Lime Kiln Division Fence

Environmental Assessment
DOI-BLM-OR-B050-2010-0041-EA

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CHAPTER I: INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

A. Introduction

The Three Rivers Resource Area of the Burns District Bureau of Land Management (BLM) is proposing to construct approximately 1-mile of barbed wire fence within the Lime Kiln Pasture of Lime Kiln Allotment #05103.

1. Overview of Lime Kiln Allotment

Lime Kiln Allotment is located approximately 6 miles northeast of Burns, Oregon, in Harney County and is managed by the Three Rivers Resource Area of the Burns District BLM (Map A). The allotment contains 3,224 acres of BLM-managed land and 9 acres of private land. The 3,313-acre allotment is divided into the Lime Kiln and Section 30 Pastures containing 2,722 and 591 acres, respectively (Map B).

One Term Grazing Permit authorizes 385 Animal Unit Months (AUMs) of Permitted Use for cattle on the allotment from April 16 to July 31 each year. Other forage allocations on the allotment include 5 AUMs for wildlife.

2. Rangeland Health Assessment

A BLM Interdisciplinary Team (IDT) completed an assessment of rangeland health standards during a 2008 Lime Kiln Allotment Evaluation. The BLM IDT's rangeland health assessment for Lime Kiln Allotment determined Rangeland Health Standards #1-5 were all being achieved within the allotment.

- Rangeland Health Standard #1 (Watershed Function – Uplands) is being achieved. There is no evidence of accelerated erosion and overland flow is detained due to the amount and distribution of plants. Based on observations of trend photos and transects, shrubs and perennial grasses are abundant on the site, and bareground and plant composition are within the expected ranges of variability for the site.
- Rangeland Health Standard #2 (Watershed Function – Riparian/Wetland Areas) is being achieved. The only riparian area is at Jamison Spring, which has been excluded from livestock grazing in the allotment.
- Rangeland Health Standard #3 (Ecological Processes) is being achieved. Trend monitoring indicates stable trend in rangeland condition evidenced by vigorous and abundant perennial grasses, forbs, and shrubs. Plant composition is within expected ranges of variability for ecological sites within the allotment.

- Rangeland Health Standard #4 (Water Quality) is being achieved. The only perennial water within the allotment is at Jamison Spring, which has been excluded from livestock grazing.
- Rangeland Health Standard #5 (Native, Threatened and Endangered and Locally Important Species) is being achieved for sage-grouse, mule deer, and elk. Trend monitoring indicates a stable composition of perennial grasses and shrubs, and increased composition of perennial forbs available for sage-grouse.

B. Purpose of and Need for Action

1. Background

The 2,722-acre Lime Kiln Pasture is approximately 4 miles in length. At the time of the 2008 Allotment Evaluation, the only reliable water within this pasture was at a reservoir along the southern pasture boundary fence, and a small trough at Jamison Spring in the northern portion of the pasture (Map B). As a result, utilization is concentrated within 1-mile of the reservoir with light to no use occurring in the north half of the pasture. The 2008 Allotment Evaluation recommended constructing a new reservoir and fence to divide Lime Kiln Pasture into two pastures.

Since the 2008 Allotment Evaluation, the permittee installed a trough (serviced from a stockwell) on unfenced private land within the northern portion of Lime Kiln Pasture. Although this eliminated the need for an additional water source within the north half of the pasture, the service areas of the new trough and existing reservoir overlap, and livestock distribution has remained concentrated within 1-mile of the reservoir.

A 500 kV transmission line bisects the middle of Lime Kiln Pasture. Utilization monitoring indicates moderate to heavy use is occurring in the south half of the pasture (south of the transmission line) with light to no grazing use occurring in the north half of the pasture (north of the transmission line).

2. Purpose and Need

The purpose of the action is to modify current grazing management within Lime Kiln Pasture to address uneven grazing distribution to ensure Standards for Rangeland Health continue to be achieved in the future. Based on utilization monitoring and observations of livestock use patterns, there exists a need to improve livestock distribution and utilization patterns within Lime Kiln Pasture.

3. Resource Management Plan Goals/Objectives/Management Actions

The objective of this project is to improve livestock distribution within Lime Kiln Pasture. All Action Alternatives must meet the management actions listed below, from the 1992 Three Rivers Resource Management Plan (RMP) direction:

- Utilize rangeland improvements, as needed, to support achievement of multiple-use management objectives (Grazing Management Program, 1992 Three Rivers RMP Page 2-36).

- Maintain or improve rangeland condition and productivity through a change in management practices and/or reductions in active use to address the current range condition, level, or pattern of utilization (Appendix 9 Allotment Management Summaries, 1992 RMP Page 32).

4. Decision to be Made

The Three Rivers Resource Area Field Manager is the responsible official who will decide which alternative analyzed in this document best meets the purpose and need for action based on the interdisciplinary analysis presented in the Environmental Assessment (EA). The Field Manager will decide whether or not to construct range improvements and identify construction specifications of range improvements and measures (terms and conditions).

C. Scoping and Issues

Internal scoping through a BLM IDT generated resource issues pertinent to the proposed project. Table 1 (Chapter III) displays resources considered by the IDT. The potential impacts to resources affected are fully analyzed in the Environmental Consequences Section. Oregon Department of Fish and Wildlife (ODFW) was also consulted regarding potential impacts to sage-grouse and big game habitat during the analysis process. ODFW did not identify any issues with the project.

D. Land Use Plan Conformance

The Proposed Action has been designed to conform to the Three Rivers RMP/Record of Decision/Rangeland Program Summary (September 1992). The Proposed Action, although not specifically provided for, is consistent with the RMP management actions identified above under the Purpose and Need for Action.

