



**US Army Corps
of Engineers** ®
Walla Walla District
BUILDING STRONG®

**LAKE VIEW RECREATION TRAIL
at**

**LUCKY PEAK DAM AND LAKE
BOISE, IDAHO**

ENVIRONMENTAL ASSESSMENT

ADMINISTRATIVE RECORD – DO NOT DESTROY

PROJECT FILE NUMBER: PPL-C-2016-0015

MAY 2020

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Acronym List

BA	Biological Assessment
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BMP	Best Management Practice
BRWMA	Boise River Wildlife Management Area
CAA	Clean Air Act
CCTV	Closed Circuit Television
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
IDFG	Idaho Department of Fish and Game
MBTA	Migratory Bird Treaty Act
MOP	Minimum Operating Pool
MOU	Memorandum of Understanding
MSA	Magnuson–Stevens Fishery Conservation and Management Act)
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Services
NRHP	National Register of Historic Places
PL	Public Law
SHPO	State Historic Preservation Officer
SWIMBA	Southwest Idaho Mountain Bike Association
THPO	Tribal Historic Preservation Officer
USACE	United States Army Corps of Engineers
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

Section 1 -INTRODUCTION

1.1 Introduction and Background

The U.S. Army Corps of Engineers, Walla Walla District (Corps), in cooperation with the Bureau of Land Management (BLM) Four Rivers Field Office (FRFO), has prepared an environmental assessment to analyze a proposal to develop a multi-purpose, non-motorized recreation trail at the Lucky Peak Dam and Lake Project (Project) near Boise, Idaho (Figures 1, 2 and 3). Non-motorized recreation trails are in high demand in the Boise area as activities including mountain biking, hiking, picnicking, and nature study have increased in recent years.

The Proposed Action would create approximately 15-miles of new, single-track trail beginning at Lydle Gulch along the southern shoreline of Lucky Peak Lake, connecting several boat-in recreational areas, ending at the camping area known as Chimney Rock, across from Spring Shores Marina. The project is primarily on Corps land; however, it crosses jurisdictional boundaries into small portions of BLM-administered lands and Idaho Fish and Game (IDFG) property.



Figure 1. Project Location at Lucky Peak Dam and Lake near Boise, Idaho.

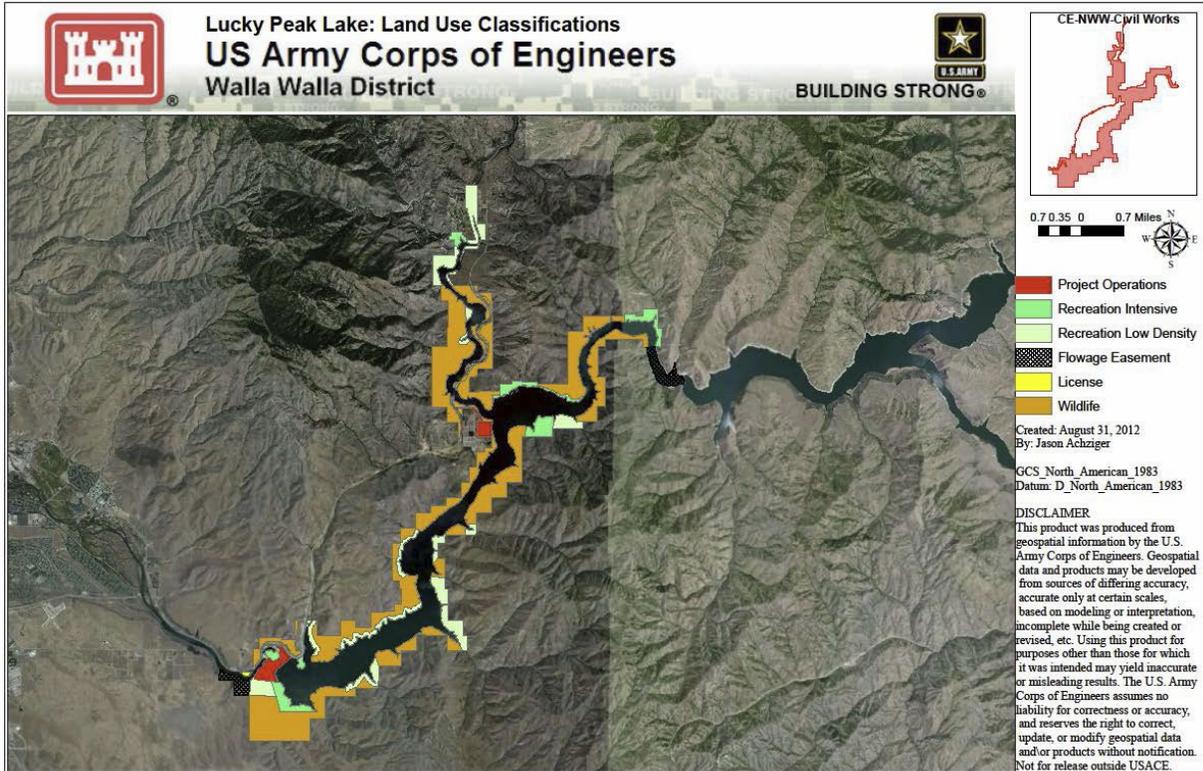


Figure 2. Lucky Peak Dam and Lake near Boise, Idaho with Land Use Classifications.

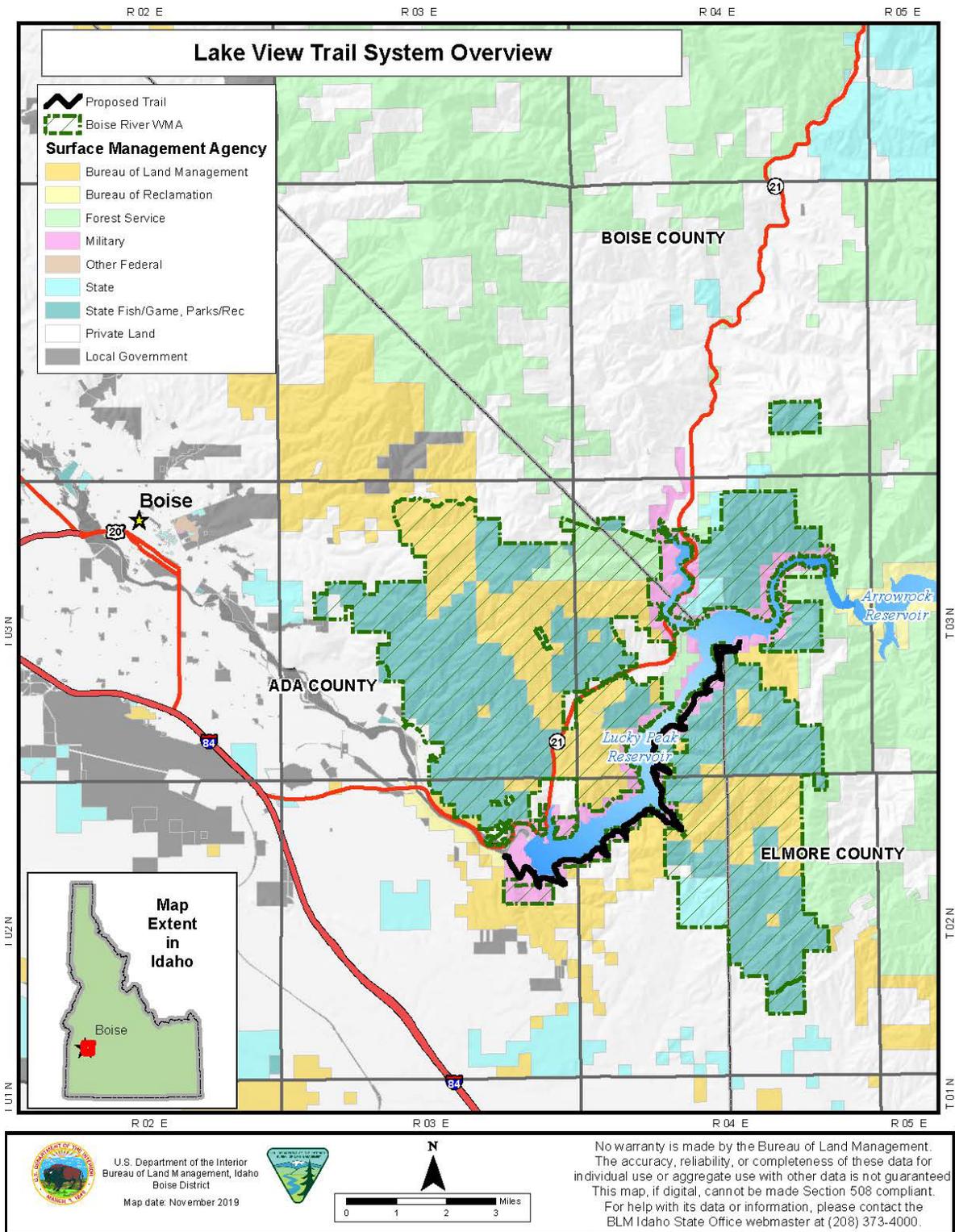


Figure 3. Lake View Trail System Overview

This Environmental Assessment (EA) is being prepared pursuant to the National Environmental Policy Act (NEPA) of 1969, in accordance with Engineer Regulation (ER)

200-2-2, *Procedures for Implementing NEPA*, and the Council on Environmental Quality (CEQ) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA)*, Title 40 Code of Federal Regulations (CFR), Part 1500-1508, to determine whether the Proposed Action constitutes a major Federal action significantly affecting the quality of the human environment and whether an environmental impact statement is required.

1.2 Purpose and Need for Action

USACE Purpose and Need

The Corps is proposing to construct a multi-purpose, non-motorized recreation trail at the Lucky Peak Project. The purpose of the Proposed Action is to provide more public recreational opportunities on Corps-managed Project lands near Boise, Idaho, in accordance with the Corps authorized Project purpose of providing opportunity for public recreation. However, maintaining existing wildlife values is a top priority in the area and this use is considered in that it doesn't detract from those values. The Proposed Action is needed to meet increased demand for lakeshore recreation activities in the Lucky Peak area. Existing lake shore trails are short, providing limited access opportunities, and hiking outside a developed trail system is difficult as the terrain in the proposed trail area is steep and biking is not feasible.

Demand for multi-purpose recreational opportunities has been identified as a high need in the Boise area. The Ridge to Rivers Partnership, a collaboration of Boise area organizations whose goal is to provide interorganizational coordination and sustainable management of a high-quality system of trails for public enjoyment in the Boise area, has identified that the Boise area enjoys a high degree of support for trails, and that trail use is projected to increase in their 10-year Management Plan (Ridge to Rivers 2016). The Ridge to Rivers Plan highlights partnerships between agencies and organizations as being the most efficient way to manage public land resources in the Boise foothills.

BLM Purpose and Need

The purpose for the action to build and maintain trail segments on BLM-managed lands as part of a 15-mile-long Corps proposed trail near Lucky Peak Lake with 0.63 miles of the trail on BLM-managed lands. The need for the action is established by the BLM's responsibility to plan for quality recreation opportunities on the public lands, as required by the Federal Land Policy and Management Act (FLPMA) of 1976.

The BLM Authorized Officer (Responsible Official) will decide whether to approve the proposed trail construction on 0.63 acres of BLM-managed lands. The BLM may choose to: a) authorize the sections of the project of BLM-managed lands with design features as proposed b) authorize an alternative to the project, or c) not authorize the project at this time.

BLM Land Use Plan Conformance

Policies for development and land use decisions within the project area for the BLM are currently contained in the Kuna Management Framework Plan (MFP) (BLM 1983). The Kuna MFP Recreation 1.2 states that the area will be managed as an extensive

recreation management area and specifically states: (6) Provide reasonable non-motorized trails.

