

FINDING OF NO SIGNIFICANT IMPACT
PERMIT RENEWAL FOR
FLAGSTAFF BENCH AND SWAMP LAKE PASTURES
OF THE WARNER LAKES ALLOTMENT (#523)

DOI-BLM-OR-L050-2013-0019-EA

The Bureau of Land Management, Lakeview Resource Area (BLM), has analyzed several alternative proposals related to renewing term grazing permit number #3600242 for a ten-year period for the Flagstaff Bench and Swamp Lake Pastures of the Warner Lakes Allotment. The pastures are located approximately eight air miles northeast of Plush, Oregon. There are approximately 3,096 acres of public land.

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), Project Development, 50% reduction in grazing, and no grazing (see pages 11-15 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 action is the Flagstaff Bench and Swamp Lake Pastures of the Warner Lakes Allotment. 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 alternatives would have either significant beneficial or adverse impacts on the human environment. There are no prime or unique farmlands, forest or woodland habitat, fire or fuels management concerns, wild horse management areas, wild and scenic rivers, significant caves, designated wilderness areas, wilderness study areas, hazardous waste sites, or low income or minority populations located in the project area. No measureable impacts would occur to climate, air quality, floodplains, hydrology, land status, or mineral and energy resources (Table 3.1, page 16).

The potential impacts to existing soils, biological soil crusts, wetland and riparian areas, upland vegetation, noxious weeds, wildlife, special status wildlife species, special status aquatic species, special status plant species, livestock grazing management, native American traditional practices, cultural resources, recreation, visual resources, ACECs, lands with wilderness character, 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 16-46).

- 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 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 analysis area (Table 3.1, page 16).

- 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 (X) No

Rationale: There are no park lands, prime or unique farmlands, wild and scenic rivers, significant caves, designated wilderness areas, or wilderness study areas located in the analysis area (Table 3.1, page 16). Impacts to riparian and wetland vegetation, ACEC values, and lands with wilderness character are not significant and are described in Chapter 3 of the attached EA (pages 20-21, and 42-44).

- 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 alternatives addressed in the attached EA. The potential impacts of these range management actions on soils, biological soil crusts, wetland and riparian areas, upland vegetation, noxious weeds, wildlife, special status wildlife species, special status aquatic species, special status plant species, livestock grazing management, native American traditional practices, cultural resources, recreation, visual resources, ACECs, lands with wilderness character, and social and economic values can be reasonably predicted based on existing science and professional expertise. The attached EA analyzed these impacts (pages 16-46). 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 alternatives addressed in the attached EA. The potential impacts of these range management actions on soils, biological soil crusts, wetland and riparian areas, upland vegetation, noxious weeds, wildlife, special status wildlife species, special status aquatic species, special status plant species, livestock grazing management, native American traditional practices, cultural resources, recreation, visual resources, ACECs, lands with wilderness character, and social and economic values can be reasonably predicted based on existing science and professional expertise. The attached EA analyzed these impacts (pages 16-46). 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 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 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 46-49).

- 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 pastures are located within an area which was used historically by native Americans. However, there are no known native American religious or sacred sites, Traditional Cultural Properties, or plant collecting sites known within the area. Potential impacts to cultural resources have been analyzed in Chapter 3 of the attached EA and found not to be significant (pages 36-39).

- 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 No

Rationale: There are no endangered species or designated critical habitat within the analysis area (pages 28, 30-31). During wet periods Flagstaff Lake can potentially provide rearing habitat for adult and possibly sub-adult Warner sucker (Threatened) and redband trout (Bureau sensitive), as these species can spill into the lake from the

more permanent Hart Lake to the south. This happens approximately one out of five years. Potential impacts to these special status aquatic species have been analyzed in Chapter 3 of the attached EA and found not to be significant (page 31)

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 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) and the *Warner Lakes Plan Amendment for Wetlands and Associated Uplands Environmental Assessment and Decision Record* (BLM 1990b). 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 2011), and the grazing regulations (43 CFR Part 4100) in varying degrees (see EA Chapter 1, pages 5-11 and Chapter 3, pages 16-46). 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 5-6).

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

**WARNER LAKES
ALLOTMENT (#00523)**

**FLAGSTAFF BENCH AND
SWAMP LAKE PASTURES**

**GRAZING
PERMIT RENEWAL**

ENVIRONMENTAL ASSESSMENT

DOI-BLM-OR-L050-2013-0019-EA

Bureau of Land Management
Lakeview Resource Area
Lakeview District Office
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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 #3600242 for a ten-year period. This permit addresses grazing management within the Flagstaff Bench and Swamp Lake Pastures of the Warner Lakes Allotment (#00523). This EA serves as the analytical basis for compliance with the National Environmental Policy Act of 1969 (NEPA), as well as making the determination as to whether any significant impacts to the human environment would result from the proposal or other alternatives considered.

The Flagstaff Bench and Swamp Lakes Pastures are located approximately eight air miles north of Plush, Oregon (Map1). There are about 3,096 acres of BLM-administered land within the Flagstaff Bench and Swamp Lake Pastures. One grazing permit, #3600242, exists for these pastures. (Other pastures within this allotment are grazed under a separate permit and are not addressed in this analysis). Under this grazing permit, the current season of use runs from September 15 through December 31, with 280 Animal Unit Months (AUMs) of active use and 110 AUMs suspended use.

B. Purpose and Need for Action

The grazing permit expires in August 2013. The permittee has 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 ten-year term livestock grazing permit #3600242 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 whether or not to construct new range improvement project within the Swamp Lake Pasture as a range of possible options to improve livestock management in the area.

C. Decision to be Made

The authorized officer will decide whether or not to renew the ten-year Term Grazing Permit, and if so, under what terms and conditions. The authorized officer will also determine whether or not to approve construction of one proposed range improvement project in the Swamp Lake 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 applicable resource management and activity plans including the *Lakeview Resource Management Plan/Record of Decision, Warner*

Lakes Allotment Management Plan (AMP), and Warner Wetlands Area of Critical Environmental Concern (ACEC) 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?

E. Conformance with Land Use Plans

The *Lakeview Resource Management Plan/Record of Decision* (BLM 2003b, as maintained) and the Warner Lakes Plan Amendment for Wetlands and Associated Uplands Environmental Assessment and Decision Record (BLM 1990b) are the primary governing land use plans for the area. The following represents goals and management direction related to livestock grazing use and ACEC management:

Warner Lakes Plan Amendment for Wetlands and Associated Uplands Environmental Assessment and Decision Record (BLM 1990b)

This plan amendment designated the Warner Wetlands as an ACEC which encompasses the entire Warner Lakes Allotment (Map 2). This document also provided some very broad management guidance for the ACEC, but reserved the development of specific management direction for subsequent ACEC management and resource activity plans. The *Lakeview Resource Management Plan/Record of Decision* (BLM 2003b) described below, largely carried forward this management direction with few changes.

Lakeview Resource Management Plan/Record of Decision (BLM 2003b, as maintained)

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

“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 Warner Lakes Allotment is currently open or allotted to livestock grazing use, has forage allocated for both livestock and wildlife use, and has a grazing system identified (see Table 5, page 48, as maintained). Also listed in Table 5 are allotment specific management objectives which include:

- Improve and/or maintain riparian vegetation
- Improve water quality and quantity

- Maintain and/or improve wildlife habitat
- Maintain and/or improve ecosite condition

Range Improvements

“Range improvement projects will be constructed... Standard implementation procedures for construction of rangeland improvements will follow BLM Manual Handbook H-1741-1 and -2 (BLM 1989, 1990), and BLM and FS (1988)” (Page 53).

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).

Warner Wetlands ACEC Management Direction

“Most of the core wetland area (potholes and acquired lands) will remain closed to grazing. The remainder of the ACEC will be grazed in accordance with an approved allotment management plan (BLM 1990f)” (Pages 63-64, as maintained).

Appendix E1 – Allotment Specific Management Direction (Page A-94, as maintained)

Rangeland 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.*

Use management practices and/or better animal distribution; develop range improvements when appropriate; adjust permitted use as needed

Wildlife/wildlife habitat - *Follow the greater sage-grouse Livestock Grazing guidelines (pages 75-76 of ODFW 2005) where appropriate.*

Special management areas - *Maintain fences and grazing exclosures to protect ACEC values around Warner Wetlands.*

Manage area in accordance with ACEC management and associated activity plans (see section below).

F. Consistency with Other Plans and Policies

The final decision must also conform to the following plans or policies, which 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 1997) - a Rangeland Health Assessment was conducted in 2004 for the Warner Lakes Allotment, and was updated in

2013 for the Flagstaff Bench and Swamp Lake Pastures. The pastures met and continue to meet all applicable rangeland health standards (BLM 2004b, 2013).

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

Warner Wetlands Area of Critical Environmental Concern (ACEC) Management Plan (BLM 1990c, 1990d, and 1990e) – these documents provide specific management direction, goals, and objectives for the Warner Wetlands ACEC, and incorporates direction from six separate activity plans including the *Warner Wetlands Allotment Management Plan (AMP)*. The ACEC was separated into five separate geographic areas, each having its own management goals and objective, but conforming to the overall ACEC goal: “emphasize the preservation and protection of unique wildlife, ecological, cultural and geological values identified within the ACEC,” and objective: “Preserve ACEC values in the designated area”.

The Flagstaff Bench and Swamp Lake Pastures fall within what is identified in the ACEC management plan as the “Flagstaff Bench grazed area.” The goal specific to this management area is to “provide for increased livestock forage production, while improving the composition, vigor, and density of the present range site plant communities.” The specific objectives for this management area are:

- Determine the range site productivity, using the Ecological Site Inventory (ESI) Method, on the public lands in these areas by 1996.
- Establish and upward or improving trend in range site productivity on all public lands in these areas by 2008.
- Make available for livestock grazing the current active preference until completion of the ESI, and then begin licensing any additional forage under provisions and procedures of 43 CFR 4100, as quickly as is consistent with the above objectives.

Warner Wetlands Allotment Management Plan (AMP), Warner Lakes Allotment #523 (BLM 1990f) - The overall management goal of the grazed area, within the Warner Wetlands is “to provide for increased livestock forage production, while improving the composition, vigor, and density of the present range site plant communities.” The long range objectives of the AMP are to manage, maintain and improve the rangeland conditions of the public lands within the allotment. Specific objectives are:

1. Implement a grazing system which should provide for establishing an upward or improving trend in range site productivity by meeting the plant growth requirements, using the ESI method, on the entire grazed portion of the allotment.
2. Make available, for livestock grazing, 922 AUMs in the grazed portion of the allotment annually until rangeland improvements are developed and monitoring indicates additional

forage is available to meet the full preference demand of 1224 AUMs. Allocate additional forage to livestock under the provision and procedures of 43 CFR 4100.

Greater Sage-Grouse Conservation Assessment and Strategy for Oregon (ODFW 2005) - 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 (page 75).” As noted above, the pastures meet all applicable Standards for Rangeland Health (BLM 2004b, 2013).

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

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.

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.

Fences

- 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)

G. Consistency with Other Authorities

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 *Lakeview Resource Management Plan/Record of Decision* has designated this allotment as available for livestock grazing (BLM 2003b). 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 permittees 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 always within permitted dates, permit terms and conditions were adhered to, base property requirements were met, and there is no history of trespass or unauthorized use. Forage consumption has been within authorized AUMs for the last ten years.

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 will be made by the Field Manager who may choose to proceed with any one of the alternatives analyzed or a combination of multiple alternatives.

A. Actions Common to All Grazing Alternatives (1-3)

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 allotment 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 a 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 60%.

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. Maintenance of Existing Range Improvements

Maintenance of existing water troughs, wells, pipelines, waterholes, and fences would be

included under these alternatives. Maintenance may not be needed on all existing developments; however, it would likely be needed sometime in the next 10 years. Waterhole maintenance would include the cleaning (within the original area of disturbance) of the waterhole to ensure continued function. Trough maintenance would include fixing and/or replacing leaking troughs, or fixing and/or replacing fittings, etc. Pipeline maintenance would include replacing and/or repairing broken, damaged, or leaking sections of pipe, and replacing fittings, etc.

3. Monitoring

Monitoring would take place by BLM staff in coordination with the livestock operator to measure the success in meeting allotment-specific resource objectives. Pace 180° methodology (BLM 1984) 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.

Utilization and use supervision would be collected by BLM staff. The Key Forage Plant Method would typically be used to measure utilization in the pasture. Target utilization levels for key forage plant species are shown in Table 2.1.

Table 2.1. Key Species and Target Utilization Levels by Pasture

Pasture	Acres	Key Species	Utilization Target
Flagstaff Bench	1,922	saltgrass, bottlebrush squirreltail	60%
Swamp Lake	1,174	crested wheatgrass, bottlebrush squirreltail	60%

During each monitoring exercise, observations for noxious weed establishment and overall rangeland condition would occur. Adjustments to timing of grazing and pasture use sequence may be implemented to ensure/promote achievement of rangeland health standards or meet other resource objectives, based on this annual data.

Upland trend and photo plots (WL-7, and WL-8) were established in the Flagstaff Bench and Swamp Lake Pastures in 2009 and would be used for future monitoring.

4. 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.

5. Trailing

Trailing use would occur to and from the Flagstaff Bench and Swamp Lake Pastures.

Cattle would be trailed from south of Plush to the pastures, then from the pastures back home. Trailing would take approximately two days, and would occur along County Road 3-12. Trailing would not occur on neighboring allotments.

B. Alternative 1 - No Action

The No Action Alternative would renew the existing livestock grazing permit (#3600242) in the Flagstaff Bench and Swamp Lake Pastures of the Warner Lakes Allotment for ten years, continuing the current grazing management, permitted season of use (September 15 through December 31) and forage allocation (up to 280 AUMs of active preference and 110 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, and grazing schematic Map 3.

Table 2.2. Specified Grazing Conditions by Alternative

<i>ALTERNATIVE</i>	<i>LIVESTOCK</i>		<i>GRAZING PERIOD</i>		<i>SUSPENDED USE (AUMs)</i>	<i>ACTIVE PERMITTED USE (AUMs)</i>	<i>Grazing Schematic Map Number</i>
	Number	Kind	Begin Date	End Date			
1 - No Action	280	Cattle	9/15	12/31	110	280	3
2 - Project Development	280	Cattle	9/15	12/31	110	280	3
3. 50% Reduction	140	Cattle	9/15	12/31	250	140	5
4 - No Grazing	0	NA	NA	NA	390	0	N/A

Livestock grazing within the Warner Lakes Allotment is described in the *Lakeview RMP/ROD* as a rest rotation system (Table 5, page 48 as maintained). However, the Flagstaff Bench and Swamp Lake Pasture have been used separately from the rest of the allotment, in the fall and winter months annually. Using these pastures in this manner has provided growing season rest to vegetation on a consistent basis in both pastures for the last 13 years.

C. Alternative 2 - Project Development

This alternative would include renewing the ten-year permit and continuing current management and terms and conditions as described under Alternative 1 (Table 2.2).

Proposed Range Improvement

Upon adoption of this alternative, a cooperative agreement between the permittee and BLM would be completed to address each partner's responsibilities for labor, construction, maintenance, and/or supplies for the proposed new improvement.

Waterhole Construction

A small waterhole would be constructed in close proximity to the existing trough in the Swamp Lake Pasture. This waterhole would be used as an overflow pond that would collect additional water. The waterhole is recommended to provide extra water storage. This would provide water for livestock use even when the solar well is not running (e.g., overcast, storming, etc.).

Disturbance associated with waterhole construction would not exceed one quarter of an acre, and would be located within an existing area of disturbance associated with the existing trough.