E. Conformance with Laws, Regulations, and Policy

The Proposed Action has been designed to conform to the following documents, which direct and provide the framework and official guidance for management of BLM lands within the Burns District:

- Taylor Grazing Act (43 U.S.C. 315), 1934
- National Environmental Policy Act (NEPA) (42 U.S.C. 4321-4347), 1970
- Federal Land Policy and Management Act (43 U.S.C. 1701), 1976
- Public Rangelands Improvement Act (43 U.S.C. 1901), 1978
- 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,1997
- Burns District Noxious Weed Management Program EA (OR-020-98-05), 1998
- Bureau of Land Management National Sage-grouse Habitat Conservation Strategy, 2004
- Greater Sage-grouse Conservation Assessment and Strategy for Oregon, 2005
- State, local, and Tribal laws, regulations, and land use plans

CHAPTER II: ALTERNATIVES INLUDING THE PROPOSED ACTION

A. Alternative A: No Action

No additional fence would be constructed within Lime Kiln Pasture. There would be no change to livestock grazing management within the allotment.

B. Alternative B: Proposed Action

The Proposed Action is to construct approximately 1-mile of 4-strand barbed wire fence to divide Lime Kiln Pasture into two separate pastures. The fence would be located in T. 22 S., R. 32 E., Section 7, S½. The fence would begin at the eastern pasture boundary and parallel an existing road to the 500 kV transmission line right-of-way (0.5-mile). The fence would then parallel the transmission line, outside of, but adjacent to the 175-foot Pacific Power and Light right-of-way for the transmission line for the remaining 0.5-mile until it ties into the western pasture boundary fence. Three wire gates would be installed where the fence would cross existing roads (Map C).

This fence would subsequently divide Lime Kiln Pasture into two separate pastures, North Lime Kiln and South Lime Kiln, which would contain 1,082 and 1,640 acres, respectively. There would be no changes to season of use or permitted use (AUMs) on Lime Kiln Allotment. Grazing management would be changed to a three-pasture rotation within Lime Kiln Allotment. Table 1 shows the proposed grazing rotation resulting from the Proposed Action:

Table 1. Proposed Grazing Rotation for Lime Kiln Allotment

Pasture	Year 1	Year 2	Year 3
Section 30	04/16-04/30	06/02-06/15 06/02-06/15	
South Lime Kiln	05/01-06/01 04/16-04/30	05/01-06/01	
North Lime Kiln	06/02-06/15 05/01-06/01	04/16-04/30	

The proposed fence would be constructed using All-Terrain Vehicles and hand tools. Construction would occur during spring-summer 2011. The Lime Kiln Allotment permittee would provide the labor to construct the fence and Burns District BLM would provide 1-mile of fence material. A Cooperative Agreement for Rangeland Improvements would be generated after construction, which would place future maintenance responsibility of the fence on the permittee within Lime Kiln Allotment. The fence would be marked by 3-inch plastic clips placed between each set of T-posts. BLM personnel would mark the fence following methodology recommended by the Sutton Avian Research Center (www.suttoncenter.org). Reference the attached Appendix A for a complete list of "Project Design Elements" which would be followed during construction of the fence.

The Proposed Action would cost the BLM approximately $3,500 to provide 1-mile of fence material. It would cost the permittee approximately $5,500 to provide labor to construct the fence.

C. Alternative C: Livestock Herding Management

This alternative would use herding management instead of building a new fence to improve livestock distribution within Lime Kiln Pasture. Although Lime Kiln Pasture would remain a single pasture, the permittee would attempt to differentiate grazing management above and below the 500 kV transmission line. This would require twice daily riding by the permittee when livestock grazing is permitted within Lime Kiln Pasture each year. The permittee would attempt to herd cows under the same grazing rotation as the Proposed Action.

This alternative would cost the permittee approximately $4,500 each year to hire a rider to herd livestock each day livestock are in Lime Kiln Pasture (45 days @ $100/day).

D. Alterna tives Considered but not Fully Analyzed

The IDT considered reducing permitted livestock use (AUMs), reducing season of use, or a combination of the two within Lime Kiln Pasture. However, such alternatives were removed from further analysis because they would not meet the purpose and need for improving livestock distribution within this pasture. Although reducing livestock use would decrease utilization levels, grazing would remain concentrated within the south half of Lime Kiln Pasture due to proximity of the reservoir.

CHAPTER III: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

A. Description of the Affected Environment and Environmental Consequences

An IDT has reviewed and identified issues and resources affected by the alternatives. The following table summarizes the results of that review. Affected resources are in bold.

Table 2. Resources/Issues Identified for Analysis

Resources/Issues		Status	If Not Affected, why? If Affected, Reference Applicable EA Section
Air Quality (Clean Air Act)		Not Affected	Dust would be produced briefly during fence construction. These impacts would not be measureable.
American Indian Traditional Practices		Not Present	No concerns have been disclosed.
Areas of Critical Environmental Concern		Not Present	
Cultural Resources		Not Present	The proposed project site was inventoried for cultural resources in spring 2010. No cultural resources were found within the Project Area during this inventory.
Environmental Justice (Executive Order 12898)		Not Affected	The Proposed Action is not expected to have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations as such populations do not exist within the Project Area.
Flood Plains (Executive Order 13112)		Not Present	The Proposed Action does not involve occupancy and modification of flood plains, and would not increase the risk of flood loss.
Greenhouse Gas Emissions		Not Affected	Fuel consumption associated with constructing the proposed project would result in carbon dioxide emissions. Approximately 20 gallons of gasoline would be consumed during construction of the fence. This emission would be so small that its incremental contribution to national and global emissions would not be measurable at the level of precision of the global and national emissions. This emission would be so small that it would not merit reporting under the Environmental Protection Agency rule on mandatory reporting of greenhouse gases, which presents a reporting threshold of 25,000 metric tons of carbon dioxide equivalent (40 CFR 98.2).
Hazardous or Solid Waste		Not Present	
Noxious Weeds (Executive Order 13112)		**Affected**	See Chapter III
Paleontological Resources		Not Present	
Prime or Unique Farmlands		Not Present	
Migratory Birds (Executive Order 13186)		**Affected**	See Chapter III
Threatened or Endangered (T/E) Species or Habitat	Fish	Not Present	There are no T/E fish species or their habitat in the vicinity of the allotment.
	Wildlife	Not Present	No Federal T/E animal species are known or suspected to occur in the Project Area.
	Plants	Not Present	No Federal T/E plant species are known or suspected to occur in the Project Area.