1.3 Authority

Corps Authority

The Lucky Peak Dam and Lake Project (Lucky Peak Project, Project) on the Boise River was authorized by Public Law 526 during the 79th Congress, on July 24, 1946 (i.e. the Flood Control Act of 1946). It was dedicated on June 23, 1955 and reached full pool two days later.

The authorized purposes of the Project include flood control, fish and wildlife habitat, irrigation, and recreation. The Flood Control Act of 1944 (P.L. 78-534) authorized recreation as a project purpose. The land use allocations for the area of the proposed action as determined in the Lucky Peak Master Plan (USACE 1988) are: High-Density Recreation, Low-Density Recreation, and Wildlife Management.

BLM Authority

The Federal Land Policy and Management Act of 1976 (FLPMA) directs that BLM manage 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 Kuna MFP provides additional management direction required by FLPMA. Designation of trails is authorized under 43 CFR 8342 - Designation of Areas and Trails.

1.4 Background

Construction of Lucky Peak Dam began in 1949 and was completed in 1955. There are 4,288 acres of public lands surrounding Lucky Peak Lake. These include lands that are federally owned and managed by the Corps, as well as easement lands to which the Corps has specific rights or easements (i.e., flowage or access). There are 4,079 acres of Corps-managed lands that are used for public recreation, wildlife habitat, and operation purposes. The state of Idaho operates Lucky Peak State Park at three locations on Lucky Peak Lake. The Corps operates a number of developed recreation areas at the Project.

The Lucky Peak Project is within important mule deer habitat for the state of Idaho. The dam and its facilities lie within Idaho Department of Fish and Game's (IDFG) Boise River Wildlife Management Area (BRWMA), a major game range in the state. The State of Idaho has developed wildlife habitat especially for mule deer on Project lands. Project lands classified Wildlife Management that are licensed to IDFG consist of extensive acreages comprised primarily of grass and shrub-type habitats. The Corps has a stewardship responsibility for these areas that transcends management agreements with the licensee and will use its resources and professional expertise to preserve and protect these areas as productive areas for both consumptive and non-consumptive recreation.

Lucky Peak Lake is a popular recreation area. The three Lucky Peak State Park units are among the most visited parks in the state. The existing recreation facilities at Lucky Peak sites help meet the recreation (especially water recreation) needs of the four-county (Ada, Boise, Elmore, Canyon) area near Boise. Corps recreation facilities at Lucky Peak Lake consist of 20 day-use areas, four boat launch ramps, and three swimming areas. Existing trails, are unimproved paths that are short, primarily accessing current recreation sites. The fiscal year 2018 visitation to Lucky Peak Lake was more than 430,000 people.

The Southwest Idaho Mountain Bike Association (SWIMBA) has been actively involved in the planning, construction, monitoring, and maintenance of trails in the area. One of SWIMBA's objectives is to provide new mountain bike trail riding opportunities. SWIMBA's members have worked with the Corps to design the Lake View Trail alignment.

1.5 Corps Land Use Classifications

The Lucky Peak Master Plan (USACE 1988) outlines the land use classifications that provide direction for the management of natural resources. The land use classifications around Lucky Peak Lake are shown in Figure 2 and described below.

High Density Recreation

Intensive (high-density) recreation use areas are defined as lands on which facilities have been or will be provided to accommodate the recreation needs of visitors in concentrated numbers. This includes adjacent or associated lands without facilities as may be required for open space purposes to make a whole compatible recreation unit. Facilities usually include, but are not limited to, access roads, utilities (water, electric, sewer), restrooms, picnicking, swimming, and boat launching and handling facilities.

Uses that are not permitted on intensive-use recreation areas include non-compatible manmade intrusions (e.g., pumping plants, underground or exposed pipelines or cables, overhead transmission lines, non-Project roads, dredging, and filling operations). Exceptions may be made where necessary to serve a demonstrated public need in those instances where no reasonable alternative is available. Measures leading to habitat improvement for the benefit of wildlife may be performed on intensive-use recreation lands insofar as such habitat improvements are compatible with recreation uses.

Low-Density Recreation

These lands are designated for dispersed or low-impact recreation use. The development of facilities and automobile access to these lands are limited. The emphasis is on providing opportunities for, but is not limited to, picnicking, fishing, hunting, bird watching, ecological workshops and forums, hiking, bicycling, primitive camping, or similar low-density activities. Limited facilities (e.g., benches, tables, sun shelters, vault toilets, and waste receptacles) will be allowed. Utilities (e.g., electricity, water, and sewer) will usually not be provided for these facilities in low-density areas.

All such facilities will be in harmony with the natural surroundings so as not to be intrusive to the environment.

Landscape development or restoration, when necessary, will utilize plants native or naturalized to the area. Manmade intrusions (e.g., pumping plants, pipelines, transmission lines, non-Project roads, dredging, and filling operations) will be permitted with appropriate controls, as necessary to minimize the adverse impact to wildlife and visual or other natural characteristics of the areas. These lands also provide open space between intensive recreation lands and incompatible land uses either on or adjacent to the Project. No agricultural uses are permitted on these lands, except when it would be favorable to wildlife and compatible with low-density recreation. Measures leading to wildlife habitat improvement would be a management objective.

Wildlife Management General

Lands classified as Wildlife Management are for the development and management of habitat for wildlife species. Most of these lands at Lucky Peak are administered under license to IDFG. Licenses, permits, or easements will not be issued on wildlife lands for manmade intrusions (e.g., pumping plants, underground or exposed pipelines or cables, overhead transmission lines, non-Project roads, or dredging or filling operations). Exceptions may be made where necessary to serve a demonstrated public need in those instances where no reasonable alternative is available. Such outgrants will include appropriate controls required to preclude or minimize adverse impacts relative to wildlife and visual or other natural characteristics of the areas. Wildlife Management lands will be available for low-density recreation activities (e.g., hiking, picnicking, hunting, fishing, nature study, photography, bird watching, and other similar activities).

Section 2 - PROPOSED ACTION AND ALTERNATIVES

2.1 Development

The Corps developed the alternatives for this EA through coordination, meetings, and/or input from the Bureau of Land Management (BLM), IDFG, Southwest Idaho Mountain Bike Association (SWIMBA); Corps planning meetings; a public scoping period, local desires; and applicable environmental laws and regulations. A public scoping period was held by the Corps from June 30, 2017 through July 30, 2017 and 77 comments were received. The BLM conducted a scoping period on the BLM trail segments from August 23 through September 6, 2019 and received comments from two nonprofit organizations and one state agency.

Public comments will be incorporated. All comments will be attached to the final EA and FONSI.

Steep terrain limited consideration of trail opportunities in other parts of the Project, but the possibility of a future recreational trail along the south shore of Lucky Peak was mentioned in the February 2013, Programmatic Biological Assessment (BA) (Appendix A). SWIMBA approached the Corps offering to construct and maintain a multiple purpose trail in this area. The activities and actions were combined into alternatives based on logistical efficiencies, as well as meeting the multi-purpose recreational use mission for the land use allocations.

The following three alternatives were developed and considered in detail:

- Alternative 1 (No Action Alternative)
- Alternative 2 (Multi-Purpose Trail, Proposed Action)
- Alternative 3 (Pedestrian Only Loop Trail)

The alternatives are discussed in more detail in the following sections.

2.1.1 Alternative 1 (No Action Alternative)

Alternative 1, the No Action Alternative, would continue current management of the area with no new recreational facilities. Public boat access would continue to the campgrounds, picnic sites, and restrooms on Lucky Peak lake's southern shore, but overland access would have to occur cross county on undeveloped areas with no trails. The area is rugged making cross country travel difficult, resulting in use beyond the developed areas remaining low to not accessed. Treatment of invasive plants would continue to be conducted as authorized in the Corps Integrated Pest Management Plan (USACE 2013). The No Action Alternative is prescribed by the Council on Environmental Quality (CEQ) Regulations to serve as the baseline against which all other alternatives are analyzed.

2.1.2 Alternative 2 (Multi-Purpose Trail, Proposed Action)

Alternative 2, the Proposed Action (Figure 4), the Corps would develop approximately 15-miles of new, single-track non-motorized trail in two segments: the short Bird View Trail and the longer Lake View Trail. Approximately 15 miles would be on Corps land, 0.63 miles would be on BLM-managed land (Figures 5 and 6) and up to 1 mile could be on Idaho Fish and Game (IDFG) managed land (Figure 7) (Table 1). If it is not possible to cross IDFG lands then the trail would be rerouted to Corps lands if possible or the second segment would not be undertaken. Both segments would be designed for multiple, low-density, low impact, recreational purposes including mountain biking, hiking, upland game hunting access, fishing access, bird watching, picnicking, and nature study.

The trail would also provide improved access for biological surveys, wildland firefighting depending on location, invasive plant treatments, and habitat management efforts such as reseeding and replanting efforts after wildfires near the trail. As a low impact opportunity, the trail would not be open to motorized vehicles to the general public. The trail would not be available for equestrian use due to a need for additional parking and the potential impact from invasive weed seeds in horse's fecal material. Handicap motor assisted access may be authorized by obtaining a permit from the Corps Natural Resource Management office.

While the area is accessible by boat during the summer when the reservoir is at maximum pool, boat access is reduced September through May due to lower reservoir water levels. Similarly, many recreational users of Lucky Peak do not own boats and therefore lack functional access to use the south side area. This trail would allow access as boating access seasonally diminishes and for recreation by individuals who do not own boats.