D. Alternative 3 - Reduction in Active Use by 50%

This alternative would include renewing the existing livestock grazing permit, #3600242, for a period of ten years with a 50% reduction in active AUMs (Table 2.2), and no change to permit dates (season of use). Under this alternative, one of the two pastures would be used each year. On the year Flagstaff Bench Pasture was grazed, the Swamp Lake Pasture would be rested, the opposite would occur the following year.

The permit would be issued with similar terms and conditions as Alternative 1 and 2. However, one additional term and condition to use only one pasture each year would be attached.

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

Under this alternative, the current permit would not be renewed and livestock grazing would not be authorized on public lands within the Flagstaff Bench and Swamp Lake Pastures. Should this alternative be selected, this decision would be reevaluated after ten years.

Existing range improvements within the interior of the pasture (existing wells, waterholes, and troughs) would not be maintained for livestock grazing management purposes. However, pasture boundary fences would still be maintained in the future to allow livestock grazing to continue on adjacent lands. 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/Summer Grazing System

This alternative would include renewing the ten-year grazing permit with 280 AUMs of active preference on the Flagstaff Bench and Swamp Lake Pastures, but use would occur in the spring and summer (3/15-6/30) in one or both pastures every year. Grazing this time of year would decrease flexibility for the permittee, increase grazing use during the critical growth period for grasses and forbs, and would decrease growing season rest on the pastures. In addition, spring/summer grazing would conflict with the timeframes of other grazing permits. Thus, the loss of grazing use in the Flagstaff Bench and Swamp Lake Pastures during the fall/winter would be replaced by feeding hay and/or leasing privately owned pasture ground. Feeding hay would be a substantial financial increase to the permittee, as would leasing private feed (but to a lesser degree).

Grazing during the spring/summer would provide livestock with the opportunity to graze when forage is more palatable and nutritious. Livestock would be present in one or both of the pastures through the end of June. If both pastures are used, grasses would have no opportunity for regrowth and seed set after grazing has occurred. If one pasture is used, the rested pasture would provide plants with growing season rest. Plant health would suffer from spring/summer grazing annually. There would be no time period for recovery after grazing with this season of use. Soils are generally damp this time of year and are more susceptible to compaction with repeated annual grazing, as compared to grazing later in the year when soils are dryer and/or frozen.

This alternative would conflict with nesting season requirements for upland bird species, as well as some waterfowl species that nest along the fringe of the allotment. This season of use would also impact pronghorn antelope and mule deer fawning that occasionally occurs within the allotment.

Due to the nature of the existing vegetation, soils, wildlife, and the permittee's livestock operation, adopting a spring/summer 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

The following section describes the current environmental or resource conditions and uses within the two pastures and a discussion of the potential changes resulting from implementation of the alternative management actions. An inter-disciplinary (ID) team identified the resources values and uses that could potentially be affected by the alternative actions. The ID team identified a number of resource values or uses that are either “not affected” or “not present”. These 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 resource uses that may result from each alternative.

Table 3.1. Resources or Uses that Would not be Affected

Elements of the Human Environment		Rationale
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 pastures or surrounding area.
Fire and Fuels Management	Not Affected	No fire or fuel treatments are being proposed in this EA.
Forest/Woodlands	Not Present	Not present within the pastures.
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 pastures.
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.
Prime or Unique Farmlands	Not Present	No such lands have been identified in the pastures.
Significant Caves	Not Present	No caves are present in the pastures.
Wilderness	Not Present	No wilderness study areas or designated wilderness areas are located in the pastures.
Wild Horses (Wild Horse and Burro Act)	Not Present	The pastures are located outside of designated wild horse herd management areas.
Wild and Scenic Rivers	Not Present	There are no Wild or Scenic Rivers within the pastures.

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 8-16 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, which are incorporated herein by reference in their entirety (BLM 2012a, 2012b), the continued utilization of up to 280 AUMs of forage would have no scientifically verifiable effects on regional or global climate, nor would it have any significant effects on either greenhouse gas emissions or carbon sequestration processes. Therefore, this issue will not be analyzed further.

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 (ESI) soil data collected by BLM and the Natural Resource Conservation Service (NRCS). This data is herein incorporated by reference in its entirety and is summarized in this section and in Appendix B.

There are five soil complexes present within Flagstaff Bench and Swamp Lake Pastures. However, two soil map units comprise 82% or more of the area. Several smaller soil map units are also present primarily depicting isolated features such as rock outcrops and lakebeds (Map 6). The two most dominant soil map units within the allotment and their respective percentages are: McConnel very gravelly sandy loam, 2 to 15 percent slopes (54%), Pait-Icene Complex, 0 to 15 percent slopes (28%), (see Table B1). They are very deep, well drained with low water holding capacities (2-3 inches). Erosion potential, based on K factor rating system, is slight to moderate.

The Rangeland Health Assessment (BLM 2004b) found that soils in the Warner Lakes Allotment exhibited soil surface factors and erosion condition class ratings appropriate for soil, climate, and land form. Root occupancy for the soil was appropriate, and therefore, Standard 1 was being met. This assessment examined soil surface factor (SSF) data for the allotment collected during the ESI effort in 1995. SSF ratings are used to assign an erosion class rating and the potential susceptibility of soil to accelerated erosion. Thirteen percent of the allotment was rated stable and 59% percent of the allotment was rated in the slight erosion condition class with 1 percent in the moderate class.

Observed apparent trend (OAT) data was collected at the long-term trend sites within the pastures, and 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 Flagstaff Bench and Swamp Lake Pastures; 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 2012e).

Biological soil crusts (BSCs) such as mosses, lichens, micro fungi, cyanobacteria and algae play a role in a functioning ecosystem and are one of at least 12 potential indicators used in evaluating upland watershed function. In addition to providing biological diversity, BSCs contribute to soil

stability through increased resistance to erosion and nutrient cycling (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).

Studies by Ponzetti (2000) and Ponzetti and McCune (2001) examined BSC cover and composition at several locations in central and eastern Oregon in 1995. One of the sites examined was the CCC exclosure, located approximately 35 miles northwest of the allotment. The study compared species richness of crusts inside and outside of several exclosures 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 exclosures than in the grazed pastures, with the exception of the CCC exclosure, 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 exclosure burned during the 2001 Big Juniper wildfire. A fire ecologist monitored plant and crust responses to wildfire inside and outside of the exclosure 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. 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 exclosure.
- 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 exclosure, mosses were present, but were much smaller in size (about 1 cm).

BSC cover data has also been collected at the long-term trend sites in both pastures. This data is collected as part of the vegetation cover data. In the Swamp Lake Pasture (plot WL-7) BSCs were recorded as one percent of the total cover in 2009, and were not recorded in 2012. In the Flagstaff Bench Pasture (WL-8), BSCs comprised one percent of the total cover in 2012. This data was collected using Pace 180° frequency method. This method is a paced transect conducted in the same general location for each reading.

Environmental Consequences:

Effects Common to Alternatives 1-3

A review of the available literature on BSCs indicate that soil crusts are more strongly correlated to soil pH, electrical conductivity, and the relative calcium carbonate content of the soil rather than presence or absence of grazing. The second greatest factor/threat would be disturbance by fire. Generally areas grazed in the moderate to heavy utilization category would have a lower threat of wildfire and, therefore, a greater likelihood of maintaining some BSCs within the systems. However, these areas would likely have a lower crust cover compared to lightly grazed or ungrazed areas. Conversely, ungrazed to lightly grazed areas would likely have higher amounts of BSCs, but would also have a greater wildfire risk and a higher likelihood of losing BSCs from a wildfire event.

Generally, livestock do not graze on BSCs. The primary impact to BSCs that can be attributed to 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 of Alternative 1

The impacts of livestock grazing on soils and BSCs 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 its entirety. In summary, livestock use would continue to negatively impact soils due to compaction at waterholes and along trails (pages 4-35 to 4-36). Under this alternative, current grazing management would continue, resulting in continuation of the current observed trend in soil conditions. Disturbance to soils and BSCs by livestock generally include physical trampling and compaction around watering sites, and along trails and fence lines. These disturbances, along with vegetation removal, would increase the potential for soil erosion by wind and water.

The greatest impacts to soils and BSCs would continue to occur in high livestock concentration areas near water sources and along cattle trails. Livestock tend to concentrate within a quarter of a mile around existing water sources (a quarter mile buffer around a water source represents approximately 120 acres). There are currently three troughs within the pastures (Map 4). Therefore, about 360 acres (3 x 120 acres) around water sources would continue to 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 fences are approximately 11.3 miles long and represent an additional 6.8 acres (11.3 mi. x 5 ft. x 5,280 ft. per mi./43,560 ft.² per acre) of concentrated disturbance. 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 allotment.

In total, approximately 366.8 acres (11.8%) of the soils and BSCs within the two pastures would be impacted by concentrated livestock use. Impacts from trailing and livestock concentration areas are less than areas grazed during spring, summer and fall because of the frozen soils during winter

grazing.

Effects of Alternative 2 - Project Development

Impacts to soils and BSCs from livestock grazing would be very similar to Alternative 1 described above. There would be some additional surface disturbance (0.25 acres) associated with construction of one new waterhole. However, since this new waterhole would be located in an existing area of disturbance, within close proximity to an existing trough, it would have minimal effect on total disturbance to upland vegetation within the pastures.

Effects of Alternative 3 - Reduced Active Use by 50%

The effects under this alternative would be less than Alternatives 1 and 2. Each pasture would be used every other year, reducing impacts to soils and BSCs, compared to Alternatives 1 and 2. During grazed years, livestock would still tend to congregate around water sources and trail along fence lines and between water sources, but fewer total cattle would be present. The acreage of impacted soils and BSC would be similar to alternative 1. The rest provided every other year would allow opportunity for some soil and BSC recovery in these disturbed areas through natural processes, including frost heaving and plant maturation and reproduction.

Effects of Alternative 4 - No Grazing

Under the No Grazing Alternative, little change to soils would occur on the pastures as a whole in the short-term (up to 5 years). Most of the existing concentrated livestock use areas (366.8 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 the trails may persist due to continued use by large wildlife such as deer and pronghorn antelope. It is likely that interspace areas (bare spots between grass/shrub species) would be reduced across the pastures due the removal of cattle grazing over the long-term. However, this change would likely be undetectable over the short-term.

C. Wetland and Riparian Vegetation

Affected Environment:

The Rangeland Health Assessment (RHA) noted that there are approximately 46 acres of palustrine wetlands within the Swamp Lake and Flagstaff Bench pastures. These wetland areas were all in Proper Functioning Condition (PFC) and were meeting Rangeland Health Standard 2 (related to riparian/wetland function). Livestock grazing did not appear to be a factor limiting Riparian/Wetland function (BLM 2004b, 2013e).

Environmental Consequences:

Effects of Alternative 1 - No Action

Since all existing wetlands (approximately 80 acres of the 1,712 acres occurring within the entire allotment) in the two pasture are rated at PFC, livestock grazing does not appear to be a factor limiting riparian/wetland function, and rangeland health standard 2 is being met (BLM 2004b,

2013e), continuing current grazing management would be expected to maintain this condition over the 10-year permit lifetime.

Effects of Alternative 2 - Project Development

Under this alternative, the impacts to wetland habitat would be similar to Alternative 1. The existing wetland condition (PFC) would be maintained and rangeland health standard 2 would continue to be met over the 10-year permit lifetime.

Effects of Alternative 3 - Reduced Active Use by 50%

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. Rangeland health standard 2 would continue to be met over the 10-year permit lifetime.

Effects of Alternative 4 - No Grazing

Under this alternative, the wetland habitat would be expected to maintain or improve its existing condition (PFC) due to the complete removal of livestock grazing. Rangeland health standard 2 would continue to be met over the 10-year analysis timeframe.

D. Upland Vegetation

Affected Environment:

Vegetation data for the pastures comes from the ESI. This inventory covers the majority of the pastures and was completed in the late 1990s. Description of the existing dominant plant communities are found in Table B-2 (Appendix B). Data presented in the table is summarized from the ESI, which is hereby incorporated by reference in its entirety. Several indicators of plant community health are also described. These include current dominant vegetation, observed apparent trend (OAT), condition rating, and seral stage.

There are three vegetation types within the Flagstaff Bench Pasture, and four within the Swamp Lake Pasture (Map 7). Of those vegetation types, three vegetation types cover the majority (82%) of the pastures. These include: Wyoming big sagebrush (*Artemisia tridentata wyomingensis*)/cheatgrass (*Bromus tectorum*); Wyoming big sagebrush/bottlebrush squirreltail (*Elymus elymoides*); greasewood (*Sarcobatus vermiculatus*)/saltgrass (*Distichlis spicata*).

Photo trend and pace transect, WL-7, established and read in 2009, in the Swamp Lake Pasture and read again in 2012, indicate a stable trend in the plant community (BLM 2012e). Observed apparent trend (OAT) data for this pasture (Table B-2, Appendix B), indicated that the site was in an upward trend both years. However, photo and data analysis indicate a stable trend. In summary, the trend in the Swamp Lake Pasture is stable.

Trend plot WL-8 located in the Flagstaff Bench Pasture, established in 2009, and read again in 2012 indicate a stable trend in the plant community. This site was also evaluated for OAT, and the

trend at this location was determined to be upward. Based on trend data and photo analysis, the trend in the Flagstaff Bench Pasture is stable.

An Interdisciplinary Team (ID) conducted an updated rangeland health assessment (RHA) within the Flagstaff Bench and Swamp Lakes Pasture in 2013. The original assessment was conducted in 2003, for the entire Warner Lakes Allotment. In both assessments, the ID team found that all applicable standards were being met (Table 3.3).

Environmental Consequences:

Effects Common to Alternatives 1-3

The impacts of continuing grazing under a fall/winter grazing system on the upland plant communities 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 their entirety. In summary, the vegetation composition of key species is expected to be maintained or improved over time under this type of grazing system because it involves dormant season grazing (BLM 2003a; page 4-5). In addition, a winter grazing system would allow for improvement in the composition of key perennial species specifically within the salt desert shrub/grassland community (BLM 2001; page A-142).

All three grazing alternatives propose dispersed grazing during the winter season when plants are dormant. Perennial grasses are dormant during the winter and primarily survive off of energy stored in their roots (Porath *et al.* 2003). Plants in these pastures would continue to be provided with growing season rest, allowing adequate time for plants to grow, complete their reproductive cycle, and store adequate energy reserves each year. Utilization would continue to be managed at an appropriate level, 60%, and promote healthy vegetative communities.

Effects of Alternative 1 - No Action

Approximately 366.8 acres (11.8%) of the vegetation communities within the two pastures would continue to be impacted by concentrated livestock use near cattle trails and water sources. However, the growing season rest provided every year would allow ample opportunity for some vegetation recovery in these disturbed areas through natural processes, including plant maturation and reproduction.

Across the pastures as a whole, continued growing season rest for plants would provide for adequate ground cover and appropriate upland vegetation community composition. Photo and pace 180° analysis indicates a stable trend in both pastures under current grazing. This trend would be expected to continue into the foreseeable future under this alternative. For these reasons, the pastures would be expected to continue to meet all applicable Rangeland Health Standards over the 10-year life of the permit.

Effects Alternative 2 - Project Development

Most of the effects to upland vegetation would be similar to Alternative 1, described above. The effects of constructing one new waterhole would disturb approximately 0.25 additional acres of upland vegetation. However, since this new waterhole would be located in an existing area of

disturbance, within close proximity to an existing trough, it would have minimal effect on total disturbance to upland vegetation within the pastures.

Effects of Alternative 3 - Reduced Active Use by 50%

Vegetation communities within the pastures would continue to be impacted by concentrated livestock use near cattle trails and water sources similar, but less than Alternatives 1 and 2.

Under this alternative, the pastures would receive growing season rest on grazed years, followed by a complete year of rest. The vegetative impacts would be slightly reduced under this alternative as compared to Alternatives 1 and 2. The rest rotation system would allow ample opportunity for vegetation recovery in these disturbed areas through natural processes, including plant development and reproduction. For these reasons, the pastures would be expected to continue to meet all applicable Rangeland Health Standards over the 10-year life of the permit.