Resources/Issues		Status	If Not Affected, why? If Affected, Reference Applicable EA Section
BLM Special Status Species (SSS) and Habitat	Fish	Not Present	There are no SSS fish species or their habitat in or near the allotment.
	Wildlife	**Affected**	greater sage-grouse –**Affected**. See Chapter III Lewis' woodpecker – Present, Not Affected SSS bats – possible occurrence, Not Affected
	Plants	Not Present	No BLM Special Status plant species have been detected, nor are any suspected to occur based on known habitat associations. In spring 2010, the proposed project site was surveyed for Special Status plants and no Special Status plant species were identified.
Water Quality		Not Present	No surface water is present in the pasture.
Wetlands/Riparian Zones (Executive Order 11990)		Not Affected	The only riparian area in Lime Kiln Pasture is at Jamison Spring which has been excluded from livestock grazing.
Wild and Scenic Rivers		Not Present	
Wilderness/Wilderness Study Areas		Not Present	
Wilderness Characteristics		Not Present	The 1980 Wilderness Review Inventory found no wilderness characteristics present on or around the allotment. This area is not part of a citizen proposed WSA.
Grazing Management		**Affected**	See Chapter III
Recreation		Not Affected	No changes to general recreational setting or access routes would occur.
Soils/Biological Crusts		**Affected**	See Chapter III
Upland Vegetation		**Affected**	See Chapter III
Visual Resources		Not Affected	Lime Kiln Allotment is Visual Resource Management (VRM) Class IV. The Proposed Action would result in minimal change in the landscape character, as it would follow the 500 kV transmission line. All alternatives are consistent with VRM IV objectives.
Social and Economic Values		Not Affected	No changes to customary social or economic values would occur.
Wildlife		**Affected**	See Chapter III

1. Noxious Weeds

Affected Environment:

There are currently five recorded noxious weed sites in Lime Kiln Allotment. They are one site of bull thistle (0.02-acre), one site of whitetop (0.003-acre), and three sites of Dalmatian toadflax (0.2-acre). Two fuels management units exist within Lime Kiln Pasture (Lime Kiln #1 and #2). They were monitored for noxious weeds in 2007. No additional weed sites were found in either unit or anywhere else in the Lime Kiln Allotment.

Infestations of perennial pepperweed, Canada thistle, bull thistle, whitetop, and dalmatian toadflax are known to exist on public and private land adjacent to the allotment. Most of these sites are small (<0.1-acre) and occur primarily along roadways, however the dalmatian toadflax sites range from 1 to 2 acres.

For the purposes of this analysis, the cumulative effects analysis area for noxious weeds is at the allotment scale. The only reasonably foreseeable future activity affecting noxious weeds is ongoing monitoring and treatment of noxious weeds under the Burns District Noxious Weed Management Plan.

Environmental Consequences:

No Action: This alternative would not involve any new ground disturbance, thereby reducing the risk of localized weed introductions. Moderate to heavy utilization would continue within the south half of Lime Kiln Pasture. Repeated moderate to heavy utilization could open up ecological niches for noxious weed establishment by reducing herbaceous plant vigor and ability to compete with noxious weeds for limited site resources. This could increase the risk of noxious weed establishment in this area.

Proposed Action: Approximately 0.72-acre of localized ground disturbance (vegetation trampling) would occur as a result of cross-county travel during fence construction, which could lead to establishment of noxious weeds in this area. However, opportunities for noxious weed establishment would be reduced by incorporating Project Design Features. If any new populations of noxious weeds were found during the site-specific clearances for the project, they would be treated using the best available methods prior to initiating the project.

The Proposed Action would improve livestock distribution within Lime Kiln Pasture, subsequently reducing utilization levels within the south half of this pasture. In all pastures, desired plant species would be provided the opportunity for regrowth and life cycle completion at least every third year. This would reduce opportunities for noxious weed establishment in this area by maintaining or improving herbaceous plant vigor and ability to compete with noxious weeds.

Alternative C: This alternative would not involve any new ground disturbance as no fence would be constructed. If herding management successfully improved livestock distribution, utilization levels in the south half of Lime Kiln Pasture would be reduced, and effects on noxious weeds would be equivalent to the Proposed Action. However, if herding fails to improve livestock distribution, effects on noxious weeds would be equivalent to the No Action Alternative.

2. Vegetation

Affected Environment:

Upland vegetation within the south half of Lime Kiln Pasture is comprised of big sagebrush (*Artemisia tridentata*) and stiff sagebrush (*Artemisia rigida*) with a variety of perennial grasses and forbs. Common perennial bunchgrass species include Thurber's needlegrass (*Achnatherum thurberianum*), bottlebrush squirreltail (*Elymus elymoides*), Sandberg's bluegrass (*Poa secunda*), and bluebunch wheatgrass *(Pseudoroegneria spicata).* Vegetation within the north half of Lime Kiln Pasture is comprised of the same sagebrush/perennial bunchgrass plant communities with an overstory dominated by Phase I and II western juniper (*Juniperus occidentalis).*

Upland vegetation along the proposed fence is a mix of big and stiff sagebrush with an understory of Sandberg's bluegrass and bottlebrush squirreltail. Scattered pre (prior to 1870) and post (after 1870) settlement western juniper exist along the proposed fence as well.