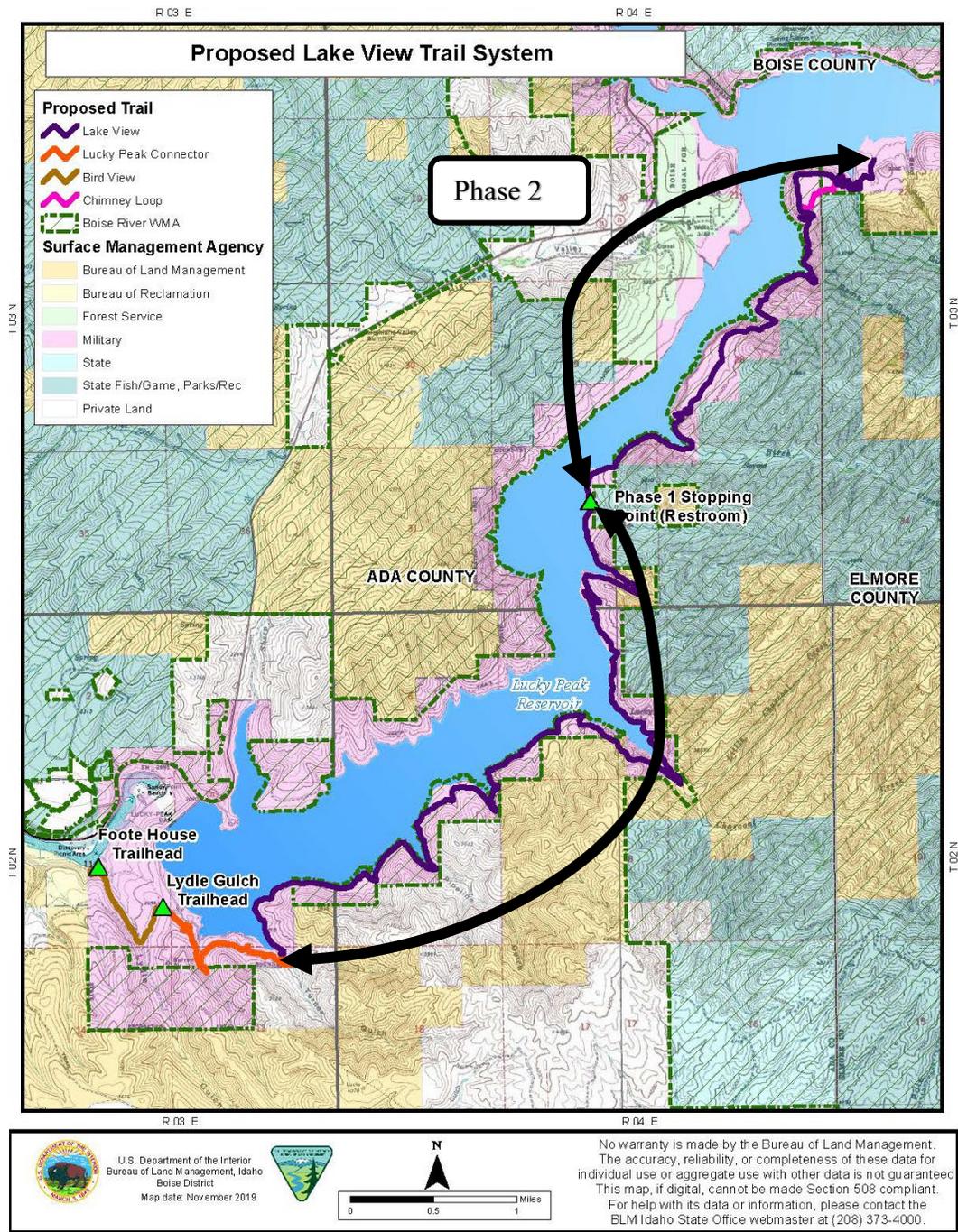
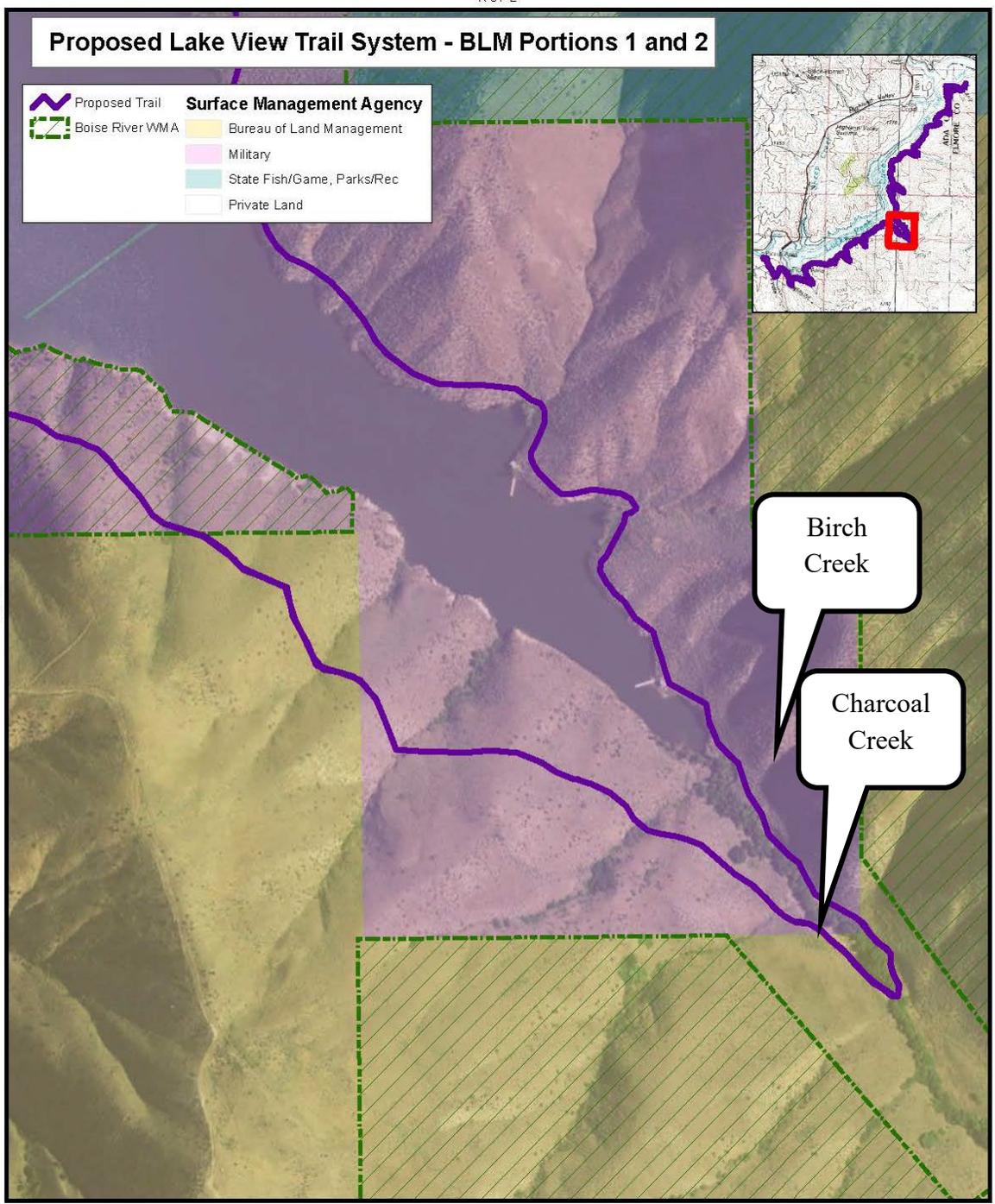


Figure 4. Proposed Lake View Trail



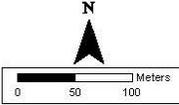
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U.S. Department of the Interior
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Boise District
Map date: November 2019





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Figure 5. Portion 1 and 2 Crossings of BLM Managed Land: Mile Post 4.12-4.27 and 4.62-4.74

