springs Allotment- 1350 AUMs allocated specifically to Packsaddle Pasture) and 510 AUMs for wildlife (Little Juniper Springs Allotment).*

Operation and Maintenance Actions

Maintenance of existing and newly constructed facilities or projects will occur over time... Such activities could include, but are not limited to, routine maintenance of existing...water control structures..., reservoirs, wells, pipelines, waterholes, fences, cattle guards, seedings, ... and other similar facilities/projects (Page 100).

Consistency with Other Plans and Policies

The final decision must also conform to the following plans or policies, which also direct and provide a framework for management of BLM lands/resources within Lakeview Resource Area:

- Standards for Rangeland Health and Guidelines for Livestock Management for Public Lands Administered by the BLM in the States of Oregon and Washington (BLM 1997a)

The Little Juniper Springs Allotment met all applicable Standards for Rangeland Health and Guidelines for Livestock Management. The Rangeland Health Assessment was conducted in 2003 for the Little Juniper Springs Allotment, and was updated in 2012 for specifically for the Packsaddle Pasture (BLM 2003c, 2012d).

- Integrated Noxious Weed Control Program, EA#OR-010-2004-03 (BLM 2004a)

This document tiered to the noxious weed management direction in the *Lakeview RMP/ROD* and provided more specific details on the locations of known noxious weed sites in the Lakeview Resource Area and how periodic treatments would be conducted on these sites, as well as new sites discovered during future inventory. The treatment methods addressed in this plan included cultural, mechanical, biological, and chemical. The type of treatment used and the frequency of treatment would be based on site/plant characteristics, treatment priorities identified in the plan, and budget.

- Greater Sage-Grouse Conservation Assessment and Strategy for Oregon (ODFW 2005)

This document (page 75) states “Where livestock grazing management results in a level of forage use that is consistent with RMP, Allotment Management Plans (AMP), Terms and Conditions of Grazing Permits or Leases, other allotment specific direction, and regulations, no changes to use or management are required if habitat quality meets Rangeland Health Standards and Guidelines.” The Little Juniper Springs Allotment – Packsaddle Pasture continues to meet all applicable Standards for Rangeland Health (BLM 2003c, 2012d).

- Greater Sage-Grouse Interim Management Policies and Procedures (BLM 2011)

This document represents the current BLM Washington Office interim policy for sage-grouse habitat management until such time as plan amendments can be completed throughout the range of the species that address a comprehensive conservation strategy. This policy addresses proposed grazing permit renewals and proposed water developments.

Permit Renewal

Plan and authorize livestock grazing and associated range improvement projects on BLM lands in a way that maintains and/or improves Greater Sage-grouse and its habitat. Analyze through a reasonable range of alternatives any direct, indirect, and cumulative effects of grazing on Sage-grouse and its habitats through the NEPA process:

- Incorporate available site information collected using the *Sage-Grouse Habitat Assessment Framework* (Stiver *et al.* 2010) when evaluating existing resource condition and developing resource solutions,
- Incorporate management practices that will provide for adequate residual plant cover (e.g., residual grass height) and diversity in the understories of sagebrush plant communities as part of viable alternatives. When addressing residual cover and species diversity, refer to the ESD (ecological site data) and “*State and Transition Model*,” where they are available, to guide the analysis.
- Evaluate and implement grazing practices that promote the growth and persistence of native shrubs, grasses, and forbs. Grazing practices include kind and numbers of livestock, distribution, seasons of use, and livestock management practices needed to meet both livestock management and Greater Sage-Grouse habitat objectives.
- Evaluate the potential risk to Greater Sage-Grouse and its habitats from existing structural range improvements. Address those structural range improvements identified as posing a risk during the renewal process.
- Balance grazing between riparian habitats and upland habitats to promote the production and availability of beneficial forbs to Greater Sage-Grouse in meadows, mesic habitats, and riparian pastures for Greater Sage-Grouse use during nesting and brood-rearing while maintaining upland conditions and functions. Consider changes to season-of-use in riparian/wetland areas before or after the summer growing season.

To ensure that the NEPA analysis for permit/lease renewal has a range of reasonable alternatives:

- Include at least one alternative that would implement a deferred or rest-rotation grazing system, if one is not already in place and the size of the allotment warrants it.

- Include a reasonable range of alternatives (e.g., no grazing or a significantly reduced grazing alternative, current grazing alternative, increased grazing alternative, etc.) to compare the impacts of livestock grazing on Greater Sage-Grouse habitat and land health from the proposed action.
- If land treatments and/or range improvements are the primary action for achieving land health standards for Greater Sage-Grouse habitat maintenance or enhancement, clearly display the effects of such actions in the alternatives analyzed.

Fences

- Evaluate the need for proposed fences, especially those within 1.25 miles of leks that have been active within the past 5 years and in movement corridors between leks and roost locations. Consider deferring fence construction unless the objective is to benefit Greater Sage-Grouse habitat, improve land health, promote successful reclamation, protect human health and safety, or provide resource protection. If the BLM authorizes a new fence, then, where appropriate, apply mitigation (e.g., proper siting, marking, post and pole construction) to minimize or eliminate potential impacts to Greater Sage-Grouse as determined in cooperation with the respective state wildlife agency.
- To improve visibility, mark existing fences that have been identified as a collision risk. Prioritizing fences within 1.25 miles of a lek, fences posing higher risks to Greater Sage-Grouse include those:

On flat topography;
Where spans exceed 12 feet between T-posts;
Without wooden posts; or
Where fence densities exceed 1.6 miles of fence per section (640 acres).

Water Developments

- NEPA analysis for all new water developments must assess impacts to Greater Sage-Grouse and its habitat.
- Install escape ramps and a mechanism such as a float or shut-off valve to control the flow of water in tanks and troughs.
- Design structures in a manner that minimizes potential for production of mosquitoes which may carry West Nile virus.

CHAPTER II - ALTERNATIVES

Alternatives 1 through 4 have been fully analyzed in Chapter III of this EA. Following the public review period for this document a proposed decision would be made by the Field Manager that may choose to proceed with any one of the alternatives analyzed or a combination of portions of multiple alternatives.

A. Actions Common to All Grazing Alternatives (1-4)

1. Grazing Management Flexibility

Knowing uncertainties exist in managing for sustainable ecosystems, changes to the proposal may be authorized for reasons such as, but not limited to:

- Adjust the rotation/timing of grazing based on previous year's monitoring and current year's climatic conditions (within the permitted season of use and permitted AUMs). An example of this would be; to turn livestock out later in the season on a year with a wet cold spring; or to bring livestock off the pasture early as conditions warrant this need.
- Drought causing lack of available water in certain areas originally scheduled to be used. An example would be resting a pasture that had low water and shifting livestock use to the pasture that had water. Conversely in wet years, livestock could be moved to areas near more dependable water sources.
- Changes in use periods to balance utilization levels per pasture. An example of this would be to shorten the time period or number of livestock in a pasture that had 65% average utilization and or increase the time period and number of livestock in another pasture that had 30% average utilization if the target utilization in both pastures is 50%.

Flexibility in grazing management would be authorized within permit dates and within active permitted AUMs so long as:

- Changes in rotations would continue to meet resource objectives.
- Flexibility is dependent upon the demonstrated stewardship and cooperation of the permittee.
- Rangeland monitoring is a key component of flexibility in grazing management. As monitoring indicates changes in grazing management are needed to meet resource objectives, they are implemented annually working with the permittee.

2. Monitoring

Monitoring would take place by BLM staff in coordination with the livestock operator to measure the success in meeting allotment-specific resource objectives following implementation. Pace 180° methodology (Technical Reference (TR) 4400-4) and permanent photo points would be used to measure the relative frequency of occurrence of key forbs, shrubs, and perennial grass species, to assess upland trend in rangeland condition. Observed Apparent Trend would be assessed at each upland trend plot. Upland trend data would be collected and analyzed on 10-year intervals.

Annual utilization studies for the pasture grazed by livestock along with multiple-use supervision reports would be collected by BLM staff. The Key Forage Plant Method would be used to measure utilization in the pasture. Target utilization levels for key forage plant species are shown in Table 2.1.

During each pasture visit, monitoring for noxious weed establishment would occur, as well

as observations of overall rangeland condition. Adjustments to timing of grazing

Table 2.1. Key Species and Target Utilization Levels Little Juniper Springs Allotment

Pasture	Acres	Key Species	Utilization Target
Packsaddle	35,410	Bluebunch wheatgrass/Thurber's needlegrass/Idaho fescue/squirreltail	50%

and pasture use sequence to ensure/promote achievement of rangeland health standards, and to meet other resource objectives, may be implemented based on this annual data.

New Monitoring: An additional upland trend and photo plot (LJ-20) was established in the Packsaddle Pasture in 2012 and would be used along with existing plots for future trend monitoring.

3. Other Terms and Conditions

Stipulations, as required by state or federal policy, would be included in the permit. Typical items include; payment of fees, submission of actual use reports, administrative access across private land, compliance with Standards and Guidelines, and maintenance of range improvements.

4. Trailing use will occur to and from Packsaddle Pasture. Cattle are usually trailed from the Plush area to Packsaddle Pasture, and then back to Plush at the end of the grazing season. Because of the distance, trailing would take approximately 4-5 days, and would occur through five other allotments. These allotments include Coyote-Colvin, South Rabbit Hills, East Rabbit Hills, North Rabbit Hills, and Corn Lake. Trailing would occur within existing permit dates under Alternatives 1 and 3, and would be built into the permit dates of Alternative 2. Trailing use would be added to the stipulations on the permit (under Alternatives 1-3). The permit stipulations would state the following:

- Cattle will be actively trailed for 4-5 days at the beginning and end of each grazing season. Total number of days permitted for trailing will not exceed 12/season.
- The permittees will call both the BLM and the affected permittees before trailing.

B. Alternative 1: No Action

The No Action Alternative would renew the existing livestock grazing permit (#3601233) in the Packsaddle Pasture of the Little Juniper Springs Allotment for 10 years, continuing the current grazing management, permitted season of use (March 1 through August 10) and forage allocation (up to 1,350 AUMs of active preference and 0 AUMs suspended use). The permit would be issued with the same terms and conditions as the expiring permit. See Table 2.2 for the current grazing management.

Table 2.2. Current Livestock Grazing Permit

<i>Little Juniper Springs Allotment</i>	<i>Active Permitted Use (AUMs)</i>	<i>Suspended Use (AUMs)</i>	<i>Permitted Season of Use</i>
Packsaddle Pasture	1,350	0	Spring/Summer (3/1-8/10)

Livestock grazing within the larger Little Juniper Springs Allotment is described in the *Lakeview RMP/ROD* as a rest rotation system (BLM 2003b, Table 5, page 49, as maintained). However, the Packsaddle Pasture of the Little Juniper Springs Allotment has been used separately from the rest of the allotment under a separate permit on an annual basis, depending on livestock water availability. Modification of the term grazing permit authorizing the use of this pasture separate from the rest of the allotment occurred by previous grazing decision issued in 2008. Because this pasture is used separately from the rest of the allotment, there are no physical boundaries or reliable water sources that allow regular rest rotation within the pasture. Using this pasture in this manner has not provided growing season rest to vegetation on a consistent basis (in the past), rather, rest was provided when and/or where livestock water was lacking. For example, over the last five years the pasture has been grazed only two years, due to lack of reliable livestock water. In general, when livestock water is available in good water years, the cattle tend to graze the northern portion of the pasture more, and in years when livestock water is limited, the cattle graze more of the southern portion of the pasture.

Maintenance of existing rangeland improvement projects, including waterholes, reservoirs, and fences, would occur under this alternative on an as-needed basis.

C. Alternative 2: Management Changes and Project Development

This alternative would include renewing the 10-year permit and broadening the season of use (permit dates) for the Packsaddle Pasture. The livestock grazing management proposed under this alternative would be dependent on the installation of a number of proposed range improvement projects. These proposed range improvements are analyzed in this EA in conjunction with the permit renewal. Range improvement activities would include the construction of a pasture division fence (which would establish two pastures), drilling a well, installing associated underground pipeline and troughs, constructing a new reservoir, maintaining existing reservoirs and waterholes, and reconstructing a holding pen/corral in the location of the original holding pen. See Table 2.3 for proposed grazing management under Alternative 2. See list of proposed range improvements below and Appendix C (Maps 3 and 4) for more details.

Table 2.3. Management Changes and Project Development

<i>Little Juniper Springs Allotment</i>	<i>Active Permitted Use (AUMs)</i>	<i>Suspended Use (AUMs)</i>	<i>Permitted Season of Use</i>
Packsaddle Pasture	1,350	0	Spring/Summer (2/1-8/10)

Following installation of the proposed range improvements, a livestock grazing system would be implemented to provide periodic growing season rest for plant species. Once a pasture rotation is in place, the season of use would be changed to 2/1-8/10, with 1,350 AUMs active preference, and 0 AUMs of suspended use. Cattle would use one pasture in the late winter to early spring and the other pasture in the late spring to summer. The opposite would occur the following year. Each pasture would only be used once per grazing year. Until improvements are in place to provide for a deferred rotation system, the current season of use 3/1-8/10 would remain in effect.

Maintenance of existing rangeland improvement projects, including waterholes, reservoirs, and fences, would occur under this alternative on an as-needed basis.

Use periods in each pasture may vary annually in order to provide for rest periods. Livestock numbers may vary annually as outlined under the Management Flexibility section (see Chapter II, A. Actions Common to All Alternatives); however, total permitted AUMs would not be exceeded.

The permit would be issued with similar terms and conditions as the other grazing alternatives. However, one additional term and condition would be attached: Each pasture would only be used once per grazing year.

Proposed Range Improvements

Upon adoption of this alternative, cooperative agreements between the permittee and BLM would be completed to address each partner's responsibilities for labor, construction, maintenance, and/or supplies. Applicable best management practices associated with Livestock Grazing Management and Surface Disturbing Activities specific to the proposed range improvements analyzed in this EA are described below. These best management practices would be followed to reduce impacts to resources (Appendix D of the *Lakeview RMP/ROD* (BLM 2003b; as maintained).

Livestock Grazing Management

Rangeland projects and improvements are constructed as a portion of adaptive management to reduce resource management conflicts and to achieve multiple use management objectives. They have been standardized over time to mitigate impacts and will be adhered to in the construction and maintenance of rangeland projects within the planning area.

Surface-Disturbing Activities

- 1) Special design and reclamation measures may be required to protect scenic and natural landscape values. This may include transplanting trees and shrubs, mulching and fertilizing disturbed areas, use of low profile permanent facilities, and painting to minimize visual contrasts. Surface-disturbing activities may be moved to avoid sensitive areas or to reduce the visual effects of the proposal.
- 2) Above ground facilities requiring painting should be designed to blend in with the surrounding environment.
- 3) Disturbed areas should be contoured to blend with the natural topography. Blending is defined as reducing form, line, and color contrast associated with the surface disturbance. Disturbance in visually sensitive areas should be contoured to match the original topography, where matching is defined as reproducing the original topography and eliminating form, line, and color caused by the disturbance as much as possible.
- 4) Reclamation should be implemented concurrent with construction and site operations to the fullest extent possible. Final reclamation actions shall be initiated within 6 months of the termination of operations unless otherwise approved in writing by the authorized officer.
- 5) Fill material should be pushed into cut areas and up over back slopes. Depressions should not be left that would trap water or form ponds.

Description of Proposed Range Improvements (see Appendix C, Map 4 Proposed Range

Improvements):

a. Pasture Division Fence

A proposed pasture division fence along the Packsaddle Draw ridgeline originating from where the existing drift fence ends at the northeast portion of Packsaddle Draw. An additional section of fence would extend from the northernmost finger of upper Packsaddle Draw to Mudhole Waterhole. A small fence would be built around Mudhole Waterhole with gates providing access to the waterhole from either side of the new pasture division fence. Proposed fence would add approximately 5.3 miles to existing fenceline.

The fence would be a three-strand barbed wire fence, built to standard BLM wildlife passage specifications (BLM 1989). The bottom wire of the fence would be smooth wire at least 18 inches off the ground, and the top wire would be no higher than 42 inches. The posts would consist of 66-inch steel posts, and rock cribs would be constructed as braces. The fence would also be built in conformance with the Greater Sage-Grouse Interim Management Policies and Procedures (BLM 2011), with diverters placed along fence lines where applicable.

b. Well, Storage Tank, Pipeline and Troughs.

A well is proposed approximately 1.5 miles north of Quarter Corner Reservoir. The exact location is yet to be determined, and would be based on a location that least affects resources and provides potential water availability. Approximately 160 acre area has been surveyed for resource concerns. Within this survey area, the well would be drilled in an area likely to target water reservoirs and avoid resource sensitive areas. Drilling the well and placement of the associated storage tank would directly disturb less than one acre. A storage tank and a trough would be placed by the well pad with an associated overflow pond. The storage tank would be of a color that is not in contrast with the natural surroundings (see project design features section below). The disturbed area for the well itself would measure approximately 100 feet in diameter, and would be surrounded by a small enclosure fence, constructed out of panels or barbed wire. The disturbed area would be approximately 100 feet around the trough. Troughs (near the well and at two locations on either end of the proposed pipeline) would be equipped with bird escape ramps to conform with the *Greater Sage-Grouse Interim Management Policies and Procedures* (BLM 2011).

A short segment of road would need to be built to provide access to the proposed well. The road will be built with a grader (if needed), totaling approximately one-eighth mile and approximately 10-12 feet wide. If needed, the grader would remove the sagebrush from this segment to construct a road. This road would provide the well drilling rig access to the site, and also the permittee for operational purposes in the future. This segment of road would originate from road number 6110, south to the well location, following proposed pipeline route, (Appendix C, Map 4). The location of the well, proposed pipeline, and associated road is within the area that was burned by the Juniper Fire, and is now primarily a crested wheatgrass seeding.

The proposed action includes extending two segments of pipeline from the proposed well (described above) to (after proposed division fence construction) both pastures. The first

segment of pipe would extend north underground approximately 1.5 miles. At the end of this pipeline, a trough would be installed to water livestock. The second segment of pipeline would extend south underground approximately 1.5 miles. This pipeline ends at the existing Quarter Corner Reservoir. A trough would be installed at this location to facilitate livestock watering. The disturbed area would be approximately 100 feet around the troughs themselves. The area disturbed while laying the pipeline would be reseeded with a crested wheatgrass and native seed mix. As described above, this area is currently a crested wheatgrass seeding with some native grasses and forbs now establishing within the seeding.

These pipelines and troughs would provide reliable water sources for livestock and wildlife which are currently lacking. The proposed well and pipelines would create a source of water in the northeast corner of the proposed North Pasture. This area currently receives little use from livestock grazing due to lack of water. As mentioned above, the proposed grazing system is dependent on developing a reliable source of livestock water, and would not be operable without developing such water.

c. Holding Pen/Corral

This alternative includes building a holding pen that would serve different functions. It would be used to: collect cattle together before turnout, gather into and load into a trailer, as a sorting pen, and branding/doctoring pen. This holding corral would not exceed an acre in size and would be built out of barbed wire, and would also be designed to incorporate portable panels for loading/unloading cattle. This pen would be located near the gate along the southern pasture/allotment boundary fence, approximately .5 miles south of Rocky Swale waterhole.

d. Reservoir Construction

A reservoir would be constructed at the bottom of Juniper Draw. This reservoir would consist of a small dam built across the draw to hold water for livestock and wildlife. The dam would be built from rock and materials on or adjacent to the site, and include a spillway for high water years. The reservoir would be constructed using a cat and a ripper blade if needed. Also, a grader, loader tractor or dump truck may be used on site. An access route would be temporary for equipment (no new roads would be constructed), and would be from the existing Dry Valley Road (#6110-00). Disturbance associated with this dam and waterhole would not exceed one acre.

e. Reservoir and Waterhole Maintenance

Maintenance may not be needed on all existing reservoirs and waterholes in the pasture; however, it would likely be needed sometime in the next 10 years. Reservoir maintenance would include the cleaning and maintenance of the reservoir to ensure continued function. This may include, but is not limited to, the application of bentonite and dam reconstruction, as needed. Waterhole maintenance would include the cleaning, within the original area of disturbance of the waterhole to ensure continued function.

f. General Project Design Elements for Proposed Range Improvements

(1) Existing cultural sites were taken in to consideration when selecting locations for proposed range improvements. Proposed range improvement sites were selected to avoid impacts to existing cultural sites. Proposed range improvement locations were surveyed for cultural sites. No eligible sites were discovered or will be impacted by proposed range improvement projects.

