Lick Spring Improvement

DOI-BLM-ORWA-L050-2025-0005-EA

December 2024

Bureau of Land Management
Lakeview District
Lakeview Field Office
1301 South G Street
Lakeview, Oregon 97630

BLM

Lakeview District, Lakeview Field Office

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1 CHAPTER 1 - INTRODUCTION

Lick Spring is a high value water source located on private land which is utilized by multiple resources including wild horses, livestock, and wildlife that move freely between private and public lands. Lick Spring is within the North Common Pasture in the Beaty Butte Allotment (#0600) in T. 38S, R. 29E, Section 03, within Harney County, Oregon, approximately 40 air miles east of Lakeview (Map 1, Appendix E). The allotment contains 510,664 acres of BLM administered lands and 41,237 acres of other land for a total of 551,901 acres (Table 1). It is a small, developed spring with variable flow that ranges from 1 to 17 gallons per minute depending on season and year. It is located midway up a steep slope (~17 to 19% grade), at 5,843 feet of elevation in a sagebrush-steppe ecosystem. The area surrounding the spring experiences heavy use by wild horses year-round, and livestock as permitted (5 out of a 24-month cycle). Due to the topography of the spring and the location of the trough, the area experiences concentrated use causing compacted soil and reduced native vegetation.

Table 1. Acreage of land managers within the Beaty Butte Allotment

Land Manager	Acreage
BLM	510,664
State	757
Private	39,645
US Fish & Wildlife Service	835
Total	551,901

1.1. Purpose and Need for Action

Need: Wild horses and livestock congregate at the steep and confined area around the source of Lick Spring.

Purpose: The purpose is to reduce wild horse and livestock congregation at the source of Lick Spring.

1.2. Decision to be Made

The BLM will decide whether or not to implement the project.

1.3. Plan Conformance

A discussion of conformance with the applicable lands use plan(s) is included in Appendix B.

1.4. Issues

1.4.1. Issue Analyzed in Detail

Issue: How would the alternatives impact wild horse and livestock congregation at the source of

Lick Spring?

1.4.2. Issues Not Analyzed in Detail

Issues not analyzed in detail are addressed in Appendix C.

2 CHAPTER 2 - ALTERNATIVES INCLUDING THE PROPOSED PLAN

2.1. Alternative 1 - No Action

Current management and the concentrated use at the source of Lick Spring would continue.

2.2. Alternative 2 - Proposed Action

The proposed action was developed by the BLM in coordination with the Beaty Butte Grazing Association. Two-inch diameter polyethylene piping would be installed and buried (less than 18 inches) approximately 820 feet from the edge of private land delivering water downhill to two 1,200-gallon troughs located within a level, previously disturbed area on BLM administered lands outside of the riparian area (Map 1, Appendix E). Each trough will be placed on a 6-inch pad of up to 28-foot diameter and will be plumbed together. The troughs will be equipped with a small animal escape ramp and a float for water conservation. An overflow pipe will be buried (less than 18 inches) and directed into the existing water channel approximately 140 feet from the troughs. The troughs will be drained prior to winter and then refilled in spring.

2.3. Alternative 3 – No Float Action

Alternative 3 is the same as Alternative 2 except no float would be installed on the troughs.

2.4. Alternatives Considered but Eliminated

2.4.1. No Grazing Alternative

This Alternative was not considered because this EA does not analyze the change or use of the current grazing permit as it is not part of the purpose and need. No change or elimination of the grazing permit would alleviate the concentration of animals at the source of Lick Spring because wild horses use this area year-round while livestock use this area as permitted (5 out of a 24-month cycle).

2.4.2. Wild Horse Removal Alternative

This Alternative was not considered because complete removal of wild horses from the Beaty Butte Herd Management Area (HMA) is not in conformance with the Wild and Free-Roaming Horses and Burros Act of 1971.

2.4.3. Surface Pipeline Alternative

This Alternative was not considered because of the potential destruction of the pipeline and water delivery due to freeze damage during winter months, potential risk during wildfires, trampling by wild horses and livestock, and increased water temperature.

3 CHAPTER 3 - AFFECTED ENVIRONMENT

Issue: How would the alternatives impact wild horse and livestock congregation at the source of Lick Spring?

3.1. Affected Environment

Lick Spring is located within the Beaty Butte HMA managed by the Lakeview Field Office in accordance with the Wild Free-Roaming Horses and Burros Act of 1971 (WFRHBA). The Appropriate Management Level (AML) for the HMA is 100-250 horses and there are 3,000 AUMs allotted for wild horse use (BLM 2003b). Wild horses grow their population at approximately 20% per year and there is no population of natural predators in this HMA to keep their population size within AML. The last census in May of 2024 estimated 438 horses on the HMA (Crabb 2024).

Lick Spring is one of 18 developed springs within the North Common Pasture of the Beaty Butte Allotment (551,901 acres). The North Common Pasture is a 234,625-acre pasture being grazed by livestock with approximately 10,000 AUMs, by an association of permittees from April 1 – September 30, on a rest rotation (5 out of a 24-month cycle). During the last *Rangeland Health Assessment* (RHA; BLM 1998a), the Lick Spring project boundary (31 acres) met all Standards for Rangeland Health. Currently, this area is undergoing an updated RHA and is expected to be completed calendar year 2025.

The project footprint (0.07 acres) is a high elevation sagebrush-steppe ecosystem with bunchgrass understory that has converted to invasive annual grasses.

Assumptions

- All animals will use any available water sources
- A trough on flatter ground is more desirable to access
- Increased watering points / access will distribute grazing animals
- Installation of a float will retain more water at the spring head
- All animals displaced during construction are expected to return to the area within the project boundary post construction
- Short-term is during construction, up to two weeks
- Long-term is post-construction

Methodology

Project Footprint Calculations
Pipeline: 960 ft pipeline x 3 ft of digging = 2,880 square ft / 43560 sq ft/acre = 0.066 acres
Troughs: 44 sq ft radius around troughs x 2 troughs = 44 sq ft / 43560 sq ft/acre = 0.001 acres

Total acres: 0.067 acres, rounded to 0.07 acres

Project Boundary Calculations
Pipeline: 960 ft pipeline x 15 ft buffer = 14,400 square ft / 43560 sq ft/acre = 0.33 acres
Troughs: 650 ft radius around troughs, 650x650x3.14(pi)= 1,327,320 sq ft / 43560 sq ft/acre =30.47acres

Total acres: 30.80 acres, rounded to 31 acres

3.1.1. Environmental Consequences of No Action Alternative

Under this alternative current wild horse and livestock management would continue. Wild horses and livestock would continue to congregate at the steep and confined area around the source of Lick Spring. Trailing would continue through the steep and confined area.