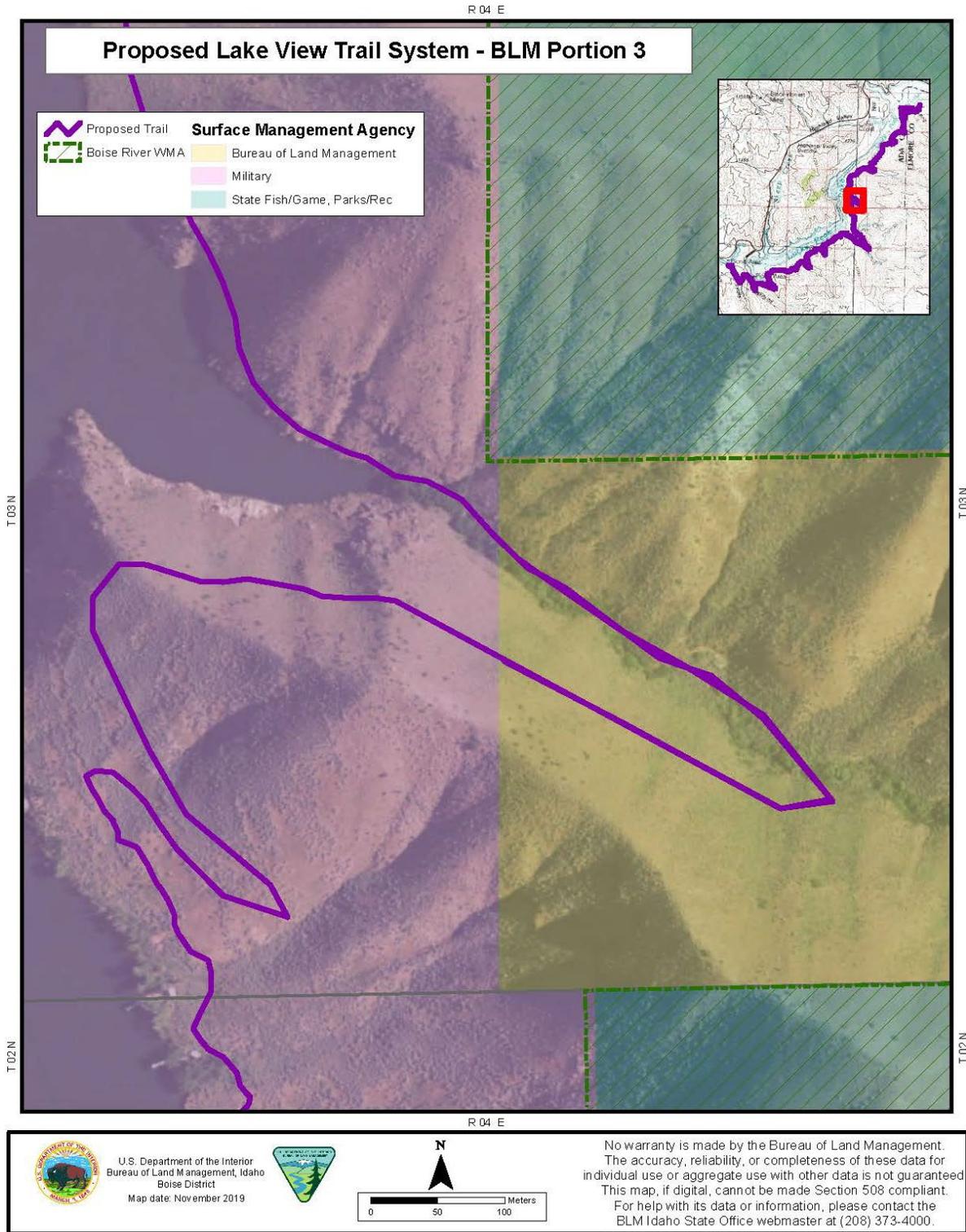


Figure 6. Portion 3 Crossing Site of BLM Managed Land: Mile Post 4.62-4.74

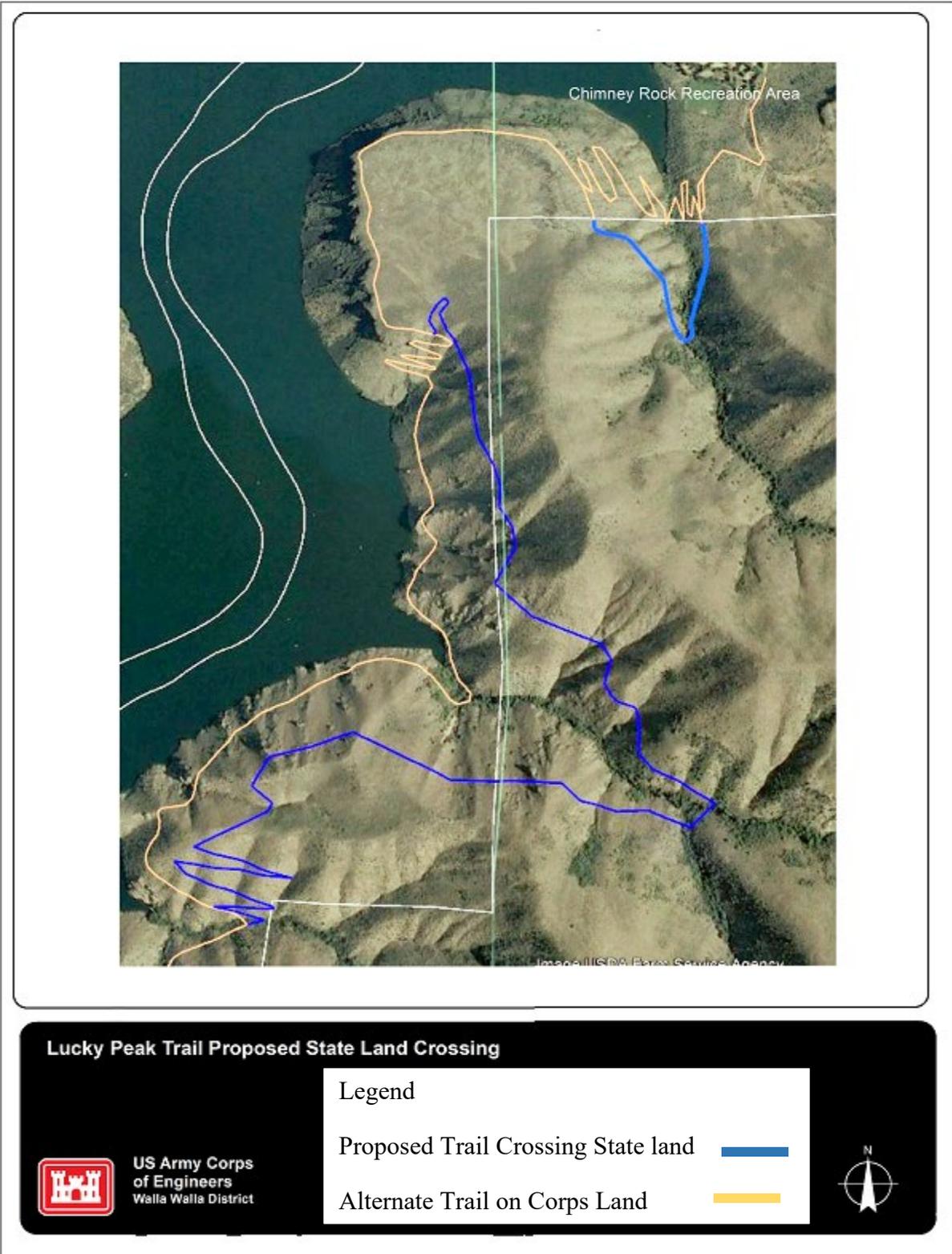


Figure 7. Proposed Trail Crossing IDFG Land

Table 1 Land Ownership by Approximate Mileage

Trail Name	Surface Management	Begin Milepost	End Milepost	Approximate Length
Bird View	USACE	0	0.97	0.97
Lucky Peak Connector (existing)	USACE	0	1.53	1.53
Lake View (Phase 1)	USACE	0	4.12	4.12
Lake View (Phase 1)	BLM	4.12	4.27	0.15
Lake View (Phase 1)	USACE	4.27	4.62	0.35
Lake View (Phase 1)	BLM	4.62	4.74	0.12
Lake View (Phase 1)	USACE	4.47	6.72	1.98
Lake View (Phase 1)	BLM	6.72	7.09	0.37
Lake View (Phase 1)	USACE	7.09	7.65	0.56
Lake View (Phase 2)	USACE and IDFG	7.65	12.72	5.07
Chimney Loop	USACE	12.00 of Lake View	12.72 of Lake View	1.8

Trail Closures

Closures may be implemented on all trail segments during periods of high fire hazard, erosion concerns, wildlife issues, or other factors. The Corps primary management focus for Corps land in the proposed project area, managed by the IDFG, is to maintain and manage the lands as big game winter range. Recreation opportunities would be secondary to big game winter range management objectives. In order to ensure the continued primary management of these areas as big game winter range, the trail would be closed year-round from motorized access. For other access it would have an annual seasonal closure, with vigorous closure enforcement, from November 16 through April 30. This closure would ensure to the greatest degree possible that potential winter wildlife impacts in the lands crossed by this trail do not change from their current level, and avoid potential human caused erosion during wet periods.

The trail closure period could be adjusted at the request and coordination of IDFG to meet IDFG hunting and BRWMA winter range management objectives and to achieve consistency with seasonal access restrictions of the BRWMA; notably on the segment of trail from Charcoal Creek to Placer Point. The trail passes adjacent to upland game areas. If access is made available during the hunting season an increase in harvest, and disturbance of upland game could result.

Trail Construction

Weather, labor availability, and funding may change the timeline. Trail construction and maintenance would be accomplished by SWIMBA through a partnership agreement. SWIMBA would follow the construction standards of the U.S. Forest Service Class Matrix and Design Parameters as outlined in Appendix B of this EA. The design would follow the design parameters for bicycles Trail Class 3 on page 53 of the US Forest Service’s Trail Fundamentals and Trail Management Objectives (USDA FS, 2016).

Construction would be accomplished with small mechanized equipment (mini excavator - Figure 8) and hand tools (pick mattocks, McCleods, shovels, rakes). Construction methods would include grade reversals to keep soil on a trail and get water off before it

has enough energy to displace the soil, water bars to divert water onto the land adjacent to the trail, and rock armoring. Small wood plank foot bridges and minor retaining walls would be constructed where needed (Figures 9 and 10). For the retaining walls a fourth unseen log is below the surface. 3 feet of rebar anchors the wall into the soil.

Grade reversal refers to a reversing or changing the grade of a trail—going downhill to uphill, and then back downhill again (or vice-versa). Water bars usually consist of a log with 1 to 2 inches sticking above the trail surface with a shallow trench dug on the uphill side to direct water off the trail.

Rock armoring uses slabs of stone to "armor" the trail tread (like cobblestone paving). This can be used on a section of trail that is too steep to be sustainable, but too difficult to re-route. An important component of this system is making sure the water is removed from the trail. This is done by digging large rolling grade dips above and below the armored section.



Figure 8. Small Backhoe designed for Trail Building.



Figure 9. Example of a Small Wood Plank Bridge.



Figure 10. Example of a Log Retaining Wall.

Trail construction may occur earlier in the spring than the proposed trail closure end date of 1 May. Effective trail construction requires more moisture in the soil, than that typically found after the first of May. In order to ensure no effect to wintering wildlife, trail construction would not begin until visual surveys had verified that all wintering animals have left the area.

Trail Maintenance: While the Corps would be ultimately responsible for trail maintenance, the Corps may reach out and encourage other local groups to contribute to post-construction maintenance. The BLM and Corps would sign a Memorandum of Understanding that would delegate trail maintenance activities on BLM-managed land to the Corps.

Bird View Trail Segment

A short “beginner” trail, referred to as the Bird View Trail in Figure 6, would run approximately 0.5 mile along Lydle Gulch using an existing two-foot path and gravel service roads. It would join an existing 1.5-mile trail to the end of Turner Gulch. This trail would be constructed concurrently with the first phase of the Lake View Trail Segment.

Lake View Trail Segment

The main segment of the Lake View Trail would start at Turner Gulch and proceed along the southern shoreline of Lucky Peak Lake approximately 15 miles to a terminus at Chimney Rock, located across from Spring Shores Marina (Figure 11). Approximately 15 miles of trail would be within the boundaries of the U.S. Army Corp of Engineers lands and would follow the shoreline of Lucky Peak Lake to the maximum extent possible. Due to difficult terrain and the location of boundary corners in cliff areas, less than one mile of trail in three short segments would be constructed on BLM-managed lands. The trail would also entail approximately two segments totaling approximately one mile constructed on IDFG administered lands. The trail would provide access to numerous existing amenities along the south shoreline (docks, shade shelters, and natural coves and beaches suitable for swimming).

The Lake View Trail would be constructed in the two phases developed by the inter-agency group made of representatives from the Corps, IDFG, and the BLM. Phase 1 would involve trail construction to Placer Point. Phase 2 would involve a trail from Placer Point to Chimney Rock. Each phase is expected to take approximately 5 years to complete.

Phase 1- Phase 1 is expected to begin during the late spring or summer of 2020 (see Figure 4, page 10, and Table 1, page 14). The first section of the Lake View Trail from Foote Park to Pipeline Gulch would be a “beginner” trail with minimal grades and a tread width of approximately 24 inches. Beyond Pipeline Gulch the trail difficulty would increase and vary in width from 18 inches to 36 inches to accommodate those looking for a more challenging trail experience.

Trail use monitoring would be conducted by field staff through visual observation or cameras, during and after construction of this segment to assess levels of possible human trespass and associated detrimental impacts on wildlife such as displacement, in the BRWMA managed by IDFG. During the second season after the Phase One trail is complete The Corps, IDFG, and BLM personnel would meet to assess impacts from the trail. If impacts are assessed as acceptable by all three members of the group, construction of the remainder of the trail to Chimney Rock would be accomplished in Phase 2.

Phase 2- Phase 2 from Placer Point to Chimney Rock would be constructed in a similar way as Phase 1 (see Figure 4, page 10, and Table 1, page 14). The trail segment would be approximately 5 miles long. The construction of the approximately 1.8-mile Chimney Rock Loop trail may also occur during this period, depending on need and resources. Due to difficult terrain and to reduce the trails impact by maintaining as low a grade as possible, approximately one mile of trail in two short segments would be assessed for construction on IDFG managed state lands.

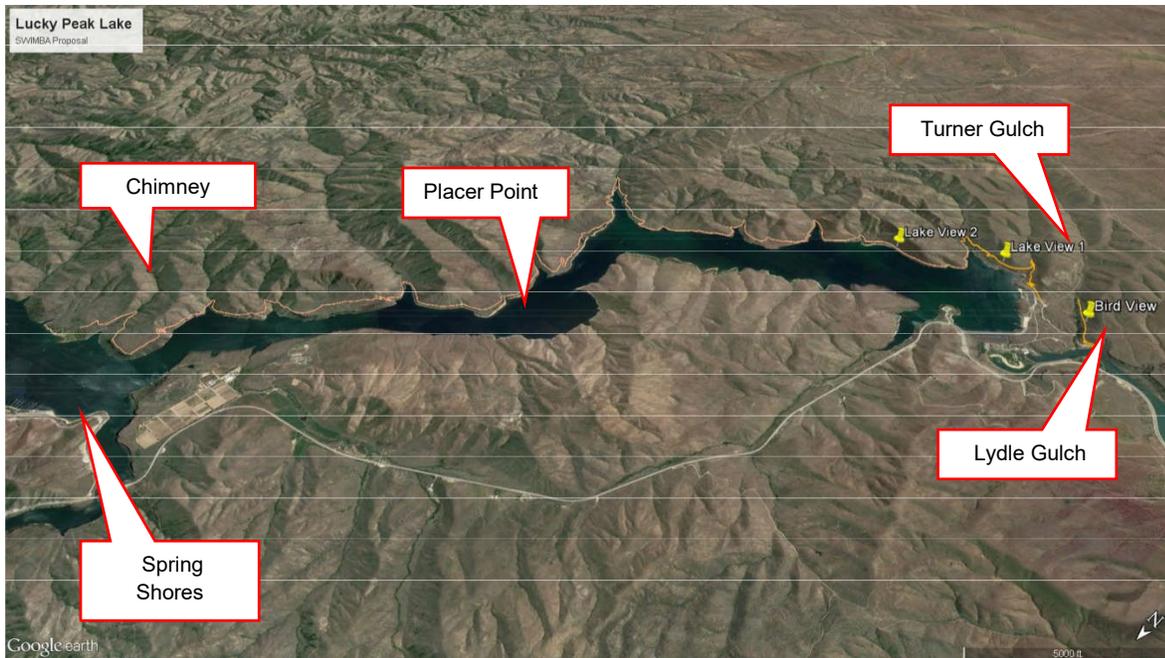


Figure 11. Proposed Location of Multi-Purpose Trail, Alternative 2

2.1.3 Alternative 3 (Pedestrian Only Trail Alternative)

Alternative 3 proposes the development of a pedestrian use only trail on Chimney Rock (Figure 12). Access would be via the existing boat-in recreation site at Chimney Rock, limiting use to foot traffic only. Handicap motor-assisted access would be authorized by obtaining a permit from the Corps Natural Resource Management office. The trail would provide for low-density recreational purposes of hiking, fishing access, bird watching, picnicking, and nature study. The trail would be constructed on Corps-owned lands as shown in Figure 13.