For the purposes of this analysis, the cumulative effects analysis area for vegetation is at the allotment scale. Past projects that have affected vegetation within the allotment include approximately 240-acres of post-settlement western juniper cutting and jackpot burning (2005) in the north half of Lime Kiln Pasture. This project helped to restore big sagebrush/perennial bunchgrass plant communities invaded by western juniper.

Environmental Consequences:

No Action: In the short term, there would be no direct or indirect impacts to vegetation under this alternative. Utilization would continue to be concentrated within the south half of Lime Kiln Pasture. Lack of periodic defoliation could lead to excessive accumulations of organic matter and reduced palatability of herbaceous plant species within the north half of Lime Kiln Pasture. In the long term, the likelihood of loss of plant community function and resilience would increase in both areas. The more heavily used areas near the reservoir would tend to lose favored forage plants with an increase in shrubs, juniper, and/or bare ground. The slightly used northern area would become more fire prone due to litter build up over the years.

Proposed Action: Sagebrush and herbaceous vegetation would be trampled by equipment during construction within 6 feet of the proposed fence (0.72-acre); however, these impacts would be temporary and vegetation would likely recover after the first growing season following construction. Because the vegetation in the area of the proposed project appears to be healthy and resilient, an indirect effect of construction may be stimulation of new leaders on damaged shrubs.

There would be no measureable loss of vegetation resulting from the proposed project. Additionally, cross-country vehicle travel during fence construction and subsequent maintenance would be minimal, as the proposed fence would parallel an existing road.

Increased utilization of herbaceous vegetation would occur in North Lime Kiln Pasture; however, utilization would remain at or below the 50 percent target use level for the allotment. Utilization levels would be reduced in South Lime Kiln Pasture, especially within 1-mile of the reservoir on the southern pasture boundary fence. Decreased utilization levels would improve herbaceous plant vigor, and provide greater amounts of residual forage following grazing each season. Additionally, upland vegetation would be provided the opportunity to recover from grazing and achieve life cycle completion within each pasture every third year. This will allow plants to maintain vigor and store carbohydrates for the following growing season.

Improved herbaceous plant vigor in the south half of the pasture combined with the past juniper project in the north half of the pasture would promote more vigorous upland plant communities within Lime Kiln Allotment.

Alternative C: There would be no direct impacts to vegetation, as no fence would be constructed under this alternative. If herding management successfully improved livestock distribution, impacts to vegetation would be equivalent to the Proposed Action. However, if herding fails to improve livestock distribution, impacts would be equivalent to the No Action Alternative.

3. Soils/Biological Soil Crusts

Affected Environment:

Soils within the Project Area are composed of the Merlin-Observation-Lambring general soil type, which is formed on hills and tablelands. This soil type is shallow to moderately deep, well drained and has either a cobbly clay or stony loam texture. The potential for erosion on this soil type is moderate.

Rangeland Health Standard #1 (Watershed Function – Uplands) is being achieved. Current livestock management is maintaining soil surface stability, and trend in rangeland condition is either stable or upward across the allotment. Rangeland Health Standard #3 (Ecological Processes) is being achieved. Plant communities represented are capable of carrying out site processes.

Although the Project Area has not been surveyed for Biological Soil Crusts (BSCs), one may infer from the achievement of Standards 1 and 3 that soil surface stability and BSC cover is adequate for purposes of achieving and maintaining upland and ecological function, outside of small site-specific areas where herbivore concentration occurs (existing water sources).

Environmental Consequences:

No Action: There would be no short-term direct impacts to soils or BSCs under this alternative. Livestock congregation in the south half of Lime Kiln Pasture would not be reduced, and localized soil disturbance would remain at current levels around the existing reservoir. If, in the long term, plant communities lose function or resilience, as described within the Vegetation Section, then soil protection would also decline and BSC would be more vulnerable to deterioration.

Proposed Action: Over the short term (less than 3 years), some small-scale localized disturbance of the soil horizon would occur during fence construction where fenceposts and rock cribs are installed along the proposed fenceline. This disturbance would be limited to no more than 0.72-acre along the proposed fenceline. This disturbance would be localized and would not modify the soil compaction in the overall area.

Livestock trailing along the fenceline would increase soil disturbance and compaction in both the short term and long term (more than 3 years). The degree of compaction would be variable and unknown depending on the amount and distance of trailing plus the amount of mitigation due to weather and vegetation. However, improved livestock distribution would reduce soil compaction and potential impacts to BSCs in the south half of Lime Kiln Pasture currently receiving concentrated livestock use.

For the purposes of this analysis, the cumulative effects analysis area for soils/BSCs is at the allotment scale. Past ground-disturbing activities which had the potential to affect soils/BSCs within the allotment include the construction of the trough at Jamison Spring, and the reservoir along the southern boundary fence. These activities have resulted in approximately 1-acre of localized soil compaction/displacement. The proposed project, combined with past activities would total 1.72 acres (.00051 percent of allotment acreage) of soil compaction/displacement.

Alternative C: There would be no direct impacts to soils/BSCs as no fence would be constructed under this alternative. If herding management successfully improved livestock distribution, long-term impacts to soils/BSCs would be equivalent to the Proposed Action. However, if herding fails to improve livestock distribution, impacts would be equivalent to the No Action Alternative.

In the short term (until livestock and riders learn what to do probably 2 to 4 years and each time there is a new rider and when there is significant turnover in cattle) herding is likely to result in new trails which will have more soil compaction than adjacent areas. This will result from the riders developing favored, easier, routes to use areas. Cows that are being herded travel somewhat differently than cattle moving of their own volition. Herding results in somewhat larger and tighter groups of cattle and the cattle tend to move faster. Taken together this is believed to slightly increase soil compaction and to some degree increase BSC disturbance along these preferred travel routes.

4. Livestock Grazing Management

Affected Environment:

One Term Grazing Permit authorizes 385 AUMs of Permitted Use for cattle on the allotment from April 16 to July 31 each year. Prior to the additional water trough on private land in the north half of Lime Kiln Pasture, grazing deferment (after July 1) was infeasible as Lime Kiln Reservoir typically goes dry by July. Since 1997, grazing has not occurred past June 20 within the allotment.