(2) Existing Special Status plants locations and their habitat were taken in to consideration when locating proposed range improvements. Proposed rangeland improvement locations would be surveyed for Special Status plant species prior to implementation. These surveys will be conducted during appropriate season in order to maximize detection of individuals. Special Status plant sites would be avoided and protected during project construction.

A regularly monitored population of the BLM Sensitive plant species, *Ivesia rhypara* var. *shellyi*, or Shelly's Mousetail, occurs within Packsaddle Pasture and grows directly on large boulders and outcrops of eroding volcanic tuff that exist only inside the steep Upper Packsaddle Canyon. *Cymopterus nivalis*, or Springline Snowparsley, has been found in similar habitat but not within the Upper Packsaddle Canyon site. Botanical surveys will confirm the presence or absence of this species.

The proposed fence line would be set back at least 300 feet from edge of rim to avoid special status plant habitat. Additional surveys would occur in spring 2013 to determine presence or absence of Special Status plants elsewhere within proposed project area. Any locations of plants or habitat discovered would be mitigated by relocating proposed projects to locations outside of Special Status Plant habitat. Projects that cannot be relocated outside of habitat would not be constructed. All equipment utilized in the project area would be washed and determined to be free of noxious or invasive species prior to entering the project area.

(3) The Wildlife Biologist would review range improvement sites prior to project implementation. Areas with occupied Special Status wildlife habitat identified during wildlife surveys would be protected/avoided during project implementation. Mitigation would include the following project design features, timing stipulations, and relocation of proposed projects to mitigate for Special Status wildlife. Projects that cannot be relocated outside of habitat or adequately mitigated would not be constructed.

a) All proposed fences would be constructed using BLM approved standards for 3 or 4-strand wire fences to provide for wildlife passage.

b) Where sage-grouse occupy sage-grouse habitat, construction of range improvements, fencing of meadows, and herbicide treatments would occur outside of the brood-rearing season (June-August).

(4) The grazing permittee would be responsible for all fence maintenance. Proper fence maintenance would be a stipulation for turnout each year.

(5) Proposed range improvement sites would be surveyed for noxious weed populations prior to implementation. Weed populations identified in or adjacent to the proposed project locations would be treated using the most appropriate methods in

accordance with the Lakeview Resource Area Integrated Weed Management Program.

(6) The risk of noxious weed introduction would be minimized during project implementation by ensuring all equipment (including all machinery, 4-wheelers, and pickup trucks) is cleaned prior to entry to the sites, minimizing disturbance activities, and completing follow-up monitoring, to ensure no new noxious weed establishment. Should noxious weeds be found, appropriate control treatments would be performed in conformance with the Lakeview Resource Area Integrated Weed Management Program

(7) As soon as practicable after completion of all project activity within a specific area, routes damaged by vehicles would be maintained or repaired to the condition they were in prior to project implementation; all road work would occur within the existing road disturbance.

(11) Pipelines: To reduce surface pipeline contrast with the landscape, which create an “industrial appearance”, pipelines would be buried, preferably in or adjacent to the roadway, particularly if the lines are long-term.

(12) Color/Paint Water Tanks and troughs: use paint color(s) which allows the facility to blend into the background. All new permanent facilities at this site would be painted the same color(s). Use the following considerations when selecting a color and shade: 1. Semi-gloss paints would stain and fade less than flat paints. 2. The background is typically a vegetated background and seldom a solid soil background. 3. The selected color should be one or two shades darker than the background. 4. Consider the predominant season of public use, but never paint an object to match snow. 5. Refer to Standard Environmental Standards Chart (CC-001) or Draft Supplemental Colors Chart. 6. Consult Outdoor Recreation Planner to aid in proper selection of paint color and hue.

(13) Fences: Where practical, fences should avoid straight lines by following the natural lines of an area, the contour of the land, or blend with existing rims, to reduce visually obtrusive lines in the landscape.

For map of proposed range improvements, refer to Appendix C, Map 4.

D. Alternative 3: Use Pasture Every Other Year

This alternative would include renewing the existing livestock grazing permit, #3601233, for a period of 10 years, with the same number of AUMs, with no change to permit dates, and the same permit terms and conditions (Table 2.4). However, grazing would only occur on the Packsaddle Pasture every other year. On the years the pasture is grazed, livestock would graze the entire pasture (or the portions able to be grazed based on water availability). The year the pasture is rested, plants would be allowed to complete their reproductive life cycle and set seed.

Table 2.4. Use Pasture Every Other Year

<i>Little Juniper Springs Allotment</i>	<i>Active Permitted Use (AUMs)</i>	<i>Suspended Use (AUMs)</i>	<i>Permitted Season of Use</i>
Packsaddle Pasture	1,350	0	Spring/Summer (3/1-8/10)

Maintenance of existing rangeland improvement projects, including waterholes, reservoirs, and fences, would occur under this alternative on an as-needed basis.

E. Alternative 4: No Grazing (Complete Removal of Livestock Grazing on the Pasture)

Under this alternative, the current permit would not be renewed and livestock grazing would not be authorized on public lands within the Packsaddle Pasture. Should this alternative be selected, this decision would be reevaluated after 10 years, or at the end of the land use planning cycle.

Existing range improvements within the interior of the pasture (existing wells, waterholes, and troughs) would not be maintained for livestock grazing management purposes. However, the pasture boundary fences would still be maintained to allow livestock grazing to continue in surrounding allotments/pastures and keep cattle out of the Packsaddle Pasture. This alternative is being considered to provide a full range of alternatives and comply with grazing management permit renewal guidance (BLM 2000, 2008b).

F. Alternatives Considered but not Fully Analyzed

Spring Grazing System

This alternative would include renewing the 10-year grazing permit with 1,350 AUMs of active preference on the Packsaddle Pasture, but use would occur in the spring (3/1-5/15) almost every year. This would include using the pasture for a shorter season, but with increased livestock numbers. This would decrease operational flexibility for the permittee, and would decrease the likelihood of the pasture receiving adequate periods of growing season rest. In addition, the way the permittee's livestock operation is structured, spring grazing would reduce the time spent on the pasture, while the time spent trailing the cattle to the pasture would remain the same.

Grazing during the spring would provide livestock with the opportunity to graze when forage is more palatable and water more reliable. Livestock would be removed early in the growing season giving grasses some opportunity for regrowth and seed set after grazing has occurred. However, after grazing there must be enough soil moisture for plant regrowth to occur. Plants are sensitive to spring grazing annually with no rotation or rest during the growing season. Soils are generally damp this time of year and are more susceptible to compaction from hoof action with repeated annual grazing, as compared to grazing later in the year when soils are dryer.

Due to the nature of the existing vegetation, soils, and the permittee's livestock operation, adopting a spring grazing system would be detrimental to these resources and would not be an appropriate grazing management strategy for this pasture. Therefore, it was not evaluated further in this EA.

CHAPTER III - AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section presents a description of the current environment within the allotment and a discussion of the potential changes resulting from implementation of the alternative management actions. An

inter-disciplinary (ID) team has reviewed and identified the resources values and uses that could potentially be affected by the alternative actions. The resources identified as “not affected” or “not present” are listed in Table 3.1 and will not be discussed or further analyzed in this EA. The remainder of this chapter describes the potential direct, indirect, and cumulative effects on resources and uses that may result from each alternative.

Table 3.1. Resources or Uses that are Not Present or Would Not be Affected

Elements of the Human Environment		Rationale
Areas of Critical Environmental Concern (ACECs)	Not Present	There are no ACECs or research natural areas (RNAs) within the pasture.
Air Quality (Clean Air Act)	Not Affected	None of the alternatives would have measureable impacts to air quality or significant discharges of regulated air pollutants.
Environmental Justice (Executive Order 12898)	Not Present	None of the alternatives would have disproportionately high or adverse effects on minority populations or low-income populations as such populations do not exist within the pasture or surrounding area.
Fire and Fuels Management	Not Affected	No fire or fuel treatments are being proposed in this EA.
Fish and Aquatic Habitat	Not Present	No perennial streams, fish habitat, or aquatic habitat associated with fish exist within the pasture.
Forest/Woodlands	Not Present	Not present within the pasture.
Flood Plains (Executive Order 13112)	Not Affected	No proposed construction within or other modification of flood plains would occur. Therefore, there would be no floodplain or related hydrologic impacts.
Hazardous or Solid Waste	Not Present	No such sites or issues are known within the pasture.
Lands	Not Affected	None of the alternatives analyzed would have any effects on current land status or land tenure.
Minerals and Energy	Not Affected	None of the alternatives analyzed would have any effects on mineral or energy resources or uses.
Noxious Weeds (Executive Order 13112)	Not Present	No noxious weed infestations are currently known within the pasture (BLM 2004a) and the risk of future infestations is low under all four alternatives. Cheatgrass, a non-native invasive annual grass, was noted during Rangeland Health Assessment, but is not a listed Oregon Noxious Weed.
Prime or Unique Farmlands	Not Present	No such lands have been identified in the pasture.
Threatened and Endangered Plants and Animals	Not Present	No known federally listed plant or animal species or their habitat are found within the pasture.
Wilderness	Not Present	No wilderness study areas or designated wilderness areas are located in the pasture.
Lands with Wilderness Characteristics	Not Present	BLM's original wilderness inventory did not find wilderness characteristics to be present within this allotment (USDI-BLM 1979a, 1979b, 1979c, 1980a, and 1980b). Since 2007, the BLM has been conducting wilderness inventory updates following current inventory guidance (BLM 2012c). In this process, an inter-disciplinary team reviewed the existing wilderness inventory information contained in the BLM's wilderness inventory files, previously published inventory findings, and citizen-provided wilderness information (ONDA 2005). BLM subsequently conducted field inventory, completed route analysis forms, made unit boundary determinations, and evaluated wilderness

Elements of the Human Environment		Rationale
		character within each inventory unit within allotment 01000. BLM did not find lands with wilderness characteristics to be present in this area (BLM 2013a). BLM hereby incorporates these findings by reference in their entirety. (The document is available at http://www.blm.gov/or/districts/lakeview/plans/inventas.php). Based upon the results of this inventory update, there would be no impacts to lands with wilderness characteristics.
Wild Horses (Wild Horse and Burro Act)	Not Present	The pasture is located outside of designated wild horse herd management area.
Water Resources/Quality (Clean Water Act)	Not Present	There are no perennial streams or municipal drinking water sources in the allotment.
Wild and Scenic Rivers	Not Present	There are no Wild or Scenic Rivers within the pasture.

A. Climate

Affected Environment:

The climate in the vicinity of the allotment is variable, but typical of the Northern Great Basin or high desert system. Mean annual precipitation ranges from 10-16 inches. Precipitation occurs mostly in the form of snow during December through March with spring rains common. The soil temperature regime is frigid. Mean annual air temperatures range from 40 to 43 degrees F. The frost-free time period is from 50 to 80 days. The period of optimum plant growth is from April through June.

Environmental Consequences:

Effects Common to Alternatives 1-4

Based on analyses contained in several recent permit renewal EAs (BLM 2012a, 2012b), the utilization of 0 to 1,350 AUMs of forage would have no scientifically verifiable effects on regional or global climate change, nor would it have any significant effects on either greenhouse gas emissions or carbon sequestration processes.

B. Soils and Biological Crusts

Affected Environment:

Soil information was compiled using data on file at the Lakeview District BLM Office. This data represents a combination of Ecological Site Inventory data (ESI) conducted by BLM personnel and soil data collected by NRCS (Natural Resource Conservation Service) (NRCS 1997a, NRCS 1997b). This data is herein incorporated by reference in its entirety and is summarized in the following section.

There is a complexity of soil associations present within Packsaddle Pasture. However, two soil map units comprise 67% or more of the area. Several smaller soil map units are also present primarily depicting isolated features such as rock outcrops and lakebeds (Appendix C, Map 7). The two most dominant soil map units within the pasture and their respective percentages are: Raz-Brace complex, 2 to 20 percent slopes (50%), Anawalt gravelly clay loam, 0 to 12 percent slopes (17%), (see Table A1). These dominant soils are typical of tablelands in this pasture. They

are well drained with very low to low water holding capacities. Erosion potential (based on K factor rating system,) is low to moderate.

Observed apparent trend (OAT) data was used to determine trend indicators correlated to soil stability. These indicators are: surface litter, pedestals, and gullies. OAT data collected indicates stable soils within Juniper Springs Allotment-Packsaddle Pasture; i.e. the majority of litter is collecting in place, there is little evidence of pedestaling, and gullies are absent from the allotment (Appendix B2; BLM 2012d).

Biological soil crusts (BSCs) consist of lichens, mosses, green algae, fungi, cyanobacteria, and bacteria growing in a thin layer on or just below the soil surface. BSCs function as living mulch by retaining soil moisture, reducing wind and water erosion, and can be used as an indicator of a site's characteristics or upland watershed function (Belnap *et al.* 2001). Lichen species diversity is poorly known in the Pacific Northwest (Root *et al.* 2011). Further, identification of BSCs at the species level is not practical for fieldwork, as it is very difficult and may require laboratory culturing (Belnap *et al.* 2001).

Some BSC monitoring work is on-going within and outside of the Civilian Conservation Corps (CCC) enclosure located just outside the southwest edge of the allotment (T30S, R24E, Sections 17 and 18). This enclosure was built by the CCC in 1938, is about 80 acres in size, and has been used periodically as a rangeland study site. No authorized livestock grazing has occurred in the enclosure since 1938. The same year the CCC enclosure was built; the south side was cleared of brush by hand and may have been burned. The north side of the enclosure was left untouched.

Studies by Ponzetti (2000) and Ponzetti and McCune (2001) examined biotic soil crust cover and composition at several locations in central and eastern Oregon in 1995. One of the sites examined was the CCC enclosure. The study compared species richness of microbiotic crusts inside and outside of several enclosures to provide a grazed-verses-ungrazed comparison. Results of the study found that all of the sites had between one and six more taxa inside the enclosures than in the grazed pastures, with the exception of the CCC enclosure, which had three more species in the grazed transect. Generally, total crust cover was inversely related to vascular plant cover, as there is a positive relationship of crust cover to available soil surfaces (BLM 2003a). Ponzetti and McCune (2001) found that the differences in crust cover and species composition between study sites were most strongly related to soil pH, electrical conductivity, and the relative calcium carbonate content of the soil. Soil chemistry and climate differences were a stronger factor affecting cover and species composition than livestock exclusion. However, the study found a lower cover of biotic crusts, lichens, and species richness in grazed areas.

Approximately one third of the CCC enclosure burned during the 2001 Big Juniper wildfire. Joseph Wagner, a fire ecologist monitored plant and crust responses to wildfire inside and outside of the enclosure following the fire. Four plots were established in 2002 inside and outside in the burned and unburned areas. The plots were visited in 2002, 2004, and 2006. The studies are on-going, but some general observations have been made (Joseph Wagner, Interagency Fire Ecologist, Lakeview BLM/Fremont-Winema National Forest, personal communication, June 2006):

- 1) Visually, the crusts appear to have been severely affected by fire. Very little moss was observed in the burned area, both inside and outside of the enclosure.

- 2) The crusts in the unburned plot are highly associated with low sagebrush plants, but are fairly frequent in the interspaces. It is suspected that the more intense burning and longer duration of burning under the sagebrush is responsible for the higher mortality of mosses associated with the sagebrush plants.
- 3) During the 2006 visit, mosses were observed in most of the plots inside the burned area. The excluded burned area had small clumps of mosses (size of a dime or nickel). Outside of the enclosure, mosses were present, but were much smaller in size (about 1 cm).

At about the same time, the Lakeview BLM botanist set out permanent plots to look at the species composition of lichen and mosses. In general terms, more lichens were found within the enclosure and within the area that had not been burned or grazed. A few lichens were found outside of the enclosure in the unburned area. No lichens were found in the burned areas inside or outside of the enclosure.

BSC cover data has also been collected in some of the frequency trend plot re-reads within the allotment (most of these are not within the Packsaddle Pasture). This data collected was part of the cover data collected at established trend locations. To date, this data has been collected on one transect established in this pasture (LJ-20). This transect was established in 2012 in the Packsaddle Pasture. Prior to 2008, Packsaddle Pasture was used as part of the Little Juniper Springs Allotment rotation.

Table 3.2. Biological Soil Crust Cover at Trend Plots Located within Packsaddle Pasture

Transect in Packsaddle Pasture and year trend data collected	% Cryptogam cover
LJ-2 yr. 2009	2
LJ-3 yr. 2006	10
LJ-3 yr. 2009	8*
LJ-5 yr. 2009	8
LJ-20 yr. 2012 (Packsaddle Pasture)	1

*This decrease from consecutive readings is not statistically significant. This data was collected using Pace 180° frequency method. This method is a paced transect conducted in the same general location for each reading. The percent cover in these two consecutive readings should be considered as a range rather than a change in biological soil crust cover.

Environmental Consequences:

Effects Common to Alternatives 1-3

Generally, livestock do not graze on BSCs. The primary impact to BSCs from livestock is associated with hoof trampling. In this respect the impacts to BSCs and soils are generally inter-related. Therefore, BLM assumes that, for purposes of this analysis, the impacts to BSCs can generally be quantified by quantifying the associated impacts to soils.

Effects Common to Alternatives 1: No Action

The impacts of livestock grazing on soils within the Lakeview Resource Area were analyzed in the *Lakeview Proposed RMP/Final EIS* (BLM 2003a) and that analysis is incorporated herein by reference. In summary, livestock use would continue to negatively impact area soils primarily due to compaction around

waterholes and along trails (pages 4-35 to 4-36).

The current use of the pasture is dependent upon precipitation and snow melt for livestock water. This is a self-limiting factor and during drought years and drought cycles, rested years would occur in the pasture. During wet cycles, it is possible that rest would not occur for several years at a time under Alternative 1.

Soils and BSCs would continue to be negatively impacted in livestock concentration areas near water sources and along cattle trails. Livestock tend to concentrate within a quarter of a mile around existing water sources. There are 17 constructed waterholes and reservoirs, and one well in the pasture (Appendix C, Map 3). A one-quarter mile buffer around a water source represents approximately 120 acres. Therefore, up to 2,160 acres (18 x 120 acres) around existing water sources would continue be impacted by concentrated grazing use.

Cattle trails tend to be located along fence lines and near water sources. These trails are typically less than 5 feet wide. The pasture perimeter fence is approximately 29.4 miles representing 17.8 acres (29.4 mi. x 5 ft. x 5,280 ft. per mi. / 43,560 ft.² per acre). There are approximately 8.9 miles of interior fence within the pasture representing another 5.4 acres (8.9 mi. x 5 ft. x 5,280 ft. per mi. / 43,560 ft.² per acre). There is a total of approximately 23.2 acres of concentrated disturbance associated with existing pasture fence construction and livestock trailing. BLM does not have a quantifiable means of estimating disturbed acres associated with cross-country livestock trailing to water sources, but based on estimates associated with fencing, believes that it represents a very small percentage of the pasture.

In total, approximately 2,183 acres (6.2%) of the soils and associated BSCs within the pasture would continue to be impacted by concentrated livestock use during grazed years.

Effects of Alternative 2: Management Changes and Project Development

The impacts of implementing a deferred (seasonal rest) rotation grazing system in the pasture would be similar to those described for Alternatives 1 and 3. However, water locations and livestock use patterns would shift under Alternative 2 (Appendix C, Map 4). The effects of hoof action on soil and BSCs throughout the majority of the pasture (where dispersed grazing use occurs) would remain relatively minor.

The proposed division fence would be approximately 5.3 miles in length. This proposed fence would add 3.2 acres of concentrated disturbance to this pasture (5.3 mi. x 5 ft. x 5,280 ft. per mi./43,560 ft.² per acre) associated with project construction and subsequent livestock trailing. Other proposed range improvements include a waterhole/dam, a corral, a well (associated trough at well), and a pipeline with two troughs.