The trail would be constructed by the Corps alone or in conjunction with SWIMBA or other interested parties. The trail segment would only occur on Corps owned land. Funding availability for the proposed trail construction is unknown. Trail difficulty would range from beginner to moderate with construction of a 24-inch tread width and grades typically less than 10 percent. The trail would access the top of Chimney Rock, providing scenic vistas of Lucky Peak Lake and the surrounding area. It would be approximately 1.8 miles long.

Seasonal closures would be the same as Alternative 2.



Figure 12. Location of Chimney Rock at Lucky Peak Project.

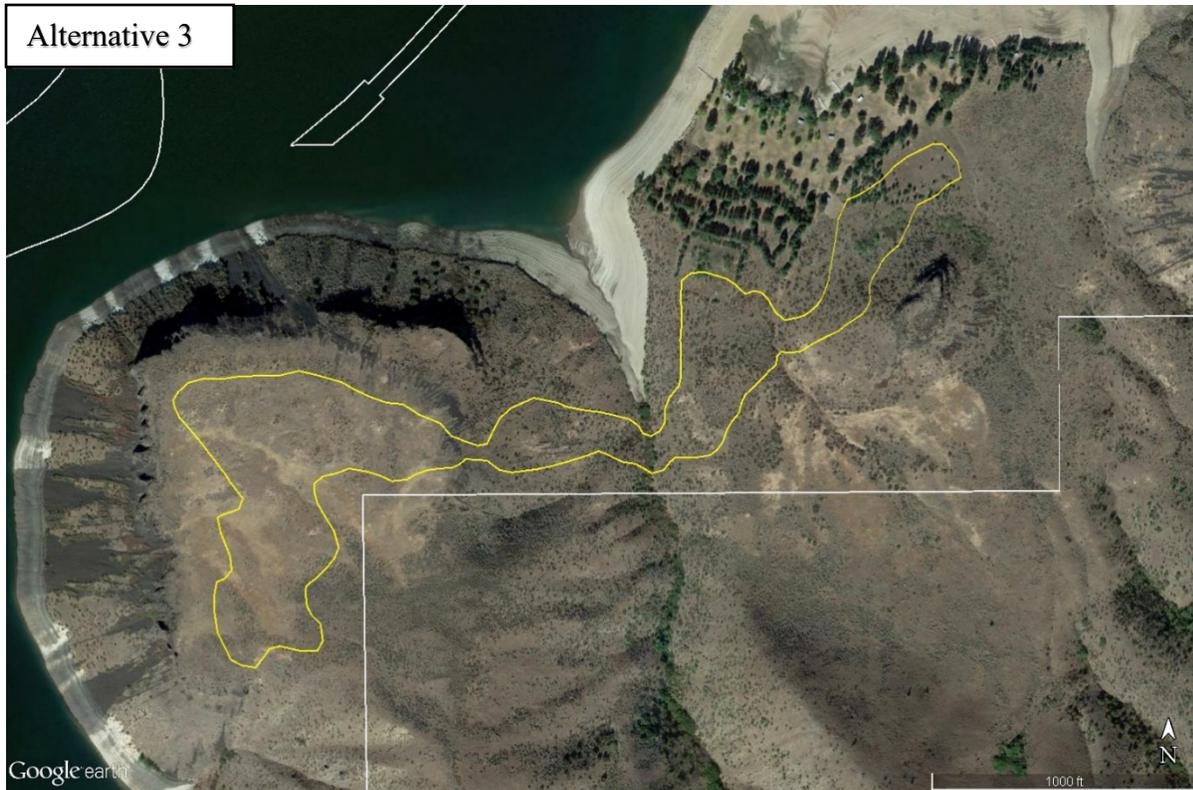


Figure 13. Area of Proposed Pedestrian Trail, Alternative 3, at Chimney Rock.

Required Design Features for All Action Alternatives

Noxious Weeds and Invasive Plants

Treatment on Corps lands would be in accordance with the Walla Walla District Pest Management Plan (USACE 2013). All proposed use of herbicides would be selected from the preapproved list in the plan. Application would follow the Best Management Practices of the plan (pages 11-14)

Treatment on BLM managed lands would be in accordance with the Boise District Noxious Weed and Invasive Plant Management Environmental Assessment (DOI-BLM-ID-B000-2016-0002 EA). All proposed use of herbicides must be coordinated with the Authorized Officer before implementing weed treatments and follow Appendix D – Required Design Features, Best Management Practices, and Standard Operating Procedures of the Boise District Noxious Weed and Invasive Plant Management EA (pages 68- 87).

During construction, workers would inspect, remove, and properly dispose of weed seed and plant parts found on clothing and equipment. Proper disposal means bagging and incinerating seeds and plant parts or washing equipment in an approved containment area.

All disturbed areas would continue to be inspected and documented for at least three growing seasons following construction. Weeds would be treated with the appropriate herbicide or removed.

Cultural Resources

Pursuant to 43 CFR 10.4(b), Depending on the land ownership the appropriate responsible person (Supervisory Archeologist in Walla Walla on Corps land and the BLM Field Manager for BLM land) must be notified by telephone, with written confirmation immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined in 43 CFR 10.2) on federal land. Pursuant to 43 CFR 10.4 (c), the construction team must immediately stop any ongoing activities connected with the discovery and make a reasonable effort to protect the discovered remains or objects.

- Trail construction activities would not resume in the identified area until notified by the Supervisory Archeologist or BLM Field Manager, to proceed.
- Any decision as to proper avoidance, protection or mitigation measures would be made by the authorized officer.

Any unanticipated discovery of cultural and/or paleontological resource or historic or prehistoric site, object or feature shall be immediately reported to the Supervisory Archeologist on Corps land and the BLM Field Manager on BLM Land so that an evaluation can be made to determine the significance of the discovery.

- Trail construction activities would not resume in the identified area until notified by the Supervisory Archeologist or BLM Field Manager to proceed.

Wildlife

Trail construction would not occur from November 15 to March 15, to minimize disturbance to big game on winter range. Trail construction that is done before April 15 would require that wintering wildlife have left the area before work begins. Presence of wintering wildlife would be determined by visual survey, and through consultation with IDFG.

Wastes, Hazardous or Solid

Fueling and equipment maintenance activities would not take place within 100 ft of any live water (stream, pond, lake, etc.) or any drainage (perennial or ephemeral.) All product containers (oil and hydraulic fluid cans, etc.) would be removed from the site and disposed of properly.

Soils contaminated by fuel spills would be removed and disposed of properly.

Any fuel spills would be reported to the USACE and BLM depending on land ownership of the spill location.

2.2 Alternative Comparison

Screening criteria related to the Purpose and Need for the action and other operational needs were developed to compare the alternatives. Alternatives were screened based on the following criteria (Table 2):

1. Provide additional multi-purpose recreational opportunities.
2. Require no initial construction expenses by the Corps.
3. Compliant with the Corps land use allocation missions (High-Density Recreation, Low-Density Recreation, and Wildlife Management) established in the Lucky Peak Master Plan (USACE 1988) and the BLM's Kuna MFP, for segments of the trail on BLM land.

Table 2 Alternative Screening

Alternatives	Alternative Screening Criteria		
	Provides Additional Multi-Purpose Recreation Opportunities	Initial Corps Construction Expenses	Compatible with Corps Land Use Allocation Missions
1-No Action	No	No	Yes
2- Multi-Purpose Trail	Yes	No	Yes
3- Pedestrian Loop Trail	Partial	No	Yes

Alternative 1 (No Action) would require no additional construction actions because no new construction would occur. However, it would fail to provide additional multipurpose recreational opportunities. It would be compatible with the Corps land use allocation missions established in the Lucky Peak Master Plan. It would not impact current wildlife values. CEQ regulations require an analysis of the No Action Alternative for the evaluation of environmental effects of the alternatives on the affected environment, so it is also carried forward for further analysis in Section 3.

Alternative 2 (Multi-Purpose Trail) would provide new multi-purpose access to the undeveloped recreation areas along the south shore of Lucky Peak Lake through the development of a 15-mile multi-purpose trail constructed and maintained by SWIMBA through a partnership agreement. The proposed multi-purpose trail would be compatible with the Corps land use allocation missions established in the Lucky Peak Master Plan. Therefore, Alternative 2 is carried forward for further analysis in Section 3. Alternative 2 was also chosen as the preferred alternative.

Alternative 3 (Pedestrian Trail) would provide recreational trail access to the Chimney Rock area for some user groups (pedestrian users after accessing the area with boats) and would be compatible with the Corps land use allocation missions established in the Lucky Peak Master Plan. Access to the trail would only be by boat but does provide partial multipurpose recreational alternatives and would be compatible with the Corps land use allocation missions established in the Lucky Peak Master Plan. Therefore, Alternative 3 is carried forward for further analysis in Section 3. Alternative 3 is not the

preferred alternative but may be considered for development if the Corps is unable to complete the preferred alternative or resources come available to complete Alternative 3 at a later date.

Based on the alternative screening, Alternative 2 more fully meets the Purpose and Need and the screening criteria and is carried forward for detailed analysis as the preferred Alternative in Section 3. Alternative 3 was maintained for further consideration as a secondary alternative to Alternative 2 if resources are limited and Alternative 2 cannot be completed or it is determined that Alternative 3 may enhance Alternative 2 later. CEQ regulations require an analysis of the No Action Alternative for the evaluation of environmental effects of the alternatives on the affected environment, so it is also carried forward for analysis in Section 3.

Section 3 -AFFECTED ENVIRONMENT – ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This section describes the existing affected environment (existing condition of resources) and evaluates potential environmental effects (consequences) on those resources for each alternative. The Lucky Peak Dam and Lake Final Environmental Impact Statement (USACE 1976) provides detailed information for a variety of resources for the entire area. This EA focuses on the existing resources that may be potentially impacted by the alternatives retained for analysis.

Alternative 1 (No Action), Alternative 2 (Multi-Purpose Trail), and Alternative 3 (Pedestrian Loop) were carried forward for analysis in this section. Alternative 1 does not propose any specific management actions beyond normal operations and maintenance actions at the Project and is used as a baseline for comparison with Alternative 2 and 3. The primary management activities associated with the No Action Alternative would be treatments to contain the invasive and nuisance plants as authorized under the Walla Walla District Pest Management Program (USACE 2013).

Alternative 2 proposes the construction of a 15-mile multi-purpose recreational trail. Environmental consequences are evaluated for various resources. Although only relevant resource areas are specifically evaluated for impacts, the Corps considered all resources in the proposed project area and determined which ones to evaluate in further detail. Those resources considered, but not evaluated further, are shown in Table 3.

Alternative 3 proposes the construction of a 1.8-mile trail loop. The environmental consequences and potential effects for Alternative 3 are similar to Alternative 2 only less due to the shorter length of the trail.

Table 3 Environmental resources not Evaluated in Further Detail

Environmental Component	Explanation
Air Quality	The proposed action would occur within an attainment area and any emissions associated with the work would be expected to be below the de minimis impact level as much of the work would be done with hand tools and small motorized equipment.
Noise	The proposed action would occur in a rural location east of Boise, Idaho. The proposed action would be in a rural setting with minimal areas that would be impacted by noise associated with the proposed action. Any noise generated would be short-term and below dangerous levels.

Socioeconomics	The potential socioeconomic impacts of the proposed action are strongly tied to recreational impacts, so these impacts would be the same as the recreational impacts.
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3.2 Soils

3.2.1 Affected Environment

Five soil mapping units comprise almost 80% of the project area (Natural Resource Conservation Service (NRCS 2018). These are: 1) Ladd-Searles complex, 30 to 65 percent slopes, 2) Searles-Ladd complex, 30 to 65 percent slopes, 3) Gem-Rock outcrop complex, 5-40 percent slopes, 4) Brent loam, 12 to 30 percent slopes, and 5) Ladd-Ada complex, 30 to 60 percent slopes.