Since 1997, Lime Kiln Allotment has been managed under an early (April 15 to April 30)/graze (May 1 to June 15) rotation between Lime Kiln and Section 30 Pastures. The allotment has received complete grazing rest 4 years since 1997. Although the early grazing treatment was intended to provide growing season rest every other year, heavy utilization within the 591-acre Section 30 Pasture, resulted in repeated graze treatments within Lime Kiln Pastures.

Environmental Consequences:

No Action: Livestock distribution would not improve and utilization would remain concentrated in the south half of Lime Kiln Pasture. Grazing management would remain the same as current management. Lime Kiln Allotment would alternate between an early/graze rotation between Lime Kiln and Section 30 Pastures. However, the additional water source in Lime Kiln Pasture could support deferred grazing treatments to provide more frequent growing season rest within this pasture.

Proposed Action: The Proposed Action would improve grazing distribution within Lime Kiln Pasture by allowing management to control timing and duration of livestock grazing within the proposed North and South Lime Kiln Pastures. Grazing management would be changed to a three-pasture rotation within Lime Kiln Allotment. Table 3 shows the proposed grazing rotation resulting from the Proposed Action:

Table 3. Proposed Grazing Rotation for Lime Kiln Allotment

Pasture	Year 1	Year 2	Year 3
Section 30	04/16-04/30	06/02-06/15 06/02-06/15	
South Lime Kiln	05/01-06/01 04/16-04/30	05/01-06/01	
North Lime Kiln	06/02-06/15 05/01-06/01	04/16-04/30	

Following completion of the fence, adaptive management could be used to adapt the grazing rotations based on utilization levels, experience, weather, and unexpected outcomes. If utilization levels could be achieved in the North and South Lime Kiln Pastures operating under a graze/rest rotation every other year, such a change would be made to provide complete grazing rest every other year to one of these pastures.

Alternative C: Herding management would improve livestock distribution within Lime Kiln Pasture to the extent that it is effective. Under this alternative, the grazing rotation within Lime Kiln Allotment would be similar to the Proposed Action; however, there would be no hard fence to help control the timing and duration of livestock grazing within Lime Kiln Pasture. The permittee would rely on twice daily herding to differentiate grazing above and below the transmission line. This alternative would improve livestock distribution; however, it would be less effective at controlling livestock distribution compared to the effectiveness of a permanent fence.

5. Migratory Birds

Affected Environment:

Migratory bird species use suitable habitat in this allotment for nesting, foraging, and resting as they pass through on their yearly migrations; however, no formal monitoring for migratory birds have been conducted. Lime Kiln Allotment includes three general habitats for migratory landbirds, with some overlap in the nesting bird community between these types. Common species of open grass-dominated habitats that may be found within this allotment include vesper sparrow (*Pooecetes gramineus*) and horned lark (*Eremophila alpestris*). Birds associated with sagebrush-dominated habitats likely to be found in this allotment include Brewer's sparrow (*Spizella breweri*), loggerhead shrike (*Lanius ludovicianus*), green-tailed towhee (*Pipilo chlorurus*), and lark sparrow (*Chondestes grammacus*). In areas where juniper cover increases and becomes dominant in sagebrush habitat, chipping sparrow (*Spizella passerina*), American robin (*Turdus migratorius*), Townsend's solitaire (*Myadestes townsendi*), and northern flicker (*Colaptes auratus*) are often present. Other species that may occupy habitat within the allotment include American kestrel (*Falco sparverius*), mountain bluebird (*Sialia currucoides*), and western meadowlark (*Sturnella neglecta*).

Environmental Consequences:

No Action: There would be no measureable change to migratory birds or their habitat. Risk of collision with fences would not increase. Moderate to heavy utilization resulting from livestock concentration would continue within the south half of Lime Kiln Pasture and potentially in the Section 30 Pasture, with slight use in the north portion of the allotment. This would continue to limit ground-nesting habitat for migratory bird species associated with grassland and sagebrush communities in the south. Juniper encroachment in the north would also contribute cumulatively to the reduction of suitable nesting habitat for species that nest low to the ground and those associated with open, sagebrush dominated habitat.

Proposed Action: Fences are hazards to flying birds, and injury and mortality have been reported due to collisions (Allen 1990). The proposed fence would be in relatively open, upland sagebrush vegetation adjacent to a transmission line right-of-way that receives periodic treatments to maintain reduced vegetative cover. This placement would make the fence more visible, minimizing the risk of collision to flying birds. The fence would provide additional territorial or hunting perches for some species, such as loggerhead shrike (*Lanius ludovicianus*), although the current level of juniper encroachment already provides numerous well-distributed perches in this portion of the allotment.

The construction of the fence and changes to the grazing rotation would help improve sagebrush-grassland vigor and retain more residual cover in the (newly created) South Pasture, especially within 1-mile of the reservoir where livestock tend to congregate. More livestock use would occur in the north of the allotment than in the past, but utilization targets of 50 percent on key herbaceous species would maintain the health and vigor of the herbaceous plant community, as well as retain adequate cover for migratory birds each year. The rotation provides rest from disturbance during the majority of the nesting period on at least 1,600 acres. The grazing management changes would complement the habitat restoration efforts of a 245-acre juniper treatment in the northern portion of the allotment. The juniper control treatment reduced the influence of tree encroachment into the open sagebrush habitat in portions of the north end of the allotment, and the proposed grazing management would improve understory vegetation in the south end of the allotment. These management actions improve habitat for sagebrush-associated species, such as Brewer's sparrow and sage sparrow.

Cumulatively, this fence would add approximately 1-mile of fence to the allotment, increasing the fence-length-to-area ratio to 1.34 miles of fence for every square mile within a 3-mile area around the allotment.