Under Alternative 2, there would be some additional surface disturbance to soils and associated BSCs from vehicle traffic during construction and future maintenance of the proposed range improvements. Increased concentrated disturbance would also occur in the vicinity of the proposed fence, well, water troughs, and waterhole due to cattle hoof action being concentrated in these areas. The total acreage impacted by concentrated livestock use at 18 existing water improvements would be similar to Alternatives 1 and 3, with approximately 600 additional acres of concentrated disturbance associated with proposed water improvements (5 x 120 acres; 3 troughs, 1 well, 1 waterhole). There would be an estimated one acre additional concentrated disturbance associated with the construction and regular use of a corral. There would be an additional small, disturbed area (estimated at 3.6 acres; 10 feet wide swath 3 miles long; 0.01% of the pasture) associated with pipeline construction and maintenance. There would also be an additional 1 acre of disturbance associated with constructing proposed waterhole. The total additional concentrated disturbance associated with these improvements is estimated to be approximately 606 acres. Total of existing and proposed concentrated disturbance to soils and BSCs in this pasture would be approximately 2,789 acres (7.9% of pasture).

The changes in range management that would accompany the additional range improvements would likely reduce the severity of hoof impacts around any given watering location due to livestock being more evenly dispersed across more functioning watering sites each year. This, coupled with annual deferment and rotation of the livestock, would reduce the negative effects that currently occur in high-concentration areas (hoof divots, trails, etc.) and allow soils and the associated biotic community time to recover through natural processes, including frost heaving and plant maturation and reproduction.

Effects of Alternative 3: Use Pasture Every Other Year

The impacts of livestock grazing on soils within the Lakeview Resource Area were analyzed in the *Lakeview Proposed RMP/Final EIS* (BLM 2003a) and that analysis is incorporated herein by reference. In summary, livestock use would continue to negatively impact area soils primarily due to compaction around waterholes and along trails (pages 4-35 to 4-36). However, the rest rotation grazing system implemented under this alternative would reduce or mitigate these impacts compared to Alternative 1.

During grazed years, the use of the pasture would continue to depend upon precipitation and snow melt providing livestock water, similar to Alternative 1. Although rest would occur every other year, cattle distribution would not be substantially improved and use would continue to be concentrated near existing waterholes and along existing trails.

Approximately 2,183 acres (6.2%) of the soils and associated BSCs within the pasture would be impacted by concentrated livestock use during grazed years, similar to Alternative 1. However, the rest provided every other year under Alternative 3 would allow opportunity for some soil and BSC recovery in these disturbed areas.

Effects of Alternative 4: No Grazing

Under the No Grazing Alternative, little change to soils and BSCs would occur on the pasture as a whole in the short-term (up to 5 years). Most of the existing concentrated livestock use areas (2,183 acres) associated with water sources and cattle trails would reclaim naturally with vegetation and BSCs from surrounding areas over the long term (5-10 years). Some of these trails may persist due to continued use by wildlife such as elk and deer. It is likely that interspace areas (bare space between grass/shrub species) would be reduced across the pasture due the lack of cattle grazing. However, this change would likely be undetectable over the short-term.

C. Wetland and Riparian Vegetation

Affected Environment:

The Rangeland Health Assessment (RHA) for the Little Juniper Springs Allotment noted there are about 392 acres of palustrine wetlands within the allotment, but there are no perennial streams. Of these 392 acres approximately 83 acres fall within the Packsaddle Pasture. The Rangeland Health Assessment found that these wetland areas were all rated at Proper Functioning Condition (PFC) and, therefore, met Rangeland Health Standard 2 (related to riparian/wetland function). Livestock grazing did not appear to be a factor limiting Riparian/Wetland function (BLM 2003c). A wetland condition assessment was conducted again in 2012 and determined that the 83 acres in the pasture continue to be rated at PFC and meet Standard 2 (BLM 2012d, 2012e).

Environmental Consequences:

Effects of Alternative 1 - No Action

Since the existing palustrine wetlands in the Packsaddle Pasture are rated at PFC and livestock grazing does not appear to be a factor limiting riparian/wetland function (BLM 2003c, 2012e), continuing current grazing management would be expected to maintain this condition over the 10-year permit lifetime.

Effects of Alternative 2 - Management Changes and Project Development

Under this alternative, the impacts to wetland habitat would be similar to Alternative 1. The existing wetland condition (PFC) would be maintained or improved slightly due to the additional rest provided by a two-pasture grazing system.

Effects of Alternative 3: Use Pasture Every Other Year

Under this alternative, the impacts to wetland habitat would be similar to Alternatives 1 and 2. The existing wetland condition (PFC) would be maintained or improved slightly due to the additional rest provided every other year.

Effects of Alternative 4: No Grazing (Complete Removal of Livestock Grazing on the Pasture)

Under this alternative, the wetland habitat condition (PFC) would be maintained or improved slightly over time due to the removal of livestock grazing.

D. Upland Vegetation

Affected Environment:

Vegetation data for the pasture comes from the Ecological Site Inventory (ESI). This inventory covers the pasture and was completed in the late 1990's (NRCS and BLM unpublished data). Potential vegetation data is derived based on its association with known soil types. Both current and potential vegetation data are available for the allotment (see Appendix B2 for summary tables). The ecological site descriptions describe the Potential Natural Community (PNC) that would be expected, based on soil and precipitation conditions, if the vegetation on the site was fully developed or in a "climax" condition.

Description of the existing dominant plant communities as they relate to range sites within the allotment/pasture is found in Table B-2 (Appendix B). Data presented in the table is summarized from the ESI which is hereby incorporated by reference. Several indicators of plant community health are described. These include current dominant vegetation, observed apparent trend (OAT), condition rating, and seral stage.

Vegetation within the Packsaddle Pasture comprises a fairly complex sagebrush steppe system. Plant community trends change primarily based on aspect, exposure, and elevation. Multiple plant community shifts occur which are influenced by soil type and depth. There are two main draws that dissect the pasture. Packsaddle Draw is located in the northern portion of the pasture; Juniper Draw is located in the southern portion of the pasture. Two main varieties of sagebrush are dispersed throughout the allotment including: Wyoming big sagebrush *Artemisia tridentata wyomingensis* (ARTRW8), and low sagebrush, *Artemisia arbuscula* (ARAR8) (Plant codes represent genus-species abbreviations adopted by USDA-NRCS; see also Plants Database available at <http://www.plants.usda.gov>). The area supports a healthy abundance of native grasses and forbs.

The dominant plant community within the pasture is Wyoming sagebrush overstory and needlegrass understory. The Bacon Camp wildfire burned approximately 75% of the pasture in 1999. The Big Juniper wildfire burned approximately 50% of the pasture in 2001. Seeding was implemented following the most recent fire. Ecological Site Inventories (ESI) were conducted in this pasture during 1993. This information

is what is reflected as Current Vegetation Types. Much of the cheatgrass types mapped at this time were burned by the above mentioned wildfires. These areas were subsequently reseeded and the seedings have been successful at reducing erosion and establishing perennial vegetation and forage for both livestock and wildlife. The same can be said for the rabbitbrush/cheatgrass communities mapped at the time of ESI. The majority of these areas also burned and were reseeded. These seedings have also been successful. However, there were mosaic pockets of sagebrush that did not burn during the wildfires. These communities have persisted, and have begun to spread in to the adjacent burned/seeded areas.

The 2003 Rangeland Health Assessment stated that livestock does not appear to be having an impact on the majority of vegetation in the allotment. Cheatgrass is present in low levels, except one isolated location in the allotment (not within Packsaddle Pasture).

Photo trend and pace transect (LJ-1) established in one of the seeded areas prior to the Big Juniper Fire (1985) and read in 2009 and again in 2012, indicate an upward trend in the plant community (BLM 2012d). Native perennial grasses and forbs now dominate the understory (see Table B-6 Packsaddle Pace 180 Transect Percent Composition by Species). Sagebrush has yet to return to the site, and the overstory is still dominated by yellow rabbitbrush. Rabbitbrush typically resprouts following a burn (depending on the severity), sagebrush does not.

The trend data prior to the wildfires (1985 through 1993) indicated a static trend. Observed apparent trend (OAT) data for this pasture (Table B-2, Appendix B), collected during the early ESI, indicated that the majority of the rabbitbrush/cheatgrass sites were in a static to downward trend. The trend site (which was classified as static when last read) was reread in 2012, and is now in an upward trend (as indicated by both photo and quantitative monitoring data).

A second trend plot located in this pasture is adjacent to a burned area/seeding. This trend plot was established and read in 2012 (LJ-20). No recent wildfires have impacted this location, as evident by the decadent stands of Wyoming big sagebrush. There is still a good native grass and forb component, but the sagebrush canopy (23%) (see Appendix B, Table B-5) is reaching a threshold, that a decrease in understory vegetation and an increase in bare ground may start occurring. This site was also evaluated for observed apparent trend, and the trend at this location was determined to be upward. Based on available trend data, representing different community types within the pasture, the trend is upward for this pasture in relation to biotic processes. Rangeland Health evaluation was conducted in this pasture in 2012, the interdisciplinary team (ID Team) conducting this evaluation concurs with the upward trend results of the data (see Table 3.6 summarizing the Standards for Rangeland Health Little Juniper Springs Allotment and Packsaddle Pasture ((BLM 2003c, 2012d).

Environmental Consequences:

Effects of Alternative 1: No Action

Approximately 2,183 acres (6.2%) of the vegetation communities within the pasture would continue to be impacted by concentrated livestock use (near cattle trails and water sources). Impacts to vegetation across the majority of the pasture (93.8%) would be dispersed and much less concentrated. Periodic rest would provide for a diversity of residual grass cover heights across the pasture. Grazing at light to moderate intensities would likely continue.

Current livestock management may allow some recovery time after each grazing period, however would be dictated by annual precipitation. Table 3.2 describes timing of grazing in relation to critical growing seasons of grasses forbs and shrubs. A rest-rotation grazing system that exists for the allotment allows plants to complete their growth cycle, and remain viable and healthy after each grazing period (Appendix

E5, BLM 2003a, p. A-169). As stated, the Packsaddle Pasture does not have a rest rotation system. The current vegetation communities, described in Appendix B, contain a diversity of native grasses, forbs, and shrubs. The current system allows for annual grazing in the pasture. Rest is dictated by lack of available water for livestock, rather than scheduled. The Packsaddle Pasture currently meets Rangeland Health Standards (BLM 2003c, 2012d). Under the No Action Alternative, it is possible the pasture could be used consecutively for many years with no rest, depending on annual precipitation. Distribution is determined by available water sources. This scenario would likely result in degradation to perennial vegetation and possible affect to Rangeland Health standards.

Table 3.3. Grazing Seasons for Alternative 1 (as used for previous decade)

Time Period	Winter (3/1)	Spring	Mid-Summer	Late-Summer (8/10)	Fall
Importance to Plant health	Plant dormant period	Important plant growth and seed production period for grasses and forbs		Grasses and forbs typically dormant until fall rains.	Important growth and seed production period for shrubs.
Pasture 1 year 2012	Not permitted	Rest			Not permitted
Pasture 1 year 2011	“ “	Graze			“ “
Pasture 1 year 2010		Rest			
Pasture 1 year 2009		Rest			
Pasture 1 year 2008		Graze			
Pasture 1 year 2007		Graze			
Pasture 1 year 2006		Graze			
Pasture 1 year 2005		Graze			
Pasture 1 year 2004		Graze			
Pasture 1 year 2003		Rest			
Pasture 1 year 2002	“ “	Rest			“ “

Effects Alternative 2: Management Changes and Project Development

Implementing a deferred rotation grazing system in the pasture (Table 3.4) would have the following impacts differing from the current management. These distinctions would include slightly more acres of concentrated ground disturbance, but better livestock distribution and more even dispersed use across the majority of the pasture. This alternative provides for alternating years of deferment during the growing season. Due to regular scheduled deferment, coupled with better livestock distribution, it is likely that this alternative would provide continued Rangeland Health attainment.

There would be some additional surface disturbance to vegetation from vehicle traffic during construction and future maintenance of the proposed range improvements. The total acreage impacted by concentrated livestock use at 18 existing water improvements, and four proposed water improvements would be similar to Alternatives 1 and 3, with the additional concentrated disturbance associated with these proposed improvements. The total additional concentrated disturbance associated with these improvements is estimated to be approximately 606 acres. Total of existing and proposed concentrated disturbance in this pasture would be approximately 2,789 acres (7.9% of pasture). The additional range improvements would likely reduce the severity of hoof impacts at any given watering location due to livestock being dispersed across more functioning watering sites each year. This coupled with annual deferment and rotation of the livestock would allow seasonal rest, recovery time, and seed maturation for the associated biotic community.

The proposed livestock management would allow seasonal rest and rotation. The impacts of grazing under this deferred rotation grazing system on plant communities within the Lakeview Resource Area have previously been analyzed in the Draft Lakeview RMP/EIS and Lakeview Proposed RMP/Final EIS (BLM 2001, 2003a) and these analyses are incorporated herein by reference. In summary, this grazing system would give most herbaceous key species an opportunity to replenish food reserves and maintain good vigor. The vigor of key species would be maintained at an acceptable level (Appendix E5, BLM 2003a, p. A-168). The current vegetation communities (Appendix B, Table B-2) contain a diversity of native grasses, forbs, and shrubs that would be maintained under this grazing system. The Packsaddle Pasture currently meets Rangeland Health Standards (BLM 2003c, 2012d) and would continue to meet Standards into the foreseeable future under this alternative.

Table 3.4. Grazing Season for Alternative 2

Time Period	Winter	Spring	Mid-Summer	Late-Summer 8/10	Fall
Importance to Plant health	Plant dormant period	Important plant growth and seed production period for grasses and forbs		Grasses and forbs typically dormant until fall rains.	Important growth and seed production period for shrubs.
Pasture 1 odd years	Graze			No grazing	Not Permitted
Pasture 1 even years	No grazing			Graze	Not Permitted
Pasture 2 odd years	No grazing			Graze	Not Permitted
Pasture 2 even years	Graze			No grazing	Not Permitted

Effects of Alternative 3: Grazed every other year

Similar to Alternative 1, approximately 2,183 acres (6.2%) of the vegetation communities within the pasture would continue to be impacted by concentrated livestock use (near cattle trails and water sources). Impacts to vegetation across the majority of the pasture (93.8%) would be dispersed and much less concentrated.

The impacts of grazing under this grazing system on plant communities within the Lakeview Resource Area have previously been analyzed in the Draft Lakeview RMP/EIS and Lakeview Proposed RMP/Final EIS (BLM 2001, 2003a) and these analyses are incorporated herein by reference. In summary, a rest rotation

grazing system would allow plants to complete their growth cycle, and remain viable and healthy after each grazing period (Appendix E5, BLM 2003a, p. A-169). Compared to Alternative 1, this grazing system would allow complete rest every other year (Table 3.5). The Packsaddle Pasture currently meets Rangeland Health Standards (BLM 2003c, 2012d) and would continue to meet Standards into the foreseeable future under this alternative.

Table 3.5. Grazing Seasons for Alternative 3

Time Period	Winter (3/1)	Spring	Mid-Summer	Late-Summer (8/10)	Fall
Importance to Plant health	Plant dormant period	Important plant growth and seed production period for grasses and forbs		Grasses and forbs typically dormant until fall rains.	Important growth and seed production period for shrubs.
Pasture 1 even year	Not permitted	Rest			Not permitted
Pasture 1 odd year	“ “	Graze			“ “
Pasture 1 even year		Rest			
Pasture 1 odd year	“ “	Graze			“ “

Effects of Alternative 4: No Grazing

Under this alternative, grazing would be limited to wildlife species and would not likely utilize all available forage on the pasture. Succession would likely favor shrub species over the long-term greater than 10 years. Due to a lack of defoliation to grass species older plant leaves would be favored which function at a less than maximum photosynthetic level. Increased shrubs and older grasses could change the structure of the plant community causing changes to the overall ecosystem relationships. With limited plant defoliation, regrowth could be restricted by previous year’s growth causing decreased evapotranspiration rates (Manske2001, McNaughton 1979).

Older vegetation and higher shrub populations would favor an increase in above ground biomass. However, with a lack of livestock on the pasture there would be a decreased need for forage production for animals and communities would change accordingly. The pasture would continue to meet rangeland health standards into the foreseeable future and would, therefore, continue to provide healthy, productive, and diverse plant populations and communities. The vegetation community may become less resilient to wildfire as the previous year’s ungrazed material accumulates as fuel.

E. Wildlife

Affected Environment:

The Packsaddle Pasture provides habitat for numerous small and nongame birds and mammals common to the Great Basin, as well as, Greater Sage-grouse and California bighorn sheep habitat. The pasture also provides habitat for raptors and some BLM and state sensitive wildlife species. The Rangeland Health Assessment (RHA) for the Little Juniper Springs Allotment #01000 found the allotment was meeting Rangeland Health Standards 3 (animal populations) and Standard 5

related to wildlife habitat (BLM 2003c). Livestock grazing did not appear to be limiting wildlife populations or habitat within this pasture or elsewhere in the allotment. RHA Standard 5 states that habitat quantity and quality for big game, small mammals, migratory birds, and other species including sage-grouse are not limiting within the allotment. The 2012 RHA update states that the conditions of quantity and quality of habitat for wildlife species continue in the Packsaddle Pasture. Rangeland Health Standards and Guidelines Determination signed April 10, 2013 states that management practices and grazing use levels within Packsaddle Pasture conform with Oregon Standards for Rangeland Health (BLM 2012f).

Water available to wildlife within the Packsaddle Pasture are limited to a few natural sources, water developments for cattle (waterholes, reservoirs, and seeps and springs) and guzzlers constructed specifically for wildlife. Wildlife guzzlers (water catchments) have been constructed for wildlife use in areas where natural water is limited. Competition for water can occur between wildlife, cattle, and horses in areas where water is scarce.

The pasture falls within the larger Oregon Department of Fish and Wildlife (ODFW) 2,955 square-mile Juniper big game habitat management unit. The mule deer and pronghorn antelope populations are relatively stable within this unit. Habitat quantity and quality do not appear to be limiting big game population size or health within the unit. Deer and pronghorn populations continue to fluctuate at or slightly above ODFW's population management objectives for the unit (ODFW 2003). The rangeland health assessment noted that the allotment supported current and proposed number of mule deer and pronghorn antelope population numbers identified in ODFW management plans. The Packsaddle Pasture comprises a small percentage of the herd management unit and provides habitat capable of supporting mule deer and pronghorn antelope. The pasture provides spring-fall habitat for mule deer, including fawning habitat. There are currently 510 AUMs allocated for mule deer, pronghorn, and other wildlife species within the entire allotment (BLM 2003b, page A-152). Based on previous consultation with ODFW biologists, this forage allocation is adequate to support big game populations and other wildlife species within the allotment.

California bighorn sheep habitat occurs within the Packsaddle Pasture. The ODFW describes the existing bighorn habitat as adequate for future population expansion. The only limitations in bighorn habitat within the pasture are limited perennial water sites and unrestricted movement to and from these water sources.

Other mammals observed in the pasture include jackrabbits, cottontails, coyotes, ground squirrels, chipmunks, marmots, bobcats, mountain lions, badgers, bats, and other common shrub-steppe mammal species. In some areas porcupines and bears have been seen.

Some migratory birds use all habitat types in the pasture for nesting, foraging, and resting as they pass through on their yearly migrations. There has been no formal monitoring of migratory birds within this pasture. Common species observed or expected to occur based on species range and vegetation in the pasture are listed in Table 3.7.