Effects of Alternative 4 - No Grazing

Under this alternative, livestock grazing would be removed from the pastures for 10 years. Grazing in these areas would be limited to wildlife species. Due to a lack of defoliation of 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 (Manske 2001, McNaughton 1979).

Older vegetation and higher shrub populations would favor an increase in above-ground biomass. However, with a lack of livestock on the pastures there would be a decreased need for forage production for animals and communities would change accordingly. Both pastures are currently meeting rangeland health standards 1, 3, and 5 (Tables 3.3; BLM 2005, 2013), which relate to upland watershed health, ecological processes, and plant communities, and would be expected to continue to do so over the 10-year permit timeframe. Therefore, the pastures would continue to provide healthy, productive, and diverse plant populations and communities. The vegetative community is likely to become more at risk to a future wildfire, as ungrazed herbaceous material accumulate and woody shrubs increase.

The pastures 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.

E. Noxious Weeds

Affected Environment:

Currently there are noxious weed infestations of *Lepidium latifolium* L. (perennial pepperweed), *Cardaria draba* (Hoary Cress), and *Cirsium arvense* (L) Canada thistle present with in the pastures. The infestations range in size from single plants to larger infestation monocultures. These infestations spread naturally through the flood waters of the Warner Wetlands and the plant numbers fluctuate depending on the amount of water in the wetlands

annually. When the wetlands are flooded to the high water mark noxious weed seeds are washed up into the rangelands and continue to spread through the dry land areas. There have been aerial and ground surveys completed of these noxious weed infestations over the last five years. These documented sites are monitored and controlled through an integrated pest management program called the “Warner Basin Weed Management Area Plan” (USDI-BLM 1999g). The treatment efforts are coordinated with private, State, and Federal land managers through a cooperative noxious weed control project managed by the Lake County Cooperative Weed Management Area called the “Warner Valley Cooperative Weed Control Project.” The plan and current project consist of herbicide, biological, manual and cultural methods.

Environmental Consequences:

Effects of All Alternatives

Management actions that encourage early to late seral vegetation allow the native species to productively compete with the current noxious weeds by occupying niches and slowing down potential movement of weeds into those areas.

Since that grazing period under all alternatives runs from September 15 through December 31, most of the noxious weeds will have already set seed and fallen.

Maintenance of the existing pipeline and troughs should cause minimal disturbance, therefore, the risk of spreading or increasing noxious weeds should be minimal to no impact.

Effects of Alternative 1 - No Action

Continuing the current management at the full permitted use level, with the current seasons of use would probably maintain the status quo for the plant communities in the allotments. There would be no additional disturbances likely to increase opportunities for new noxious weed invasion.

Since these pastures are grazed late season, the current cattle grazing serves as a biological control, reducing plant re-growth that may take place in the late season. Once the noxious weed species freeze they become very palatable for livestock. This late season grazing greatly reduces the chance for any fall maturing plants to set seed and reduces the chance of spreading seed.

Effects of Alternative 2 - Project Development

While the proposed waterhole would involve a small, increased short-term disturbances during the construction, if BMPs are followed the potential for persistent weeds issues over the long-term should be similar to the No Action Alternative. The risk of noxious weed introduction would be reduced by ensuring all equipment is cleaned prior to entry to the sties, minimizing disturbance activities, and compiling follow-up monitoring, and if necessary, treatment.

The proposed range improvement site has been surveyed for noxious weed populations. No weeds were found at the proposed project site. However, weeds are present elsewhere within the two pastures, increasing the likelihood of establishment at the proposed range improvement site. The risk of noxious weed introduction at the project site would be minimized by ensuring all equipment

(including all machinery, 4-wheelers, and pickup trucks) is cleaned prior to entry to the site, minimizing disturbance activities, and completing follow-up monitoring. Should noxious weeds be found in the future, appropriate control treatments would be performed in conformance with the Lakeview Resource Area Integrated Weed Management Program (such as BLM 2004a). Weed monitoring would be conducted for 2-3 years post-project completion.

Since there would be no other changes to the grazing management in this alternative, the impacts of grazing under this alternative would be similar to the No Action Alternative.

Effects of Alternative 3 - Reduced Active Use by 50%

The effects from this alternative would generally be similar to Alternative 1. However, due to the reduced grazing use there would be potential for some of the perennial noxious weed species to send up re-growth in the fall and set seed with less cattle present to graze these plants. This could lead to expanded noxious weed infestations across portions of the allotment.

Effects of Alternative 4 - No Grazing

The effects of completely removing livestock grazing would be similar to Alternative 3. Without fall grazing, one biological method or control measure (grazing) would be removed, leaving potential for season-long weed growth and set reproduction. This could lead to additional noxious weed spread across portions of the allotment.

F. Wildlife and Special Status Terrestrial Wildlife Species

Wildlife and Wildlife Habitat

Affected Environment:

A mix of greasewood, rabbitbrush, and big sagebrush communities comprise the dominant vegetation within the pastures and provide habitat for numerous small and nongame birds and mammals common to the Great Basin. The Rangeland Health Assessment for the Warner Lakes Allotment determined it was meeting Standard 5 related to wildlife habitat. Livestock grazing did not appear to be limiting wildlife habitat within these pastures (BLM 2004b) nor was livestock grazing found to be limiting wildlife habitat when a site visit was conducted in spring of 2012.

Water available to wildlife within the pastures are limited to a few natural sources, livestock water developments (wells, troughs), and Flagstaff Lake (when water is present). Competition for water can occur between wildlife and cattle in areas when water is scarce.

The areas of Flagstaff Bench and Swamp Lake pastures are within the Warner Lakes ACEC which was designated to emphasize management for important wildlife and wetland habitat values (primarily waterfowl and shorebird habitat). A discussion of the ACEC is addressed below in section N.

Big Game

The pastures fall within the larger Oregon Department of Fish and Wildlife (ODFW) 2,507 square mile Beatys Butte 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 pasture comprises a very small percentage of the hunt unit and provides habitat capable of supporting mule deer and pronghorn antelope. The area within the pastures provides spring-fall habitat for mule deer. There are currently 50 AUMs allocated for mule deer, pronghorn, and other wildlife species within the Warner Lakes Allotment (BLM 2004b). Based on previous consultation with ODFW biologists, this forage allocation is adequate to support wildlife species within these pastures. California bighorn sheep habitat occurs just outside the allotment on the Hart Mountain National Antelope Refuge. However no sheep habitat exists within the pastures.

Other Mammals

Other common mammals observed in the area include jackrabbits, cottontail rabbits, coyotes, ground squirrels, chipmunks, marmots, bobcats, mountain lions, badgers, bats, and other shrub-steppe mammal species.

Birds

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 these pastures. Common species observed or expected to occur based on species range and vegetation in these pastures are included in the following table (birds identified under the Migratory Bird Treaty Act of 1918, as amended).

Waterfowl habitat is prevalent in the surrounding Warner Lakes area, depending upon water levels. However, wetland habitat within the pastures is limited. Waterfowl may frequent these pastures during migration and a few pairs may breed in the limited wetland habitats.

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.” *Birds of Conservation Concern 2008 (BCC 2008)* is the most recent effort to carry out this mandate. Birds of Conservation Concern for the Great Basin Region that may inhabit these pastures are listed in Table 15.

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 are then 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 these pastures, are also included in the following table. Golden and bald eagles are 2 species given special protection under the Bald Eagle Protection Act of 1940 (as amended).

Table 3.2 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
Northern Pintail	Wetlands	*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							
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				x

*FC – Federal Candidate Species

**SSS – Special Status Species

Amphibians and Reptiles

There may also be amphibian and reptile species that occur within the area including fence lizards, sagebrush lizards, gopher snakes, rattlesnakes, horned-lizards, and many other common shrub-steppe species.

Special Status Terrestrial Wildlife Species

BLM policy and guidance on special status species is to conserve those species and the ecosystems upon which they depend (BLM 2001c). There are no known terrestrial wildlife species classified as federally-listed Threatened or Endangered, proposed or candidate species, or proposed or designated critical habitat within the pastures. A discussion of other special status terrestrial wildlife species follows.

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.

At the time the RHA was completed in 2004, no known sage-grouse leks were known within the pastures, nor had sage-grouse been seen using the pastures (BLM 2004b). Based on Oregon Department of Fish and Wildlife’s (ODFW) most recent sage-grouse lek data, the nearest active lek is located approximately 6 miles northwest of the pasture boundaries.

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, have refined this dataset. At this point in time, core habitat has become 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 referring to 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 habitat mapping exercise considered a landscape approach to wildlife conservation prioritizing sage-grouse habitats 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. Currently, there is no PPH located within the pastures. Neither of the pastures contain core or low density habitat. The majority of the two pastures were initially mapped as PGH however based on the reduced percentages of sagebrush cover and heights associated with the current greasewood dominant vegetation types, the two pastures are unsuitable sage-grouse habitat. Therefore, this species would not be affected by any of the alternative proposals and will not be addressed further in this analysis.

Raptors

Peregrine falcons (BLM sensitive Species) have been observed in the general area due to releases from the Crump Lake hack site; however, no nesting habitat is present nor has nesting been documented within the pastures.

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 pastures, but no known nests or nesting habitat present.

Pygmy Rabbits

While potential habitat for pygmy rabbits (BLM sensitive species) was identified in the Rangeland Health Assessment (BLM 2004b), this species has not been confirmed within the pastures.

Kit Fox

The pastures lie within the northern range of the kit fox, a bureau sensitive species in Oregon. While potential habitat may exist, no kit fox have been documented anywhere within the Lakeview Resource Area. Therefore, it is unlikely that this species would be affected by any of the alternative proposals and will not be addressed further in this analysis.

Bats

Special status bats may occur within the pastures, but likely only involve occasional migrating individuals or animals foraging or passing through from adjacent habitat. There are no known caves, adits, shafts, or outbuildings within the pastures capable of providing hibernacula for bats. Due to the low potential for bat occurrence and lack of suitable roosting/resting habitat in the pastures, none of the alternatives would likely have any measurable impacts to bats. Therefore, they are not carried forward for further analysis.

Environmental Consequences:

Effects of Alternatives 1 and 3

An estimated 366.8 acres of wildlife habitat within the pastures would continue to be impacted by livestock trailing and concentration near existing water sources. The remainder of the vegetation and associated habitats within the pastures would continue to be impacted to a very minor degree by dispersed grazing use. All of the allotment is currently achieving Rangeland Health Standard 5

related to wildlife habitat, including special status species habitat, and this trend is expected to continue into the foreseeable future under these alternatives as per the updated Rangeland Health Assessment conducted in 2013 on the Swamp Lake and Flagstaff Bench pastures.

In the long-term, the diversity of native plants and residual cover available to all wildlife species would be maintained or improved under the livestock management associated with Alternatives 1 and 3. The presence of herbaceous vegetation within each pasture would not increase the available vertical or horizontal screening cover, but would retain forbs and habitat for insects, which are important to other sagebrush-steppe species.

Effects of Alternative 1 - No Action

Current grazing management has achieved Rangeland Health Standard 5 for wildlife habitat. Approximately 366.8 acres (11.8%) of the wildlife habitat within the pastures 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 (88.2%) would be dispersed and much less concentrated.

The existing vegetation communities contain a diversity of native grasses, forbs, and shrubs that would be maintained across the pastures through continuation of the current grazing use (refer to the Upland Vegetation section). Current livestock grazing use (both stocking rates and grazing schedule) does not appear to be limiting wildlife habitat within the pastures. In particular, the area has adequate habitat to support an appropriate assemblage of migratory birds other sagebrush-dependent wildlife species. Current livestock grazing does not appear to be negatively affecting this habitat (BLM 2004b) or in the current Rangeland Health Assessment conducted in 8/20/2012. For these reasons, Rangeland Health Standard 5 would continue to be met over the 10-year life of the permit

Effects of Alternative 2 - Project Development

Although approximately 366.8 (11.8%) of the wildlife habitat within the pastures would be impacted by concentrated livestock use (near fences and water sources) and project implementation, impacts to wildlife habitat across the majority of the pastures (88.2%) would be dispersed and much less concentrated. The impacts of this alternative on wildlife habitat in general would be somewhat less than Alternative 1. The pastures would continue to provide adequate quality wildlife habitat that is capable of supporting an appropriate assemblage of sagebrush-dependent wildlife species. For these reasons, Rangeland Health Standard 5 would continue to be met over the 10-year life of the permit.

Effects of Alternative 3 - Reduced Active Use by 50%

Approximately 366.8 acres (11.8%) of the wildlife habitat within the pastures would continue to be impacted by concentrated livestock use (near cattle trails and water sources). However, impacts to wildlife habitat across the majority of the pastures (88.2%) would be dispersed and much less concentrated. The impacts of this alternative (rest – rotation with use every other year) on wildlife habitat in general would be slightly less than Alternatives 1 or 2 and would provide adequate habitat for all wildlife species in the short and long-term. The pastures would continue to provide adequate quality wildlife habitat that is capable of supporting an appropriate assemblage of

sagebrush-dependent wildlife species. For these reasons, Rangeland Health Standard 5 would continue to be met over the 10-year life of the permit.

Effects of Alternative 4 - No Grazing

Under the no grazing alternative there would be very little change in the existing quality of wildlife habitat, including migratory bird or special status species habitat in the short-term (1-5 years) compared to Alternatives 1-3. However, the removal of grazing would provide some increased forage availability for wildlife. In addition, an estimated 365.6 acres (11.8%) of greasewood and sagebrush habitat within the pastures formerly impacted by concentrated livestock use would improve over the long-term (6-10 years).

The pastures would continue to provide adequate quality wildlife habitat that is capable of supporting an appropriate assemblage of sagebrush-dependent wildlife species. For these reasons, Rangeland Health Standard 5 would continue to be met over the 10-year analytical timeframe.

G. Special Status Aquatic Species

Affected Environment and Environmental Consequences:

Flagstaff Lake is the only area in the Warner Lakes Allotment that could provide any habitat for any special status aquatic species. During dry periods, a temporary electric fence keeps cattle from accessing Flagstaff Lake. During wet periods Flagstaff Lake can potentially provide rearing habitat for adult and possibly sub-adult Warner sucker (Threatened) and redband trout (sensitive) as these species can spill into the lake from the more permanent Hart Lake to the south. This happens approximately one out of five years. All fish in Flagstaff Lake perish eventually as the lake goes dry approximately two out of every five years. As the lake begins to dry there is no way for the fish to return to Hart Lake, as the channel connecting the two also goes dry.

Cattle grazing in the Flagstaff Pasture have access to approximately 1/2 mile of the Flagstaff Lake shoreline. During high water years cattle access the lake shore for water. However, this access does not have any effect on Warner sucker or redband trout, as no larval or young of the year of these species exist in Flagstaff Lake. No reproduction of these species occurs in Flagstaff Lake or its tributaries. The shoreline area is generally too shallow to provide habitat for adult or sub-adult fish, as these age classes generally do not occupy extreme lake margins.

Flagstaff Lake has turbid water with less than a foot of visibility constantly due to the regular wind and wave action in the area. For this reason, any sedimentation generated from cattle using the shore of Flagstaff Lake would have no measurable effect on fish habitat.

In summary, cattle grazing in the Warner Lakes Allotment, specifically Flagstaff Bench and Swamp Lake Pastures would have no effect on any special status aquatic species under any of the proposed alternatives.