Alternative C: No fence would be constructed; therefore, there would not be an increased risk of collision to flying birds. If herding is successful, the improvements to vegetation would be similar to the Proposed Action, although herding is generally not as effective as a fence. Riders checking and moving cattle twice daily (North and South Lime Kiln Pastures only) would cause more disturbance to ground-nesting species and species nesting low in shrubs relative to the other alternatives.

6. Special Status Species – Fauna:

Affected Environment:

Lime Kiln Allotment supports approximately 2,643 acres considered suitable habitat for some aspect of greater sage-grouse (*Centrocercus urophaisanus*) life history; however, actual usage of the habitat by sage-grouse is unknown. This habitat is located in the sagebrush-dominated communities in the south half of Lime Kiln Pasture and Section 30 Pasture. Approximately 650 acres within the allotment are considered unsuitable for sage-grouse due to juniper invasion and from the 500 kV transmission line that runs through the allotment. This area is located north of the transmission line in Lime Kiln Pasture.

The nearest leks are Lone Pine that lies 4 miles to the west and Mortimer Canyon that lies 8 miles to the east. Eleven and eighteen males were the high counts recorded in 2010 for the Lone Pine and Mortimer Canyon leks, respectively. Actual use in the allotment is unknown, but birds from both of these leks could use suitable habitat within the allotment. A 245-acre juniper control treatment in the north end of the allotment has improved the quality of the sagebrush community for sage-grouse.

Environmental Consequences:

No Action: There would be no measureable change to greater sage-grouse or their habitat. Risk of collision with fences would not increase. Moderate to heavy utilization resulting from livestock concentration would continue within the south half of Lime Kiln Pasture and potentially in the Section 30 Pasture, with slight use in the north portion of the allotment. Heavy use in the south portion of the allotment would continue to reduce the nesting and brood-rearing habitat for greater sage-grouse, and increasing the risk of noxious weed introduction and spread.

Proposed Action: Fences are hazards to sage-grouse, especially when placed in frequently traveled areas such as near lek sites (Hagen 2005).

The nearest lek to the proposed fence is well outside the recommended buffer distance (0.6-mile) suggested in the *Greater Sage-grouse Conservation Assessment and Strategy for Oregon* (Hagen 2005). The proposed fence would be in relatively open, upland sagebrush vegetation adjacent to a transmission right-of-way that receives periodic treatments to reduce vegetative cover. This placement would make the fence more visible, minimizing the risk of collision to flying sage-grouse. Additionally, the proposed fence would be marked with plastic clips to reduce the potential for avian collisions. The fence would provide territorial or hunting perches for grouse predators, such as red-tailed hawks (*Buteo jamaicensis*) and common ravens (*Corvus corax*), although the existing transmission towers and current level of encroaching juniper have saturated this portion of the allotment with potential perches. The use of steel posts, as opposed to wooden posts, as part of the fence specifications provides less suitable perch sites for predators.

The construction of the fence would provide more control over livestock distribution, improving vigor of sagebrush-grassland communities and allowing for more residual cover in the (newly created) South Pasture, especially within 1-mile of the reservoir in the south of the allotment where livestock tend to congregate. Although more livestock use would occur in the north end of the allotment than in the past, utilization targets would still be set at 50 percent on key herbaceous species, maintaining adequate herbaceous cover for sage-grouse. Proposed grazing management changes would complement the restoration efforts of a recent 245-acre juniper control project in the northern portion of the allotment. The juniper treatment reduced the influence of tree encroachment into the open sagebrush habitat, improving conditions for greater sage-grouse.

Cumulatively, the proposed fence would increase the fence-length-to-area ratio in potential sage-grouse habitat to 1.34 miles of fence per square mile within 3 miles of the allotment.

Alternative C: Sage-grouse generally nest within 4 miles of a lek (Connelly et al. 2004); however, hens have been known to travel further than that and consequently a few birds may nest in or near the allotment. Since no fence would be constructed, there would not be an increased risk of collision to flying sage-grouse. If herding is successful, the improvements to vegetation (increased vigor and residual carryover) would be similar to the Proposed Action, although herding generally is not as effective for controlling livestock as a permanent fence. Herding with riders and dogs twice daily to check and move cows would increase the risk of disturbance (flushing or trampling) to sage-grouse that may be nesting or foraging in the allotment relative to the other alternatives.

7. Wildlife

Affected Environment:

Lime Kiln Allotment supports a diversity of wildlife. Rocky Mountain elk (*Cervus elaphus*), mule deer (*Odocoileus hemionus*), and pronghorn (*Antilocapra americana*), are common ungulates in this allotment. Approximately 70 percent of the allotment provides winter range for mule deer and 30 percent provides winter range for elk. Lime Kiln Allotment is in ODFW's Malheur Wildlife Management Unit for deer, elk, and antelope. Deer numbers are at about 80 percent of the current management objective for this unit. Elk numbers are currently meeting the proposed management objectives for the Malheur Unit.

Common predatory species occurring in this area are bobcat (*Felis rufus*), coyote (*Canis latrans*), and badger (*Taxidea taxus*). The allotment also supports a wide variety of small mammals and a few amphibians and reptiles.

Environmental Consequences:

No Action: Moderate to heavy utilization due to livestock concentration would continue in the south half of Lime Kiln Pasture and potentially in the Section 30 Pasture, with light use in the north portion of the allotment. Continued heavy use in the south end would reduce cover and forage availability for wildlife in the short term (<10 years), and increase the potential establishment and spread of noxious weeds. Heavy use over the long-term (>10 years) would increase the likelihood of habitat loss and subsequent displacement of numerous wildlife species as the health of native plant communities deteriorates. The northern portion of the allotment would still provide adequate habitat in the short and long term.