Birds of Conservation Concern for the Great Basin Region that may inhabit the pasture are also included in the table. A mix of big and low sagebrush communities inter-mingled with invasive

Table 3.7. Wildlife Species with Special Management Considerations

Species and Designation	General Habitat	Species Status	Birds of Conservation Concern	Migratory Birds	Focal Species	Game Birds Below Desired Condition	Eagle Act	Known Habitat or Potential Habitat Within the Pasture
Prairie Falcon	Cliff-open habitat				x			x
Ferruginous Hawk	Sagebrush-shrub steppe		x	x	x			x
Golden Eagle	Elevated nest sites in open country		x	x			x	x
Sage Sparrow	Sagebrush		x	x	x			x
Greater Sage Grouse	Sagebrush dominated rangelands	*FC	x		x			x
Peregrine Falcon	Cliff-open habitat	**SSS	x	x				x
Loggerhead Shrike	Open country/scattered trees/shrubs		x	x	x			x
Swainson's Hawk	Open Habitat			x				x
Sage Thrasher	Sagebrush-shrub steppe		x		x			
Bald Eagle	Wetlands/River Systems/Lakes	**SSS	x				x	x
Burrowing Owl	Grasslands-shrub steppe			x	x			
Brewer's Sparrow	Sagebrush clearings in bitterbrush		x	x	x			
Pygmy Rabbit	Sagebrush with deep soils	**SSS						
Kit Fox	Arid shrub-steppe	**SSS						
Pallid Bat	Arid regions/rocky outcroppings	**SSS						
Townsend's Big-eared Bat	Lava fields /Rocky Cliffs /Abandoned Structures	**SSS						
Northern Harrier	Wetlands/Ponds/Riparian Areas			x				

*FC – Federal Candidate Species

**SSS – Special Status Species

juniper comprise the dominant habitat types across the pasture. Waterfowl may frequent the pasture during migration. The 1988 amendment to the Fish and Wildlife Conservation Act mandates the U.S. Fish and Wildlife Service (USFWS) to “identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973.” The *Birds of Conservation Concern 2008* (BCC 2008) is the most recent effort to carry out this mandate. Partners in Flight use the focal species approach to set biological objectives and link priority species with specific conservation recommendations. It is a multi-species approach in which the

ecological requirements of a suite of focal species are used to define an 'ideal landscape' to maintain the range of habitat conditions and ecological processes required by landbirds and many other species. Focal species are considered most sensitive to, or limited by, certain ecological processes (e.g. fire or nest predation) or habitat attributes (e.g. patch size or snags). The requirements of a suite of focal species may then be used to help guide management activities.

Migratory game bird species identified by the USFWS that represents species whose population is below long-term averages or management goals, or for which there is evidence of declining population trends, and may be present in the Packsaddle Pasture, are also included in Table 3.7. Golden and bald eagles are 2 species given special protection under the Bald Eagle Protection Act of 1940 (as amended).

There are also numerous amphibian and reptile species that occur within the pasture including fence lizards, sagebrush lizards, gopher snakes, rattlesnakes, horned-lizards, and other common shrub-steppe species.

F. **Special Status Wildlife Species**

Affected Environment:

The BLM policy on special status species is to conserve those species and the ecosystems upon which they depend (BLM 2001c). Other than the Greater Sage-grouse (Federal Candidate Species), there are no known wildlife species classified as federally-listed Threatened or Endangered, proposed or candidate species, or proposed or designated critical habitat within the project area.

The greater sage-grouse (*Centrocercus urophasianus*) is a Bird of Conservation Concern for the Great Basin Region and a USFWS candidate species. In March 2010, the U.S. Fish and Wildlife Service (USFWS 2010) issued its 12-Month Finding which noted that that listing the greater sage-grouse range-wide is warranted, but precluded by higher priority listing actions. The major risk factors in the western portion of the range that are relevant to the allotment area include habitat conversion due to fire, cheatgrass invasion, and west Nile virus occurrence.

The pasture provides marginal yearlong habitat for the Greater Sage-grouse. The *Lakeview Proposed RMP/Final EIS* (BLM 2003a) Map W-1 shows areas defined as sage-grouse habitat as of spring 2002. The data displayed in the map is considered to be a "broad-brush" habitat map subject to refinement/update with new information over time. As noted in the footnotes of Map W-1, the habitat data represented "*the best data currently available*" and this data was expected to be refined or updated over time. Since the map was published, a cooperative habitat mapping effort with ODFW has occurred throughout eastern Oregon resulting in updated sage-grouse habitat and lek location data.

Based on Oregon Department of Fish and Wildlife's (ODFW) most recent sage-grouse lek data, there are no known, active sage-grouse leks found within the Packsaddle Pasture. The nearest active lek is located approximately 10 miles southwest of the Packsaddle Pasture boundary.

Knick and Connelly (2011) contains a compilation of recent sage-grouse research which addresses a variety of issues related to management of the species at the range-wide scale (often referred to as the “Monograph”). Information from the Monograph was synthesized for application at the regional scale (Oregon) within the *Greater Sage-Grouse Conservation Assessment and Strategy for Oregon: A Plan to Maintain and Enhance Populations and Habitats* (ODFW 2011).

ODFW (2011) developed a habitat dataset that identifies the most productive landscapes for sage-grouse as either “core habitat” or “low density habitat”. Since that time, the BLM, in coordination with ODFW, has refined this dataset. At this point in time, core habitat has become virtually synonymous with what BLM is currently calling “preliminary priority habitat” (PPH). This habitat is defined as areas that have the highest conservation value for maintaining sustainable Greater Sage-Grouse populations. These areas include breeding, late brood-rearing, and winter concentration areas. BLM is currently calling low density habitat as “preliminary general habitat” (PGH). This is defined as areas of occupied seasonal or year-round habitat outside of priority habitat. This mapping exercise considered a landscape approach and was based upon sage-grouse distribution and abundance in association to nearest lek and not on actual vegetation. The main objective of the exercise was to protect the most important breeding or nesting areas. Based on refined habitat data there are approximately 673 acres of PGH and 0 acres of PPH in the Packsaddle Pasture (Appendix C, Map 8).

Sage-grouse habitat quality was also assessed using the *Sage-grouse Habitat Assessment Framework* (Stiver *et al.* 2010). At the Third Order scale (sage-grouse home range scale) habitats are limited within the pasture. Connelly *et al.* (2004) found most sage-grouse nest within 4 miles of a lek. Based on the distance from the nearest active lek (approximately 10 miles) and the reduced percentages of sagebrush cover and heights associated with the current dominant vegetation types (due somewhat to three previous wildfires), approximately 500 acres (1%) of the Packsaddle Pasture is marginal yearlong habitat. Based on the reduced sagebrush cover approximately 34,910 acres (99%) of the pasture contains unsuitable nesting, summer and winter habitat (Appendix C, Map 8)

Potential habitat for pygmy rabbits was identified in the Rangeland Health Assessment (BLM 2003c). This species has since then been documented in a few locations elsewhere within the Little Juniper Springs Allotment, but has not been confirmed within the Packsaddle Pasture.

Peregrine falcons have been observed in the general area due to releases from the Crump and Summer Lake hack sites; however, no nesting has been documented within the pasture. Currently, there are no known nests or nesting habitat for bald eagles within the pasture. They are suspected to be occasional visitors to the area. There are confirmed golden eagle observations within the pasture but no known nests.

The pasture lies within the northern range of the kit fox in Oregon and potential habitat does exist. However, no kit fox have ever been documented anywhere within the Lakeview Resource Area including the Packsaddle Pasture. Therefore, they are not carried forward for further analysis.

Special status bats may occur within the pasture, but likely only involve occasional migrating individuals foraging or passing through from adjacent habitat. There are no known caves, adits, shafts, or outbuildings in the pasture capable of providing hibernacula for bats. Due to the low

potential for occurrence and lack of roosting/resting habitat, none of the alternatives would have any measurable impacts to bat species. Therefore, they are not carried forward for further analysis.

Environmental Consequences: Wildlife and Special Status Species:

Effects Common to All Alternatives

ODFW (2011; page 13) cites two unpublished studies that documented sage-grouse mortality associated with fencing as a risk factor in winter habitat in Wyoming and near lek sites in Idaho. IM No. 2012-043 recommends marking fences within 1.25 mile of leks with anti-strike markers (reflectors). Based on the closest active lek being at least 10 miles away from existing and proposed fences associated with the Packsaddle Pasture, the risk of fence collision mortality would be very low and anti-strike markers would not be required to comply with either ODFW or BLM interim guidelines.

Effects of Alternative 1 - No Action

An estimated 2,183 acres (6.2%) of predominantly sagebrush wildlife habitat types within the Packsaddle Pasture would continue to be impacted by livestock trailing and concentration near existing water sources. The majority of these acres lie within unsuitable sage-grouse habitat. The remainder of the vegetation and associated habitats within the pasture would continue to be impacted to a very minor degree by dispersed grazing use. The pasture is currently achieving Rangeland Health Standards 3 and 5 for wildlife populations and habitat, including special status species habitat. As this pasture currently has no formal grazing system, it is unknown whether the current trend will continue. A series of wet years which would allow consecutive grazing without rest or deferment may have a slight negative effect to perennial vegetation. As this would ultimately effect wildlife habitat, there is some risk to habitat for wildlife and special status wildlife species with continued implementation of this alternative.

Due to the lack of suitable sage-grouse habitat, continuing grazing under the No Action alternative would have only minor effects on the marginal sage-grouse nesting and brood-rearing/summer habitat within the pasture. Continued grazing without periodic rest or deferment, could affect available vertical or horizontal screening cover. Lack of a grazing system could also negatively affect forbs and habitat for insects, which are important to sage-grouse during the spring and summer months (Drut *et al.* 1994, Gregg and Crawford 2009). Continuous grazing without periodic rest or deferment may affect the marginal quality of winter habitat

Another risk factor identified in the Monograph, the Oregon Strategy, and the 12-Month Finding is West Nile virus spread by mosquitoes around standing water (Knick and Connelly 2011, ODFW 2011, USFWS 2010). Sage-grouse are susceptible to West Nile Virus (Clark *et al.* 2006) and mortality may be as high as 100 percent (Naugle *et al.* 2004) in certain areas. The virus is primarily transmitted by infected mosquitoes, and was first detected in southeastern Oregon near Burns Junction in 2006, and then later near Crane and Jordan Valley. Across the species range, total mortalities attributable to West Nile Virus have markedly declined since 2003. The virus has not been detected near the Packsaddle Pasture or in southeast Oregon since the first observations in 2006 (DeBess 2009). Existing water troughs (Appendix C, Map 3) are designed to minimize overflow and minimize potential for the production of mosquitoes. Therefore, the risk of virus spread or associated mortality would be low under this alternative.

Current grazing management has achieved Rangeland Health Standards 3 and 5 for wildlife species and habitat. Livestock grazing did not appear to be limiting wildlife populations or habitat within this pasture or elsewhere in the allotment. RHA Standard 5 states that habitat quantity and quality for big game, small game, and non-game species including sage-grouse are not limiting factors within the allotment (BLM 2003c). The 2012 RHA update states that the conditions of quantity and quality of habitat for wildlife species continue in the Packsaddle Pasture. Rangeland Health Standards and Guidelines Determination signed April 10, 2013 states that management practices and grazing use levels within Packsaddle Pasture conform with Oregon Standards for Rangeland Health (BLM 2013b).

Approximately 2,183 acres (6.2%) of the wildlife habitat within the pasture would continue to be impacted by concentrated livestock use (near cattle trails and water sources), while impacts to habitat across the majority of the pasture (94%) would be dispersed and much less concentrated. Currently, the area has adequate habitat to support an appropriate assemblage of big game, small mammals, migratory birds, and other species. The existing vegetation communities contain a diversity of native grasses, forbs, and shrubs. However, without a formal grazing system that allows for periodic rest or deferment, vegetation and habitat diversity may not be maintained over time under current No Action alternative (refer to the Upland Vegetation section).

Sage-grouse habitat in the pasture has maintained approximately 500 acres of marginal yearlong sage-grouse habitat under the current grazing management. Without a grazing system that allows for periodic deferment or rest, vegetation trends may remain static or decline. Decline in vegetation diversity or structure would negatively affect existing marginal habitat for sage-grouse in the future. In the long-term, Western Juniper expansion in the pasture could also affect portions of marginal sage-grouse habitat within the pasture, but future juniper management is not specifically addressed in this analysis.

Effects of Alternative 2 - Management Changes and Project Development

Although approximately 2,789 acres (7.9%) of the wildlife habitat within the pasture would be impacted by concentrated livestock use (near cattle trails and water sources) and project implementation, impacts to wildlife habitat (big game, small mammals, migratory birds, and other species) across the majority of the pasture (92%) would be dispersed and much less concentrated. The impacts of this alternative on wildlife habitat in general would be less than Alternatives 1, due to implementation of a deferred grazing system. The vegetation within the pasture would be deferred spring use, as compared to no grazing system under Alternative 1 which is dependent upon water availability and potentially utilized each spring. The existing vegetation communities contain a diversity of native grasses, forbs, and shrubs that would be maintained across the pasture through implementation of a deferred rotation grazing system. (Refer to the Upland Vegetation section).

Rangeland Health Standards 3 and 5 would continue to be met for wildlife populations and habitat. The pasture would continue to provide adequate quality wildlife habitat that is capable of supporting an appropriate assemblage of sagebrush-dependent wildlife species. Due to a deferred grazing system, the long term effects of this alternative on sage-grouse habitat would be less than Alternative 1. This alternative would continue to provide marginal habitat (based on acreage) for sage-grouse in both the short and long-term.

Under this alternative, there would be up to five additional water developments. The proposed water troughs would all be equipped with floats to prevent excess ponding which can contribute to increased mosquito populations and associated threat of West Nile virus. The proposed waterhole would be seasonal in nature, and is not expected to increase mosquito populations substantially.

Effects of Alternative 3: Use Pasture Every Other Year

Approximately 2,183 acres (6.2%) of existing wildlife habitat (big game, small mammals, migratory birds, and other species) within the pasture would be impacted by concentrated livestock use (near cattle trails and water sources). Impacts to wildlife habitat across the majority of the pasture (94%) would be dispersed. The impacts of this alternative (rest rotation with use every other year) on wildlife habitat in general would be less than to Alternative 1 and would provide adequate habitat for sage-grouse and other wildlife species in the short and long-term.

Effects of Alternative 4: No Grazing (Complete Removal of Livestock Grazing)

Under the no grazing alternative there would be very little change in the existing quality of wildlife (big game, small mammals, migratory birds, and other species) habitat compared to the no action alternative. However, the removal of grazing would provide increased forage availability for many species of wildlife. The pasture currently meets Rangeland Health Standards 3 and 5 and provides suitable wildlife habitat and forage (BLM 2003c, 2013b), and would continue to do so under this alternative into the foreseeable future.

There would be no substantial change in special status species habitat quantity or quality in the short-term (1-5 years) compared to Alternatives 1 through 3. An estimated 2,183 acres (6.2%) of sagebrush habitat within the pasture formerly impacted by livestock trailing and concentration near existing water sources would improve over the long-term (6-10 years).

Alternative 4 would result in slightly less total suitable mosquito larval habitat at available water sources within the pasture as compared to Alternatives 1, 2, and 3. However, all existing water sources in the pasture would remain. This reduction would not substantially lower the risk of viral spread of West Nile virus (and associated sage-grouse mortality) compared to these alternatives. The effects of this alternative on sage-grouse habitat would be less than Alternative 1, and similar to Alternatives 2-3. This alternative would continue to provide marginal habitat for sage-grouse in both the short and long-term.

G. Special Status Plants

Affected Environment:

A regularly monitored population of the BLM Sensitive plant species, *Ivesia rhypara* var. *shellyi*, or Shelly's Mousetail, occurs inside Upper Packsaddle Canyon within Packsaddle Pasture. *Ivesia rhypara* var. *shellyi* grows directly on large boulders and outcrops of eroding volcanic tuff that exist only along the steep walls of the canyon. These boulders support little to no other plant life and are extremely difficult for livestock to access. The population has grown significantly since 1985 when it was first recorded at about 5,000 individuals, and is presently estimated at

approximately 29,000 individuals. *Cymopterus nivalis*, or Snowline Springparsley, is another BLM Sensitive plant species with similar habitat needs, but has never been found within Upper Packsaddle Canyon. Its population trends on several other sites within the Lakeview District have remained stable over the past 30 years.

Environmental Consequences:

Effects of Alternative 1 – 4

Due to the specificity of their rocky and inaccessible substrate, the population of *Ivesia rhypara* var. *shellyi*, or a population of *Cymopterus nivalis* in Upper Packsaddle Canyon (Packsaddle Pasture) are not disturbed or otherwise affected by current grazing activity (Alternative 1), and would not be affected by any changes in grazing activity proposed under Alternatives 2-4.

H. **Livestock Grazing Management**

Affected Environment:

Little Juniper Springs Allotment is a management category *Improve* allotment. General management direction within an *Improve* allotment is:

-
- Allotments have moderate to high resource production potential but are producing at low to moderate levels.
- Present management is considered unsatisfactory.
- Riparian areas are presently in a declining trend and management is unsatisfactory.
- Serious resource use conflicts may exist and controversy is at a high level.
- Potential for high return on public investment exists.

Authorized use consists of one cattle grazing permit (#3601233) in the Packsaddle Pasture of this allotment. The permitted active use for this permit is for 1,350 cattle from March 1 through August 10. Cattle numbers can fluctuate annually as long as the total active use on the pasture is not exceeded.

In 2003, an Interdisciplinary Team (ID) conducted a rangeland health assessment (RHA) within the allotment. The ID team found that all applicable standards were met (BLM 2003c). In 2012, an ID team conducted a review of the 2003 findings specifically within the Packsaddle Pasture of the Little Juniper Springs Allotment and found that all applicable standards are continuing to be met. The 2003 RHA and 2012 update are summarized in Table 3.8, and are incorporated in their entirety herein by reference (BLM 2003c, 2012d; available at <http://www.blm.gov/or/districts/lakeview/plans/inventas.php>).

Prior to 2008, Dry Valley Pasture and Packsaddle Pasture, both within the Little Juniper Allotment were used in conjunction by the current permittee. In 2008, Dry Valley Pasture was transferred to another permittee. The Packsaddle Pasture has 1,350 Active AUM's. Dry Valley Pasture has 1,271 Active AUM's. The total for the permit when both pastures were used in conjunction was 2,621 Active AUM's. Actual use and utilization data dating back to 1985 has been compiled for this pasture/permittee (see Appendix B3). In

Table 3.8. Standards for Rangeland Health for Little Juniper Springs Allotment (BLM 2003c, 2012d)

Standard	Assessment 2003 Met/Not Met	Current Assessment 2012 Met/Not Met	Comments
1. Watershed Function – Uplands	Met	Met	Plant composition is diverse and community structure of grasses, forbs, and shrubs are what is expected for the site. The Big Juniper Wildfire of 2001 affected this pasture and crested wheatgrass is found intermixed with native plants. Cheat grass is also present. Organic matter in the form of plant litter is accumulating and being incorporated into the soil. Available trend data shows that plant cover and the amount and distribution of bare ground is within the range of variability expected for the ecological sites found in the allotment. There is a greater distribution of bare ground in LJ-20.
2. Watershed Function Riparian/ Wetland Areas	Met	Met	The 2003 RHA identified 392 acres of Palustrine wetlands to be in Proper Functioning Condition within the Little Juniper Springs Allotment. Of these 392 acres, approximately 83 acres are located within the Packsaddle Pasture. The 2012 update to the RHA found the palustrine wetlands located within the Packsaddle Pasture continue to be in PFC.
3. Ecological Processes	Met	Met	Plant composition and community structure across LJ-01 and LJ-20 sites of the Packsaddle Draw Pasture are appropriate for the site. Available trend data shows that organic matter is accumulating in the form of litter and is being incorporated into the soil. Plant roots appear to be occupying the soil profile, stabilizing the soil. Many insects, birds, pronghorn and coyotes were spotted in this allotment in 2012. The ecosystem shows a positive response to the wildfire of 2001.
4. Water Quality	N/A	Met	Not applicable; no perennial water present.
5. Native, T/E, and Locally Important Species	Met	Met	<i>Ivesia rhypara</i> var. <i>shellyi</i> is present in this pasture and is a rock dwelling plant that is not impacted by livestock. Pronghorn and coyotes were spotted in this allotment in 2012. There are no known sage grouse leks in the allotment; however, sage grouse have been seen using the allotment at different times of year. Livestock grazing does not appear to be limiting wildlife within the allotment.

these 27 years, actual use exceeded authorized AUMs one time (2001) by two AUMs. This is considered a minor deviation from authorized use and may be attributed to a rounding error. Utilization data has been collected for 10 of these 27 years. The average utilization for the Packsaddle Pasture for that period of time has been 26 %. This is well within the target utilization levels for key forage plant species of 50%.

Environmental Consequences

Effects of Alternative 1: No Action

Under the no action alternative, the pasture would continue to be utilized in years when there is adequate water for livestock. There could be a scenario that would allow continuous grazing with no rest or deferment for numerous consecutive years. During these years, distribution would be determined by which waterholes contain water. During low precipitation years, livestock would not be present on the pasture. The permittee would continue to be faced with the uncertainty related to their livestock management. Both

actual use and utilization data (see Use data dating back to 1985 (see Table Appendix B-3) has been below authorized Active AUM's with the exception of one year when it was exceeded by two AUM's. This minor exception may be attributed to rounding errors.