H. Special Status Plants

Affected Environment:

Two Special Status Plant populations exist near Swamp and Flagstaff Lakes just outside the permit renewal area: Verrucose seapurslane (*Seasuvium verrucosum*) and Seaside heliotrope (*Heliotropium curassavicum* var. *obovatum*). Currently, these populations do not overlap with either the Swamp Lake or Flagstaff Bench Pastures, as their habitat is confined to the seasonally wet substrate of the immediate lake margins. Population numbers of these two species fluctuate depending on water levels each year, but have remained relatively stable over the past 26 years of monitoring. However, one survey of Verrucose seapurslane conducted in 1987 mapped the population boundary into the southeast section of the Swamp Lake Pasture. This was either the result of mapping error or unusually high water levels in Swamp Lake that year. In order for this population to remain in the more upland, greasewood-dominated habitat type of the Swamp Lake Pasture, high water levels would have to be maintained on a permanent basis, which is not feasible.

Environmental Consequences:

Effects of Alternative 1 - No Action

Under the current grazing management with the permitted season of use (September 15 through December 31) the populations of the two Special Status Plants that inhabit adjacent lake margins would be expected to remain relatively stable. Negligible amounts of suitable habitat for both species exist within the Swamp Lake and Flagstaff Bench Pastures. Thus, it is unlikely that any herbivory or trampling by livestock on these populations would occur. Additionally, the reproductive phenology of these two plant species is such that the majority of individuals would have flowered, set seed, and dispersed seed before the season of use began. Overall, both of these plant species have maintained strong and stable population numbers throughout the use of these pastures at the current intensity and permitted season of use. Livestock grazing does not appear to be limiting the Special Status Plant populations adjacent to either pasture.

Effects of Alternative 2 - Project Development

Under this alternative, the impacts to Special Status Plant populations would be similar to Alternative 1. The existing Special Status Plant populations would be maintained due to negligible livestock-related disturbance.

Effects of Alternative 3: Reduced Active Use by 50%

Under this alternative, the impacts to Special Status Plant populations would be similar to Alternatives 1 and 2. The existing Special Status Plant populations would be maintained or slightly improved with a 50% reduction in active use.

Effects of Alternative 4 - No Grazing

Under this alternative, the impacts to Special Status Plant populations would be similar to Alternatives 1-3. The existing Special Status Plant populations would be maintained or slightly

improved with removal of livestock grazing.

I. Livestock Grazing Management

Affected Environment:

Warner Lakes Allotment is a management category *Improve* allotment. One permit (#360024) exists which authorizes grazing in the Flagstaff Bench and Swamp Lake Pastures of this allotment. The permitted active use for this permit is for 280 cattle from September 15 through December 31; livestock preference is 280 AUMs of active use, and 110 AUMs of suspended use. Cattle numbers can fluctuate annually as long as the 280 AUMs of total active use on both pastures is not exceeded, and as long as use occurs within permit dates.

In general, the Flagstaff Bench Pasture is grazed from September 15 through the first part of November. Cattle are moved to the Swamp Lake Pasture and are there from November through December 31. All use within these pastures occurs during the fall and winter seasons, when plants are dormant. Flagstaff Lake acts as a natural barrier to livestock along the northwest portion of the Flagstaff Bench Pasture when the lake is full. A temporary electric fence is installed as a livestock barrier when water levels are low.

In 2004, an Interdisciplinary Team (ID) conducted a rangeland health assessment (RHA) within the allotment. The ID team found that all applicable standards were met (BLM 2004b). In 2012, an ID team conducted a review of the 2004 findings specifically within the Flagstaff Bench and Swamp Lake Pastures of the allotment and found that all applicable standards are continuing to be met. The 2004 RHA and 2013 update are summarized in Table 3.3, and are incorporated in their entirety herein by reference (BLM 2004b; 2013).

Effects Common to Alternatives 1 and 2

The Flagstaff Bench and Swamp Lake Pastures would continue to be grazed during the fall and winter dormant season. The Flagstaff Bench would continue to be used first, followed by the Swamp Lake Pasture (Map 3). This rotation is optimal for the permittee's livestock operation.

Actual use, utilization, and climate data have been summarized in the allotment monitoring file and indicate that livestock grazing levels are sustainable at the current forage allocation for the pastures. Long-term trend monitoring plots indicate a stable trend in the key areas of the pastures (Appendix B, Table B-4).

The average utilization for each pasture has not exceeded the 65% utilization standard. The average actual use for both pastures, over the last 13 years, was 245 AUMs. Grazing levels would remain at or below 280 AUMs under Alternatives 1 and 2. This level of use, along with current grazing management, would provide a sustainable forage base under both alternatives.

Table 3.3. Rangeland Health Assessment Findings

Standard	2004 Assessment	2013 Assessment	Comments
1. Watershed Function – Uplands	Met	Met	Plant composition and community structure of grasses, forbs, and shrubs are what is expected for the site. There is good plant vigor and plants are able to complete their reproductive cycle following grazing use each fall and winter. 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 pastures.
2. Watershed Function Riparian/ Wetland Areas	Met	Met	There is a network of ephemeral lakes/wetlands throughout the allotment connected to the larger Warner Lakes system. Most of the lakes/wetlands within this network are overflow areas for the larger lakes. There are 1,712 acres of palustrine wetlands rated in Proper Functioning Condition (PFC). The 80 acres of wetlands located within the Flagstaff Bench and Swamp Lake Pastures continue to meet this standard.
3. Ecological Processes	Met	Met	Plant composition and community structure across the Flagstaff Bench and Swamp Lake Pastures 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.
4. Water Quality	Met	Met	The 2004 Rangeland Health Assessment stated that neither surface water nor groundwater within the Warner Lake Allotments has been listed for exceeding State water quality standards. Since 2004, the Flagstaff Bench and Swamp Lake Pastures have not been added to the list for exceeding state water quality standards.
5. Native, T/E, and Locally Important Species	Met	Met	Special Status Plant <i>Sesuvium verrucosum</i> (ONHP2, BLM Assessment ASM Species) is documented to occur around the edges of Flagstaff Lake and Swamp Lakes. Also, <i>Heliotropium curassavicum</i> (ONHP3, BLM Bureau Tracking TRA Species) was found on the southeast edge of Campbell Lake. The allotment provides very limited habitat to sage-grouse and California Bighorn sheep. There are no known sage-grouse leks in the allotment.

Environmental Consequences:

Grazing management under both alternatives would be expected to continue to meet rangeland health standards and guidelines for livestock management over the 10-year life of the permit. Livestock grazing management would continue to maintain a vegetative community that supports other resources objectives and uses. For these reasons, these alternatives would be consistent with the *Lakeview Resource Management Plan/Record of Decision* (BLM 2003b), the *Warner Lakes AMP* (BLM 1990e), the grazing regulations, and FLPMA.

Effects of Alternative 2 - Project Development

In addition to the effects described above as common to Alternatives 1 and 2, this alternative would provide an additional water storage site in the Swamp Lake Pasture. The waterhole would be located within the same area of disturbance as an existing trough (Map 4). It would provide livestock water on cloudy days when the solar pump is not running. It would increase the efficiency of the existing solar water system and would be a benefit to the permittee's livestock

operation.

The proposed range improvement project would be consistent with the allotment-specific management direction found in Appendix E1 of the *Lakeview Resource Management Plan/Record of Decision* (BLM 2003b, page A-94 as maintained), the grazing regulations, and FLPMA.

Effects of Alternative 3 - Reduced Active Use by 50%

Under this alternative, one pasture would continue to be used while the other is rested (Map 5). A 50% reduction in AUMs would occur under this alternative, equating to a reduction of 140 AUMs. The permittee would have to replace the 140 AUMs of lost forage elsewhere, or buy hay. The additional cost to replace this forage would be at the permittee's expense. These costs are discussed further in the social and economic section.

This livestock grazing management would be expected to continue to meet rangeland health standards over the life of the permit. Other multiple use objectives from the land use plan and the Warner Lakes Plan Amendment would continue to be met on the allotment.

Due to a lack of monitoring data or other information indicating that rangeland health standards are not being met, other multiple use objectives are not being met, or resource damage is occurring, adopting this alternative would not be entirely consistent with all of the multiple use objectives in the *Lakeview Resource Management Plan/Record of Decision* (BLM 2003b), *Warner Lakes ACEC Management Plan* (BLM 1990c, 1990d, 1990e), *Warner Lakes AMP* (BLM 1990f), the grazing regulations, or FLPMA.

Effects of Alternative 4 - No Grazing

Under this alternative, grazing would no longer be permitted within the Flagstaff Bench and Swamp Lake Pastures. The permittee would need to replace 280 AUMs of lost forage with private land forage or hay. The additional cost to replace this forage would be at the permittee's expense.

Existing range improvement projects within the allotment would not be maintained. Pasture boundary fences would need to be maintained by the BLM or adjacent land owners/permittees to ensure cattle do not trespass into the pastures.

Due to a lack of monitoring data or other information indicating that rangeland health standards are not being met, other multiple use objectives are not being met, or resource damage is occurring, adopting this alternative would not be consistent with all of the multiple use objectives in the *Lakeview Resource Management Plan/Record of Decision* (BLM 2003b), *Warner Lakes ACEC Management Plan* (BLM 1990c, 1990d, 1990e), *Warner Lakes AMP* (BLM 1990f), the grazing regulations, or FLPMA. In particular, this alternative would not be consistent with the primary Livestock Grazing Management Goal of providing “for a sustainable level of livestock grazing consistent with other resource objectives and public land-use allocations” (BLM 2003b; Page 52 as maintained).

J. Native American Traditional Practices

Affected Environment:

The allotment is located within a pre-contact and modern American Indian Traditional Use Area. Some members of the Fort Bidwell Indian Community have ancestors that used the Warner Valley area during their seasonal economic activities. The allotment area would have had a variety of plants and animals which were historically used by them (see Cultural Resource section which follows). Some areas within the Warner Valley area were used for religious activities. However, BLM is not aware of any specific locations or cultural activity occurring within the Warner Lakes Allotment. Recent statements from current members of the Fort Bidwell Indian Community indicate that they consider all manifestations of the native American past to be of importance and sacred (personal communications with Tribal members during the Ruby Pipeline Project).

Environmental consequences

Effects of All Alternatives (1-4)

None of the alternatives would substantially change the nature of traditional use sites in the area, if they exist. There is currently no known use of the area for collecting of any type of plant or of any religious use of the area. The proposed range development could potentially be within an area of importance to the Fort Bidwell Indian Community, but it has not been identified by them as such at this time.

K. Cultural Resources

Affected Environment:

Warner Valley Area

The Warner Valley area historically was within the territory of the Fort Bidwell Northern Paiute. Ethnographic studies of this group indicate that they seasonally moved between the Surprise Valley area in California to the Warner Valley and upland areas around Big Valley to the west of Warner Valley. Activities conducted include the collection of plant resources, fishing and hunting and procurement of stone tool materials at obsidian sources in the area. Site types which are present from this time period (700 BP to Historic Contact) include large village locations, small occupation sites, stone house ring sites, rock cairns, burials, lithic quarry sites. The overall archaeological record for the Warner Valley area goes back at least 10,000 years and may go back as far as 14,000 years in the past. The earliest record which we have for the area is the finding of Clovis projectile points. This type of projectile point is thought to occur between 12,000 to 10,000 years BP. This period would be called the Clovis Period. Also occurring in the area are stemmed projectile points. These maybe coeval with the Clovis points or they maybe even earlier in time as indicated by archaeological research at Paisley Caves located to the west of Warner Valley in the Summer Lake Basin. At Paisley Caves, these types of point are dated to nearly 14,000 years BP.

The period following the Clovis Period is known as the Early Archaic and would date from 10,000 BP to 6500 BP. Site types from this period would include village locations, quarry sites, burial, rock art sites, small occupation sites, upland plant collecting sites. Research conducted in the

northern portion of the Warner Valley has produced radio carbon dates of 8,000 years BP on what are known as Cascade or Foliate type projectile points. Following the Early Archaic Period is the Middle Archaic. This time period would date from 6500 BP to 2500 BP. During this period, new projectile point forms occur and it is thought that the reliance on plant gathering and the hunting of many types of game became more important in the subsistence record. Sites occur in all parts of the valley for this time period and include village locations, quarry sites, burials, small occupation sites, upland plant collection sites and rock art sites.

The next time period for the Warner Valley is the Late Archaic which would date from 2500 BP to 700 BP for the Warner Valley area. During this time period the subsistence pattern which is seen historically is set for the area. Heavy reliance of plant resources is indicated by the very large number of plant processing tools such as manos and metates found in the sites of this period. There are also indications of use of fish resources and freshwater mussels collected from the lakes and streams of the area. Site types for this time period include village locations, small occupation sites, burials, rock art sites, quarry sites, shell middens and upland plant collecting sites.

The last time period is the Proto Historic and Historic period which dates from 700 BP to historic contact with Euro Americans which took place in 1843 when John C. Fremont passed through the region. It is during this time period that a change in populations in the region may have taken place. Archaeological evidence indicates that a former population, possibly with relations to the Klamath Indians which currently are located to the west, was replaced by Northern Paiute peoples. Both the Northern Paiute and The Klamath have oral traditions which indicate this replacement of populations in the Warner Valley area. Site types from this time period would include village locations, small occupation sites, quarry sites, rock art sites, burials, shell midden sites, stone house ring sites, and upland plant collecting sites.

Warner Lakes Allotment

The areas of Flagstaff Bench and Swamp Lake pastures are within the Warner Lakes ACEC which was designated in part due to the presence of cultural resources. The Warner Lakes area, especially around the Dune and Slough areas and edges of the lakes have an abundance of cultural resource sites which contribute to the ACEC values (see also ACEC section which follows).

There has been no systematic survey for cultural resources across the two pastures of the allotment. The fact that cultural surveys have not been completed on 100% of the area 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 remaining portions of the two pastures is estimated at \$800 to \$1080 per acre based upon current costs for contract survey work. Surveying the remaining 1,500 unsurveyed acres within the pastures would cost approximately \$1,200,000 to \$1,620,000 and is considered to be exorbitant. The following section summarizes the results of surveys that have been completed to date by pasture.

Flagstaff Bench Pasture

There are 9 known cultural sites within this pasture. Approximately 80% of the pasture has been surveyed for cultural resources. Sites present include one very large occupation site which covers more than 200 acres, two smaller occupation sites, and 6 lithic scatters. The focus of use within the pasture is along the shoreline of the lake. Here, the large site extends for more than 1 mile along the shoreline. Numerous ground stone artifacts are present upon the site along with often dense lithic debris and numerous projectile points, bifaces, and worked or utilized obsidian flakes.

Swamp Lake Pasture

The Swamp Lake Pasture, while similar in environment to the Flagstaff Lake Pasture, has only 4 known cultural sites. However, only about 5% of this pasture has been surveyed to date. The recorded sites are all small occupation sites which are all located on shoreline of the lake. The sites have numerous ground stone artifacts along with lithic debris and projectile points.

Environmental Consequences:

Effects common to Alternatives 1-3

It is unknown to what extent livestock trampling is currently impacting cultural resource sites specifically within these pastures. There have been very few studies of livestock impacts to cultural sites, but based on field observations by BLM cultural resources staff over the last 38 years on known cultural resource sites in the Lakeview Resource Area, concentrated livestock use can impact cultural materials located in the soil profile. These effects include ground cover removal, surface scuffing, and hoof shear. Cultural materials within the top 12 inches of soil are the most susceptible to exposure and 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. In saturated soils adjacent to water sources, deep hoof “punching” can put the cow’s leg up to 24” into the ground. Multiple holes such as this can mix and churn the underlying sediment layers which may contain site materials. In dry areas along fence lines, concentrations of livestock can trample or remove the vegetation, mix the surface soil layer (often up to 6 inches), loosen the soil and cause erosion by wind and rainwater. Artifacts can be mixed between layers of sediment, moved both vertically and horizontally, or broken and chipped. Dispersed grazing, on dry uplands away from water sources may cause light hoof shear and surface scuffing, and could result in light (2 inches) to moderate (6 inches) depth of impacts to some sites.