3.1.2. Environmental Consequences of Alternative 2

Water is an important tool in managing wild horse and livestock distribution and utilization across the landscape. The establishment of two water troughs on level ground would achieve better animal distribution across the landscape through an additional water source (Ganskopp 2001) and across the pasture which would improve or maintain existing range condition in this area (Pinchak et al. 1991).

The proposed action involves piping water from the spring source onto more level ground into two float-equipped troughs (820 feet) with a 140 ft overflow pipe (Map 1, Appendix E). As compared to the no action alternative, the expected short-term detrimental effects from construction are dispersion of wild horse and livestock from Lick Spring within the project boundary (31 acres) due to noise and human presence during construction. There are no expected long-term detrimental or short-term beneficial effects. The expected long-term beneficial effects are the relocation of congregation of wild horse and livestock use from the source of Lick Spring and a reduction in trailing.

This project meets the purpose and need of relocating congregation of wild horse and livestock from the source of Lick Spring because a trough located on open level ground is more desirable to access. All detrimental effects will reside within the 31-acre project boundary, representing 0.0056% of the 551,901-acre allotment. Due to the scope and scale (31-acre project boundary, representing 0.0056% of the 551,901-acre allotment), there are no expected potential effects outside what is disclosed above to wild horse and livestock.

Cumulative Effects

Past, Present, and Reasonably Foreseeable Actions

Action	**Time Frame**	**Size**	**% of the project boundary (31 acres) within each action**
Special Recreation Permit for Guided Hunts - ODFW Beatys Butte Unit 70	Past, Present, Reasonably Foreseeable	1,683,200 acres	0.0018%
Beaty Butte Herd Management Area (BLM 2017)	Past, Reasonably Foreseeable	437,120 acres	0.0071%
Grazing Management – North Common Pasture of the Beaty Butte Allotment (#0600)	Past, Present, Reasonably Foreseeable	234,625 acres	0.0132%
Lick Spring Improvement Footprint	Reasonably Foreseeable	0.07 acres	0.2258%
Total		2,354,945.07	0.0013%

Within all past, present, and reasonably foreseeable actions, the project boundary represents 0.0013% of the total acres of all actions. Because of the scope and scale, the proposed project has no expected cumulative effects outside what is disclosed within this EA to the project boundary.

3.1.3. Environmental Consequences of Alternative 3

The proposed action is the same as Alternative 2 except, no float will be installed. The effects (including cumulative) would be the same as alternative 2, except the water discharge from the overflow pipe into an existing stream channel would create an additional water source resulting in wild horse and livestock congregation in the ephemeral stream channel (within the 31-acre project boundary) causing a long-term detrimental effect. All detrimental effects will reside within the 31-acre project boundary, representing 0.0056% of the 551,901-acre allotment. Therefore, there are no expected potential effects outside what is disclosed above.

4 CHAPTER 4 - CONSULTATION AND PUBLIC INVOLVEMENT

This EA has been scoped and reviewed internally by the BLM resource specialists to ensure that all natural, cultural, and social resource issues and concerns are being identified and addressed appropriately. Their comments and evaluations are included in the affected environments section within this EA. External scoping was not conducted. Internal scoping included several meetings with management and resource specialists. Several field visits were conducted, including a fall 2024 visit to assess improvement methods for Lick Spring.

4.1. Comment Period

Individuals, groups, and agencies with a known interest in livestock management within the allotments were notified of the availability of the EA and the Finding of No Significant Impact (FONSI) and will be provided a 30-day review period. Tribal governments and/or representatives were also notified of the availability of the EA and FONSI and provided an opportunity to comment on the EA. The mailing list is contained in the project file.

4.2. List of Preparers

Team Member	Title
Christine Anderson	Biological Science Technician
Les Boothe	Assistant Field Manager
Michael Collins	Planning & Environmental Coordinator
Todd Forbes	District Manager
Katherine Gendron	Archeologist
Grace Haskins	Assistant Field Manager
Brittany Hill	Natural Resource Specialist
Oliver Liu	Natural Resource Specialist
Jami Ludwig	Field Manager
David McGhee	Outdoor Recreation Planner
Tye Morgan	Planning & Environmental Coordinator
Kathryn Ness	Range Management Specialist
John Owens	Natural Resource Specialist
Eric Pluta	Natural Resource Specialist
Nathan Silvis	Natural Resource Specialist
Lindsey Smith	Natural Resource Specialist
Shannon Theall	GIS Coordinator
Steve Van-Si	Outdoor Recreation Planner

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6 APPENDIX B - CONFORMANCE WITH EXISTING LAWS, REGULATIONS, AND LAND USE PLANS

6.1. National Environmental Policy Act (NEPA)

This EA has been prepared in compliance with National Environmental Policy Act of 1969. The EA analyzes the potential direct, indirect, and cumulative impacts that could result with the implementation of the proposed alternatives and also serves as the analytical basis for making the determination as to whether any significant impacts to the human environment would result from the proposal.

6.2. Compliance with Federal Land Policy and Management Act (FLPMA) and Conformance with Applicable Land Use Plans

Section 302(a) of the FLPMA directs the Secretary of Interior to manage the public lands under the principles of multiple use and sustained yield, in accordance with the land use plans developed under Section 202 of the act. The FLPMA also requires that proposed management actions implemented or authorized by BLM conform with the applicable land use plan(s) (see 43 CFR 1601.0-5(b), 1601.0-5(c), and 1610.5-3(a)). The BLM has determined that the proposed project conforms with the applicable goals, objectives, or management decisions of the following BLM land use plans or strategies.

6.2.1. Lakeview Resource Management Plan / Record of Decision (RMP/ROD)

The *Lakeview RMP/ROD* (BLM 2003b, as maintained and amended) is the primary governing land use plan for the area and provides desired future conditions, goals, and management direction related to livestock grazing use and other resource values. The proposed action conforms with the following goals and management direction:

Plant Communities – Riparian and Wetland Management Direction

Spring developments will be modified to promote natural function where possible, but still allow livestock and wildlife access to developed water (page 31, as maintained).

Livestock Grazing Management Goal—Provide for a sustainable level of livestock grazing consistent with other resource objectives and public land-use allocations.

Livestock Management Direction

Range improvement projects will be constructed…. Standard implementation procedures for construction of rangeland improvements will follow BLM Handbook H-1741-1 and -2 (BLM 1989, 1990) and BLM and FS (1988). Rangeland improvement projects will be implemented to meet resource objectives (page 53, as maintained).

Operation and Maintenance Management Direction

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 …water control structures…pipelines…. (page 100, as maintained).