Proposed Action: Fences may be a barrier or hazard to some wildlife species, especially larger animals such as mule deer, because of the potential for entanglement. Mule deer and elk often travel through the allotment into the hay fields on private land to the south, and a fence adds a potential obstruction. Fences would be constructed to standards designed to prevent livestock from crossing, but minimize potential risk to deer and elk of entanglement and allow pronghorn to crawl under. The changes to grazing would result in improvements to vegetation (increased vigor and residual cover), which increases nesting, foraging, and hiding cover available for most wildlife.

Cumulatively, the proposed fence would increase the ratio of fence within the allotment to 2.83 miles of fence per square mile, but only 1.34 miles of fence per square mile within a 3-mile area around the allotment.

Alternative C: No fence would be constructed, therefore, there would not be an increased risk of entanglement to large animals (i.e., mule deer) traveling through the allotment. If herding is successful, the improvements to the shrub and herbaceous vegetative communities (increased vigor and residual carryover) would be similar to the Proposed Action, although herding is generally not as effective as a permanent fence for controlling livestock distribution. Herding twice daily to check and move cows would increase the risk of disturbance to wildlife, such as pronghorn and mule deer, that may be using the allotment during this time. This type of disturbance would be frequent enough to cause these animals to avoid the area for the duration of the grazing schedule, although use of the area would resume after livestock are moved off the allotment.

B. Cumulative Effects Analysis

As the Council on Environmental Quality (CEQ), in guidance issued on June 24, 2005, points out, 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 on consideration of the Proposed Action's cumulative effects, and secondly as a basis for past action may be useful in two ways according to the CEQ guidance. One is for identifying the Proposed Action's effects.

The CEQ stated in this guidance 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 inherently includes the effects of past actions. The CEQ guidance specifies that the "CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions." Our 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.

However, "experience with and information about past direct and indirect effects of individual past actions" have been found useful in "illuminating or predicting the direct and indirect effects" of the Proposed Action in the following instances: the basis for predicting the effects of the Proposed Action and its alternatives is based on the general accumulated experience of the resource professionals in the agency with similar actions.

The environmental consequences discussion described all expected effects including direct, indirect and cumulative on resources from enacting the proposed alternatives. A distinction between direct and indirect effects is not made and in many cases cumulative effects are only described as effects. All effects are considered direct and cumulative; therefore, use of these words may not appear. In addition, the Introduction Section of this EA, specifically the Purpose of and Need for Action, identifies past actions creating the current situation. No reasonably foreseeable future actions were identified within the cumulative effects analysis area.

CHAPTER IV: CONSULTATION AND COORDINATION

A. List of Preparers

Jason Brewer, Wildlife Biologist
Bill Dragt, Supervisory Natural Resource Specialist
Michelle Franulovich, Recreation Specialist
Lisa Grant, Fisheries Biologist
Eric Haakenson, Wilderness Planner
Rhonda Karges, District Planning and Environmental Coordinator
Doug Linn, Botanist
Caryn Meinicke, Weeds Coordinator
Rob Sharp, Rangeland Management Specialist (Lead Preparer)
Scott Thomas, Archaeologist

B. Persons, Groups, and Agencies Consulted

Harney County Court
Lime Kiln Allotment Permittee
Oregon Department of Fish and Wildlife
Oregon Natural Desert Association

Appendix A

Project Design Elements

(1) Proposed project site would be inventoried for cultural resources prior to implementation. National Register eligible sites would be avoided through project modification and if avoidance is not possible, mitigation measures would be developed in consultation with the State Historic Preservation Office.

(2) Proposed project site would be surveyed for Special Status plant species prior to implementation. Special Status plant sites would be avoided.

(4) No range improvement projects would be constructed within 0.6-mile of known sage-grouse lek sites.

(5) BLM personnel would mark the top wire of the proposed fence using 3" plastic clips (white). Two clips would be installed between each fence post along the length of the fence. Marker design would follow recommendations from Sutton Avian Research Center (www.suttoncenter.org).

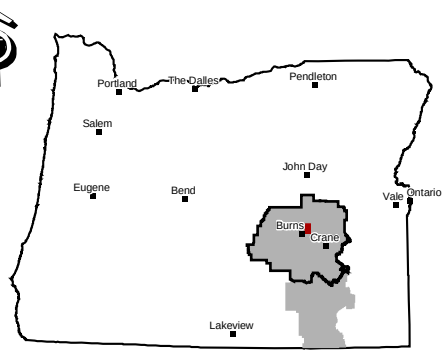
(6) Proposed range improvement sites would be surveyed for noxious weed populations prior to implementation. Weed populations identified in or adjacent to the proposed projects would be treated using the most appropriate methods in accordance with the Burns District Noxious Weed Management Program EA/Decision Record (DR) OR-020-98-05.

(7) The risk of noxious weed introduction would be minimized by ensuring all equipment (including all machinery, 4-wheelers, and pickup trucks) is cleaned prior to entry to the sites, minimizing disturbance activities, and completing follow-up monitoring, to ensure no new noxious weed establishment. Should noxious weeds be found, appropriate control treatments would be performed in conformance with the Burns District Noxious Weed Program Management EA/DR OR-020-98-05.

(8) The proposed fence would be constructed according to specifications in BLM Handbook H-1741-1 – Fencing. The proposed fence would not be bladed or scraped during construction.

(9) The grazing permittee would be responsible for all range improvement maintenance.

Map A
Lime Kiln Allotment
VICINITY MAP
Three Rivers Resource Area



Legend

- Allotment
- Three Rivers Resource Area Boundary
- Major Roads

Note: No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual or aggregate use with other data. Original data was compiled from various sources and may be updated without notification.