Maintenance of existing range developments would have little or no additional impact upon cultural resources beyond those that may have occurred when the improvement was constructed.

Effects of Alternative 1 - No Action

Any cultural sites (both documented and undocumented) in the pastures within livestock high-concentration areas (11.8% of the area), 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. Sites (both documented and undocumented) located across the majority of the allotment (88.2% of the area) would continue to be impacted by light hoof shear and surface scuffing from dispersed livestock and big game use.

Effects of Alternative 2 - Project Development

A cultural survey was completed for the proposed water development site in the Swamp Lake Pasture. No new eligible sites were located. Therefore, the impacts of this alternative would be similar to Alternative 1.

Effects of Alternative 3 - Reduced Active Use by 50%

Under this alternative, there would be about a 50% reduction in overall concentrated livestock use areas, and a corresponding reduction in potential site trampling impacts by livestock. However, effects to cultural resources would continue from big game use and from wind and water erosion.

Effects of Alternative 4 - No Grazing

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

L. Recreation

Affected Environment:

Recreation within the area is managed for multiple activities, opportunities, and experiences (Map R-3, BLM 2003b). Recreation within approximately half of the project area is managed for Semi-Primitive Motorized experiences (48%). The area possesses a moderate probability of experiencing isolation, closeness to nature, and self-reliance in outdoor skills. User interaction is low, but there is evidence of other users and few isolated structures.

Recreation near main improved roads, such as Flagstaff Lake (3-11) and Hart Mountain Road (3-12), accounting for the remainder of the area (52%), is managed for Roaded Natural experiences. These areas possess an equal probability of experiencing other user groups as well as isolation from the sights and sounds of others. Opportunity to have a high degree of interaction with the natural environment, but primitive types of recreation is not as important. User interaction is low to moderate. Resource modifications and utilizations are moderately evident, but harmonize with nature. Solitude, where a visitor could avoid the presence of others, is largely absent in the area due to the close proximity of moderate-high use roads bisecting the units and running along the eastern side of both pastures.

Off-Highway Vehicle use in the pastures is Limited to Designated roads and trails. Cross-country travel is prohibited (Map R-7, BLM 2003b).

There are no developed recreation sites within these pastures. The primary recreation activities in the area are wildlife viewing, upland game bird (e.g., chukar and quail) and big game (e.g., mule deer and pronghorn antelope) hunting, and driving for pleasure. Other recreation activities that occur in these pastures include: photography, hiking, mountain biking, horseback riding, and rock hounding.

Environmental Consequences:

Effects of Alternative 1 - No Action

The No-Action Alternative would continue to have negligible impacts to recreation opportunities, activities, and experiences across the pastures. Current recreation activities and opportunities would likely remain constant.

Effects of Alternative 2 - Project Development

The proposed developments under Alternative 2 would marginally degrade recreational experiences. Areas within close proximity to the water development would be undesirable for those seeking naturalness due to the negative physical and visual impacts of the constructed waterhole. The proposed development would also slightly impact the naturalness of the area's recreational setting from pastoral to more agricultural. Thus, recreational use in the area would incrementally shift away from experiences reliant on a natural appearing landscape. However, due to the proposed location of the waterhole, within an already disturbed area and close proximity to other disturbances, negative impacts would likely be unnoticed by the average user.

Effects of Alternative 3 - Reduced Active Use by 50%

The effects of this alternative to recreation would be similar to Alternative 2. In addition, proposed rotation adjustments within the pastures and reduced AUMs would have moderate beneficial impacts to recreation. Those seeking to recreate, free from the sights and sounds of cattle, could anticipate and avoid these impacts under this rotation system. Furthermore, reduced AUMs would also slightly reduce trampling along fence lines, trailing routes, and around water developments, thus improving the naturalness of the area.

Effects of Alternative 4 - No Grazing

The No-Grazing Alternative would enhance recreation activities, opportunities, and experiences in these pastures. Naturalists' and primitive recreationists' experiences in these areas would be moderately enhanced by the removal of livestock grazing due to the absence of the sights and sounds of cattle, the eventual improved ecological condition of the pastures (particularly associated with cattle trails and impacts around watering/gathering areas), and the potential for facilities to be deemphasized and begin to blend into the landscape due to lack of use.

M. Visual Resources

Affected Environment:

Topographically, the two pastures consist of an ancient lake edge plateau ranging in elevation, from 4,611 ft. to 4,471 ft., above a vast, open, wetland. Swamp Lake Pasture is characterized by small sand dune knobs, while Flagstaff Bench Pasture is a shallow, bowl shaped, flat. Views looking out from the pastures include: the Warner Valley Wetlands to the south and north (Anderson, Swamp, Mugwump, Flagstaff, and Campbell Lakes), the Warner Mountains and the Coyote Hills to the west, the Rabbit Hills to the northwest, and Hart Mountain to the East. Vegetation in the pastures is represented by Wyoming big sagebrush, greasewood, bottle brush squirreltail, cheatgrass, and saltgrass. Observable developments in the pastures include: 7 miles of motorized routes, 11.3 miles of fence, and 600 ft. of pipeline, 1 mile of underground electrical lines, and 3 troughs.

These pastures are managed according to Visual Resource Management class VRM III (Map 8), to “partially retain the existing character of the landscape, moderate levels of change are acceptable.” Additionally, both pastures are completely within the Lakeview to the Steens Back Country Byway three mile Scenic Corridor. Management direction requires “all developments, land alterations, and vegetation manipulations within a 3 mile buffer... of all major routes and recreation use areas to be designed to minimize visual impacts (unseen areas within these zones will not be held to this standard)... All projects will be designed to maximize scenic quality and minimize scenic intrusions” (BLM 2003, page 88).

Environmental Consequences:

Effects of Alternative 1 - No Action

The No-Action Alternative would continue to have low impacts to the existing visual quality of the pastures. Current visual objectives for VRM classes III and the scenic corridor would continue to be achieved.

Effects of Alternative 2 - Project Development

This alternative would have low negative impacts to visual resources as the visual characteristics of lines, form, color, and texture would be slightly impacted. However, these impacts would be mitigated by the proposed location of the waterhole within an already disturbed area, the projects close proximity to other disturbances, and the relatively small proposed size of the waterhole. These negative impacts would likely be unnoticed by the average user. Thus, Alternative 2 would meet visual resource objectives for VRM Class III and the scenic corridor.

Effects of Alternative 3 - Reduced Active Use by 50%

The effects of proposed developments within this alternative to visual resources would be similar to Alternative 2. Additionally, the proposed rotation adjustments within the pastures and reduced AUMs would have some beneficial impacts to visual resources. Reduced AUMs would slightly improve negative impacts from trampling along fence lines, trailing routes, and around water

developments. These impacts would continue to meet visual resource objectives for VRM III and the scenic corridor.

Effects of Alternative 4 - No Grazing

The No-Grazing Alternative would moderately enhance visual resources within the pastures. During the life of the plan, visuals would improve across the pasture as ecological conditions slowly restored denuded areas particularly around waterholes, cattle trails, pipelines and troughs. Visual resources would be further improved by the removal of facilities within the pasture if and when changes occur. Visual objectives for VRM classes III and the scenic corridor would be enhanced.

N. Areas of Critical Environmental Concern (ACEC)

Affected Environment:

The two pastures fall completely within the Warner Wetlands ACEC (Map 2). This 52,000-acre ACEC was designated in 1989 to emphasize management for important wildlife and wetland habitat values (primarily waterfowl and shorebird habitat), as well as prehistoric and scenic values (BLM 2003a). The area is managed in accordance with an approved ACEC management plan (BLM 1990b, 1990c, 1990d) and *Lakeview Resource Management Plan/Record of Decision* (BLM 2003b; pages 57-64, as maintained). Generally, livestock grazing has been removed from a core wetland area containing the majority of the water, aquatic, and wetland habitat inside the ACEC boundary. However, the two pastures are located in upland habitats outside the core wetland area and are open to grazing use.

Environmental Consequences:

Effects of Alternative 1 - No Action

The effects of livestock grazing on the relevant/important resource values (wildlife and wetland habitat, prehistoric sites, and scenic quality) within the ACEC have been analyzed previously in two separate NEPA processes (BLM 1990b, 1990c, 1990d, 1990e, 2001, 2003a, 2003b). These analyses are incorporated by reference in their entirety.

Both the ACEC management plan and AMP called for constructing additional pasture fencing to exclude livestock from the core wetland area and to allow implementation of a rest rotation grazing system. Approximately 1,200 acres of crested wheatgrass was proposed in the Flagstaff Bench Pasture to mitigate the effects of forage lost by excluding livestock use in the core wetlands area (BLM 1990b, 1990c, 1990d, 1990e). The fencing has been implemented. The grazing system was expected to provide for some residual nesting cover during the rest period in those pastures where wetlands were present (BLM 1990d, page 18). However, most of the wetland and waterfowl/shorebird habitat are located outside of the two pastures in other portions of the larger ACEC. The grazing system was also expected to improve plant density, vigor, and composition and benefit foraging upland wildlife species (BLM 1990d, page 18).

Both the seeding and fence construction were expected to have some negative effects on scenic quality. However, these proposals were consistent with VRM Class III management objectives and were expected to be less noticeable over time (BLM 1990d, pages 21-22).

A discussion of potential impacts to these values can also be found in the Wildlife, Wetland and Riparian Vegetation, Cultural Resources, and Visual Quality sections of this EA. Continued livestock grazing management under Alternative 1 would not have any substantial additional impacts on these values over the 10-year life of the permit.

Effects of Alternative 2 - Project Development

The effects of livestock grazing management under Alternative 2 on the relevant/important values within the Flagstaff and Swamp Lake Pastures portion of the ACEC would be similar to Alternative 1. The construction of one small waterhole would result in an additional 0.25 acre of surface disturbance within the 52,000-acre ACEC compared to Alternative 1, but this additional impact on the relevant/important values would not be significant.

Effects of Alternative 3 - Reduced Active Use by 50%

The effects of livestock grazing management under Alternative 3 on the relevant/important values within the Flagstaff and Swamp Lake Pastures portion of the ACEC would be somewhat less than Alternative 1 over the 10-year life of the permit. A discussion of potential impacts to these values can also be found in the Wildlife, Wetland and Riparian Vegetation, Cultural Resources, and Visual Quality sections of this EA.

Effects of Alternative 4 - No Grazing

The effects of removing livestock grazing for a 10-year period under Alternative 4 would result in only slight benefits to the relevant/important values within the Flagstaff and Swamp Lake Pastures portion of the ACEC compared to Alternative 1. A discussion of potential impacts to these values can also be found in the Wildlife, Wetland and Riparian Vegetation, Cultural Resources, and Visual Quality sections of this EA.

O. Lands with Wilderness Characteristics

Affected Environment:

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, 2007). BLM subsequently conducted field inventory, completed route analysis forms, made unit boundary determinations, and evaluated wilderness characteristics within each inventory unit within the evaluation area.

ONDA reported wilderness characteristics to be present within all of the Flagstaff Bench Pasture as

part of their larger Poker Jim Addition WSA proposal (ONDA 2005, pages 162-181). While BLM did not find wilderness characteristics to be present in most of the Flagstaff Bench and Swamp Lake Pastures, BLM did find wilderness characteristics to be present in approximately 105 acres along the north and western edges of the Flagstaff Bench Pasture (Map 9). BLM hereby incorporates these findings by reference in their entirety. In summary, the Warner Lakes inventory unit (OR-015-114) is currently about 33,900 acres in size, is predominantly in a natural condition, and offers an outstanding opportunity for primitive and unconfined recreation (BLM 2012d). The document is available at <http://www.blm.gov/or/districts/lakeview/plans/inventas.php>.

Environmental Consequences:

Effects of Alternative 1 - No Action

Since a small portion of the Flagstaff Bench Pasture was found to contain wilderness characteristics with the current level of livestock use and human disturbances (range improvements) present, continued grazing and range improvement maintenance activities would not be expected to have any additional impacts to wilderness characteristics.

Effects of Alternative 2 - Project Development

Since no range improvements are proposed within the Flagstaff Bench Pasture, the impacts of this alternative on wilderness characteristics would be similar to Alternative 1.

Effects of Alternative 3 - Reduced Active Use by 50%

The impacts of reducing livestock use within the Flagstaff Bench Pasture could result in less trailing use along the north and western pasture boundary fence. This could slightly improve the natural character of a very small portion of the Warner Lakes inventory unit (OR-015-114).

Effects of Alternative 4 - No Grazing

The impacts of removing livestock use within the Flagstaff Bench Pasture would remove trailing use along the north and western pasture boundary fence. This would slightly improve the natural character of a very small portion of the Warner Lakes inventory unit (OR-015-114).

P. 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 2011, an estimated 98,000 head of cattle and calves were in Lake County, Oregon (Oregon Agricultural Information System 2011). In 2011, Lake County ranchers sold an estimated \$35,000,000 worth of cattle. The pastures support approximately 79 cattle on an annual basis for 3.5 months of the year. Approximately 67 calves can be produced annually for market (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 allotment 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 small, nearby communities such as Plush and Adel, though the specific contribution of the allotment cannot be accurately estimated.

Effects of Common to Alternatives 1 and 2

Under these alternatives, the Federal Government would continue to collect grazing fees (280 AUMs * \$1.35/AUM = \$378) 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 approximately 79 cattle and produce approximately 67 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 \$134/cwt (100 lbs. of live weight) (Shasta Livestock Auction Yard Market Report, March 15, 2013) the permittee would generate a gross income of approximately \$46,000. This calculation is assuming that 9 head were kept as replacement heifers. 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 - Project Development

In addition to the effects described above, the water development proposed under Alternative 2 could potentially reduce the permittee's operating costs by reducing the number of times the permittee would have to pump water via a gas-powered generator, by providing additional water storage. Pumping water involves the costs of driving to/from the site, fuel for the generator, and the permittee's time. Limiting the number of trips and fuel used would be a tangible benefit to the permittee.

Effects of Alternative 3 - Reduced Active Use by 50%

The federal government would collect 50% less grazing fees from the pastures, reducing the grazing fees collected by \$193.20 assuming AUMs @ \$1.35/AUM.

Under this alternative the permittee could either reduce his herd size by 50% or find alternative forage. If the permittee chose to reduce number of cows and calves by 50%, then gross revenue would be reduced by 50%. The gross income for the permittee would be (600-pound stocker calf at \$134/cwt) (29 calves) approximately \$23,316. This would be a loss of gross income compared to Alternative 1 of approximately \$22,684. This estimate would vary every year depending on the price of beef and the weight/condition of the calves at the time of sale.

The permittee could chose to find alternative forage and assuming the permittee did so for 50% of the herd, the estimated costs would be about \$13,500 to feed hay for 3.5 months. This is based on the current cost of hay, approximately \$250/ton (Oregon-Washington weekly hay report, 2013) and assuming feeding 25lb/day/cow for all 3.5 months. If the permittee could lease private land the estimated cost for 50% of the herd would be approximately \$2,072, assuming (140 AUMs at \$14.80 per AUM). The average pasture rate for private land forage in Oregon is \$14.80 Per AUM.

The permittee could also do a combination of private land leasing and feeding hay so the additional cost could vary between \$2,072 and \$23,316.

If the rancher could not secure other suitable pasture land or could not afford these increased costs, then approximately 29 calves would no longer be produced in Lake County, resulting in less than 1% annual reduction in county-wide cattle production. Based on the current price of a 600-pound stocker calf at \$134/cwt, this could result in an economic loss to the permittee and the Lake County economy of about \$22,684 per year.