Appendix E1 – Allotment Specific Management Direction

This appendix has been updated through plan maintenance (in accordance with 43 CFR 1610.5-4) on several occasions since 2003 to incorporate corrections or more recent management decisions made as the plan has been implemented over time. The latest maintenance action occurred in 2015. The latest allotment-specific management direction for the Beaty Butte Allotment is as follows.

Beaty Butte Allotment Management Direction (Appendix E1, p. A-89; BLM 2015b)

> ***Livestock Distribution / Management –*** *Improve livestock management and distribution through improved management practices, installation of livestock management facilities (such as fences and water sources), and / or other actions as opportunities arise.*
>
> ***Improve / Maintain Range condition –*** *Use management practices and / or better animal distribution; develop range improvements when appropriate; adjust permitted use as needed.*
>
> ***Special Status Animal Species: Greater Sage-grouse –*** *Follow the livestock grazing management direction in the Oregon Greater Sage-Grouse Approved Resource Management Plan and ROD (BLM 2015a), as appropriate.*

Plan Conformance

The proposed project is consistent with the livestock grazing management goal and associated grazing and allotment-specific management direction. In particular, public land that the proposed project occurs on within the Beaty Butte Allotment has been identified as available for, or open to livestock grazing use (see Table 5, pages 46-49, as maintained, Appendix E1, and Map G-3). In addition, constructing range improvements to improve livestock management is consistent with the livestock grazing management direction.

6.2.2. Oregon Greater Sage-grouse Approved Resource Management Plan Amendment (BLM 2015a)

The *Lakeview RMP/ROD* (BLM 2003b, as maintained) was amended in 2015 by this Plan Amendment and associated Record of Decision (BLM 2015a). Proposed management actions within designated sage-grouse habitat must also conform with the appropriate goals, objectives, and management decisions in this plan amendment. The proposed project conforms with the following goals, objectives, management decisions, and required design features (RDFs):

Goal SSS 1: Conserve, enhance, and restore the sagebrush ecosystem upon which GRSG populations depend in an effort to maintain and/or increase their abundance and distribution, in cooperation with other conservation partners.

MD SSS-9: Apply buffers and seasonal restrictions in Table 2-3 to all occupied or pending leks in PHMA and GHMA to avoid direct disturbance to Greater Sage-grouse. In undertaking BLM management actions, and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will apply the lek buffer-distances identified in the USGS Report Conservation Buffer Distance Estimates for Greater Sage-Grouse—A Review (Open File Report 2014-1239).

MD SSS-11: Anthropogenic disturbances or activities disruptive to GRSG (including scheduled maintenance activities) shall not occur in seasonal GRSG habitats unless the project plan and NEPA document demonstrate the project will not impair the life-cycle or behavioral needs of GRSG populations. Seasonal avoidance periods vary by GRSG seasonal habitat as follows:

- In breeding habitat within four (4) miles of occupied and pending leks from March 1 through June 30. Lek hourly restrictions are from two hours before sunset to two hours after sunrise at the perimeter of an occupied or pending lek.
- Brood-rearing habitat from July 1 to October 31
- Winter habitat from November 1-February 28

Objective LG 1: Manage livestock grazing to maintain or improve Greater Sage-grouse habitat by achieving Standards for Rangeland Health (SRH).

Objective LG 2: On BLM-managed lands, 12,083,622 acres will continue to be available for livestock grazing in Greater Sage-grouse habitat.

MD LG 6: Authorize new, relocate, or modify existing range improvements that use seeps or springs as a water source to enhance their year round functionality. Install or retrofit wildlife escape ramps in all livestock water troughs or water storage facilities (e.g., catchments, storage tanks). Maintain, enhance, or reestablish riparian areas in PHMA and GHMA.

MD LG 8: Design new and maintain existing water projects to avoid standing pools of shallow water that would spread West Nile Virus.

RDF Common to All 18: Minimize unnecessary cross-country vehicle travel during field and fire operations in GRSG habitat.

RDF Common to All 19: There will be no disruptive activities two hours before sunset to two hours after sunrise from March 1 through June 30 within 1.0 miles of the perimeter of occupied leks, unless brief occupancy is essential for routine ranch activities. Disruptive activities are those that are likely to alter GRSG behavior or displace birds such that reproductive success is negatively affected or an individual's physiological ability to cope with environmental stress is

compromised. Examples of disruptive activities are noise, human foot or vehicle traffic, or other human presence.

RDF Livestock Grazing 3: Locate new or relocate existing livestock water developments within GRSG habitat to maintain or enhance habitat quality.

RDF Livestock Grazing 4: Construct or modify spring developments to maintain their free-flowing, natural, and wet meadow characteristics.

RDF Livestock Grazing 6: Ensure wildlife accessibility to water and install escape ramps in all new and existing water troughs.

RDF Livestock Grazing 7: Construct new livestock facilities, such as livestock troughs, fences, corrals, handling facilities, and "dusting bags," at least 1.2 miles from leks or other important areas of GRSG habitat (i.e., wintering and brood-rearing areas) to avoid concentrating livestock, collision hazards to flying birds, or avian predator perches.

RDF Noise 1: Limit noise at the perimeter of occupied or pending leks from two hours before to two hours after sunrise and sunset during the breeding season to less than 10 decibels above ambient sound levels.

Plan Conformance

The proposed project would be consistent with the above goals, objectives, management decisions and required design features listed in Appendix B. Much of the Lakeview Field Office remains open to livestock grazing use under this plan amendment (see Appendix A if BLM 2003b, Figure 2-3). This range improvement project would facilitate continued implementation of effective grazing systems and provide for more even livestock distribution and grazing use across pastures within sage-grouse habitats. This would result in maintained or enhanced vegetation conditions, as well as maintaining, achieving, or making significant progress towards meeting rangeland health standards (including wildlife habitat - Standard 5) in accordance with 43 CFR 4180.

6.3. Consistency with Other Plans and Policies

6.3.1. Rangeland Reform '94 / Standards for Rangeland Health and Guidelines for Livestock Management for Public Lands Administered by the BLM in the States of Oregon and Washington

Management Direction

The Record of Decision (ROD) from the Rangeland Reform '94 (BLM 1994) process required the BLM to adopt regional rangeland health standards and complete an assessment of rangeland health on all grazing allotments within a ten-year timeline. The rangeland health standards for

Oregon and Washington BLM were adopted in 1997 (BLM 1997). These standards and guidelines were developed with public participation and included the formation of, and review by, several regional resource advisory committees (RACs).