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Burns District, Oregon

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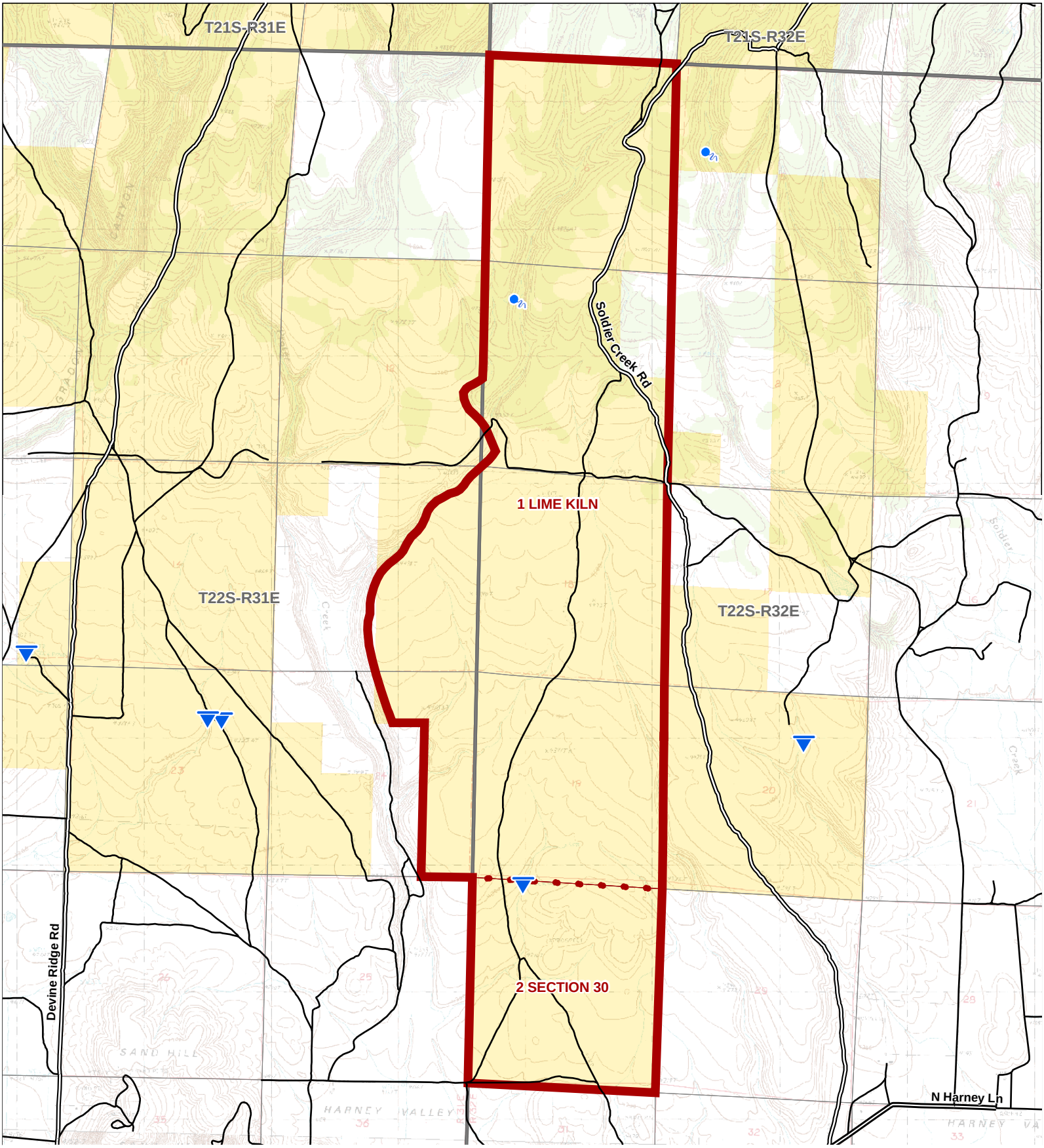
Map B

Lime Kiln Allotment
LAND STATUS



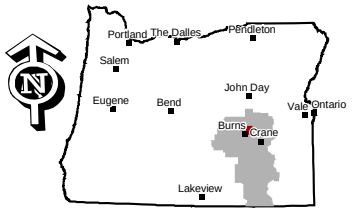
Legend

- Allotment Boundary
- Pasture Boundary
- Paved Road
- Non-Paved Improved Road
- Primitive or Unknown Road Surface
- Bureau of Land Management
- Private/Unknown

Range Improvement Points

PROJTYPE

- RESERVOIR
- SPRING (spring development)



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9/1/2010

Map C
Lime Kiln #5103
PROPOSED FENCE

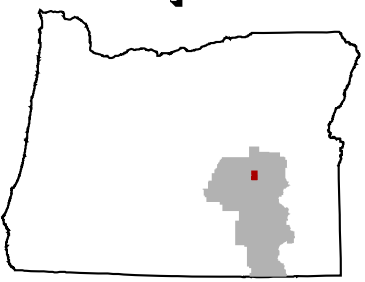
Proposed Projects Highlighted In Yellow

- Proposed_Fence
- Paved Road
- Non-Paved Improved Road
- Primitive or Unknown Road Surface

Land Status

Land Administration

- Bureau of Land Management
- BLM Wilderness
- Wilderness Study Area
- Private (White)
- State
- U. S. Forest Service
- USDA (except Forest Service)
- U. S. Fish and Wildlife
- Indian Reservation
- Bureau of Reclamation
- Local Government
- Other Federal
- Undetermined; Water
- Allotment Boundary
- Pasture Boundary



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0 0.5 1 2 Miles

T21S-R31E
3 PRATHER CREEK
3 CHERRY SPRING
T21S-R32E
3 PRIVATE
2 RIDGE
1 N. GRAVEL RIDGE
Soldier Creek Rd
2 RATTLESNAKE
1 NORTH
4 MIDDLE GRAVEL RIDG
1 LIME KILN
4 W SANDHILL
T22S-R31E
T22S-R32E
1 SANDHILL
4 HORSE
5 MEADOW
2 S. GRAVEL RIDGE
2 SOUTH
Devine Ridge Rd
2 SECTION 30
VACANT
N Harney Ln