Continued current grazing management could negatively affect perennial vegetation. In turn, this may lead to a scenario of consecutive annual grazing where Rangeland Health Standards are at risk.

Effects of Alternative 2: Management Changes and Project Development

This alternative provides the permittee with predictable use of the pasture. This alternative also provides a deferred rotation system for the pasture. Proposed range improvements associated with this alternative allow continued use of the pasture while ensuring other resources are protected. Through the development of water within the pasture, both livestock and wildlife would benefit. Construction of a division fence, creating two pastures, would allow rotation of spring growing-season and dormant use on an annual basis. Adjusting livestock distribution using the techniques proposed under this alternative would be consistent with the allotment-specific management direction found in Appendix E1 of the *Lakeview Resource Management Plan/Record of Decision* (BLM 2003b, p. A-131) (see also Chapter 1). This grazing management would continue to meet rangeland health standards into the foreseeable future. Multiple use objectives from the land use plan would also be met on the pasture. For these reasons, this alternative would also be consistent with the grazing regulations and FLPMA.

Effects of Alternative 3: Grazing every other year

Under this alternative, the pasture would be utilized every other year. During these grazed years, distribution would be determined primarily by which waterholes contain water. This alternative does provide the permittee with a level of certainty as to when use will be authorized. However, there may still be drought years when use would not be possible due to lack of water. This sets up a negative scenario for the permittee, as a favorable year may be a no use year and vice-versa.

Adjusting livestock distribution using the techniques proposed under this alternative would be consistent with the allotment-specific management direction found in Appendix E1 of the *Lakeview Resource Management Plan/Record of Decision* (BLM 2003b, p. A-131) (see also Chapter 1). This rest rotation grazing management would continue to meet rangeland health standards into the foreseeable future. Multiple use objectives from the land use plan (see Chapter 1) would be met on the pasture. For these reasons, this alternative would be consistent with the *Lakeview Resource Management Plan/Record of Decision* (BLM 2003b), the grazing regulations, and FLPMA.

Effects of Alternative 4: No Grazing

Under this alternative, grazing would no longer be permitted within the Packsaddle Pasture. The permittee would need to replace 1,350 AUMs of lost forage (approximately 2,400 lbs) with private land forage or hay in the general vicinity. The additional cost to replace this forage would be at the permittee's expense. If private landowners within the pasture wish to continue livestock grazing on their private lands, they would be required to bear the cost of keeping livestock off public land by either herding or constructing fences to prevent trespass. These costs are discussed further in the Social and Economic section.

Existing range improvement projects within the pasture would not be maintained. However, the pasture boundary fences would need to be maintained by the BLM or adjacent permittees to keep livestock out of the pasture.

This alternative would not be consistent with the primary overall Livestock Grazing Management Goal in the *Lakeview Resource Management Plan/Record of Decision* of providing "for a sustainable level of

livestock grazing consistent with other resource objectives and public land-use allocations,” nor would it be consistent with the specific grazing management direction for the allotment, which is listed as open and available to grazing use (BLM 2003b, as maintained; p. 52; Table 5, p. 49; Map G-3).

I. Native American Traditional Practices

Affected Environment:

The Packsaddle Pasture is located within an area which was used by Northern Paiute Indians. Members of the Burns Paiute Tribe may have used the area or have relatives who used the area in the past for collection of traditional plant materials or religious uses. However, there are currently no known sacred or religious sites, Traditional Cultural Properties, or plant collecting sites within the pasture.

Environmental consequences

Impacts Common to Alternatives 1-4

None of the alternatives would substantially change the nature of existing traditional use sites in the area, if actually present.

J. Cultural Resources

Affected Environment:

Only about 2 to 5% of the Packsaddle Pasture has had a Class III cultural survey performed on it. Surveys have been done on and around water developments, power line right-of-ways, fire rehab projects and roads in the area. The fact that cultural surveys have not been completed on 100% of the pasture represents a resource for which there is “incomplete or unavailable information”. According to the CEQ’s NEPA regulations (40 CFR Part 1502.22), when an agency is evaluating impacts and there is incomplete or unavailable information, the agency must make clear that such information is lacking. Further, if the information “cannot be obtained because the cost of obtaining it are exorbitant or the means to obtain it are not known, the agency shall include.... (1) a statement that such information is incomplete or unavailable; (2) a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts....; (3) a summary of the existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant impacts... and (4) the agency’s evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community...”. The DOI NEPA regulations state that these costs are not just monetary, but can also include “social costs, delays, opportunity costs, and non-fulfillment or non-timely fulfillment of statutory mandates” (43 CFR Part 46.125). The costs of obtaining a comprehensive survey of cultural resources across the pasture is estimated at \$800 to \$1080 per acre based upon current costs for contract survey work. Surveying the entire 35,410 acres within pasture would cost approximately \$28,328,000 to \$38,242,800 and is considered to be exorbitant.

Based upon analysis of the known sites which are located in the area, the pasture appears to have been used for plant gathering and hunting, especially in the last 2,000 to 4,000 years. Some evidence of occupation during 8,000 to 10,000 years before present (BP) is also indicated by the sites presently known.

Based on past cultural surveys, 15 sites have been documented in the allotment. Five sites are prehistoric sites related to stone tool manufacture and maintaining hunting tools. Two sites are more complex and also involve plant food processing and a longer term encampment. Two sites are stone ring sites, probably hunting blinds. Two sites are rock cairn sites. One site is a rock art site. One site is a rock lined pit situated in a talus slope which was used either as a hunting blind or storage pit. Two sites are small rock shelters

which may have been used for occupation or for cache sites.

Environmental Consequences:

Effects of Alternative 1- No Action

Based on field observations by BLM cultural resources staff over the last 38 years on known cultural resource sites in the Lakeview Resource Area, livestock use can impact cultural materials located in the top 12 inches of the soil profile. These effects include ground cover removal, surface scuffing, and hoof shear. The reoccurring cycle of ground disturbance, removal of vegetative cover, along with water and wind erosion can lead to continued loss of soil and further exposure of a given site, and loss of vertical context within the site. Cultural materials within the top 12 inches of soil can be exposed to trampling damage, resulting in reduced site integrity. The deepest disturbance is typically seen at sites located in congregation areas (near water sources and trailing areas) where concentrated hoof shear is common. Generalized dispersed grazing, with light hoof shear and surface scuffing, can result in light (2 inches) to moderate (6 inches) depth of impacts to some sites.

Seven of the documented sites in the allotment have been impacted in varying degrees from surface scuffing (2 inches deep) to hoof shear (12 inches deep) by livestock use. However, the severity and extent of impacts have not been quantified. The most common impacts to these documented sites have been livestock trampling, wind erosion, and sheet wash erosion from rain. The other seven sites are of a type or location which would not normally be impacted by livestock trampling.

Any undocumented cultural sites located in the allotment within livestock concentration areas (6.2% of the pasture) such as water sources and trailing areas would continue to be impacted by heavy hoof shear and trampling from both livestock and big game, along with erosion from wind and water. Any undocumented sites located across the majority of the allotment (93.8% of the pasture) would continue to be impacted by light hoof shear and surface scuffing from dispersed livestock and big game use.

Effects of Alternative 2: Management Changes and Project Developments

Changing the timing of livestock use under Alternative 2 would not likely change the effects on cultural resources substantially across most of the pasture, compared to Alternative 1. Cultural surveys were completed for all proposed range improvements within the pasture. No new eligible sites were located that are likely to be affected by proposed range improvements. Proposed range improvement design incorporated known locations of cultural sites, all known site were avoided by proposed range improvements to eliminate affect to these sites.

Effects of Alternative 3: Use Pasture Every Other Year

Grazing every other year would not reduce the amount or type of livestock impacts on cultural resources, but rather it would simply spread them out over a longer period of time compared to Alternative 1. Impacts from big game and erosion impacts from wind and water would be expected to continue similar to Alternative 1.

Effects of Alternative 4: No Grazing

Removal of grazing would eliminate existing disturbances from livestock grazing on cultural sites within the pasture. However, effects to cultural resources would continue from big game use and from wind and water erosion.

K. Recreation

Affected Environment:

There are currently no developed recreation sites within the Packsaddle Pasture, nor are there any planned for the future. Recreation in the area is primarily focused on Semi-Primitive Motorized activities, opportunities, and experiences (BLM 2003b, Map R-3). The area possesses a moderate probability of experiencing isolation, closeness to nature, and self-reliance in outdoor skills. There is evidence of other users, but user interaction is low. Topographic screening within Packsaddle Draw and Juniper Draw offer some degree of solitude in the northern and southern sections of the pasture (BLM 2013a). Use of motorized vehicles on roads, trails, and cross-country travel is allowed (BLM 2003b, Map R-7), although motorized use in the area is low. The primary recreation activities in the pasture are upland game bird (e.g. chukar) and big game (e.g. mule deer and pronghorn antelope) hunting. Additionally, there are two wilderness therapy group campsites located in the southwest corner of the allotment. The area also offer some other limited primitive recreation opportunities including: wildlife viewing, nature study, hiking, and horseback riding (BLM 2013a).

Environmental Consequences:

Effects of Alternative 1: No Action

Continuing grazing management under this alternative would have minimal effects to existing recreation opportunities across the pasture. Current levels of recreation activities, opportunities and experiences would remain relatively constant.

Effects of Alternative 2: Management Changes and Project Development

Alternative 2 would have both negative and positive impacts to recreation in the Packsaddle pasture. The proposed grazing system and pasture division fence would seasonally constrain grazing to either the north or south pasture. Users seeking isolation and closeness to nature as well as those seeking hunting and wildlife viewing would marginally benefit from the temporary removal of cattle during rest periods. Conversely, these same users recreating in a pasture during grazing periods would endure a slightly diminished recreational experience due to a higher density of cattle (less area, same AUMs).

Additionally, the proposed fence would create a new barrier to those hiking or riding horses across the allotment. This would somewhat diminish the recreational experiences related to activities dependent on unconfined space. Furthermore, the proposed holding pen would have moderately negative impacts to wilderness therapy groups camping less than a quarter mile away during times when animals and permittees are utilizing the pens (2-3 weeks a year). Wilderness therapy group campsites have typically been designated in locations away from pens and other use areas, as solitude and isolation is paramount to their operation for both safety and therapeutic benefit of their clients.

Additionally, Alternative 2 would increase the grazing season of use by about 17%. This change would result in 28 more days, or 190 days/year total permitted time in this pasture, the public could not recreate within the pasture free of the impacts of cattle (e.g. sights, sounds, smells of fresh manure, and associated pressure on wildlife dependent activities).

Generally, impacts to recreation associated with the establishment of a new water distribution system (well, water tank, pipelines, troughs, and reservoir) would be either moderately beneficial or moderately detrimental depending on the user group. A functioning well, with increased access to water, would benefit users pursuing wildlife viewing and hunting opportunities. However, areas within close proximity to water developments would also be undesirable for those seeking isolation, closeness to nature, or a more natural outdoor experience, due to the negative impacts of increased use by permittees and livestock. These developments would also, to some degree, change the natural character of the area's recreational setting from pastoral to more agricultural. Overall, these changes could shift recreational use in the area more

towards wildlife dependent activities and away from experiences that rely on more natural landscapes.

Effects of Alternative 3: Use Every Other Year

Alternative 3 would slightly enhance recreational experiences and opportunities within the pasture compared to Alternative 1. Wildlife dependent user groups and those seeking natural outdoor experiences would benefit from a more vigorous upland plant ecosystem. However, these changes would likely go unnoticed by the average visitor.

Effects of Alternative 4: No Grazing

The No-Grazing Alternative would moderately enhance recreation activities, opportunities, and experiences within the Packsaddle Pasture. Naturalists' and wildlife dependent recreationists' experiences in these areas would be enhanced due to somewhat restored ecological conditions (in areas associated with cattle trails and watering/gathering areas) that would likely occur over the 10-year period, due to the absence of the sights and sounds of cattle and the increased potential to watch and hunt wildlife. Furthermore, recreation experiences would improve for every additional year grazing is removed as ecological conditions are restored or existing facilities (e.g. water developments, fences, corral) becomes less observable to the casual observer due to lack of maintenance or from reestablishment of vegetative cover/screening.

L. Visual Resources

Affected Environment:

The visual setting of Packsaddle Pasture is comprised of open, panoramic views of Juniper Mountain to the west, Hart Mountain to the southeast, Dry Valley and Dry Valley Rim to the east, along with Horsehead and Little Juniper Mountains to the north. Topographically, the pasture slopes from west to east towards Dry Valley at 4,600 ft., with Turpin Knoll being the most prominent feature at 5384 ft. in elevation in the southwest corner. As a whole, the area is dominated by Packsaddle Draw in the north and Juniper Draw in the south, with both running nearly the entire length of the pasture from southwest to northeast. The vegetation consists of sagebrush-steppe system with a mix of native grasses and forbs. A few scattered juniper trees can be found near the western boundary. Observable developments within the pasture include: roads, motorized trails, reclaiming routes, fences, reservoirs, waterholes, a well, seeding (2002), wilderness therapy campsites, and historic McCarty Cabin site.

Packsaddle Pasture is managed according to Visual Resource Management (VRM) Class IV which allows for "major modifications to the landscape," though every effort should be made to ... minimize disturbances and design projects to conform to the characteristic landscape" (BLM 2001, page 290).

Environmental Consequences:

Effects Common to Alternatives 1 and 3

Both alternatives would have negligible effects to existing visual resources, thus achieving the visual objectives for VRM IV.

Effects of Alternative 2: Management Changes and Project Development

Alternative 2 would affect visual resources within the Packsaddle Pasture primarily due to the development of a new water distribution system (well, water tank, pipelines, troughs, and reservoir), fences, and corral. However, these impacts would be localized and designed to conform to the characteristic landscape of the area when possible. The proposed pasture division fence would be placed to blend in with the rim lines of

Packsaddle Draw. The proposed pipeline would be buried to reduce visual contrast or an “industrial” appearance and the water tanks/troughs would be painted to fit in with surrounding colors to prevent the structure from being seen from miles around the site (refer to General Project Design Elements for Proposed Range Improvements in Chapter 2. Thus, Alternative 2 would conform to visual objectives for VRM IV by minimizing visual disturbances when possible through design and color scheme of facilities.

Other mitigation measures were considered, but determined not necessary for this proposal.

Effects of Alternative 4: No Grazing

The No-Grazing Alternative would enhance visual resources slightly within the Packsaddle Pasture. During 10-year period, visual resources would improve across the pasture as ecological and vegetation conditions improve around water developments and cattle trails. Visual resources would continue to improve every additional year grazing is removed from the pasture as existing facilities (water developments, fence lines, corral) would slowly become less observable due to lack of maintenance or from reestablishment of vegetative cover/screening.

M. Social and Economic Values

Affected Environment:

The economy of Lake County is based primarily on agriculture, timber, livestock, and government sectors. Livestock grazing and associated feed production industries are major contributors to the economy of Lake County. The most common is the raising of cattle and calves for beef. In 2009, an estimated 96,500 head of cattle and calves were in Lake County, Oregon (Oregon Agricultural Information System 2010). In 2009, Lake County ranchers sold an estimated \$28,000,000 worth of cattle and calves or related beef products from public lands. The pasture supports approximately 250 cattle on an annual basis for 5.5 months of the year. Approximately 208 calves can be produced annually for market (assuming 5 bulls and 85% calving rate). Ranching is also important as a social lifestyle within Lake County.

Environmental Consequences:

Effects Common to Alternatives 1-4

Public lands in and around the pasture would continue to contribute social amenities such as open space and recreational opportunities. These amenities encourage tourism in the surrounding region and provide economic benefits to nearby communities such as Christmas Valley, Riley, and Burns, though the specific contribution of the pasture to these local economies cannot be accurately estimated.

Effects of Alternatives 1 – 3

Under these alternatives, the Federal government would continue to collect grazing fees (1350 AUMs * \$1.35/AUM = \$1822.50) from the permittee. This commodity use of public lands would continue to generate revenues for the Federal government on an annual basis. The rancher/permittee would continue to graze 250 cattle and produce approximately 208 calves each year, contributing less than 1% to the total county-wide cattle production.

Based on the current price of a 600-pound stocker calf at \$163/cwt (100 lbs. of live weight) (Stockmans Journal, 2012) the permittee would generate a gross income of approximately \$203,424. This is an estimate that would vary every year depending on the price of beef and the weight/condition of the calves at the time of sale.

Effects of Alternative 2: Management Changes and Project Development

The range improvements proposed under Alternative 2 could potentially provide a one-time influx of approximately \$40,000 in income to surrounding businesses and communities from project construction activities. Alternative 2 may also have a return on these investments in terms of efficiency and increased production. Calving rates could increase, efficiency may lower labor costs. It is not possible to quantify these benefits to the permittee and their operation, but they represent a potential tangible benefit.

Effects of Alternative 3: Use Every Other Year

Under alternative 3, the pasture would be rested every other year. The current producer would have to either locate suitable pasture lands to purchase or lease, or feed hay for the portions of the year they would have been on Public Lands. The current cost of hay is approximately \$245/ton (Oregon-Washington weekly hay report, 2012) and assuming it takes 30 lbs./day/cow, the additional cost per day would be \$918.75. This would result in approximately \$154,120 in additional costs to feed the permittee's 250 cows for 5.5 months, not including transportation costs of moving the hay to the ranch. The average pasture rate for private land forage in Oregon is \$14.80 Per AUM. The additional annual cost (every other year) to the rancher would be approximately \$18,157.50 ((1350 AUMs * \$14.80) - \$1822.50).

Effects of Alternative 4: No Grazing

A minimum annual loss of \$1822.50 would occur to the Federal government due to the loss of grazing fee collections associated with this pasture. This would also result in the loss of suitable grazing land for the local rancher/permittee. The rancher would then have to find suitable pasture to graze his livestock elsewhere in the surrounding region or feed additional hay. This would result in additional costs to the rancher. The current cost of hay is approximately \$245/ton (Oregon-Washington weekly hay report, 2012) and assuming it takes 30lb/day/cow, the additional cost per day would be \$918.75. This would result in approximately \$154,120 in additional costs to feed the permittee's 250 cows for 5.5 months, not including transportation costs of moving the hay to the ranch. The average pasture rate for private land forage in Oregon is \$14.80 Per AUM. The additional annual cost to the rancher would be approximately \$18,157.50 ((1350 AUMs * \$14.80) - \$1822.50). If the rancher could not secure other suitable pasture land or could not afford these increased costs, then approximately 208 calves would no longer be produced annually in Lake County, resulting in less than a 1% annual reduction in county-wide cattle production. Although this is a small percentage of the total livestock production, the real social-economic cost would be the loss of one operating ranch within the county.

N. Cumulative Effects

Analysis Scale and Timeframe

For the purposes of this analysis, cumulative impacts are usually addressed at the allotment scale. The reasons for choosing this analysis scale include the fact that issuing a grazing permit is a usually a decision that affects the entire allotment and BLM has a good idea of other potential reasonably foreseeable actions that may occur within the allotment due to management direction identified in the *Lakeview RMP/ROD* (Appendix E, BLM 2003b). However, the analysis spatial scales can vary depending upon the resource values/uses being addressed. In this instance, the Packsaddle Pasture boundary was chosen for the cumulative impact analysis area because the grazing permit decision only affects this specific pasture.

The timeframe of analysis is defined as the same 15-20 year expected life of the *Lakeview RMP/ROD*. The reason for choosing this timeframe is because this represents the same analysis timeframe considered in the *Lakeview Proposed RMP/Final EIS* (BLM 2003a) and portions of that analysis may be appropriate for tiering purposes within this analysis. However, it is important to realize that the RMP/ROD has already been in effect for 10 years of its planned 15-20 year plan life-expectancy. The grazing permit renewal

period covers a 10-year period, making the end of the permit period correspond closely with the end of the analysis period addressed in the *Lakeview Proposed RMP/Final EIS* (BLM 2003a).

Known Past Activities

The Council on Environmental Quality (CEQ) issued cumulative impact guidance on June 24, 2005, that states the “environmental analysis required under NEPA is forward-looking,” and review of past actions is required only “to the extent that this review informs agency decision-making regarding the proposed action.” Use of information on the effects of past action may be useful in two ways: one is for consideration of the proposed action’s cumulative effects, and secondly as a basis for identifying the proposed action’s direct and indirect effects.