Plan Conformance

The Lakeview Field Office has completed rangeland health assessments for all grazing allotments under its management jurisdiction, thus fulfilling both requirements of this ROD. The rangeland health assessment for the Beaty Butte Allotment was completed in 1998 and the results are summarized in the *Livestock Grazing* section. The BLM has subsequently implemented grazing management changes designed to make significant progress towards meeting applicable standards, in accordance with the requirements of 43 CFR 4180.

7 APPENDIX C – ISSUES NOT ANAYLYZED IN DETAIL

Issue: How would the alternatives impact Cultural and Paleontological Resources?

Cultural
While the proposed undertaking is not anticipated to result in no potential adverse impacts to identified, potentially eligible or eligible cultural resources, Traditional Cultural Properties (TCPs), or Sacred Sites within the project footprint (0.07 acres), the Lakeview Field Office has developed an Inadvertent Discovery Plan and Procedure (refer to Appendix F) that will be strictly adhered to during the project period. Class III archaeological surveys have been conducted across the proposed project footprint, resulting in no recorded cultural resources within the footprint of the project site and a finding of no adverse effect.

Paleontological
The proposed undertaking is not anticipated to result in no potential adverse impacts on paleontological resources. Based on a review and assessment, the project footprint has been classified under the Potential Fossil Yield Classification (PFYC) system as Class U (Unknown). This classification signifies that there is minimal potential for the discovery of scientifically significant paleontological resources within the project footprint. The potentiality of encountering paleontological resources during the execution of the project activities is nominal.

Issue: How would the alternatives impact air quality and climate?

Air Quality
While construction of the proposed project would have short-term (up to two weeks) vehicle exhaust and fugitive dust emissions, none of the alternatives would have measurable impacts to air quality or significant discharges of regulated air pollutants.

Climate
According to the Oregon Climate Change Research Institute 2018 report on Future Climate Projections in Lake County in 50 years, by the 2050s, Lakeview in Lake County is projected to experience significant changes in climate under a higher greenhouse gas emissions scenario (RCP 8.5):

- **Average Temperature**: The average temperature is projected to increase by 5.6°F (with a range of 3.2°F to 7.3°F) compared to the historical baseline (1971–2000).
- **Heat Waves**: The frequency of hot days (≥90°F) is projected to increase by 32 days (with a range of 15 to 43 days). The temperature of the hottest day of the year is projected to increase by 8°F (with a range of 3 to 11°F).
- **Cold Waves**: The frequency of days at or below freezing is projected to decline by 11 days (with a range of 6 to 15 days). The temperature of the coldest night of the year is projected to increase by 8°F (with a range of 3 to 13°F).
- **Heavy Rains**: The magnitude of precipitation on the wettest day is projected to increase by 19% (with a range of 6% to 33%). The magnitude of precipitation on the wettest consecutive five days is projected to increase by 13% (with a range of -3% to 39%).

- **Drought**: Drought conditions, as represented by low spring snowpack, are projected to become more frequent. Drought conditions represented by low summer soil moisture and low summer runoff are projected to occur with the same or slightly greater frequency.
- **Wildfire**: The frequency of very high fire danger days per year is projected to increase by about 38% (with a range of -10% to +90%).
- **Air Quality**: The number of days with high concentrations of wildfire-specific particulate matter is projected to increase by 33%.
- **Windstorms and Dust Storms**: Limited research suggests very little, if any, change in the frequency and intensity of windstorms. The risk of dust storms in summer is projected to decrease in areas that experience an increase in vegetation cover.
- **Increased Invasive Species & Pests**: Warming temperatures, altered precipitation patterns, and increasing atmospheric carbon dioxide levels increase the risk for invasive species, insect and plant pests.
- **Loss of Wetland Ecosystems**: Freshwater wetland ecosystems are sensitive to warming temperatures and altered hydrological patterns, such as changes in precipitation seasonality and reduction of snowpack. These projections indicate a warmer, drier, and more extreme climate for Lakeview, with increased risks of heatwaves, droughts, wildfires, and changes in precipitation patterns.

This project adapts to changing climate by capturing water in the troughs during warmer/drier events. By piping water underground, it will keep the water from evaporating during transportation and maintain a lower water temperature. It will also provide water to wildlife, wild horses, livestock, and wildfire suppression. Even with the changing conditions, the current project will have no potential effects because the scope and scale of the project (0.07 acres within the 551,901-acre allotment).

Issue: How would the alternatives impact fire and fuels management?

Livestock grazing can reduce the risk of wildfires in rangelands (Davies et al. 2010) by reducing fine fuel loading. The addition of an extra water source in the Beaty Butte allotment would support initial wildland firefighting efforts and potentially decrease the size and severity of fire impacts on sagebrush-dependent wildlife and habitats in the long term. The two troughs, each holding approximately 1,200 gallons, would provide enough water to fill three fire trucks for initial fire suppression. Fire risk during construction would be minimized by adhering to the appropriate PDFs in Appendix D. Given the small scope of the project (0.07 acres within the 551,901-acre allotment), along with the benefits to suppression activities and the potential impact on fine fuels utilization, the proposed actions are not expected to affect fire and fuels management.

Issue: How would the alternatives impact Visual Resource Management at the project site?

The proposed project boundary is within a VRM Class IV Management area which allows for major modification to the landscape (BLM 2003b). The installation of troughs would be seen by a casual viewer but would not impair the visual quality of the landscape, therefore there would

be no potential effects of this project to visual resources.

Issue: How would the alternatives impact lands with wilderness characteristics?

The project would be located in a previously disturbed area (see Map 1 of Appendix E) along the southern edge of Wilderness Character Unit OR-015-142/ Wilson Spring. The unit is 16,479 acres and currently contains the following man-made developments/disturbances: 4,358 acres of a prescribed burn, 3,461 acres of wildfire, 19 acres of chemical treatments, 11 miles of motorized routes, 1 mile of reclaiming routes, 2 miles of above-ground pipelines, 1 mile of fence lines, 4 developed springs, 3 waterholes, 2 reservoirs, 1 water tank, and 3 troughs (BLM 2018). Impacts to the area would include localized trampling and use of vegetation from the congregation of wild horses and livestock for watering (31 acres within the 551,901-acre allotment).

Burying the pipeline would maintain naturalness because it would be substantially unnoticeable and not visible within the viewshed. This unit is part of the Beaty Butte Allotment (#06000), and grazing is a legacy use for this area (RMP 2003b). The existing developments are substantially unnoticeable primarily due to topographic shielding and/or revegetation and weathering has caused them to fade in to the background. The placement of two additional troughs would contribute to a slight reduction in naturalness, however because of the proximity to the existing road (approximately 400 ft), proximity to the edge of the unit, the similarity in nature to existing developments within the unit and scope and scale of the project footprint (0.07 acres within the 551,901-acre allotment) this would not contribute to a substantial reduction in naturalness and would not cause the unit to no longer have wilderness characteristics or reduce the size of the unit.