Soil textures are generally gravelly to very gravelly loams to sandy loams, with rock outcrops common and some clay loam layers. Depth to bedrock ranges from 12 inches to more than 80 inches. None of these soil series are on the hydric soil list, indicating well-drained soils and deep water tables with no substantial inundation during the year. Parent materials are primarily colluvium over basalt or granite, with some inclusions of loess and alluvium.

The NRCS reports that these soil mapping units have somewhat limited to very limited ratings for the construction of paths and trails. These ratings are based on soil properties affecting trafficability and erodibility including stoniness, slope, texture of the surface layer, and other properties.

3.2.2 Environmental Consequences

Alternative 1: No Action

The primary management activities associated with the No Action Alternative would be treatments to contain the invasive and nuisance plants as authorized under the Walla Walla District Pest Management Program. Any direct or indirect effects to soil resources from plant treatments would be minor and of a short-term duration. Current cross country recreational and other uses would be expected to continue or possibly increase with an increasing population. They are expected to have minimal impacts to the soil resource but depending on use could lead to erosion impacts.

Alternative 2: Proposed Action

Alternative 2 activities associated with the construction, maintenance, and use of the proposed multi-purpose trail would have minor negative impacts on the soil resource with the implementation of proposed construction methods. SWIMBA, the volunteer organization that would be constructing and maintaining the trail, has had considerable experience constructing trails on similar landscapes. The design would follow the design parameters for bicycles Trail Class 3 on page 53 of the US Forest Service's Trail Fundamentals and Trail Management Objectives (USDA FS, 2016).

The trail would be constructed following the U.S. Forest Service Trail Class Matrix and Design Parameters with the designated use being bicycles. Soils displacement to create a flat track would be limited to the trail prism itself which would be approximately 3.6 acres over the proposed 15 miles of multi-purpose trail construction. Soil displacement, erosion, and loss of vegetation cover would be minor.

Surface disturbance associated with trail construction on 0.64 miles (.2 acres) of BLM-managed lands would directly impact soils through removal of soil stabilizing agents causing increased erosion and soil loss from and adjacent to the route. The direct effects are expected to only last for the duration of the construction period. The trail tread surface would be slightly sloped to facilitate drainage and shed water across the trail instead of down the tread. Indirect effects include general erosion of the trail surface, and short-term sedimentation into the stream areas where foot bridges would be built. Indirect effects are expected until the disturbed area revegetates and throughout the life of the trail.

Alternative 3: Pedestrian Loop Trail

Soil displacement to create a flat track would be limited to the trail prism itself which would be approximately 0.5 acres over the proposed 1.8 miles of trail construction. Activities associated with the construction and maintenance of the loop trail would be similar, for the length of the trail to Alternative 2.

3.3 Aquatic Habitats

3.3.1 Affected Environment

There are a variety of aquatic habitats present in the Lucky Peak area. Lucky Peak Lake fluctuates between the minimum operating pool (MOP) level elevation of 2905 feet and the normal operating pool level elevation of 3055 feet. As the lake water level recedes during the summer, more vegetated shoreline is exposed resulting in sedimentation to the lake from wave action and other activity.

Small linear riparian areas, some with wetland characteristics, are present along some of the tributary streams flowing into Lucky Peak Lake along the south shore. These streams include Lydle Gulch, Turner Gulch, Pipeline Gulch, Charcoal Creek (BLM Land), Birch Creek (BLM Land), Sam's Gulch, and Long Gulch as shown in Figure 14. These streams are intermittent, flowing during spring snowmelt and after major rain events. The vegetation along these intermittent streams includes wild rose (*Rosa sp.*), willow (*Salix sp.*), Alder (*Alnus sp.*), hawthorn (*Crataegus sp.*), and boxelder (*Acer negundo*).

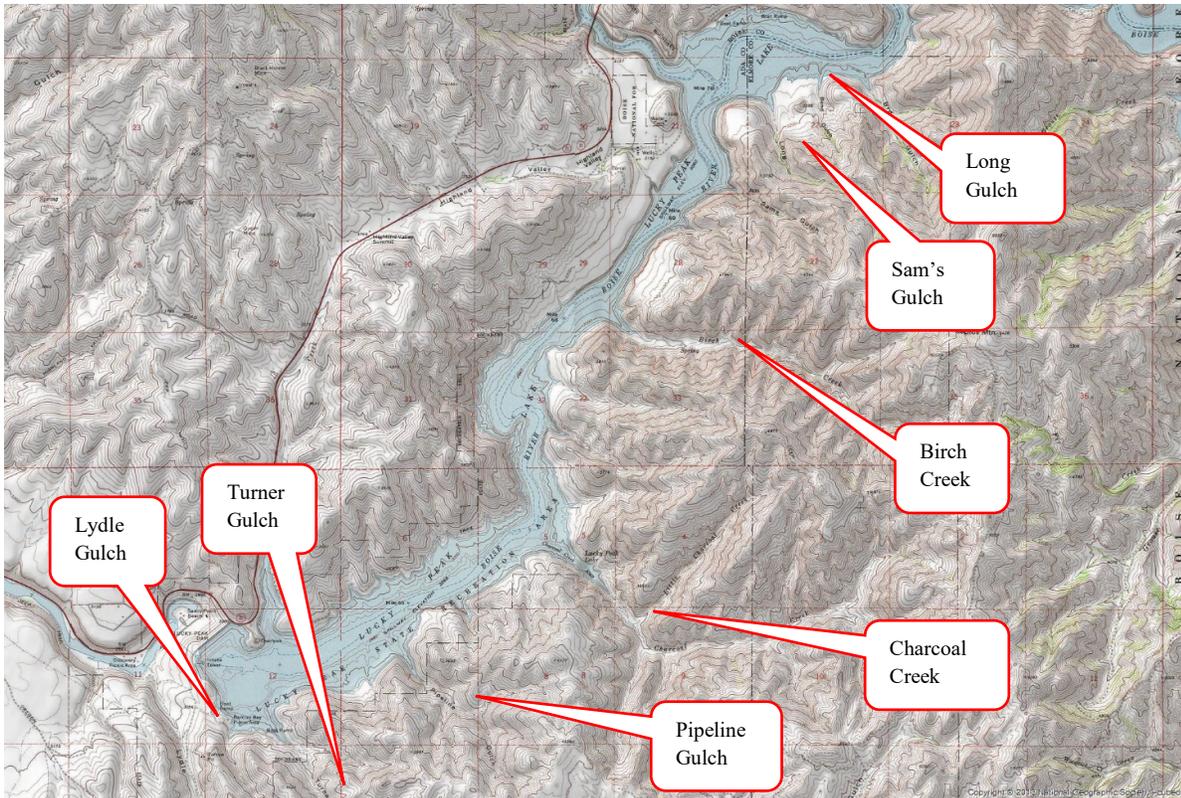


Figure 14. Tributary Streams flowing into Lucky Peak Lake

3.3.2 Environmental Consequences

Alternative 1: No Action

The primary management activities associated with the No Action Alternative that could affect aquatic habitats would be herbicide treatments to contain the invasive and nuisance plants as authorized under the Walla Walla District Pest Management Program. These treatments would maintain water quality of Lucky Peak Lake and tributary streams by maintaining native vegetation and ground cover which would reduce sedimentation into aquatic habitats. Continued current recreational use would have minimal negative impacts to aquatic habitats.

Alternative 2: Proposed Action

Alternative 2 activities associated with the construction, maintenance, and use of the proposed multi-purpose trail would have minor negative impacts to aquatic habitats similar to the “No Action” alternative. These possible impacts are increased turbidity from trail runoff during storm events, and removal of riparian vegetation were the trail crosses intermittent streams.

The production of sediment in riparian areas of tributary streams during construction of the proposed trail would be minor and of short duration and unlikely to be transported to Lucky Peak Lake. A total of two stream crossings would occur on BLM managed lands on Charcoal Creek and Birch Creek. The remaining stream crossings would be on

Corps lands. Short-term minor sedimentation into the streams where foot bridges and retaining walls would be built is expected from soil disturbance and minor riparian vegetation removal during construction. Bridges and retaining walls in the long term would minimize impacts from pedestrian travel, vegetation removal and soil movement during storm events or spring runoff.

The implementation of proposed construction methods by SWIMBA of working when the soil is moist, keeping trail slopes to a minimum, structuring the trail to shed water properly would lower runoff velocity thereby reducing soil erosion and displacement which would reduce potential impacts to aquatic habitats. SWIMBA would follow the construction standards of the U.S. Forest Service Class Matrix and Design Parameters. The design would follow the design parameters for bicycles Trail Class 3 on page 53 of the US Forest Service's Trail Fundamentals and Trail Management Objectives (USDA FS, 2016).

Alternative 3: Pedestrian Loop Trail

Activities associated with the construction, maintenance, and use of the proposed loop trail would have impacts to aquatic habitats similar to Alternative 2.

3.4 Vegetation

3.4.1 Affected Environment

Vegetation in the project area is currently dominated by grass-shrub plant communities. Grass species include: bluebunch wheatgrass (*Pseudoroegneria spicata*), prairie junegrass (*Koeleria macrantha*), foxtail barley (*Hordeum jubatum*), basin wildrye (*Leymus cinereus*), Sandberg bluegrass (*Poa secunda*), rough fescue (*Festuca campestris*), and Idaho fescue (*Festuca idahoensis*). Forb species include: arrowleaf balsamorhiza (*Balsamorhiza sagittata*), Lupine (*Lupinus sp.*), Longleaf hawksbeard (*Crepis acuminata*), yarrow (*Achillea millefolium*), buckwheat (*Eriogonum sp.*), and stickseed (*Hackelia sp.*). Shrubs include: big sagebrush (*Artemisia tridentata*), threetip sagebrush (*Artemisia tripartita*), antelope bitterbrush (*Purshia tridentata*), wild rose (*Rosa sp.*), and rabbitbrush (*Chrysothamnus and Ericameria sp.*).

In riparian areas previously mentioned in Section 3.3, mesic shrubs and trees are found. Tree species include: black cottonwood (*Populus balsamifera ssp. trichocarpa*), boxelder (*Acer negundo*), black locust (*Robinia pseudoacacia*), black hawthorn (*Crataegus douglasii*), thinleaf alder (*Alnus incana ssp. tenuifolia*), and Rocky Mountain maple (*Acer glabrum*). Shrubs include wild rose (*Rosa sp.*) and willow (*Salix sp.*).

A special status plant survey would be completed on BLM and required state land prior to trail construction on the respective lands.

3.4.2 Environmental Consequences

Alternative 1: No Action

The primary management activities associated with the No Action Alternative would be treatments to contain the invasive and nuisance plants as authorized under the Walla Walla District Pest Management Program. These treatments would improve the vegetative composition of the existing areas, allowing native species to maintain their presence. Continued current recreation would have minimal negative impacts to vegetation. Minimal negative vegetation impacts occur at existing boat-in recreation sites.

Alternative 2: Proposed Action

Activities associated with the construction, maintenance, and use of the proposed multi-purpose trail would have minor negative impacts to the existing vegetation. Alternative 2 would permanently remove approximately 3.6 acres of mainly of grasses and shrubs along the trail, with the length being approximately 15 miles and an average width of 2 feet. Approximately .2 acres of vegetation would be disturbed on BLM-administered lands.

Soil disturbance due to the construction and subsequent use of the trail and could create an entry point for invasive plant species, by exposing new areas of bare soil. This could lead to the introduction of weeds into areas that they are not currently growing. This impact would be minimized by treatments to contain the invasive and nuisance plants as authorized under the Walla Walla District Pest Management Program. Herbicides to eliminate invasive species, and proper sloping of the trail to reduce runoff, would be used during and post construction of the trail to reduce potential impacts to vegetation and the surrounding area.