The CEQ stated that “[g]enerally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions.” This is because a description of the current state of the environment (ie. affected environment section) inherently includes the effects of past actions. Further, the “CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions.” Information on the current environmental condition is more comprehensive and more accurate for establishing a useful starting point for a cumulative effects analysis than attempting to establish such a starting point by adding up the described effects of individual past actions to some environmental baseline condition in the past that, unlike current conditions, can no longer be verified by direct examination.

The second area in which the CEQ guidance states that information on past actions may be useful is in “illuminating or predicting the direct and indirect effects of a proposed action. The usefulness of such information is limited by the fact that it is anecdotal only, and extrapolation of data from such singular experiences is not generally accepted as a reliable predictor of effects”.

The Department of Interior issued some additional guidance related to past actions which state, “when considering the effects of past actions as part of a cumulative effects analysis, the Responsible Official must analyze the effects in accordance with 40 CFR 1508.7 and in accordance with relevant guidance issued by the Council on Environmental Quality, such as “The Council on Environmental Quality Guidance Memorandum on Consideration of Past Actions in Cumulative Effects Analysis” dated June 24, 2005, or any superseding Council on Environmental Quality guidance (see 43 CFR 46.115)”.

Based on this guidance, BLM has summarized known disturbances that have occurred within the pasture as part of past or on-going management activities. These include: livestock grazing management, range improvement project construction and maintenance, and road construction and maintenance.

The pasture has historically been grazed by cattle. Prior to the Taylor Grazing Act of 1935, grazing on public lands was essentially uncontrolled. After the Taylor Grazing Act, allotments were established tied to private base property owned by a permittee, and were initially under the management responsibility of the Grazing Service. Under the Grazing Service and then under the new BLM in 1946, the number of grazing livestock was generally higher and the pattern of grazing use was generally more intense than what occurs today.

Based on a GIS analysis of current data for the pasture, approximately 36 miles of constructed roads and 14 miles of primitive motorized routes (totaling about 60.6 acres of road disturbance) exist in the pasture. Approximately 38.3 miles of fence (23.2 acres disturbance) currently exist. Other past and present actions within the pasture have included 18 water developments (Appendix C, Map 3) resulting in approximately 2,160 acres of concentrated livestock use. This represents an estimated total of about 2,244 acres of past or on-going concentrated ground disturbance (6.3%). Past ground disturbance across the majority of the allotment (93.7%) is characterized as light and widely dispersed.

All of these past activities have affected or shaped the landscape within the pasture into what it is today. Current resource conditions are described further in the “Affected Environment” portions of this chapter, as well as in the Rangeland Health Assessments for the allotment (BLM 2003c, 2012d).

Reasonably Foreseeable Future Actions

The *Lakeview RMP/ROD* (Appendix E3, page A-146, BLM 2003b) lists Dry Valley pipeline (11 miles) and storage, 6-7 waterhole cleanouts, and juniper removal/control as potential future projects within the Little Juniper Springs Allotment. However, the Dry Valley project is located not within the Packsaddle Pasture. While the other listed activities could potentially occur within the Packsaddle Pasture, no such proposals have yet been run through the NEPA analysis process, have an approved decision authorizing implementation, or have dedicated funding. Therefore, these activities are considered to be speculative at this point in time and will not be analyzed further.

The only other activities that might occur within the pasture during the analytical timeframe would be road maintenance and noxious weed treatment activities, and the exact locations or durations of these activities cannot be determined at this time. As noted above, there are approximately 50 miles of constructed roads and primitive motorized routes within the pasture. None of these routes are maintained on an annual basis, but for analytical purposes BLM assumes that 3-5 miles could receive some spot maintenance or minimal level of re-grading. These activities would generally be limited to the existing roadbed prism and would not create new ground disturbance.

Cumulative Effects Common to Alternatives 1 – 4

None of the alternatives would have any measureable or substantial incremental cumulative effects on climate, greenhouse gas emissions, carbon storage, water quality, Native American traditional practices, recreation, or visual quality, as the analysis contained earlier in this chapter revealed that there would be little or no direct or indirect effects on these values/issues.

No noxious weeds are currently known to be present within the pasture (BLM 2003c, 2004, 2012d) and the risk of future infestations is low under all four alternatives. If new infestations were to occur in the future, they would be treated in accordance with the most current Integrated Weed Treatment Plan(s) and policies (such as BLM 2004, 2007b, 2007c). The impacts of such treatments have already been analyzed in detail and are incorporated by reference in their entirety. Such impacts could include: short-term increases in surface disturbance and soil erosion at the treatment site, coupled with reduction in weed distribution, native vegetation recovery, protection or restoration of wildlife habitats, maintenance of recreation experiences, maintenance of livestock forage production, maintenance of visual quality, and minimal risk to human health over the long-term (BLM 2004, Pages 10-20).

For purposes of this analysis, the estimated total acres of concentrated ground disturbance or surface recovery served as the main indicator of cumulative impacts on soils, BSCs, upland vegetation, wetland and riparian vegetation, cultural resources, wildlife, and special status species habitat. These acreages are presented in Table 3.9.

Cumulative Effects Common to Alternative 1

The incremental cumulative effects of continued grazing of up to 1,350 AUMs each year, along with range improvement maintenance, when added to past, present, and reasonably foreseeable future actions would result in either: no change in total acres of concentrated ground disturbance (Alternative 1 and 3), or a minor incremental increase in total acres of concentrated disturbance (Alternative 2) (Table 3.9).

Table 3.9. Cumulative Acres of Concentrated Ground Disturbance in Alternatives 1-4

	Alternative 1 – No Action	Alternative 2 – Management Changes and Project Development	Alternative 3 – Use Every Other Year	Alternative 4 – No Grazing
Past/Present Actions	2,244	2,244	2,244	2,244
Estimated Area of New Disturbance or Recovery	0	606	0	-2,183 of natural recovery
Cumulative Total	2,244	2,850	2,244	61 (associated with existing roads)

The incremental impacts of continued grazing under these alternatives, even when added to past, present, and reasonably foreseeable future actions may result in continued achievement Rangeland Health Standards. As this Alternative does not allow for scheduled rest or deferment from grazing, annual consecutive use for numerous years could risk achievement of Rangeland Health Standards. The use in the pasture is currently dictated by available water for livestock use. Scheduled trend monitoring would probably detect a change in trend, but it is possible that negative effects could occur prior to detection and management changes.

Cumulative Effects Specific to Alternative 2: Management Changes and Project Development

There are several proposed range improvements associated with the grazing system under this alternative that would result in approximately 606 acres of additional concentrated ground disturbance. The total concentrated ground disturbance in this pasture would be approximately 2,850 acres (Table 3.8) (8% of pasture).

Cumulative Effects of Alternative 3: Use Every Other Year

There are no range improvements proposed with this alternative, therefore no additional ground disturbance or concentrated use. With rest every other year, Rangeland Health Standards would likely continue to be met.

Cumulative Effects of Alternative 4: No Grazing

The incremental cumulative effects of removal of grazing, when added to past, present, and reasonably foreseeable future actions would result in an incremental decrease in total ground disturbance of up to 2,183 acres within the pasture over the long-term (Table 3.8).

CHAPTER IV - INDIVIDUALS, GROUPS, AND AGENCIES CONSULTED

Agencies and Individuals Consulted

Grazing Permittee
Oregon Department of Fish and Wildlife

In addition, this EA was made available for a 30-day public comment period. Interested public, groups, and

tribal interests were notified of this review opportunity. A complete mailing list is contained in the file.

CHAPTER V - REFERENCES

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Appendix A- Grazing Treatment Descriptions

Early – (Approximately March 1 to April 30) – This treatment provides the plants an opportunity to recover after utilization of early plant growth. By removing livestock before all spring and summer precipitation occurs, the plants would be able to store carbohydrates, set seed, and maintain their vigor. This "early" treatment can be used every year with little effect on the plant.

The dates of April 1 to April 30 are a guideline for the "early" treatment. Early use must take place before grass plants are in the boot stage. There must also be enough soil moisture in the ground to provide for regrowth after grazing. Therefore, flexibility in the early treatment would allow for use prior to April 1 but generally not after April 30, and will depend on climate.

Graze – (Approximately May 1 to July 1 to 15) – This treatment allows for grazing during the critical growth period of most plants. Carbohydrate reserves are continually being utilized because the green parts of the plant are continuously being removed by livestock. Pastures that are under the "graze" treatment will generally experience some other treatment the following year so as not to repeat graze treatments.

Defer – (Approximately July 1 to 15 to October 31) – Grazing during this treatment will not begin until after most plants have reached seed ripe and have stored adequate carbohydrate reserves. This treatment will assist in meeting the objectives by providing all plants an opportunity to complete their life cycles and produce the maximum amount of cover and forage.

Winter – Grazing during this treatment will occur when most plant species are dormant. Most plants will have completed their life cycles and stored maximum carbohydrates for the next growing season.

Rest – This treatment provides the plants a full year of growth in the absence of grazing. They are allowed to store maximum carbohydrate reserves, set seed, and provide carryover herbage for the following year's turnout.

These dates are approximations based on general plant phenology. Year-to-year variation in phenology will occur based on climatological phenomena.

Appendix B - Soils, Vegetation, and Biological Soil Crust Tables

Table B1. Packsaddle Pasture Soil Associations

Soil Series	% Area*	Soil Map Unit
Raz-Brace complex, 2 to 20 percent slopes	50	272
Anawalt gravelly clay loam, 0 to 12 percent slopes	17	14
Anawalt-Raz complex, 2 to 10 percent slopes	9	17
Felcher-Fitzwater-Rock outcrop association, 20 to 60 percent slopes	9	108
Reallis fine sandy loam, 0 to 3 percent slopes	9	275
Poujade very fine sandy loam, 0 to 2 percent slopes	2	268
Orenea gravelly loam, 0 to 12 percent slopes	1	247
Spangenburg silty clay loam, thick surface, 0 to 2 percent slopes	1	312
Enko-Catlow association, 2 to 20 percent slopes	1	96
Ninemile-Westbutte-Ninemile complex, 2 to 30 percent slopes	1	230

*values less than 1% of area are not displayed in table.

Table B-2. Current and Potential Vegetation Types in Packsaddle Pasture

Range Site Number	Range Site	Current Dominant Vegetation Common Name	Current Dominant Vegetation Code	Potential Vegetation Plant Code	Observed Apparent Trend	Condition Rating	Acres	% of area*
023XY214 OR	CLAYPAN 10-12	LOW SAGE;BLUEGRASS	/ARAR8/POSE/	ARAR8/PSSPS/POSE4//	Static	FAIR	4981	14
023XT212 OR	LOAMY 10-12	YELLOW RABBITBRUSH;CHEATGRASS	/CHV18/BRTE/	ARTRW8/STTH2//	Downward	FAIR	3672	10
023XY212 OR	LOAMY 10-12	WYOMING BIG SAGE;NEEDLEGRASS	/ARTRW/STTH2/	ARTRW8/STTH2//	Static	FAIR	3191	9
023XY212 OR	LOAMY 10-12	YELLOW RABBITBRUSH;CHEATGRASS	/CHV18/BRTE/	ARTRW8/STTH2//	Static	FAIR	1899	5
023XY212 OR	LOAMY 10-12	YELLOW RABBITBRUSH;CHEATGRASS	/CHV18/BRTE/	ARTRW8/STTH2//	Downward	POOR	1885	5
023XY212 OR	LOAMY 10-12	WYOMING BIG SAGE;LOW SAGE;NEEDLEGRASS ;BLUEBUNCH	/ARTRW/POA++ /	ARTRW8/STTH2//	Static	FAIR	1440	4
023XY300 OR	SOUTH SLOPES 8-12;NORTH SLOPES 10-12	BLUEBUNCH WHEATGRASS	//AGSP/	ARTRW8/PSSPS/STTH2//;ARTRW8/FEID/PSSPS//	Upward	GOOD	944	3
023XY300 OR	SOUTH SLOPES 8-12;NORTH SLOPES 10-12	WYOMING BIG SAGE;BLUEBUNCH WHEATGRASS	/ARTRW/AGSP/	ARTRW8/PSSPS/STTH2//;ARTRW8/FEID/PSSPS//	Upward	GOOD	670	2
023XY300 OR	SOUTH SLOPES 8-12;NORTH SLOPES 10-12	BLUEBUNCH WHEATGRASS	//AGSP/	ARTRW8/PSSPS/STTH2//;ARTRW8/FEID/PSSPS//	Upward	GOOD	612	2
024XY014 OR	SODIC TERRACE 6-	GREASWOOD;CHEATGRASS;CLASPING	/SAVE4/BRTE/L EPE2		Downward	POOR	620	2

Range Site Number	Range Site	Current Dominant Vegetation Common Name	Current Dominant Vegetation Code	Potential Vegetation Plant Code	Observed Apparent Trend	Condition Rating	Acres	% of area*
	10	PEPPERWEED						
023XY213 OR	LOAMY 10-12	YELLOW RABBITBRUSH;CHEATGRASS;TANSY MUSTARD	/CHV18/BRTE/D ESCU	ARTRW8/STTH2//	Static	POOR	853	2
023XY212 OR	LOAMY 10-12	WYOMING BIG SAGE;LOW SAGE;NEEDLEGRASS ;BLUEBUNCH	//BRTE/	ARTRW8/STTH2//	Upward	FAIR	847	2
023XY212 OR	LOAMY 10-12	WYOMING BIG SAGE;BLUEGRASS	/ARTRW/POSE/	ARTRW8/STTH2//	Static	FAIR	721	2
023XY212 OR	LOAMY 10-12	YELLOW RABBITBRUSH;CHEATGRASS	/CHV18/BRTE/	ARTRW8/STTH2//	Downward	POOR	655	2
023XY212 OR	LOAMY 10-12	WYOMING BIG SAGE;NEEDLEGRASS	/ARTRW/SIHY/	ARTRW8/STTH2//	Static	FAIR	618	2
023XT212 OR	LOAMY 10-12	YELLOW RABBITBRUSH;CHEATGRASS	/CHV18/BRTE/	ARTRW8/STTH2//	Downward	FAIR	618	2
023XY212 OR	LOAMY 10-12	CHEATGRASS;CLASP ING PEPPERWEED	//BRTE/LEPE2	ARTRW8/STTH2//	Downward	POOR	606	2
023XY214 OR	CLAYPAN 10-12;LOAMY 10-12	LOW SAGE;BLUEGRASS	/ARAR8/POSE/	ARAR8/PSSPS/POSE4//;ARTRW8/STTH2///	Static	FAIR	884	2
023XY214 OR	CLAYPAN 10-12;LOAMY 10-12	LOW SAGE;BLUEGRASS	/ARAR8/POSE/	ARAR8/PSSPS/POSE4//;ARTRW8/STTH2///	Static	FAIR	601	2
023XY214 OR	CLAYPAN 10-12	LOW SAGE;BLUEGRASS	/ARAR8/POSE/	ARAR8/PSSPS/POSE4//	Static	FAIR	815	2
023XY300 OR	SOUTH SLOPES 8-12;NORTH	BLUEBUNCH WHEATGRASS	//AGSP/	ARTRW8/PSSPS/STTH2//;ARTRW8/FEID/PSSPS//	Upward	GOOD	503	1

Range Site Number	Range Site	Current Dominant Vegetation Common Name	Current Dominant Vegetation Code	Potential Vegetation Plant Code	Observed Apparent Trend	Condition Rating	Acres	% of area*
	SLOPES 10-12							
023XY212 OR	LOAMY 10-12	YELLOW RABBITBRUSH;CHEATGRASS;TANSY MUSTARD	/CHV18/BRTE/D ESCU	ARTRW8/STTH2//	Static	FAIR	475	1
023XY212 OR	LOAMY 10-12	CHEATGRASS	//BRTE/	ARTRW8/STTH2//	Upward	FAIR	357	1
023XY212 OR	LOAMY 10-12	WYOMING BIG SAGE;SQUIRRELTAIL	/ARTRW/SIHY/	ARTRW8/STTH2//	Static	FAIR	288	1
023XY212 OR	LOAMY 10-12	CHEATGRASS	//BRTE/	ARTRW8/STTH2//	Upward	FAIR	273	1
023XY212 OR	LOAMY 10-12	WYOMING BIG SAGE;NEEDLEGRASS	/CHV18/STTH2/	ARTRW8/STTH2//	Upward	GOOD	248	1
023XY212 OR	LOAMY 10-12	YELLOW RABBITBRUSH;CHEATGRASS	/CHV18/BRTE/	ARTRW8/STTH2//	Downward	POOR	245	1
023XY104 OR	LOAMY 10-12	GREEN RABBITBRUSH;GREAT BASIN WILD RYE	/CHNA2/ELCI2/	ARTRW8/STTH2//	Static	FAIR	240	1
023XY212 OR	LOAMY 10-12	WYOMING BIG SAGE;LOW SAGE;NEEDLEGRASS;BLUEBUNCH	//BRTE/	ARTRW8/STTH2//	Upward	FAIR	200	1
023XY212 OR	LOAMY 10-12	YELLOW RABBITBRUSH;CHEATGRASS	/CHV18/BRTE/	ARTRW8/STTH2//	Static	FAIR	200	1
023XY212 OR	LOAMY 10-12	WYOMING BIG SAGE;NEEDLEGRASS	/ARTRW/STTH2/	ARTRW8/STTH2//	Static	FAIR	199	1
023XY216 OR	CLAYPAN 12-16;LOAMY 12-16;JUNIPER TABLELAND	WESTERN JUNIPER;LOW SAGE;BLUEGRASS	JUOC/ARAR8/POSE/	ARAR8/FEID/PSS PS/POSE4;ARTRV/FEID/STTH2//;JUOC/ARAR8/FEI	Downward	FAIR	258	1

Range Site Number	Range Site	Current Dominant Vegetation Common Name	Current Dominant Vegetation Code	Potential Vegetation Plant Code	Observed Apparent Trend	Condition Rating	Acres	% of area*
	12-16			D/PSSPS/				
023XY214 OR	CLAYPAN 10-12;LOAMY 10-12	CHEATGRASS	//BRTE/	ARAR8/PSSPS/POSE4//;ARTRW8/S TTH2///	Static	FAIR	289	1
023XY214 OR	CLAYPAN 10-12;LOAMY 10-12	YELLOW RABBITBRUSH;CHEATGRASS	/CHVI8/BRTE/	ARAR8/PSSPS/POSE4//;ARTRW8/S TTH2///	Static	POOR	285	1
023XY202 OR	CLAYPAN 10-12;LOAMY 10-12	YELLOW RABBITBRUSH;CHEATGRASS;TANSY MUSTARD	/CHVI8/BRTE/D ESCU	ARAR8/PSSPS/POSE4//;ARTRW8/S TTH2///	Downward	POOR	235	1
023XY214 OR	CLAYPAN 10-12;LOAMY 10-12	BLUEGRASS	//POA++/	ARAR8/PSSPS/POSE4//;ARTRW8/S TTH2///	Static	POOR	210	1
023XY214 OR	CLAYPAN 10-12	LOW SAGE;BLUEGRASS	/ARAR8/POSE/	ARAR8/PSSPS/POSE4//	Static	FAIR	429	1

*values less than 1% of area are not displayed in table.

Table B-3. Pasture Use Summary and Utilization for Little Juniper Springs Allotment (#01000)

YR	March			April				May			June			July			August			Sept			Oct			DV	P	AUM			
2011										33%																				1046	1046
2008										22%																				1617*	1617
2007										25%																				1160*	1160
2006										30%																				1746*	1746
2005																														2203*	2203
2004																														1901*	1901
2001																														2623*	2623
2000										30%																				1667*	1667
1999																														2067*	2067
1997																													607	266	873
1993																													353	2031	2384
1992																													197	289	486
1991						4%																							383	1384	1767

YR	March			April			May			June			July			August			Sept			Oct			DV	P	AUM			
1990										22%																		79	192	271
1989																												209		209
1989							54%						12%																890	890
1985										40%																		1760	*	1760

DV=Dry Valley (East and West Combined)

CG=Cox Grove

P=Packsaddle

***DV: Used with Packsaddle.** Dry Valley transferred to another permittee in 2008. Years that are not shown in table, pasture was rested, including 2012. Little Juniper Allotment Packsaddle Pasture has 1,350 Active AUM's. Dry Valley had 1,271 Active AUM's. The total for the permit at the time was 2,621 Active AUM's. Percentages within the actual use schematic represent utilization data collected for that year. The average for the ten years of data collection is 26%.