Short-term (occur up to two weeks) negative effects on wilderness character would occur because of the construction and associated activities. Construction of associated activities would have temporary negative impacts on solitude and unconfined recreation, but those impacts would not continue beyond the construction period. The alternatives would be allowable under the current LWC management guidelines and would be consistent with the 2010 Settlement Agreement.

Issue: How would the alternatives impact hydrology, wetlands, and riparian zones?

Lick Spring falls within the Shallow Lake-Slickey Lake HUC-10 watershed classification and within southeastern Oregon's Northern Basin and Range ecozone which is characterized by basin-and-range topography. The area contains several wide basins bordered by scattered low mountains. Despite regional aridity, natural springs and spring-fed wetlands are scattered around the landscape, sustaining much of the region's wildlife (Oregon Department of State Lands 2000). The scarce surface waters present within the region are supported by subterranean spring sources and seasonal precipitation. The streams coursing within the Beatys Butte area are dominated by ephemeral discharge events, responding to direct precipitation runoff. The stream channels above and below spring sites on Beatys Butte are generally seasonal and show evidence of surface flows in the spring and early summer. The discharge from each of the springs/seeps is

limited to several yards below the spring sites.

Lick Spring sits on a northeast facing slope having the added benefit of snow deposition runoff. The geography of the site will collect drifting snow that will melt slowly with the narrow deep ravines and tall upland vegetation. As snowmelt supported runoff within the stream courses provides saturation of the local soils, the spring discharge is conveyed downstream for miles. Once the snowmelt has ended, the spring discharge only persists for few yards until the surface water infiltrates into the unsaturated soils. This discharge then flows with terrain to support a stream feature. Lick Spring has several locations that show vegetation indications of surface water (*Juncus* spp.), but the main riparian area around the spring head is approximately 0.2 acres in size.

Assumptions and Methodology

Pipeline

The pipeline will be turned on when major frost events have ended and turned off when fire season has ended, approximately, 7 months (April 1 to November 1). All months are set to 30 days for the purpose of analysis (7 months = 210 days).

Developed Spring Source Production

Nine gallons was selected because this is an average of the high flow in the spring with the low flow in the fall.

Spring production varies 1 -17 gallons/minute so for calculations assume average 9 gallon/minute = 12,960 gallon per 24 HR Day for 7 months (210 days) = 2,721,600 gallons x 2 seasons = 5,443,200 gallons.

Livestock

Maximum water consumption was used for the purposes of this analysis. Lactating cows need 2 gallons of water per 100 pounds of body weight per day (National Research Council 2000). Therefore, a 1,000lb cow needs 20 gallons/day.

For the purposes of this analysis, maximum livestock use is 200 based on past actual use and utilization data and professional observation. 200 cows/day using 20 gal/day = 4,000 gal/day for 150 days = 600,000 gallons. Five months (150 days) was used because this is the permitted use by livestock (5 of 24-month cycle).

Wild Horses

Wild horses use 10 gallons/day for 7 months (210 days) = 2,100 gallons/horse
Assuming average 20 horses a day = 42,000 gallons. The consumption estimate was chosen based off Comprehensive Animal Welfare Program Regulations (BLM Permanent Instruction Memorandum 2021-002). Based on professional observation, for the purposes of this analysis,

we are applying this calculation to a single band, an estimated 20 horses to capture variability in band size.

Estimated Water Use

Total Consumption 600,000 + (42,000 x2 seasons) = 684,000 gallon/24 months when livestock use North Common Pasture every other year.

Alternative 2 - Proposed Action

Over the course of 2 years, when the pipeline is open (14 months), total spring production is 5,443,200 gallons. The total use by wild horses and livestock is 684,000 gallons. If utilizing a float, an estimated 12.6% of the total developed spring production is used. This results in 4,759,200 gallons retained at the source.

The pipeline is gravitationally fed and is not expected to contribute to the draw down of ground water because the proposed project is diverting water through the pipeline and capturing surface water in the troughs that would have gone down the stream channel, therefore, there are no expected potential effects.

Alternative 3 – No Float Installation

Once the snowmelt has ended, the spring discharge only persists within the stream channel for few yards until the surface water infiltrates into the unsaturated soils. Under this alternative, there will be no water retention from the spring development and water will flow to the stream channel below the troughs via the overflow pipe from the newly installed troughs (approximately 2,000ft from the spring development), mimicking a high flow during a wet year in an area that would not normally have water during the summer and fall months. Due to the mimicking of natural high flows and the scope and scale of the project (31 acres within the 551,901-acre allotment), there are no expected potential effects.

Issue: How would the proposed developments impact soils?

Soils within the project boundary is of the Raz-Brace complex, high precipitation with 2-20% slopes (NRCS undated). These soils are formed on lava plateaus with a parent material of slope alluvium, colluvium, and residuum derived from volcanic rock such as basalt or welded tuff. The Raz-Brace complex soils are well-drained, with very high runoff and moderately low water erosion and low wind erosion potential that have a strongly cemented material occurring at approximately 17-30 inches. These soils are non-saline to very slightly saline, with low capacity to hold water.

Minor disturbances to soils would occur in the topsoil horizon during installation of the buried pipeline and troughs. Cross-country travel by vehicles or machinery associated with the installation of the pipeline and troughs would occur in an area that is previously disturbed. The area of disturbance would be approximately 960 feet long by 15 feet wide associated with the burial of the pipe. The pipeline would be buried up to 18” beneath the surface. The area of

disturbance during trough installation would be approximately 88 sq ft.

After initial compaction (i.e., the first equipment pass), this soil is able to support standard equipment with only minimal increases in soil bulk density. Impacts of pipeline and trough installation to soils would be minimized by following appropriate PDFs in Appendix D.

The new trough locations would receive increased disturbance to soils from soil compaction by higher concentrations of livestock, impacting an area approximately 650 feet in diameter (31 acres). Congregation by livestock in the proposed project boundary would be minimized by resting the pasture the following year. Pending moisture patterns, the area impacted would re-vegetate within a year which would continue to stabilize the soils around the troughs. Concentrated livestock activities specifically within the proposed project boundary (31 acres) would increase bare ground, increase the susceptibility of soil loss from wind and water erosion, and decrease the ability of the soils to allow infiltration and retain moisture and nutrients. Due to the PDF's above and the scope and scale of this project (31 acres within the 551,901-acre allotment) the proposed actions are expected to have no potential effects to soils.