The increased use in the area may increase the potential for human caused fires. The potential would be addressed through signage detailing the risk and responsibilities of users, vigorous enforcement of fire restrictions, and potential closure of the trail during the fire season.

The clearing of a two-foot wide section of vegetation for the trail has the potential to hinder the spread of fires started on the reservoir side of the trail were camping and most of the recreation takes place. The trail would be routed behind the recreation sites, with possibly wider tread to further hinder the spread of fire. This would offer some containment potential from recreation use where none currently exists.

In areas of low-density recreation development, such as Charcoal and Placer Point recreation areas, the trail width may be increased. The wider trail would allow for an improved fuel break while additionally facilitating access to restrooms.

Alternative 3: Pedestrian Loop Trail

The impacts to vegetation from Alternative 3 would be similar to the impacts from Alternative 2, only the amount of vegetation removed would be less. Construction of the

trail prism would directly eliminate less than .5 acres of vegetation along the 1.8 miles of two-foot-wide trail.

3.5 Wildlife

3.5.1 Affected Environment

The Lucky Peak environment contains a wide variety of wildlife species including mammals, amphibians, reptiles, and birds. The Lucky Peak Dam and Lake Environmental Impact Statement (EIS) (USACE 1976) contains lists of species found throughout the area. Lucky Peak Dam and Lake is in the center of the most important mule deer (*Odocoileus hemionus*) winter habitat in Idaho. Some of the highest winter densities of mule deer are found in the Boise River Wildlife Management Area which is managed by IDFG. Figure 15 shows raw counts (numbers) of mule deer observed during a survey conducted in January 2018.

Project lands classified as Wildlife Habitat along the proposed trail have been licensed to IDFG for the maintenance and development of wildlife habitat especially for mule deer. These grass-shrub plant communities are particularly productive and sensitive environments for mule deer and Rocky Mountain elk (*Cervus canadensis*). Large numbers of mule deer (approximately 7,000) and elk (approximately 500) winter in the BRWMA. The Corps has a stewardship responsibility for these areas that transcends management agreements with the licensee and will use its resources and professional expertise to preserve and protect these areas as productive areas for both consumptive and non-consumptive wildlife recreation.

Other mammals common to the Project include pronghorn (*Antilocapra americana*), coyote (*Canis latrans*), black bear (*Ursus americanus*), cougar (*Puma concolor*), red fox (*Vulpes vulpes*), and many small mammals.

Birds, including the American bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), and osprey (*Pandion haliaetus*), are commonly seen throughout the area along with other raptors, upland game birds, and songbirds. While sage-grouse are found several miles south of the Project area, they are not normally seen in the Project area due to the low habitat suitability.

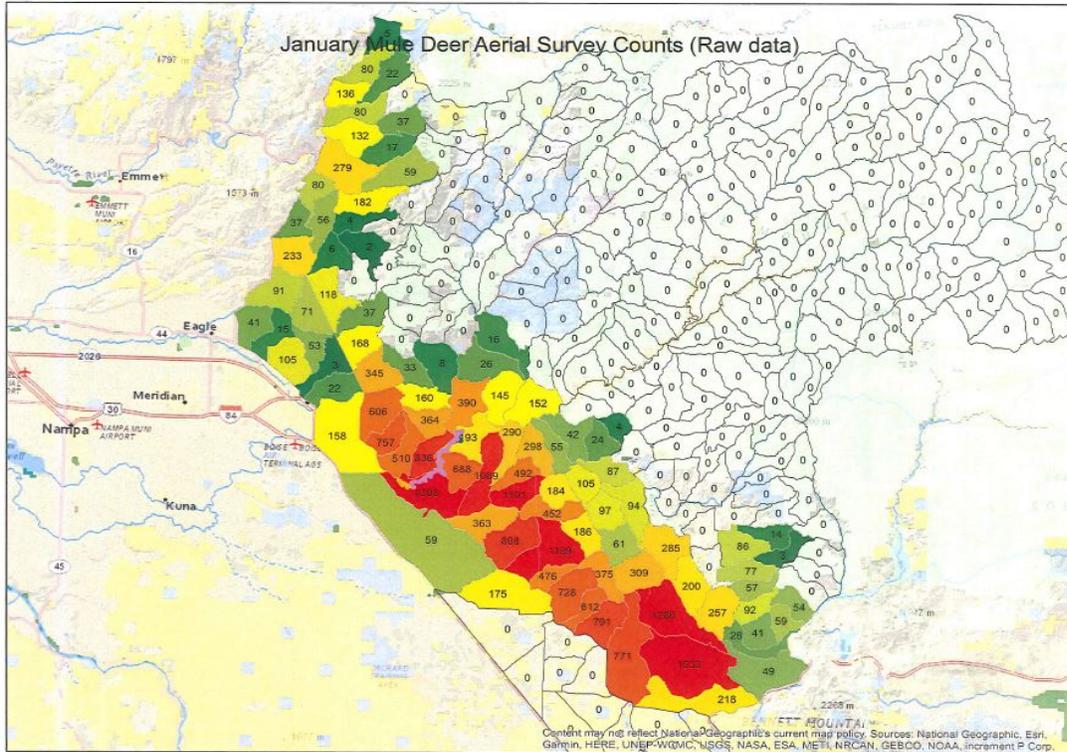


Figure 15. January 2018 Aerial Survey Mule Deer Counts near Boise, Idaho.

3.5.2 Environmental Consequences

Alternative 1: No Action

The primary management activities associated with the No Action Alternative would be continued recreational uses accessed by boats and treatments to contain the invasive and nuisance plants as authorized under the Walla Walla District Pest Management Program and the management of recreational use of the campground. The invasive plant treatments would maintain habitat conditions for native plant communities benefiting wildlife. Current recreational uses, primarily during the summer season, would cause minimal negative impacts to wildlife as recreation impacts a fraction of the area, and many animal species have adapted to these regular activities.

Alternative 2: Proposed Action

Alternative 2 activities associated with the construction, maintenance, and use of the proposed multi-purpose trail have the potential to minimally impact wildlife. These impacts come from opportunities for hiking, hunting, fishing, mountain biking, bird watching, etc., in a portion of the Project area where access was previously limited due to steep terrain. It would create land access to recreation areas that were previously only available by boat. It also increases the potential for fire, weeds, and erosion.

Several factors minimize the potential impact. Construction would not begin prior to April 30th unless the area had been surveyed and in conjunction with IDFG it was determined that wintering big game have left. The trail would be placed at the very

edge of terrestrial habitat near the lake thereby avoiding habitat fragmentation of the upland steppe. The proposed trail would allow easier access for hunters, however, existing IDFG laws and regulations minimize negative hunting impacts. The proposed seasonal trail closure from November 16 through April 30 (and during additional periods, if needed) would minimize, or functionally eliminate trail caused negative impacts to wildlife, including mule deer and elk wintering in the area.

Monitoring would be conducted during Phase 1 construction and operation of the proposed trail to Placer Point for potential trespass issues during the proposed seasonal closure. The majority of the Phase One portion of the trail could be monitored from the Natural Resource Management Office by closed-circuit television cameras. Year-round park rangers would patrol the area of Phase One activities from roads, water, and trails enforcing the closure with citation authority. Park hosts would also monitor for trespass. Monitoring for trespass would reduce human wildlife interaction impacts during the winter.

Implementation of Phase Two trail construction to Chimney Rock would be contingent on assessing results demonstrating minimal levels of trespass and other negative impacts from possible unknown or unintended consequences due to trail development. During the second season after the trail is built Corps, IDFG, and BLM personnel would meet to determine whether acceptable levels of trespass and impacts were observed. If acceptable levels of impact are met, authorization to move forward with Phase Two of trail construction to Chimney Rock would be implemented.

Additional trails exist on the lands bordering the trail, almost all are parallel to the trail and high upon the ridge over a mile from the proposed trail. There are also trail-like bulldozer lines, in the area that run from the ridge down toward the reservoir. Two primitive undeveloped paths, one at 1.5 miles from the start of the trail and another 3.5 miles, run from the upper ridge south of the trail and terminate near the proposed trail. Except for the two primitive paths no additional connections are known in the area or if they did connect, such as the bulldozer lines, they would not be usable by the public.

The area south of the trail is steep and rugged. Traveling on bike or foot is hazardous and difficult from the ridge down to the trail. The number of individuals able to transverse the area is highly limited. Use of the two primitive paths at 1.5 and 3.5 miles would be minimal as well. Accessing the reservoir from the upper ridges using these primitive paths would require a 6 to 10-mile cross country trip through rugged country, with an additional arduous hike or bike ride of 1.5 and 2 miles down the mountain side respectively to reach the reservoir. The same areas would be accessed by the proposed trail along a relatively flat trail of 1.5 miles and 3.5 miles respectively. Impact from these paths to Phase Two of the project or the BRWMA, would be dismissible as the intersection points are in Phase One and within the first 3.5 miles of the trailhead.

The area's ruggedness automatically impedes the development of new trails from the upper ridges down to the proposed trail. The Corps will monitor for the development of unauthorized trails intersecting with the proposed Lucky Peak Lake View Trail. Upon

discovery of any trails the Corps will communicate their presence with the affected land management agency, BLM or IDFG. The land management agency will enforce removal of the trails as per their management guidelines.

Negative impacts to large mammals (primarily mule deer and elk) in the BRWMA would be expected to be minimal due to the animals primarily using the area during the winter when the trail is closed. Other factors limiting impact from the proposed trail would include locating the trail along the edge of the management area, and the long distance needed to travel from the trailhead to the management area thereby limiting the number of people with time and the ability to travel the distance to the BRWMA.

Summer use of the trail would have negligible impacts to large mammal species because the number of wildlife in the area is highly reduced due to seasonal migration out of the area to spring and summer ranges. Movements of animals that are in the area are not encumbered by snow, and abundant food sources are available to recover any expended energy needed to move away from the trail.

The trail would be closed to winter use however, there could be a potential for disturbance from trespass causing moderate impacts to large mammals on the landward side of the trail. Wildlife would move away from the trail through snow exerting energy. Food sources to recover energy during the winter would not be readily available.

Negative impacts caused by disturbance, and vegetation removal, to populations of other wildlife species other than large mammals, such as mice, and migratory birds, would be minimal as the trail impacts a small percentage of the total area.

The proposed trail has the potential to protect wildlife habitat from future wildfires by creating a barrier where none currently exists. While the trail is not specifically designed as a fire break it would act as an impediment to fire moving beyond the recreation areas.

Alternative 3: Pedestrian Loop Trail

The type of impacts to wildlife from Alternative 3 would be similar to Alternative 2, however, the amount of impact would be less. The impacts would be limited to the last mile of the 15 miles being assessed under Alternative 2. Use of the trail is expected to be only a fraction of the use of the Proposed Action. The only access to the trail would be by boat. Boating access diminishes during the year as the reservoir level drops, shortening the days of available access to the trail. This would reduce the impacts to wildlife by both the area impacted and the number of people using the area.

3.6 Fisheries

3.6.1 Affected Environment

Lucky Peak Lake, adjacent to the proposed trail, is home to a variety of native and introduced fish species. IDFG annually stocks catchable rainbow trout (*Oncorhynchus mykiss*), and juvenile Kokanee salmon (*Oncorhynchus nerka*). IDFG identified fish species found in Lucky Peak Lake during fish surveys. IDFG indicates that this may not be a complete list of species present, and some of the species may only be present in small quantities or seasonally. Several other fish species were identified in the Lucky Peak Master Plan (USACE 1988). All identified species are listed in Table 4.