Table B-4. Packsaddle Pasture Composition and Trend (LJ-01 and LJ-20 transects)

Percent Cover								Percent Composition			
Plot #	Pasture	Year	Bare Gr.	Litter	Rock	Veg.	Photo Trend	Grass (per.)	Forbs	Shrubs	Data Trend
LJ-1	Packsaddle	12	19	7	12	62	Upward	79	14	7	Upward
LJ-1	Packsaddle	09	24		6	51	Upward	75	18	17	Down
LJ-1	Packsaddle	93	Photo	Only							
LJ-1	Packsaddle	85	4	51	33	12	Static (1987)	69	0	31	Static
LJ-20	Packsaddle	12	43	15	0	42	Baseline established	58	7	35	Upward (OAT)

Table B-5. Packsaddle Pace LJ-01 180 Transect Percent Composition by Species

P-180	Packsaddle	Packsaddle	Packsaddle
	Pre Wildfire	Post Big Juniper Wildfire	
	1985	2009	2012
PSSP		8	3
POSE	52	32	56
STTH	3	4	4
KOMA	10	9	4
ELEL	1	22	12
BRTE	3		
ARAR	29		
CHNA	2		
CHVI		7	7
Forbs		18	14
Bare Ground	4	24	19
Litter	51	19	7
Rock	33	6	7
Gravel			5
Vegetation	12	51	62

Table B-6. Packsaddle Pace LJ-20 180 Transect Percent Composition by Species

P-180	Packsaddle
	2012
SIHY	5
STTH	35
POSE	16
PSSP	2
BRTE	3
ARTR	23
CHVI	12
Forbs	7
Bare Ground	43
Litter	15
Rock	0
Cryptogam	1
Vegetation	41

Table B-7. Precipitation Data from the Summit Remote Automatic Weather Station (RAWS)*

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	0.00t	4.50	2.29	1.11	0.38	8.28h							
2001	0.57	0.42	0.92	1.09	0.73	0.38	0.46	0.03	0.90	1.04	2.24	1.16	9.94
2002	1.09	0.58	0.38a	1.25	0.56	0.61	0.01	0.04	0.15	0.14	0.98	1.60	7.39
2003	2.69	0.84	2.49	1.79	1.76	0.00	0.75	0.19	1.45	0.00	1.29	1.27	14.52
2004	0.46	1.57	10.35	0.69	1.55a	0.67	0.00a	0.65	0.09	2.18	0.56	1.20	19.97
2005	0.24	0.33	1.09	2.54	8.22	0.96	0.22	0.00	0.51	1.27	3.63	5.89	24.90
2006	0.62e	1.24	1.13	2.11	0.57	0.36a	0.00	0.68	0.23	0.54	1.22	1.29	9.99
2007	0.19	0.53	0.46	0.97	0.82	1.22	0.09	0.24	1.27	3.19	1.10	0.30a	0.38
2008	0.34	0.21	0.35	0.22	1.36	0.56	0.26	0.00	0.00	0.88	0.88	0.51	5.57
2009	0.35	0.67	0.48	0.46	2.72	1.97	0.00	1.02	0.00	1.04	0.74	0.44	9.89
2010	0.70	0.53	0.51	1.08	1.70	1.98	0.09	0.48	0.50	2.96	0.82	2.33	13.68
2011	0.36	0.19	0.98	2.03	1.67	0.87	0.21	0.00	0.04	1.16	0.37	0.47	8.35
2012	1.39	0.09	1.29	1.78	0.88	0.89	0.00	0.03	0.00	0.89	3.16	2.23	12.63

*Approximately 55 air miles SW of Packsaddle Pasture.

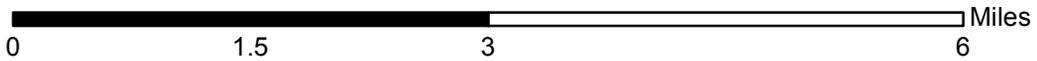
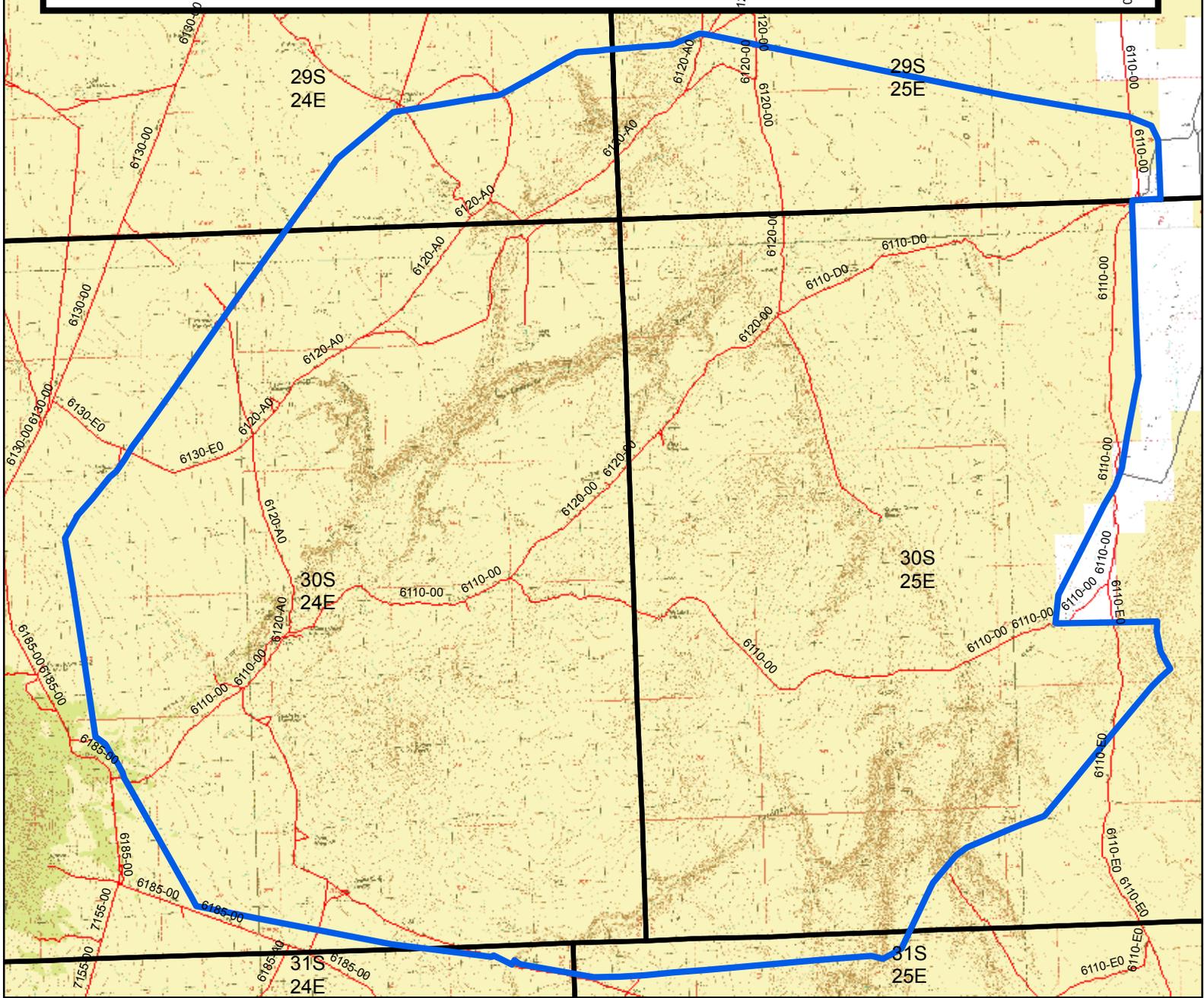
Table B-8. Precipitation Data from the Rock Creek Remote Automatic Weather Station (RAWS)*

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	0.00t	1.15	1.43	0.49	0.00	3.07h							
2001	0.08	0.05	0.55	0.57	0.02	0.38	2.28	0.62	1.00	0.37	0.69	0.61	7.22
2002	0.42	0.25	0.02	0.96	0.08	0.50	0.00	0.09	0.44	0.48	0.42	0.08	3.74
2003	0.59	0.16	0.57	1.02	1.30	0.24	0.04	0.50	1.09	0.47	0.45	0.18	6.61
2004	0.10	0.57	0.11	0.45	1.75	0.77	0.12a	1.13	0.72	1.28	0.60	0.45	8.05
2005	0.06	0.15	0.57	1.83	7.42	0.71	0.14	0.00	0.40	0.86	0.46k	1.82	13.96a
2006	0.26	0.73	0.23	1.37	0.59	1.63	0.58	0.05	0.43	0.60	0.73	0.38	7.58
2007	0.02	0.63	0.42	1.21	0.22	1.08	0.13	0.23	1.18	1.07	0.47	0.03	6.69
2008	0.43	0.07	0.23	0.22a	2.52	0.69	0.33	0.00	0.34	0.22	0.96	0.08	6.09
2009	0.21	0.22	0.37	0.90	1.80	3.94	0.15	0.97	0.00	1.27	0.23	0.05	10.11
2010	0.62	0.41	0.34	1.16	1.33	0.96	0.07	0.47	0.99	1.21	0.68	1.47	9.71
2011	0.53	0.53	0.95	1.56	1.02	0.96	0.13	0.00	0.00	0.39	0.03	0.14	6.24
2012	0.70	0.18	0.52	0.89	0.83	0.83	0.00	0.00	0.01	0.34	1.44	1.20	6.94

*Approximately 30 air miles SE of Packsaddle Pasture.

The above tables represent the closest Remote Automatic Weather Stations (RAWS) that have complete recent data for the Packsaddle Pasture (RAWS 2012).

Appendix C Map 1 - Little Juniper Springs Allotment #01000 - Packsaddle Pasture Vicinity Map



Legend

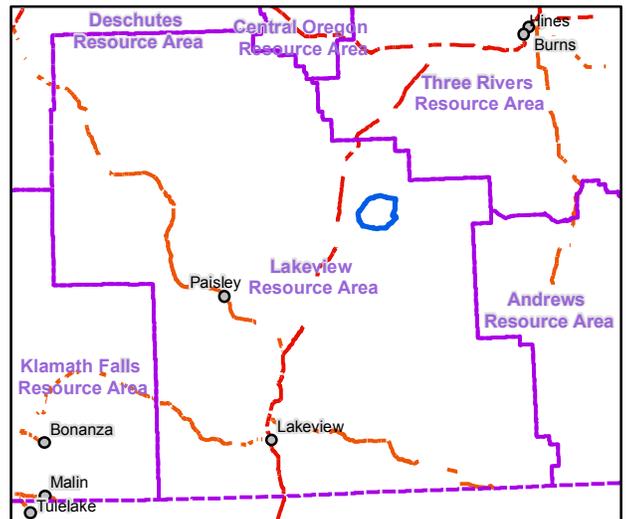
- Packsaddle Pasture Boundary
- Township/Range

Roads

- County route
- Bureau of Land Management
- Other

Land Management

- Bureau of Land Management
- U.S. Forest Service
- U.S. Fish and Wildlife Service
- State
- Private/Unknown

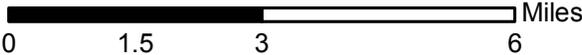
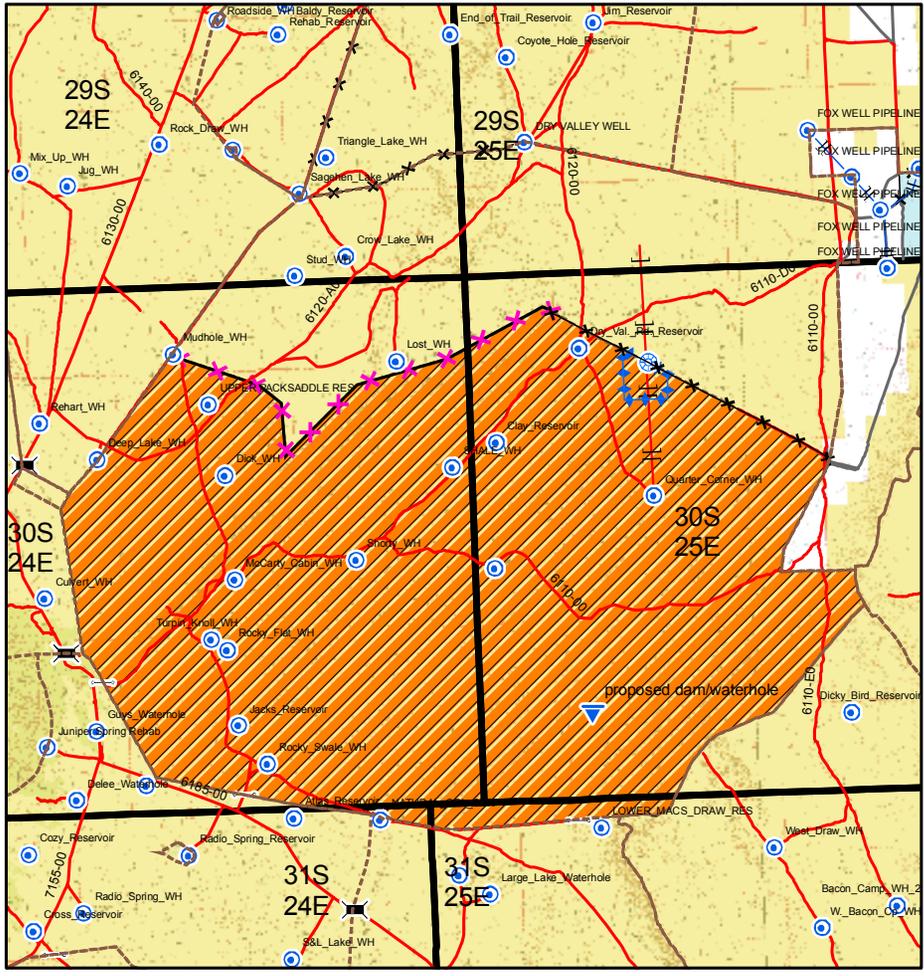
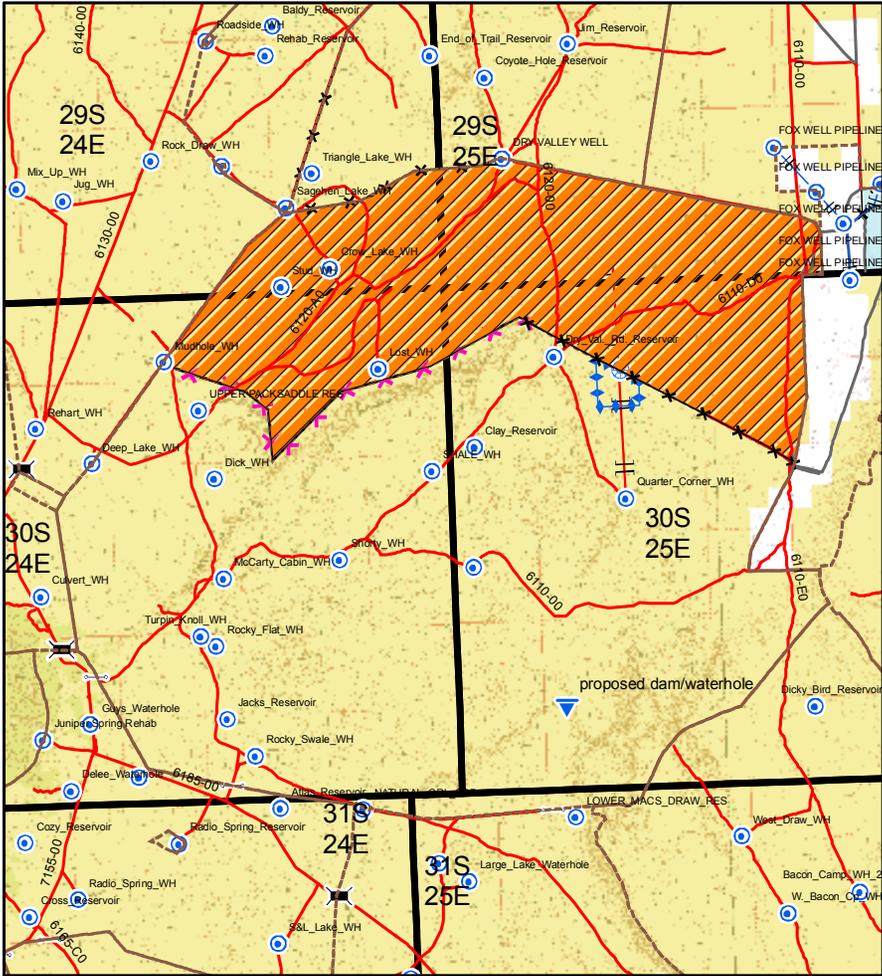


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Appendix C Map 2- Proposed Grazing Schematic

Spring-Summer use odd year begin 2013

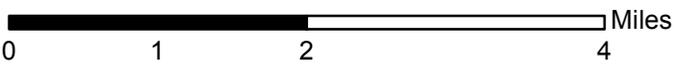
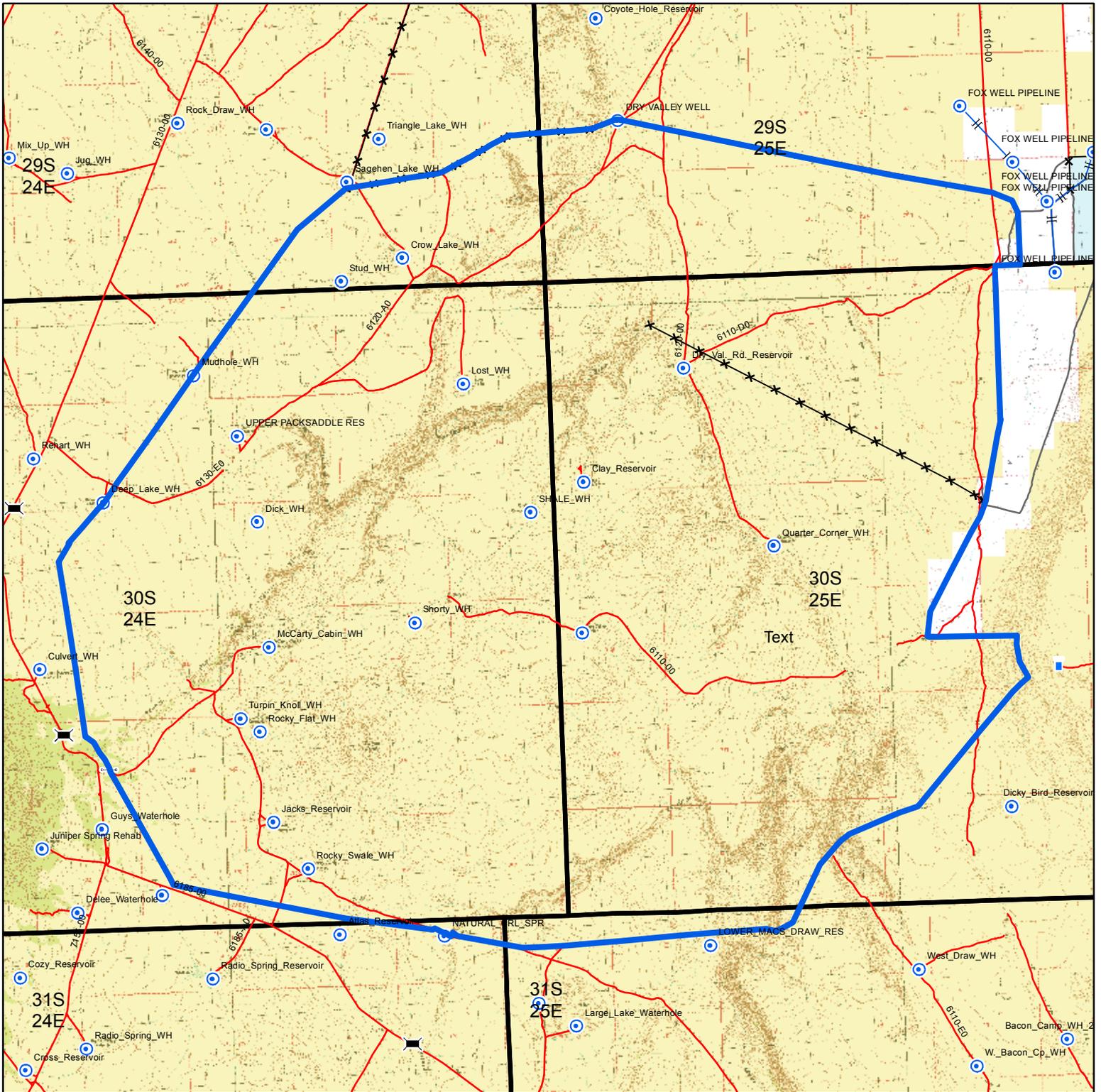
Spring-Summer use even years begin 2014