Issue: How would the alternatives impact site vegetation?

Since 2006, the site has been dominated by cheatgrass (45%-50% cover, Figure 1). According to the Ecostate Summarization Tool, which summarizes threat-based ecostate maps, the project footprint is characterized by poor condition grassland and intermediate condition grassland (33% and 17% respectfully). Several scientific publications have documented that majority of restoration efforts fail in cheatgrass dominated systems. When trying to improve restoration efforts in these areas, the seed bank needs to be controlled to approximately >5% annual grass seeds (Davies et. al., 2011, 2015, Young and Clements 2009, Clements et. al. 2017) prior to restoration. Construction activities would be conducted in a manner that would minimize disturbance to soils and existing vegetation (see Appendix D). Vegetation would be temporarily disturbed along the 960-foot pipeline imprint during burial and trough installation (up to 2 weeks). This would temporarily affect the current year's vegetation growth, but the Rangeland Analysis Platform data (RAP; Figure 1) supports the vegetation would return as cheatgrass dominate. Livestock trails may develop in the adjacent area of the troughs. The estimated 650 feet of livestock concentration around the troughs would increase bare ground, but according to the RAP data, an oscillation between annual grasses and bare ground would continue (Figure 1). Despite construction and the potential increase of bare ground through trampling of vegetation around the troughs, the current project will have no potential effects because the natural oscillation would still occur.

The potential risk of weed introduction beyond the site would be minimized by following the weed prevention best management practices (BMPs) listed on page A-6 of Appendix D of the Lakeview RMP/ROD (2003b). Any weeds located in the project boundary in the future would be treated, primarily by manual methods, in accordance with the existing Integrated Invasive Species Management Plan (BLM 2015c, 2016).

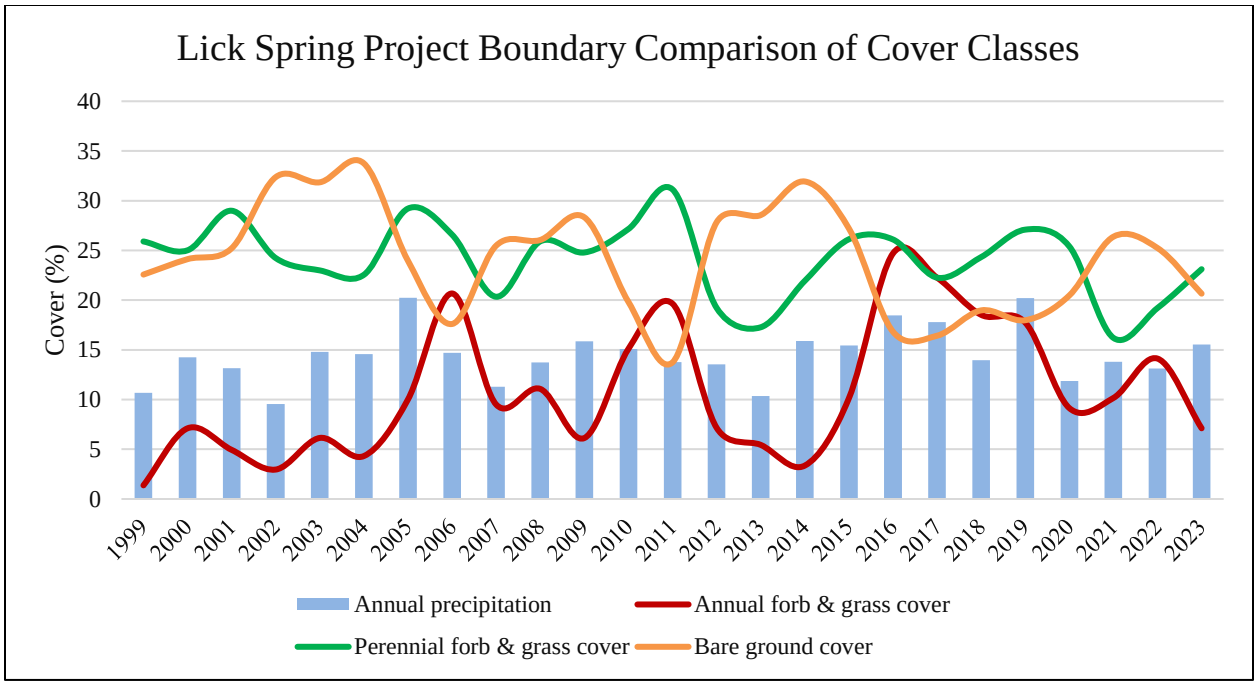


Figure 1. Rangeland Analysis Platform data from 1999 to 2023 for the Lick Spring Project Boundary

Issue: How would the alternatives affect the greater sage-grouse seasonal habitats?
Issue: How would the alternatives impact sage-steppe have associated breeding and migratory birds?
Issue: How would the alternatives affect other BLM Sensitive Species?
Issue: How would the alternatives affect big game species?

Assumptions

- All animals will use any available water sources
- A trough on flatter ground is more desirable to access
- Increased watering points / access will distribute grazing animals
- All animals displaced during construction are expected to return to the area within the project boundary post construction
- Short-term is during construction, up to two weeks
- Long-term is post-construction

Common To All Wildlife

The proposed action is in Oregon Essential Pronghorn (*Antilocapra americana*) Habitat, bighorn sheep (*Ovis canadensis*) occupied habitat, mule deer (*Odocoileus hemionus*) winter range, within greater sage-grouse (*Centrocercus urophasianus*) priority habitat management area (PHMA), small mammal, pollinator, and migratory bird habitat. However, the project footprint (0.07 acres) is within a heavily disturbed area with a longstanding oscillation of bare ground to annual grass and forb (Figure 1). The area surrounding the project footprint (0.07 acres) supports the habitats above.

The installation of two troughs away from the spring head, on flat ground, will decrease wild horse and livestock pressure mid-slope and allow wildlife to use the trough and spring head with less wild horse and livestock disturbance. Direct disturbance associated with construction would be of short duration and while wildlife inhabiting the area may depart the area during construction, they would return and resume normal activities after project completion. Additionally, the new troughs would be a source of additional water available to all wildlife. The troughs would have a wildlife escape ramp that meets the side and bottom of the troughs to reduce the risk of individual bird, mammal, or reptile mortality.

Issue: How would the alternatives affect the greater sage-grouse seasonal habitats?