Effects of Alternative 4 - No Grazing

A minimum annual loss of \$378 would occur to the Federal government due to the loss of grazing fee collections associated with these pastures. This would also result in the loss of suitable grazing land for the local rancher/permittee. The permittee 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 permittee. The current cost of hay is approximately \$250/ton, and assuming it takes 25lb/day/cow, the additional cost per day would be \$26,662.50. This would result in approximately \$26,284.50 in additional costs to feed the permittee's 79 cows for 3.5 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 permittee would be approximately \$3,174 ((280 AUMs * \$14.80) - \$378)). If the permittee could not secure other suitable pasture land or could not afford these increased costs, then approximately 58-67 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 loss would be the loss of one existing ranching operation.

G. Cumulative Effects

Analysis Scale and Timeframe

For the purposes of this analysis, cumulative impacts are addressed at the pasture scale. The reasons for choosing this analysis scale include the fact that issuing a permit is a decision that affects both pastures, and BLM has a good idea of other potential reasonably foreseeable actions that may occur within the pastures due to management direction identified in the Lakeview RMP/ROD (Appendix E, BLM 2003b). However, the analysis spatial scales could vary somewhat depending upon the resource value/use being addressed. 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.

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 pastures as part of past or on-going management activities. These include: livestock grazing and management, road construction and maintenance, and range improvement project construction and maintenance.

The pastures have 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, approximately 3 miles of constructed roads and 4 miles of primitive motorized routes (totaling about 8.5 acres of road disturbance) exist in the two pastures. Approximately 29.4 miles of fence (5.6 acres of trailing disturbance) currently exist. Three water developments exist (Map 3) representing another 360 acres of disturbance associated with livestock use. These represent an estimated total of about 374.1 acres of past or on-going ground disturbance.

All of these past activities have affected or shaped the landscape within the allotment into what it is today. Current resource conditions are described further in the “Affected Environment” portions of Chapter 3 earlier in this document, as well as in the Rangeland Health Assessment(s) for the allotment (BLM 2004b, 2013).

Reasonably Foreseeable Future Actions

Foreseeable future actions in these pastures include continued road and range improvement maintenance comparable to what has gone on in the past. Noxious weed treatments, hunting, and other dispersed recreation activities may also occur.

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 revealed that there would be little or no direct or indirect effects on these values/issues.

Perennial pepperweed, Hoary Cress, and Canada thistle are present within the pastures (BLM 2004a) and the risk of future infestations or expansion is relatively high under all four alternatives, due to the fluctuating water levels of the adjacent Warner Lakes. If new infestations occur in the future, they would be treated in accordance with the most current Integrated Weed Treatment Plan(s) and related policies (such as BLM 2004a, 2007b, 2007c). The amount and locations of such treatments are somewhat speculative at this time and are difficult to quantify. However, the impacts of such potential treatments have already been analyzed in another NEPA document and this analysis is incorporated by reference in its entirety. Such impacts could include: short-term increases in surface disturbance and soil erosion, 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 2004a, Pages 10-20).

For purposes of this analysis, the total acres of likely concentrated surface disturbance or surface recovery served as the main indicator of cumulative impacts on soils, BSCs, upland vegetation, wetland and riparian vegetation, cultural resources, and wildlife and special status species habitat.

A comparison of acres of concentrated disturbance is included in Table 3.4. None of these alternatives would result in a significant amount of new or incremental surface disturbance when compared to Alternative 1. Alternatives 3 and 4 would result in fewer acres of total disturbance within the two pastures compared to Alternative 1.

Table 3.4. Cumulative Acres of Concentrated Disturbance

	Alternative 1 – No Action	Alternative 2 – Project Development	Alternative 3 – Reduce Active Use by 50%	Alternative 4 – No Grazing
Past/Present Actions	374.1	374.1	374.1	374.1
Estimated Area of New Disturbance or Recovery	0	0.25	-182.6(natural recovery)	- 365.6 (natural recovery)
Cumulative Total	374.1	374.35	191.1	8.5 (associated with existing routes)

CHAPTER IV - INDIVIDUALS, GROUPS, AND AGENCIES CONSULTED

Agencies and Individuals Consulted

Grazing Permittee
Oregon Department of Fish and Wildlife
The Nature Conservancy

In addition, this EA was made available for a 30-day public comment period. Interested public, groups, agencies, and tribal interests were notified of this review opportunity. A mailing list is contained in the file.

CHAPTER V - REFERENCES

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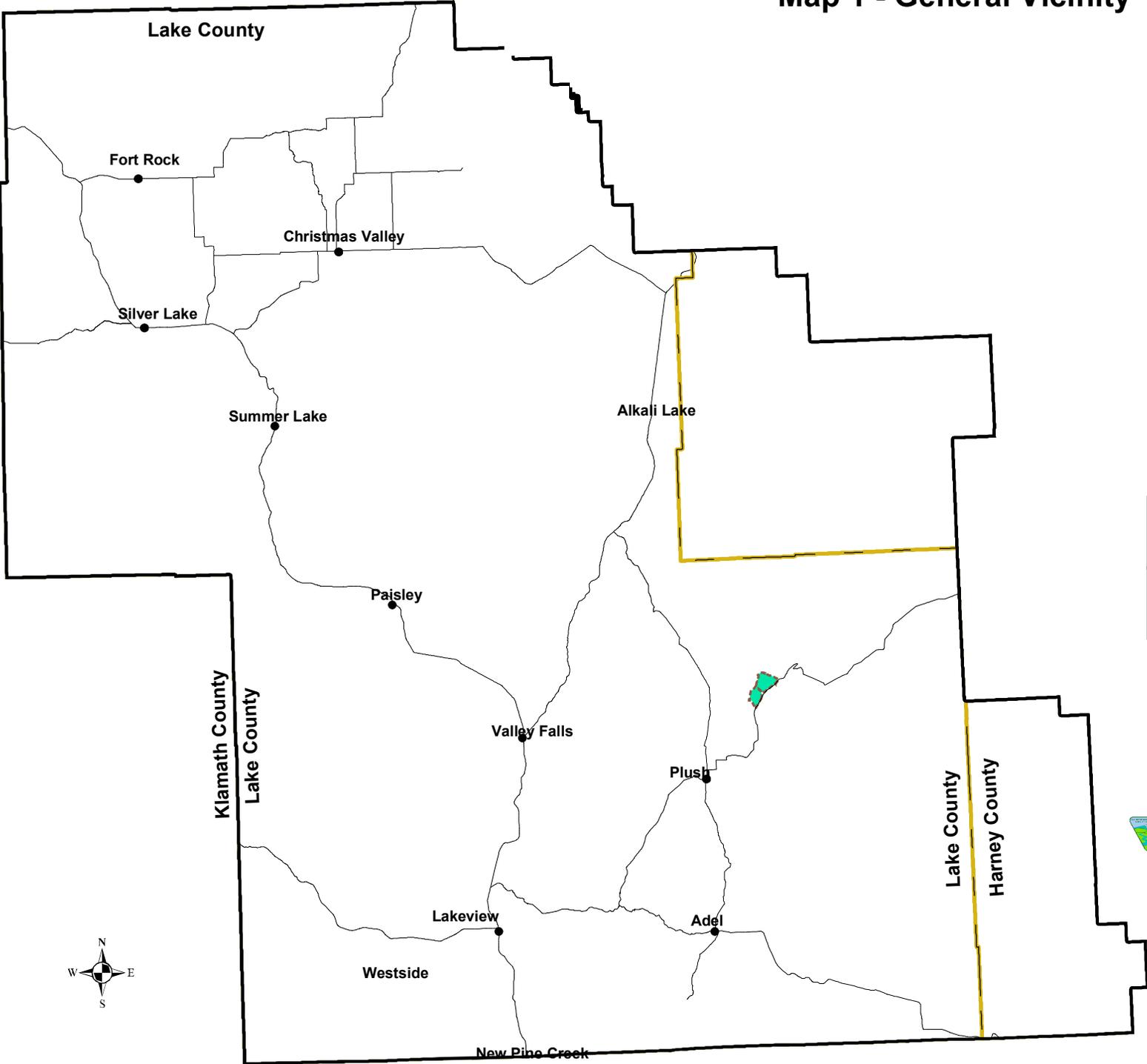
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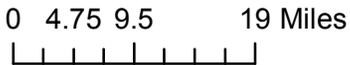
Map 9 - Lands with Wilderness Character

Map 1 - General Vicinity



Legend

- Lakeview Resource Area
- County Boundary
- Cities
- Major Roads
- Pastures



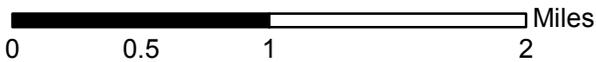
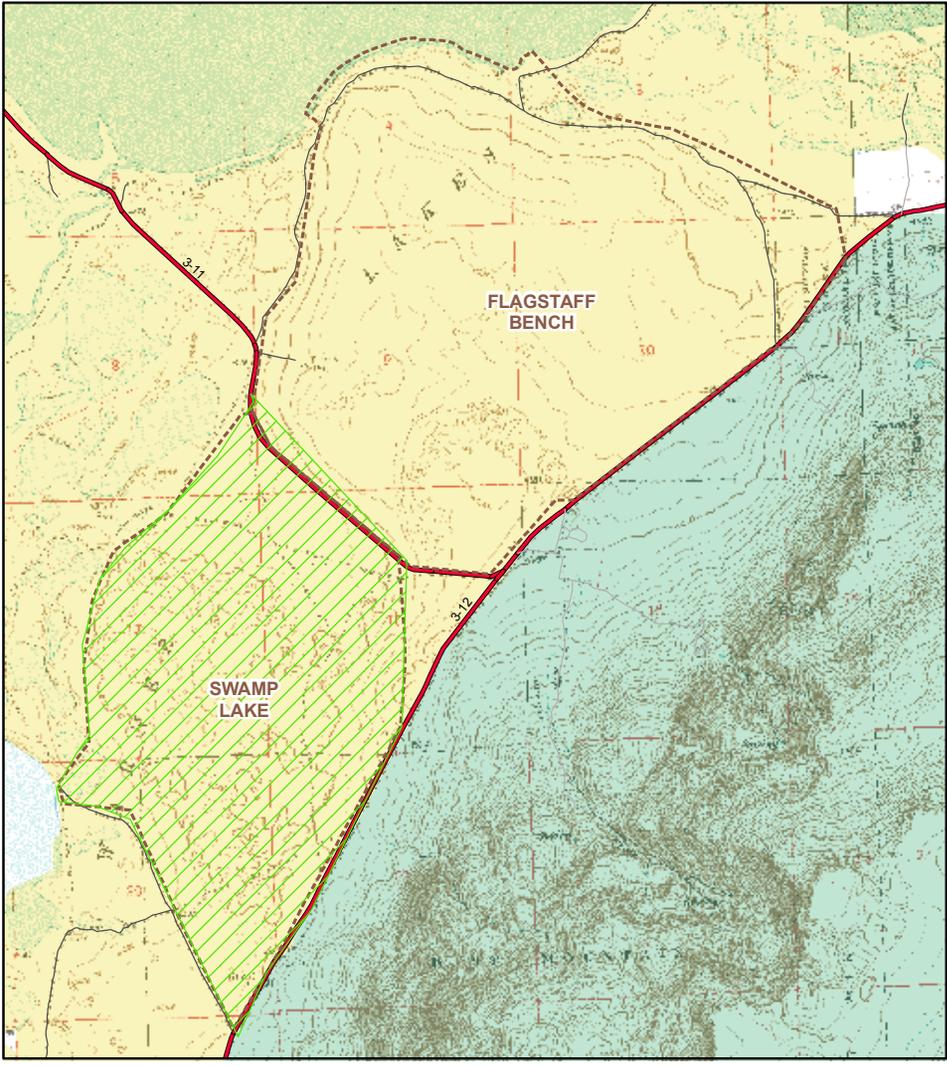
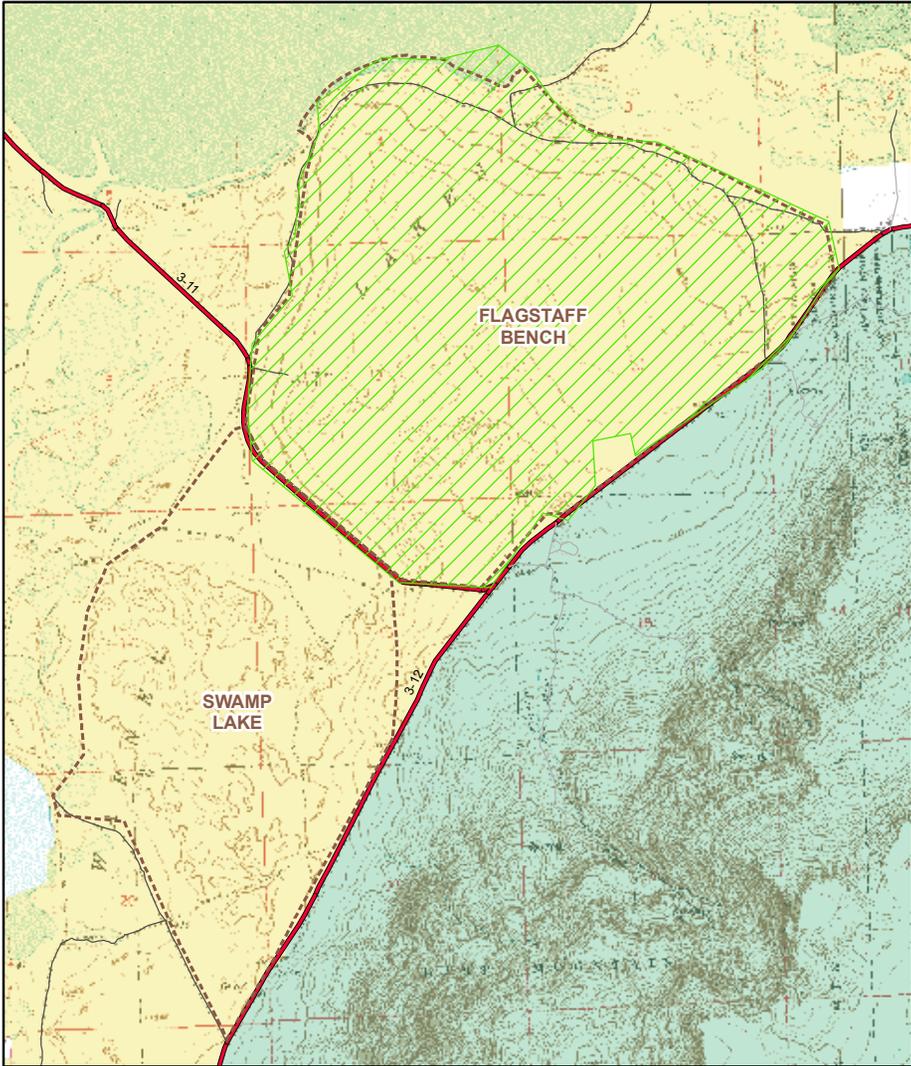
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Map 3. Grazing Schematic (Alternatives 1 and 2)