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Legend		
<ul style="list-style-type: none"> ● Existing Water Developments Cattle Guard Gate Existing Pipelines Existing Internal Fence Pastures proposed_fence Proposed dam/waterhole 	<ul style="list-style-type: none"> ● proposed well potential_well_area proposed_pipeline County route Bureau of Land Management Other 	<ul style="list-style-type: none"> Bureau of Land Management U.S. Forest Service U.S. Fish and Wildlife Service State Private/Unknown
PASTNAME		
Pasture used	Pasture rested	Township/Range

Appendix C Map 3 - Existing Range Improvements in Packsaddle Pasture



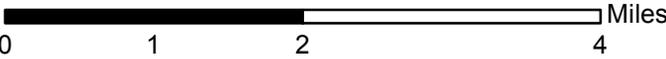
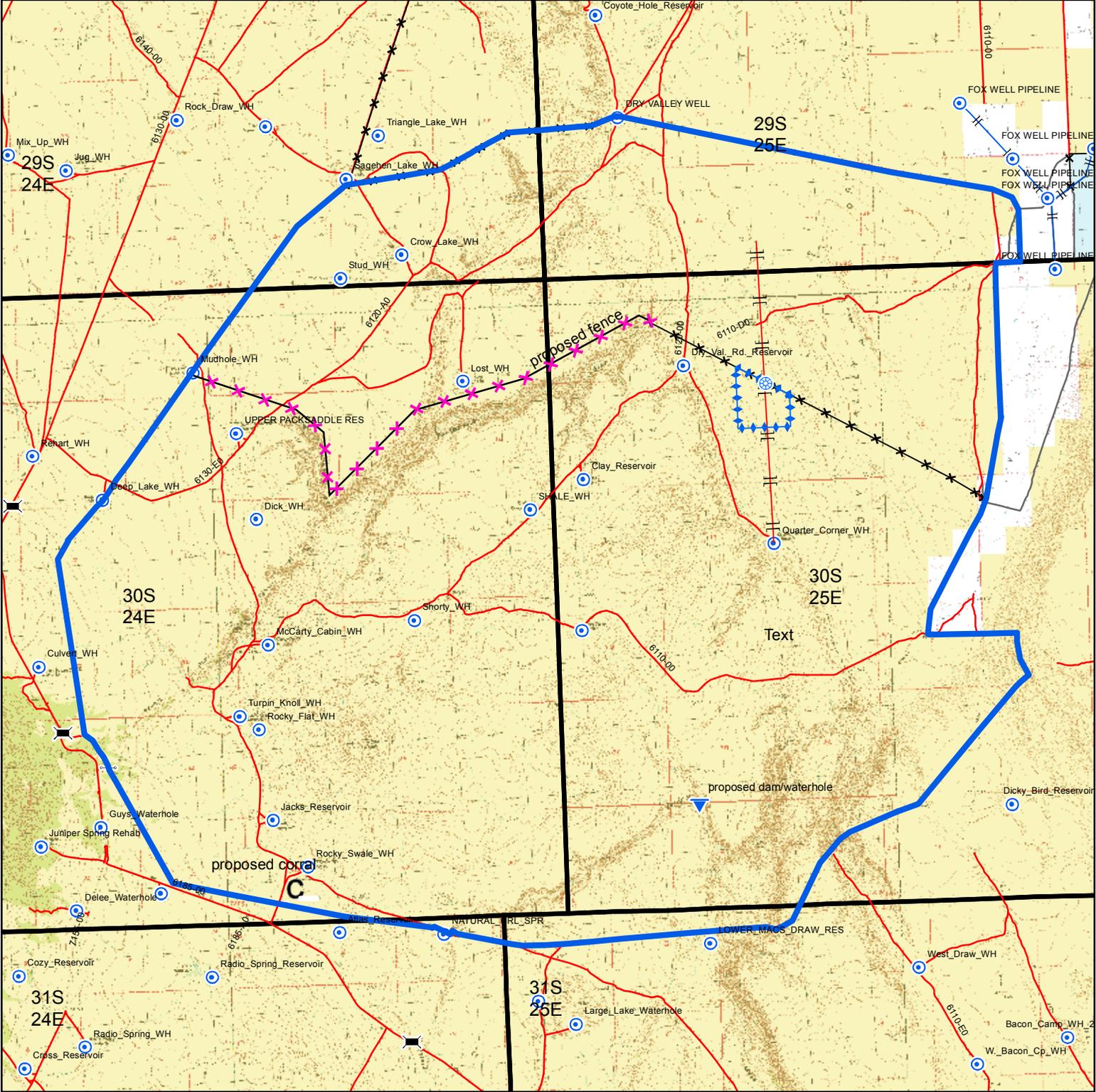
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Legend

Packsaddle Pasture Boundary	Bureau of Land Management
Existing Water Developments	Other
Wildlife Guzzlers	Township/Range
Cattle Guard	Bureau of Land Management
Gate	U.S. Forest Service
Existing Pipelines	U.S. Fish and Wildlife Service
Existing Internal Fence	State
County route	Private/Unknown

Appendix C Map 4 - Proposed Range Improvements in Packsaddle Pasture

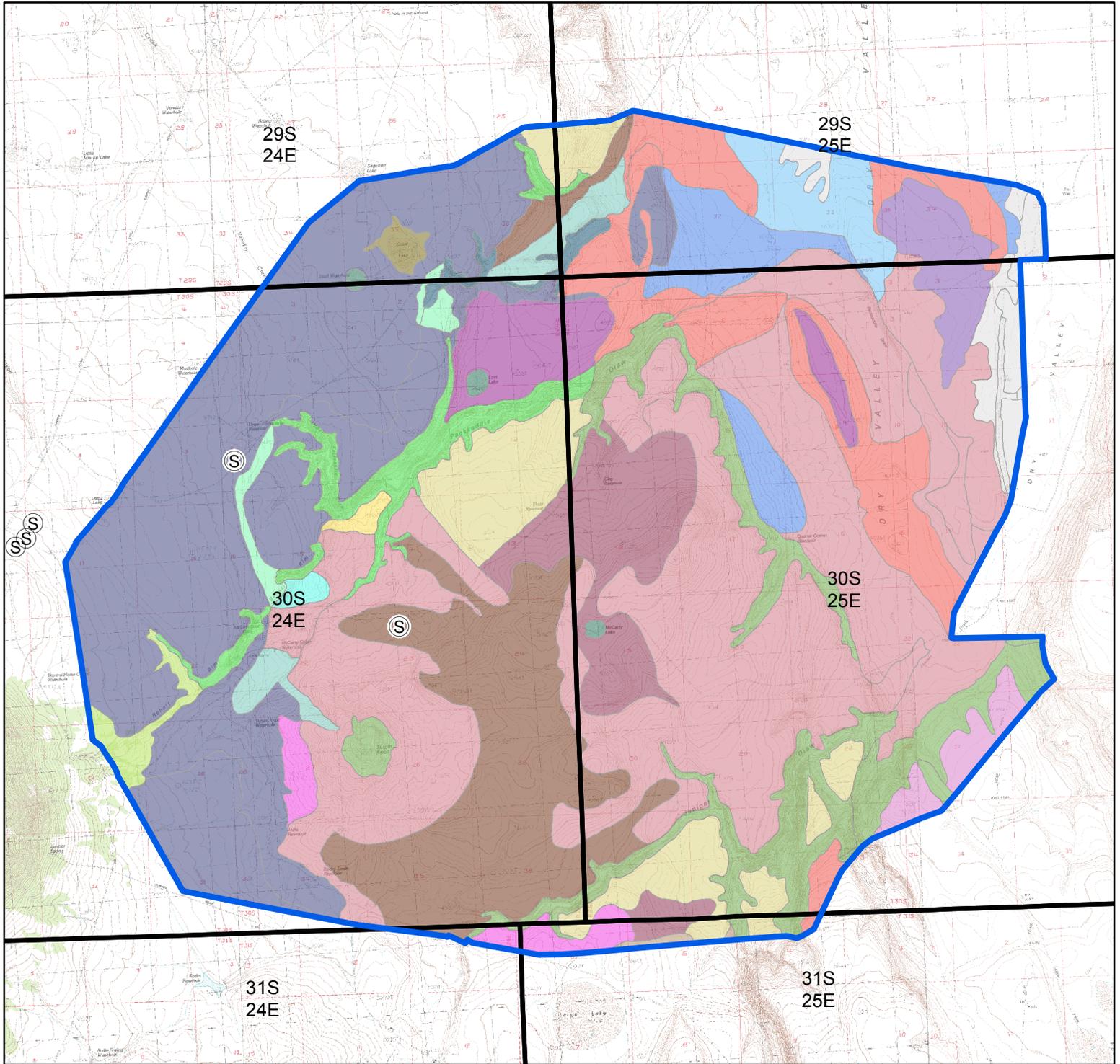


Legend

Packsaddle Pasture Boundary	Existing Water Developments	Bureau of Land Management
proposed_fence	Cattle Guard	Other
Proposed dam/waterhole	Gate	Township/Range
proposed corral	Existing Pipelines	Bureau of Land Management
proposed well	Existing Internal Fence	U.S. Forest Service
potential_well_area	County route	U.S. Fish and Wildlife Service
proposed_pipeline		State
		Private/Unknown

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Appendix C Map 5 - Current Dominant Vegetation in Packsaddle Pasture



Legend

(S) Trend Coordinates

Packsaddle Pasture Boundary

Township/Range

Dominant Vegetation Types

other

DOMVEG1

//AGSP/

//BRTE/

//BRTE/LEPE2

//POA+/

//SIHY/LEPE2

//ARAR8/AGSP/

//ARAR8/POSE/

//ARCA13/

//ARTRT/BRTE/

//ARTRW/AGSP/

//ARTRW/POA+/

//ARTRW/POSE/

//ARTRW/POA+/

//ARTRW/STTH2/

//CHNA2/AGSP/

//CHNA2/ELC12/

//CHV18/BRTE/

//CHV18/BRTE/DESCU

//CHV18/CAREX/

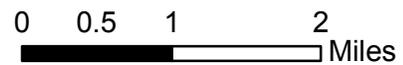
//CHV18/POSE/

//CHV18/STTH2/

//SAVE4/BRTE/LEPE2

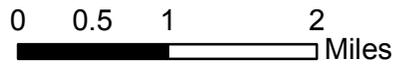
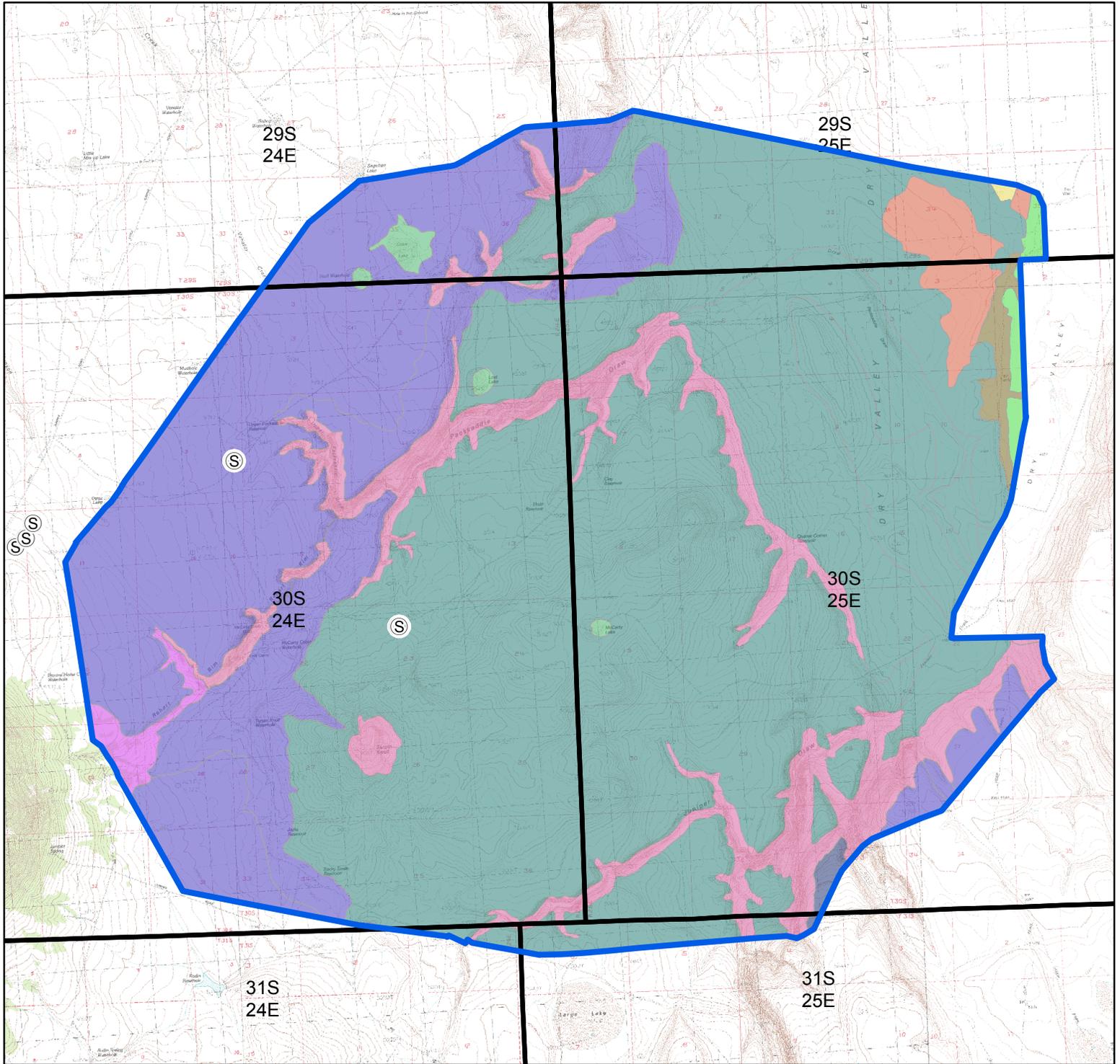
JUOC//ARAR8/POSE/

//ARTRW/STTH2/



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Appendix C Map 6 - Potential Vegetation in Packsaddle Pasture



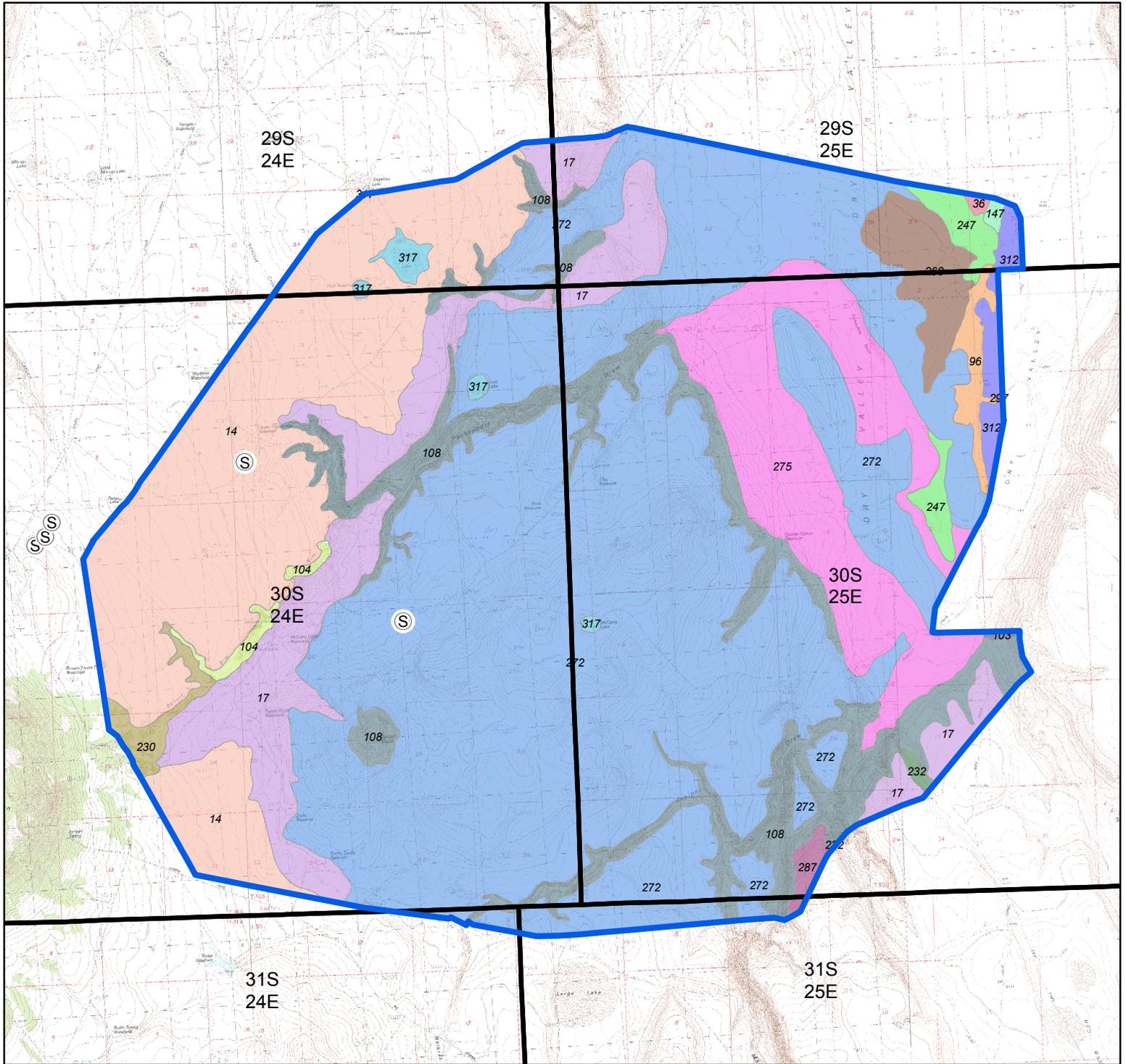
Legend

TrendCoordinates	ARCA13/POSE3LETR5//	ARTRW/PSSPS//
Packsaddle Pasture Boundary	ARTRT/GRSP/SAVE4/ORHY//	ARTRW/PSSPS/STTH2//
Township/Range	ARTRT/STCO4/ORHY//	ARTRW/STTH2//
ARAR8/FEID/PSSPS/POSE4//	ARTRT/STCO4/STTH2//	ARTRW/STTH2/ORHY/PSSPS//
ARAR8/PSSPS/POSE4//	ARTRW/ELEL5/STTH2/POSE4//	



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Appendix C Map 7 - Soil Associations in Packsaddle Pasture

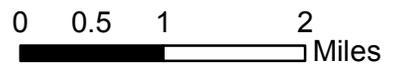


Legend

- Packsaddle Pasture Boundary
- Trend Coordinates
- Township/Range

Soil Map Unit Name

Anawalt gravelly clay loam, 0 to 12 percent slopes	Anawalt-Raz complex, 2 to 10 percent slopes	Berdugo silt loam, 0 to 3 percent slopes	Enko-Callow association, 2 to 20 percent slopes	Felcher-Fitzwater-Rock outcrop association, 20 to 60 percent slopes	Felcher-Rock outcrop complex, 40 to 70 percent south slopes	Felcher-Rock outcrop-Brezniak complex, 30 to 65 percent south slopes	Ioene-Playas complex, slightly alkaline, 0 to 1 percent slopes	Ninemile-Felcher association, 5 to 30 percent slopes	Ninemile-Westbutte-Ninemile complex, 2 to 30 percent slopes	Oreneva gravelly loam, 0 to 12 percent slopes	Poujade very fine sandy loam, 0 to 2 percent slopes	Raz-Brace complex, 2 to 20 percent slopes	Realls fine sandy loam, 0 to 3 percent slopes	Robson-Anawalt complex, 2 to 15 percent slopes	Sandgap sand, 3 to 8 percent slopes	Spangenburg silty clay loam, thick surface, 0 to 2 percent slopes	Swalesilver silt loam, 0 to 2 percent slopes
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