The project is located in a priority habitat management area (PHMA) in the Beaty Priority Area for Conservation (PAC) that is also a sagebrush focal area (SFA; Oregon GRSG ARMPA 2015). There are six leks within four miles of the project footprint. Two have a status of unoccupied and four have pending status. The closest lek to the project footprint is 1.24 miles and has a pending status. The project site and surrounding area is within summer, winter, and spring seasonal sage-grouse habitat. Impacts of pipeline and trough installation to sage-grouse would be minimized by following appropriate PDFs in Appendix D. Sage-grouse habitat would not be impacted by installation of the pipeline or troughs because construction would occur within the footprint of a previously disturbed area that does not support vegetative characteristics of sage-grouse habitat (mostly cheatgrass). Additionally, the proposed water trough installation would occur near an existing road (approximately 400 ft). For these reasons, the proposed actions are expected to have no potential effects to greater sage-grouse or its habitat.

Issue: How would the alternatives impact sage-steppe have associated breeding and migratory birds?

Numerous species of birds may use the project boundary during the breeding season and spring and/or fall migration. Increased wild horse and livestock grazing in the vicinity of the new troughs would affect ground and shrub nesting species by reducing the amount of ground and low-lying vegetation immediately around the water sources, which would result in a decreased availability of potential nest sites within the project boundary (31 acres within the 551,901-acre allotment; Harrison et al. 2010, Ryder 1980). Decreased ground vegetation would also decrease the amount of hiding cover for ground nesting species, which would result in increased nest predation (Fondell and Ball 2004, Picman 1988, Ryder 1980).

The estimated 650 feet of livestock concentration and disturbance around the troughs would represent a minor, but permanent loss of ground nesting habitat. However, these effects would be offset by the larger, positive impacts of better overall livestock distribution and wildlife habitat conditions across the larger pasture. Over time, wildlife habitats around other existing waterholes and developments in the pastures would receive less livestock congregation and forage utilization would be spread more evenly across the pastures, reducing existing impacts to habitats for ground and low-lying nesting birds in these areas. Impacts of pipeline and trough installation to breeding birds would be minimized by following appropriate PDFs in Appendix D. Due to the

PDF's, the short period of construction (up to 2 weeks), and the scope and scale of this project (31 acres within the 551,901-acre allotment) the proposed actions are expected to have no potential effects to breeding and migratory birds.

Issue: How would the alternatives affect other BLM Sensitive Species?

Pygmy rabbits (*Brachylagus idahoensis*) are a BLM Sensitive species which have a potential to occur in the project boundary. In January 2024 the U.S. Fish and Wildlife Service began a 12-month review of the species to determine if it warrants listing under the Endangered Species Act. Pygmy rabbit habitat is present in the Beaty Butte Allotment. BLM and ODFW surveys have confirmed pygmy rabbit presence within the North Common Pasture with detections as close as 3.6 miles to the project, but with no detections within the project boundary. Due to this distance, scope and scale of this project, and no documented pygmy rabbits within the project boundary (31 acres within the 551,901-acre allotment), there are no expected potential effects to pygmy rabbits.

Due to the characteristics of the allotment, BLM Sensitive Species that have the potential to occur within the proposed project boundary, include monarch butterfly (*Danaus plexippus*), kit fox (*Vulpes macrotis*), white-tailed jackrabbit (*Lepus townsendii*), Morrison's bumble bee (*Bombus morrisoni*) and western bumble bee (*Bombus occidentalis*). However, none of these species have been documented within the project boundary (31 acres). McIntyre et al. 2024, recently produced high resolution models of habitats important to migrating western monarchs, which revealed no seasonal habitat suitability exists within the project boundary. Due to no documented occurrences and the scope and scale of this project (31 acres within the 551,901-acre allotment), there are no expected potential effects to BLM Sensitive Species.

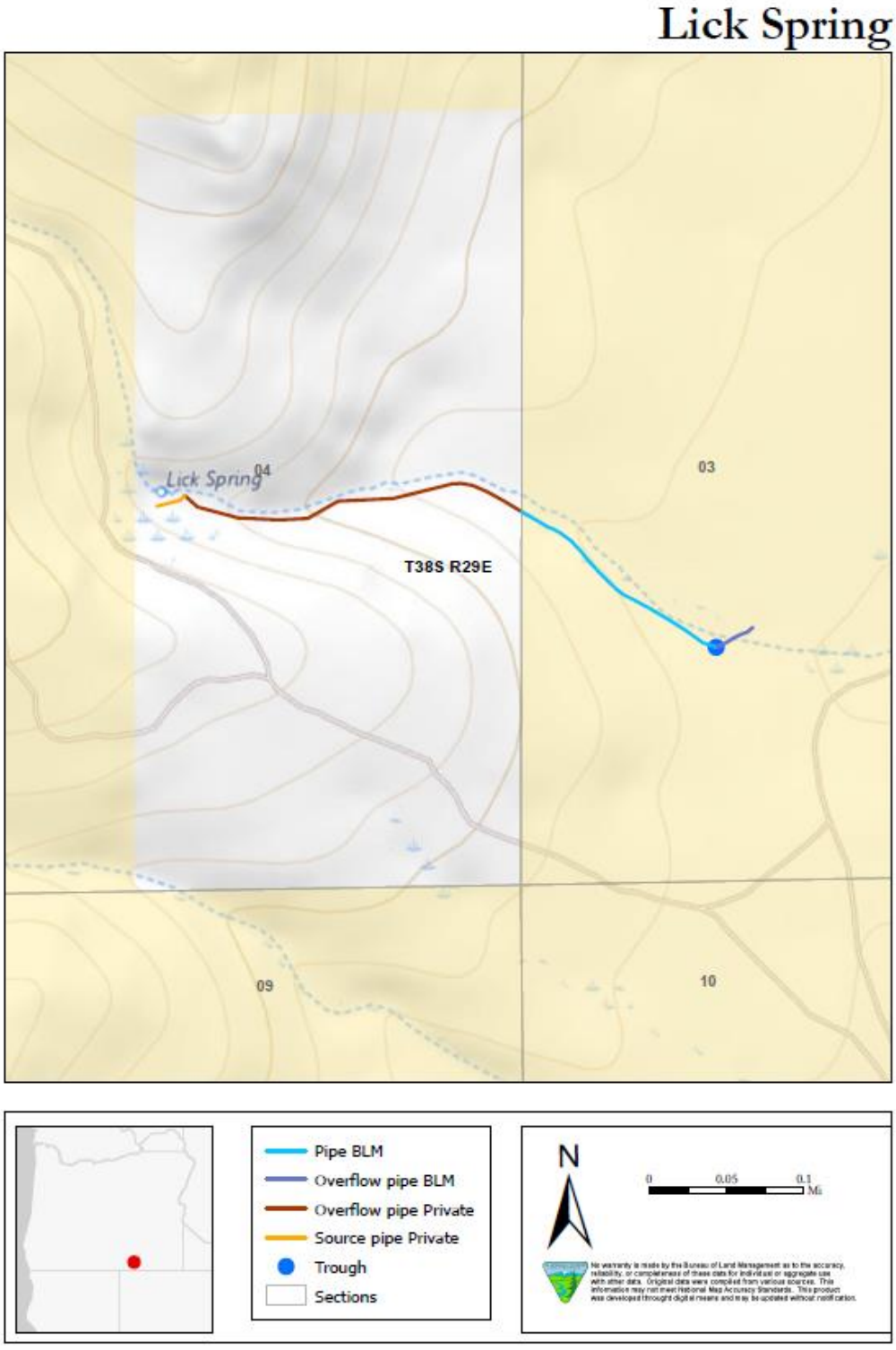
Issue: How would the alternatives affect big game species?