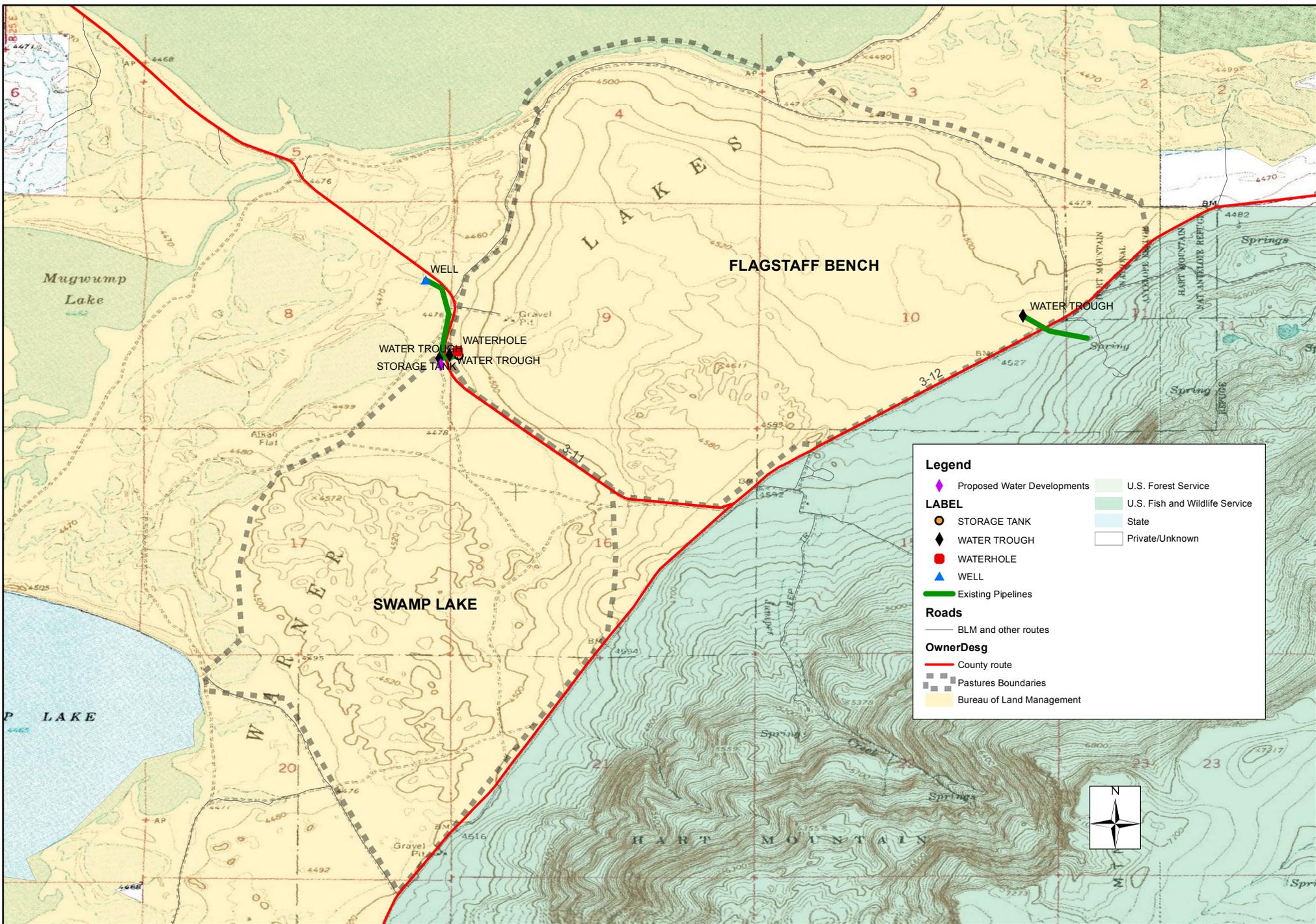
Fall Use, Each Year

Winter Use, Each Year



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Legend	
	Pastures
	Pasture Used
	County route
	Bureau of Land Management
	Other
	Bureau of Land Management
	U.S. Forest Service
	U.S. Fish and Wildlife Service
	State
	Private/Unknown



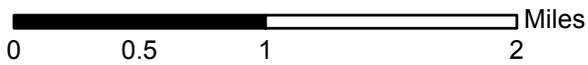
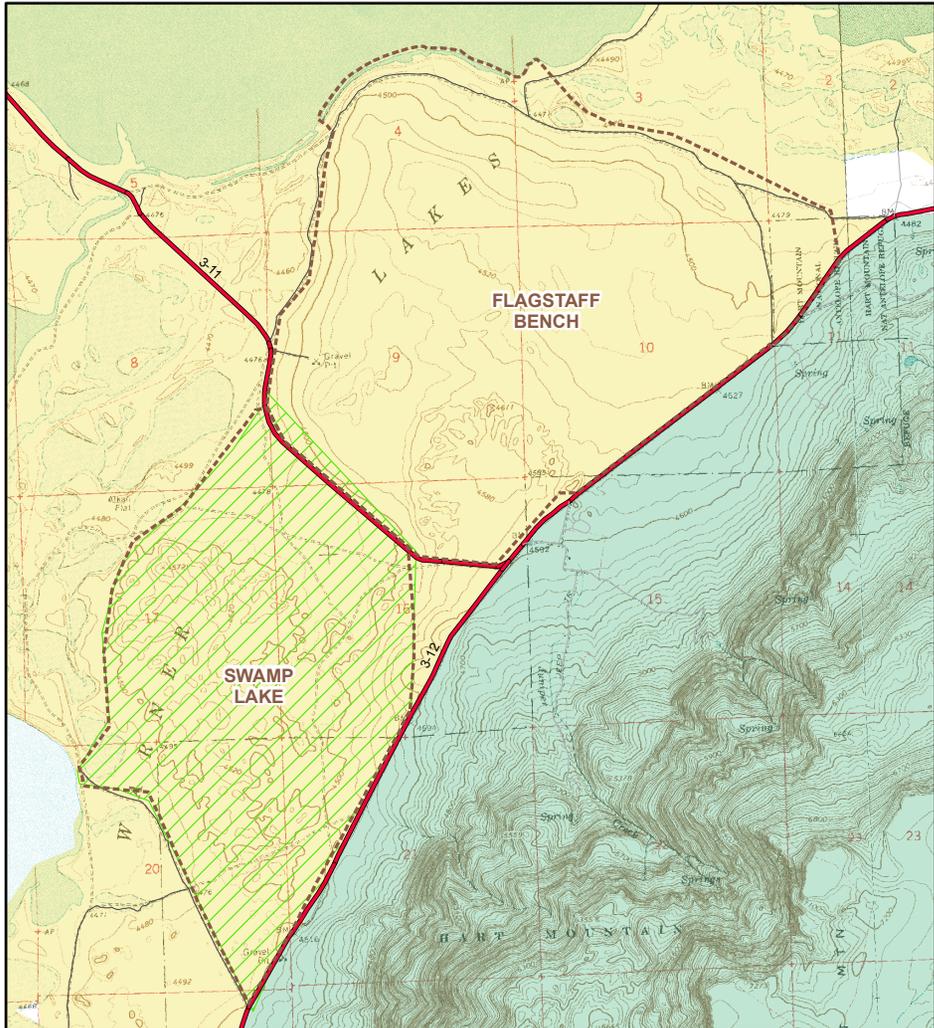
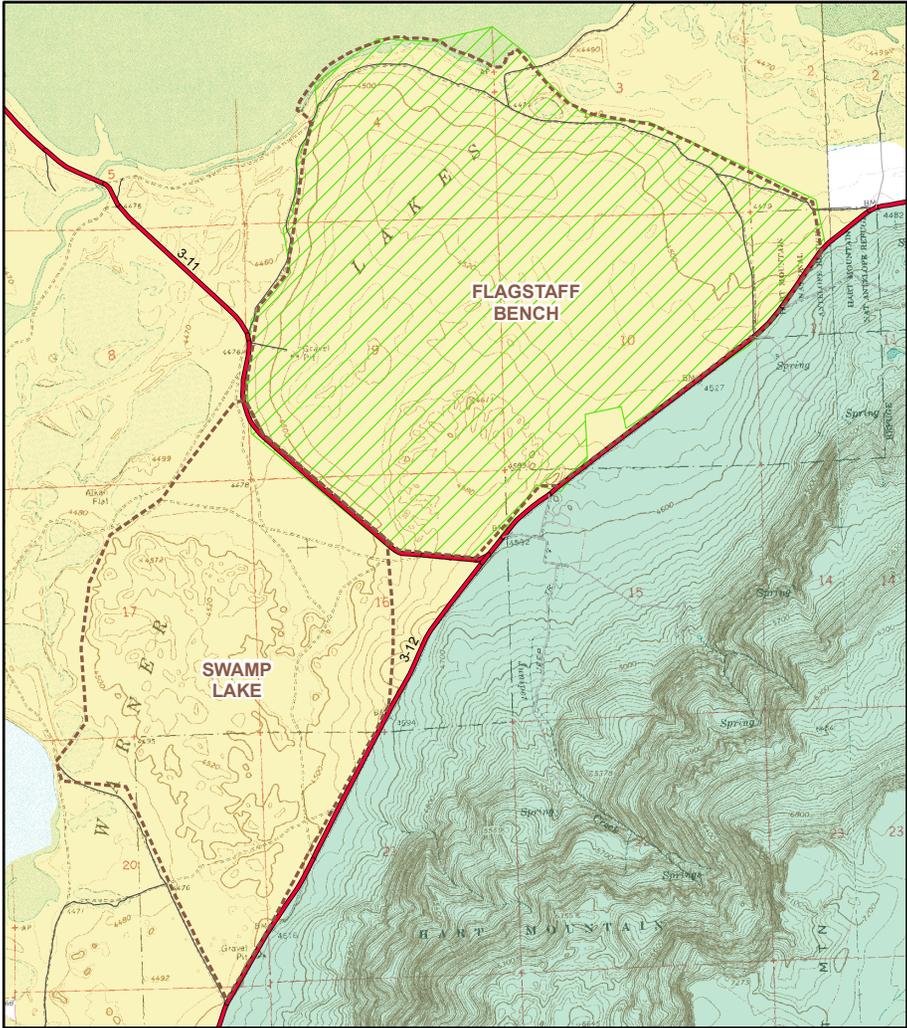
Map 4. Existing and Proposed Range Improvements

0 0.25 0.5 1 Miles

Map 5. Grazing Schematic (Alternative 3)

Fall/Winter Use - Year 1

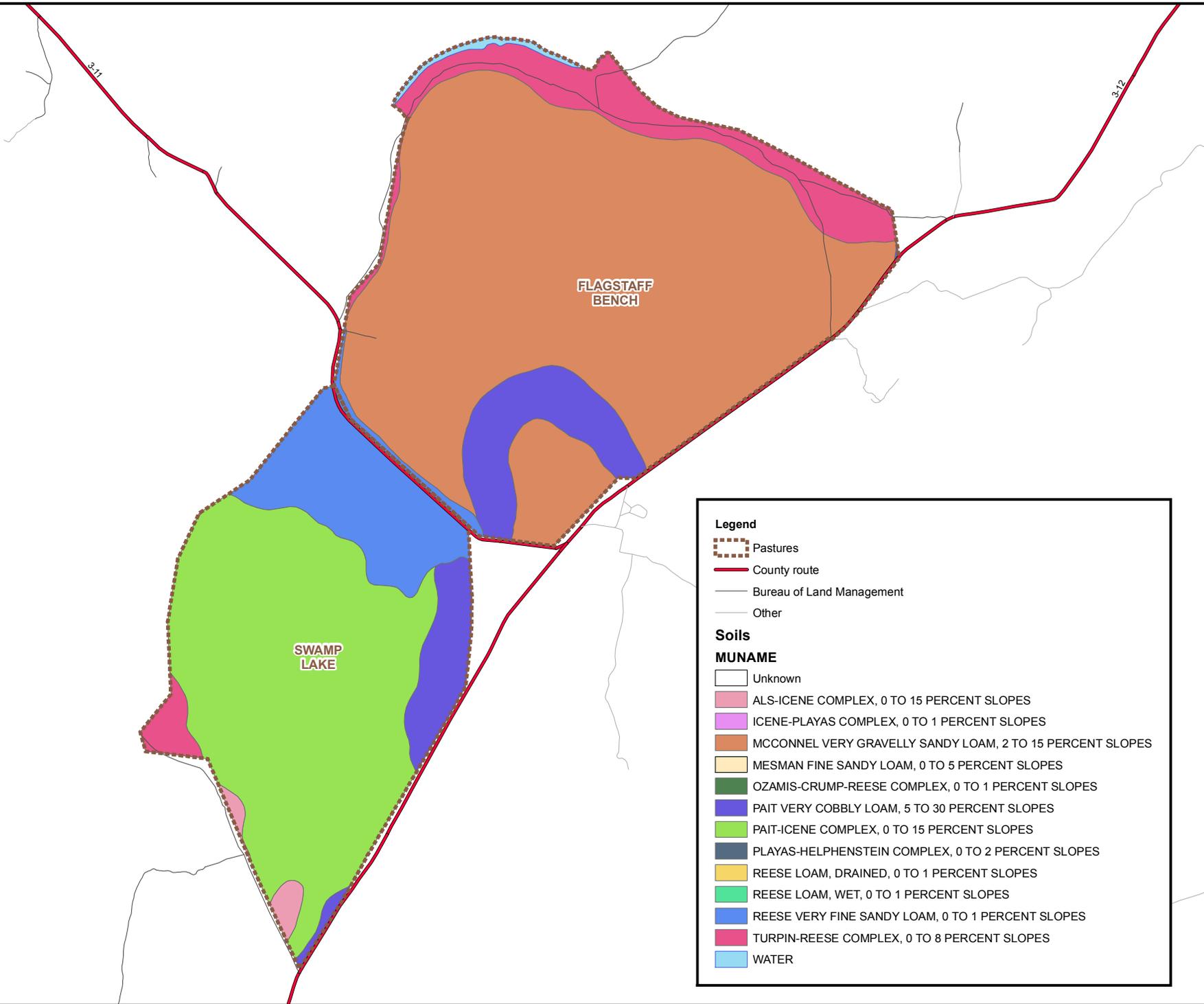
Fall/Winter Use - Year 2



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Legend

- Pastures
- County route
- Bureau of Land Management
- Other
- Pasture Used
- Bureau of Land Management
- U.S. Forest Service
- U.S. Fish and Wildlife Service
- State
- Private/Unknown