As state above, the project boundary (31 acres) encompasses habitats used by mule deer, pronghorn, and bighorn sheep; however, the project footprint (0.07 acres) does not include any of these habitats. The Lakeview RMP assigned 400 AUMs of forage for deer/pronghorn and 240 AUMs of forage for bighorn sheep to the Beaty Butte Allotment (BLM 2003b). The AUMs of forage designated for big game use would remain the same. Implementation of the proposed actions would not have a measurable effect on existing thermal or hiding cover for big game because this does not currently exist within the project footprint (0.07 acres of cheatgrass). Therefore, essential habitat for big game will continue to remain intact and unaffected by construction in the project footprint. Since habitat for these species is provided outside the project footprint and due to the scope and scale of this project (31 acres within the 551,901-acre allotment), there are no expected potential effects to big game species.

8 APPENDIX D – PROJECT DESIGN FEATURES

- Access to the area for pipeline and trough installation will be limited to existing, open routes. Cross country travel at the project site will be minimized as much as possible.
- Construction activities would not occur when the soil is wet to reduce soil compaction and potential erosion.
- Parking and staging of vehicles will avoid sagebrush.
- Minimize unnecessary cross-country vehicle travel during field and fire operations.
- Proposed project construction within pronghorn habitat would avoid active fawning.
- Should construction take place during the breeding/nesting season (April 15–July 15), the site would be surveyed by a BLM wildlife biologist prior to work to avoid potential harm to nests, eggs, and nestlings. Documented nests on the site during that period would result in construction being delayed until nesting is complete, or nest sites would be avoided.
- Proposed project construction would avoid migratory bird nests.
- Any paleontological or cultural resources discovered within the project footprint would immediately be reported to the Lakeview Field Office Manager or their designee. All operations in the immediate area of the discovery should be suspended until authorization to proceed is issued (see Appendix F). An evaluation of the discovery shall be made by a paleontologist to determine appropriate actions to prevent the loss of scientifically important paleontological or cultural values.
- Pre and post construction noxious weed/invasive species surveys would be completed. If any noxious weeds are found during the survey they will be treated in accordance with the existing Integrated Invasive Plant Management Plan (BLM 2015c, 2016).
- The proposed construction area will be treated prior to construction and all the disturbed areas will be treated post-construction.
- All equipment/vehicles used during construction would be power washed prior to entering the site to avoid the potential for weed spread.
- Contractor must follow all fire restrictions put in place by South Central Oregon Fire Management Partnership https://scofmp.org/restrictions.shtml
- There will be no disruptive activities two hours before sunset to two hours after sunrise from March 1 through June 30 within 1.0 miles of the perimeter of occupied leks, unless brief occupancy is essential for routine ranch activities. Disruptive activities are those that are likely to alter GRSG behavior or displace birds such that reproductive success is negatively affected or an individual's physiological ability to cope with environmental stress is compromised. Examples of disruptive activities are noise, human foot or vehicle traffic, or other human presence.
- Limit noise at the perimeter of occupied or pending leks from two hours before to two hours after sunrise and sunset during the breeding season to less than 10 decibels above ambient sound levels.

9 APPENDIX E – MAPS



Map 1. Proposed Action at Lick Spring

10 APPENDIX F – INADVERTENT DISCOVER PLAN FOR ARCHAEOLOGICAL RESOURCES OR HUMAN REMAINS

Discovery Protocol: Immediate Action Required

If you discover any potential archaeological resource, human remains, or cultural items on site, **immediately** take the following steps:

1. **Immediately Halt Work**: Cease all activity within a 100-foot radius of the discovery. Secure and protect the area from additional disturbance or interference (such as flagging-off the area and/or by assigning a qualified archaeologist to monitor the area).
2. **Secure and Protect the Discovery**: Do not touch, move, or disturb the item(s) in any way. Any individual on site who discovers a potential archaeological resource, human remains, or cultural items are to secure and protect the discovery, treat the discovery respectfully, ensure nothing is touched, moved, photographed, discussed on social media sources (e.g., Facebook, Instagram, TikTok), or further disturbed. *Maintain strict confidentiality of the discovery*. Information about the discovery will only be shared with those who need to be involved in the *Notification of Discovery* procedure outlined below; this may include supervisors or project leads. This confidentiality includes restricting the distribution of precise location data, such as GPS coordinates, and visual representations of the site, including photographs.
   - **Legal Implications:** Failure to comply with these procedures may result in ***serious legal*** consequences.
     - Under Oregon law:
       - Failure to report a dead human body: Class B misdemeanor
       - Abuse or desecration (this includes disturbing, moving, concealing, or destroying) of a dead human body: Third-degree felony
     - Under the Archaeological Resources Protection Act (ARPA):
       - Violations of ARPA can lead to fines of up to $100,000 or imprisonment.
3. **Notify Appropriate Personnel**:
   - Any individual on site who discovers a potential archaeological resource, human remains, or cultural items must immediately notify their supervisor or project lead, the Tribal monitor (if one is present on location), the cultural monitor (if one is present on location), and ***the Field Office Manager by phone or in person, followed by a written documentation (email)*** that includes the following information:
     - The name of the individual(s) who made the discovery.
     - The time and date of discovery.
     - The geographical location by county and State.
     - The land status (BLM, Private, State).
     - The contents of the discovery.
     - The steps taken to secure and protect the discovery.
     - A description of the related activity that resulted in the discovery.
     - A description of any potential threats to the discovery.
     - Confirmation that all activity around the discovery has stopped and will not resume until the date listed in a written certification authorizing that activity may resume issued by the Field Office Manager.
4. **Pause All Work until Further Notice**: Project activities shall be halted and will not proceed within a 100-foot radius of the discovery until the written certification to proceed is obtained from the BLM.