Legend

- Pastures
- County route
- Bureau of Land Management
- Other

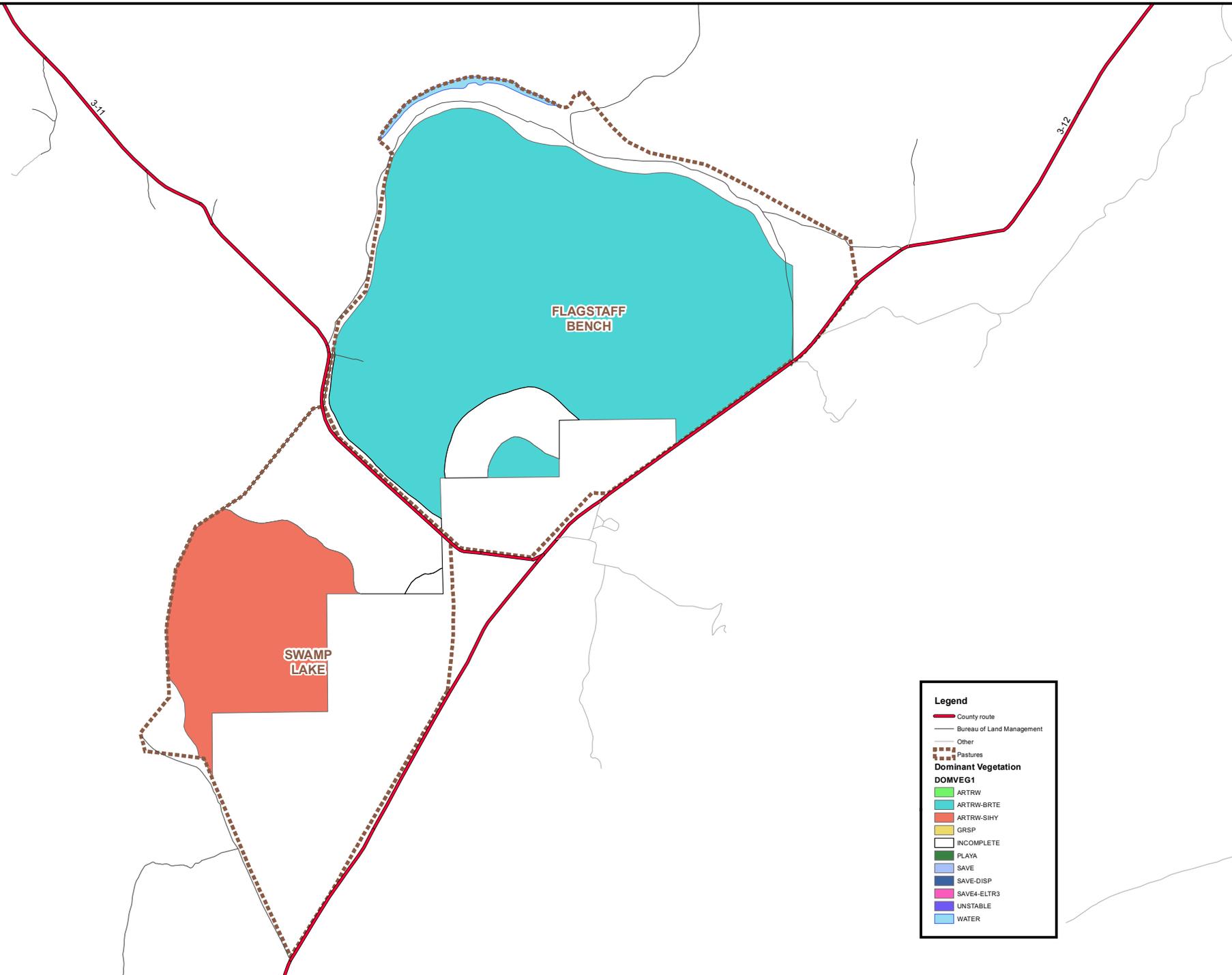
Soils

MUNAME

- Unknown
- ALS-ICENE COMPLEX, 0 TO 15 PERCENT SLOPES
- ICENE-PLAYAS COMPLEX, 0 TO 1 PERCENT SLOPES
- MCCONNELL VERY GRAVELLY SANDY LOAM, 2 TO 15 PERCENT SLOPES
- MESMAN FINE SANDY LOAM, 0 TO 5 PERCENT SLOPES
- OZAMIS-CRUMP-REESE COMPLEX, 0 TO 1 PERCENT SLOPES
- PAIT VERY COBBLY LOAM, 5 TO 30 PERCENT SLOPES
- PAIT-ICENE COMPLEX, 0 TO 15 PERCENT SLOPES
- PLAYAS-HELPHENSTEIN COMPLEX, 0 TO 2 PERCENT SLOPES
- REESE LOAM, DRAINED, 0 TO 1 PERCENT SLOPES
- REESE LOAM, WET, 0 TO 1 PERCENT SLOPES
- REESE VERY FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES
- TURPIN-REESE COMPLEX, 0 TO 8 PERCENT SLOPES
- WATER

0 0.2 0.4 0.8 1.2 Miles

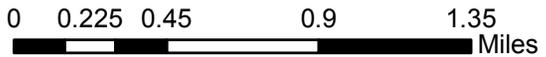
Map 6. Soils in the Flagstaff Bench and Swamp Lake Pastures



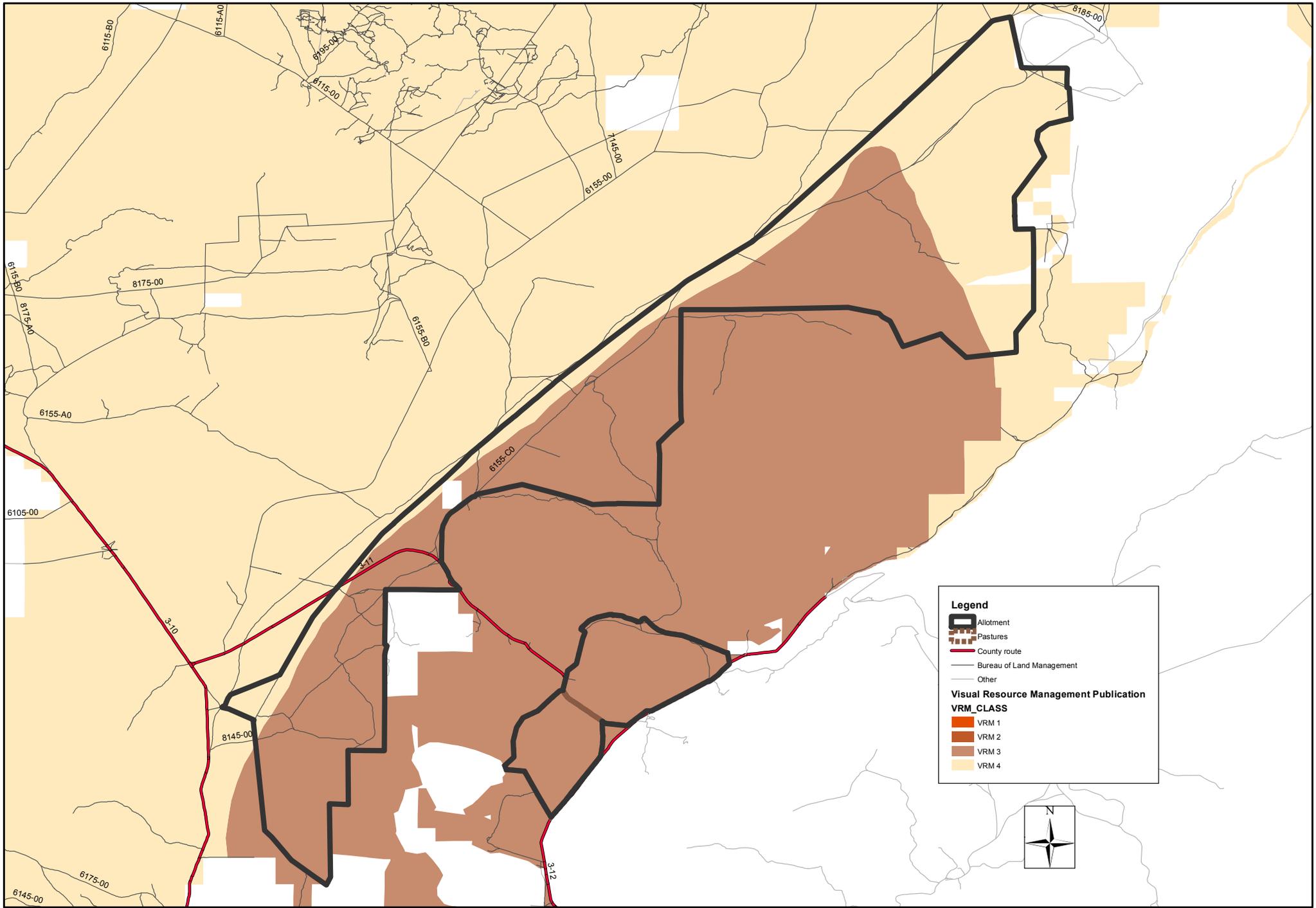
Legend

- County route
- Bureau of Land Management
- Other
- Pastures
- Dominant Vegetation**
- DOMVEG1
- ARTRW
- ARTRW-BRTE
- ARTRW-SIHY
- GRSP
- INCOMPLETE
- PLAYA
- SAVE
- SAVE-DISP
- SAVE-ELTR3
- UNSTABLE
- WATER

Map 7. Dominant Vegetation in the Flagstaff Bench and Swamp Lake Pastures



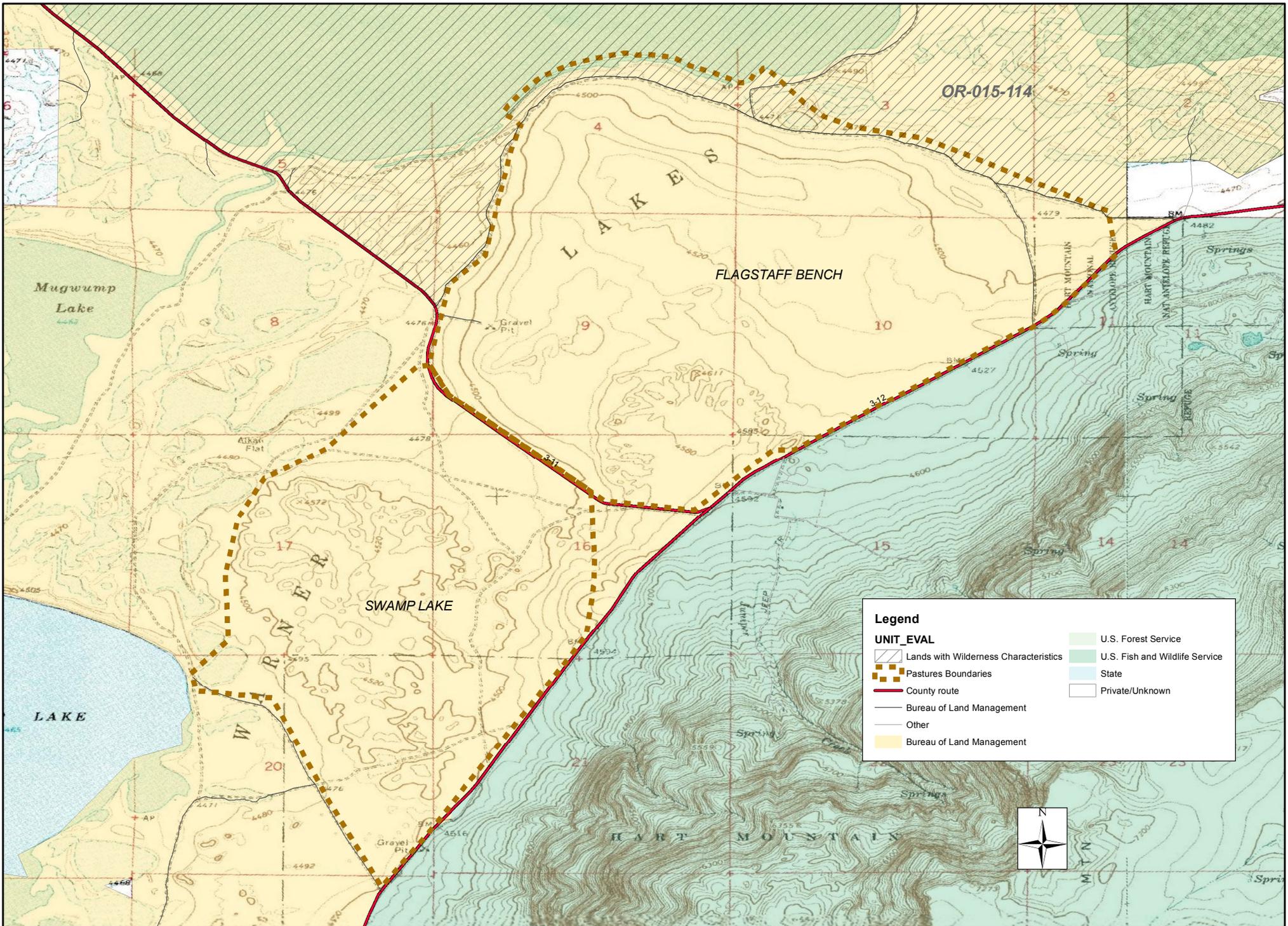
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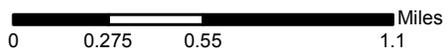
Map 8. Visual Resource Management Classes in the Warner Lakes Allotment

0 1 2 4 Miles

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Map 9. Lands With Wilderness Characteristics



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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.

Fall - Grazing occurs approximately September 1 through October 31. Grazing during this timeframe would occur after most plants have reached seedripe and have stored adequate carbohydrate reserves. All plants have an opportunity to complete their life cycles and produce the maximum amount of cover and forage.

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. Flagstaff Bench and Swamp Lake Pastures Soil Associations

SOIL MAP UNIT	SOIL NAME	Acres*
197E	PAIT VERY COBBLY LOAM, 5 TO 30 PERCENT SLOPES	240
225A	REESE LOAM, WET, 0 TO 1 PERCENT SLOPES	4
255A	TURPIN-REESE COMPLEX, 0 TO 8 PERCENT SLOPES	2589
153C	MCCONNEL VERY GRAVELLY SANDY LOAM, 2 TO 15 PERCENT SLOPES	1546
223A	REESE VERY FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	248
198C	PAIT-ICENE COMPLEX, 0 TO 15 PERCENT SLOPES	802

*Acreages were calculated for the entire Warner Lakes Allotment.

Table B-2. Current and Potential Vegetation Types in Flagstaff Bench and Swamp Lake Pastures

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
024XY017 OR	SHALLOW LOAM 8-10	WYOMING BIG SAGE/SQUIRRELTAIL	ARTRW8/ELEL	ARTRW8/PSSPS/HECO/ACHY	Stable	FAIR	196	6
024XY001 6OR	LOAMY 8-10	WYOMING BIG SAGE;BRTE	/ARTRW8/BRTE /	ARTRW8/PSSPS/HECO	Downward	POOR	22	.07
024XY013 OR	LOW SODIC TERRANCE 6-10	GREASEWOOD/SALT GRASS	SAVE4/DISP2	SAVE4/DISP2/LE CI4/SPAI/SPGR	(No Data)	POOR	1117	36
024XY016 OR	LOAMY 10-12	WYOMING BIG SAGE/BRTE	/ARTRW8/BRTE /	ARTRW8/PSSPS/HECO	Downward	POOR	1046	40

Note: A large portion of the areas ESI data is incomplete, and was not included in this table. Plant codes represent genus-species abbreviations adopted by USDA-NRCS; see also Plants Database available at <http://www.plants.usda.gov>.

Table B-3. Pasture Use Summary and Utilization for Flagstaff Bench and Swamp Lake Pastures

YEAR	May	June	July	August	September	October	November	December	FB	SL	AUMs	
2012						41%		29%	143	137	280	
2010						38%		26%	113	172	285	
2009						47%		50%	137	153	290	
2008						37%		39%	150	136	286	
2007						25%		36%	131	154	285	
2006					40%				30	257	287	
2005								47%		592	592	
2004								59%	40%	173	111	284
2003								45%		294	294	
2002									267		267	
2001										78	78	
2001						24%			146		146	
2000						21%		38%	116	186	302	
1989											0	
1988				17%							0	
Averages									141	206	245	

Flagstaff
Bench (FB)
Swamp Lake
(SL)

Table B-4. Flagstaff Bench and Swamp Lake Composition and Trend

Swamp Lake Pasture:

Observed Apparent Trend

	2009	2012
Vigor	6	8
Seedlings	5	7
Surface Litter	5	5
Pedestals	4	5
Gullies	5	5
Total	25	30
Rating	<i>Upward</i>	<i>Upward</i>

Cover

	2009	2012
Bare Ground	30	27
Litter	22	30
Rock	1	0
Vegetation	46	43
Crust/Moss	1	0

% Composition

	2009	2012
Salt Grass	34	44
AGCR	38	41
SIHY	4	0
SAVE	5	7
ARTR	6	5
CHNA	13	3

Flagsaff Bench Pasture:

Observed Apparent Trend

	2009	2012
Vigor	7	8
Seedlings	6	6
Surface Litter	5	3
Pedestals	5	5
Gullies	5	5
Total	28	27
Rating	<i>Upward</i>	<i>Upward</i>

Cover

	2009	2012
Bare Ground	33	43
Litter	32	21
Rock/Gravel	5/0	2/1
Vegetation	30	31
Crust/Moss	0	1

% Composition

	2009	2012
Salt Grass	28	10
SIHY	6	3
ORHY	3	3
ELCI	5	13
AGCR	0	2
STCO	5	0

Note: Plant codes represent genus-species abbreviations adopted by USDA-NRCS; see also Plants Database available at <http://www.plants.usda.gov>.