Table 4 Fish Species in Lucky Peak Lake

Common Name	Scientific Name
Bluegill	<i>Lepomis macrochirus</i>
Bridgelip Sucker	<i>Catostomus columbianus</i>
Brown Trout	<i>Salmo trutta</i>
Columbia Basin Redband Trout	<i>Oncorhynchus mykiss gairdneri</i>
Largemouth Bass	<i>Micropterus salmoides</i>
Largescale Sucker	<i>Catostomus macrocheilus</i>
Mottled Sculpin	<i>Cottus bairdii</i>
Mountain Whitefish	<i>Prosopium williamsoni</i>
Northern Pikeminnow	<i>Ptychocheluis oregonensis</i>
Rainbow Trout (Hatchery)	<i>Onchorhynchus mykiss</i>
Redside Shiner	<i>Richardsonius balteatus</i>
Sculpin (Var. Species)	<i>Cottus spp.</i>
Smallmouth Bass	<i>Micropterus dolomieu</i>
Speckled Dace	<i>Rhinichthys osculus</i>
Western Mosquitofish	<i>Gambusia affinis</i>
Brown Bullhead	<i>Ameiurus nebulosus</i>
Bull Trout	<i>Salvelinus confluentus</i>
Chiselmouth	<i>Acrochelius alutaceus</i>
Coho (Silver) Salmon	<i>Oncorhynchus kisutch</i>
Cutthroat Trout	<i>Oncorhynchus clarkii clarkii</i>
Kokanee Salmon	<i>Onchorhynchus nerka</i>
Longnose Dace	<i>Rhinichthys cataractae</i>
Mountain Sucker	<i>Catostomus platyrhynchus</i>
Tui Chub	<i>Gila bicolor</i>

No anadromous fish occur near Lucky Peak as the Hells Canyon Complex (Hells Canyon, Brownlee, and Oxbow Dams) blocked anadromous migration upon their completion. The tributary streams flowing into Lucky Peak Lake in the project area are intermittent and do not contain resident populations of any fish species.

3.6.2 Environmental Consequences

Alternative 1: No Action

The primary management activities associated with the No Action Alternative would be the treatments to contain the invasive and nuisance plants as authorized under the Walla Walla District Pest Management Program in the area. The invasive plant treatments would have no negative impacts on fisheries as treatments occur above the

shoreline of Lucky Peak Lake. Current recreational fishing and boating would have minor negative impacts to fisheries as fish are caught and removed from the lake, and boats contribute to the noise pollution underwater.

Alternative 2: Proposed Action

Activities associated with the construction, maintenance, and use of the proposed trail would have minor negative impacts to fisheries in the area. The implementation of proposed construction methods and BMPs by SWIMBA would result in minimal impacts to fisheries due to the distance from Lucky Peak Lake and the effectiveness of measures to minimize sedimentation from the proposed trail. Construction design would follow the U.S. Forest Service Class Matrix and Design Parameters with the designated use being bicycles. Appendix B, describes the construction process that would be used. The production of sediment in riparian areas of tributary streams during construction of the proposed trail would be minor and of short duration and unlikely to be transported to Lucky Peak Lake. The trail would open the south side of the lake to more angler access and would be expected to result in additional take of fish from the lake.

Alternative 3: Pedestrian Loop Trail

Use of the trail is expected to be only a fraction of the use of the Proposed Action. The only access to the trail would be by boat. Boating access diminishes during the year as the reservoir level drops, shortening the days of available access to the trail. The type of impacts to aquatic environments from Alternative 3 would be similar to Alternative 2, however, the amount of impact would be substantially less. The impacts would be limited to the last mile of the 15 miles being assessed under Alternative 2.

3.7 Threatened and Endangered Species

3.7.1 Affected Environment

Several species listed as threatened or endangered under the Endangered Species Act (ESA), were evaluated in the 2013 Programmatic Biological Assessment (BA) (Appendix A). Since the Programmatic BA was complete, several species have been removed from the listing or while still listed are not found in the Proposed Action area. A more recent listing of ESA species identified as having the potential to occur in the area of the Proposed Action (U.S. Fish and Wildlife Service 2019) are: bull trout (*Salvelinus confluentus*), slickspot peppergrass (*Lepidium papilliferum*), and yellow-billed cuckoo (*Coccyzus americanus*).

Bull Trout: Bull trout are listed as threatened and critical habitat is designated under the ESA. A small population of bull trout was found in 2000 and 2001 in Mores Creek (a tributary to Lucky Peak Lake). Fish are believed to pass from Arrowrock Dam into Lucky Peak Lake becoming stranded. All bull trout that inhabit Lucky Peak Lake are regarded and treated as movement blocked or entrained fish from Arrowrock Dam. Entrained fish are considered “taken” by the USFWS. Therefore, bull trout in Lucky Peak are not addressed when considering indirect impacts to the fish. However, the

proposed trail is buffered from the water edge and does not cross any perennial streams and therefore would have no further effect even upon entrained fish.

Slickspot Peppergrass: Slickspot peppergrass is listed as threatened with proposed critical habitat under ESA. Slickspot peppergrass occurs only in sagebrush steppe habitats in southwestern Idaho, including the Snake River Plain, Owyhee Plateau, and adjacent foothills in Ada, Canyon, Elmore, Gem, Owyhee, and Payette Counties. However there is no known potential habitat or local populations of slickspot peppergrass in the area of the proposed trail, but the species is known to occur outside the Project area around Boise.

Yellow-billed Cuckoo: The western yellow-billed cuckoo is listed as threatened with proposed critical habitat under the ESA. Yellow-billed cuckoos prefer open woodlands with clearings and a dense shrub layer. They are often found in woodlands near streams, rivers, or lakes, but yellow-billed cuckoos occur most frequently and consistently in cottonwood (*Populus spp.*) forests with thick understory (Taylor 2000). The closest known occurrence of yellow-billed cuckoo near Lucky Peak is in the Barber Pool area downstream of Lucky Peak Dam. Based on the habitat requirements of the species, it is unlikely to occur on Corps land upstream of the dam due to the lack of suitable habitat.

3.7.2 Environmental Consequences

Alternative 1: No Action

The primary management activities associated with the No Action Alternative would be treatments to contain the invasive and nuisance plants as authorized under the Walla Walla District Pest Management Program. The invasive plant treatments would have no effect on any of the ESA listed species potentially occurring in the Lucky Peak area. Little suitable habitat exists for any of these ESA-listed fish, bird, or plant species. One-way movement of bull trout through Arrowrock Dam would continue stranding bull trout in Lucky Peak Lake.

Alternative 2: Proposed Action

The ESA-listed species having the potential to occur in or near the Proposed Action area were evaluated in the Programmatic BA in 2013 (Appendix A, Lucky Peak Natural Resource Management Activities Programmatic Biological Assessment and USFWS Concurrence Letter). The BA specifically mentioned the possibility of the construction of a recreation bike trail along the southern shore of Lucky Peak Lake.

Possible effects to ESA listed species would be so minimal that they are discountable for the Proposed Action Alternative. Slickspot peppergrass and yellow-billed cuckoo are not present nor is suitable habitat for them. Given that the project would be constructed above the ordinary high-water mark and not cross over any perennial tributaries, and seasonally dry tributaries would be bridged; construction, operation, and maintenance of the trail would have no effect on bull trout. Table 5 summarizes the potential effects of the Proposed Action Alternative on the listed species.

Table 5 Proposed Action Alternative Effects on ESA-Listed Species

Species	Species Determination	Critical Habitat Determination
Bull Trout	No Effect	No Effect None Present
Slickspot peppergrass	No Effect	No Effect None Present
Yellow-billed cuckoo	No Effect	No Effect None Present

Alternative 3: Pedestrian Loop Trail

The impacts to threatened and endangered species from Alternative 3 would be similar to Alternative 2. There are no threatened and endangered species in the area and therefore no impacts to threatened or endangered species for Alternative 3.

3.8 Cultural Resources

3.8.1 Affected Environment

A survey of approximately 114 acres of land along the route of the proposed multi-purpose trail was conducted by a Corps cultural resource specialist in 2016. Six additional resources (two historic sites, and four historic isolated finds) were identified; all of which are recommended as “not eligible” for the National Register of Historic Places (NRHP). Therefore, the Corps determined that the Lake View Trail project would not result in significant impact to historic properties and can proceed as planned.

The proposed Action area occurs on the extreme margin of the Snake River Plain extending into the Idaho-Bitterroot Range of the greater Rocky Mountains. The Snake River Plain represents a transitional zone between the Great Basin and the Northern Plains.

Changing climate and shifts between biotic resources influenced cultural adaptation within the Project area. It has been hypothesized that the Snake River Plain region was more culturally connected to the Northwest Plains until about the fifteenth century A.D (Butler 1986). At that time, traits similar to those found further west and south became apparent. These hunter-gatherer traditional cultures continued into the early 19th century coinciding with Canadian and American fur traders establishing trading posts throughout the region and beginning the early Euro-American expansion west.

Native inhabitants have occupied areas to the east of this area as long as 12,000 years before present, based on spear points found in association with now extinct mega-fauna (mammoth, camel, horses, etc.) Evidence of house structures of the Northern Fremont tradition, from approximately 500 A.D. until the fourteenth or fifteenth century, is present on the Snake River Plain up to the margins of the mountains at its northern edge. The first evidence of Shoshonian culture in southern Idaho in the Birch Creek Valley is dated to the early nineteenth century though they may have expanded into the region much earlier as part of food collecting activities (Butler 1986).

The first recorded forays into the immediate Project area by early fur traders date to 1811. By the 1830s, the route along the Boise River was well established as trading posts were constructed at Fort Hall and Boise. Settlers began arriving along the Oregon Trail in the mid-1830s, which remained active until the completion of the trans-continental railroad in 1869. The discovery of gold in August 1862 led to extensive permanent settlement in the region. The first settlers arrived in 1863 and platted the original town of Boise three-quarters of a mile north of the Boise River. Irrigated agriculture was the primary focus in the growth and settlement of the area.

The Boise Project created a dam diverting water through the New York Canal into Deer Flat Reservoir for irrigation use. Arrowrock Dam was created in 1915 to provide additional water storage for the burgeoning agricultural community centered around Boise. Arrowrock Dam was expanded in 1937 and work was begun on Anderson Ranch Dam in 1940 but halted in 1943 due to labor needed for the war effort. Plans were presented for the construction of Lucky Peak in 1944 and construction was completed in 1955.

3.9 Environmental Consequences

Alternative 1: No Action

The No Action Alternative would have no effect on cultural resources in the Lucky Peak area. Three cultural resource sites have been identified during prior surveys in this area, and continued Project actions would have no effect on these cultural resource sites.

Alternative 2: Proposed Action

Activities associated with the construction, maintenance, and use of the proposed multi-purpose, Alternative 2, trail would not result in significant impacts to historic properties. A survey of approximately 114 acres of land along the route of the proposed multi-purpose trail was conducted by a Corps cultural resource specialist in 2016. Six additional resources (two historic sites, and four historic isolated finds) were identified; all of which are recommended as “not eligible” for the National Register of Historic Places (NRHP).

Alternative 3: Pedestrian Loop Trail

Activities associated with the construction, maintenance, and use of the proposed multi-purpose, Alternative 3, trail on historic properties would be the same as Alternative 2. Alternative 3 would have no potential to effect historic properties.

3.10 Recreation

3.10.1 Affected Environment

Lucky Peak Dam and Lake is a popular recreation site for the Boise, Idaho area, providing day-use facilities, camping, and boating access on Lucky Peak Lake and the associated lands (Figure 16). There are 4,079 acres of Corps-managed lands that are

used for public recreation, wildlife habitat, and operation purposes. The Corps manages major recreation facilities at Lydle Gulch, Barclay Bay, Turner Gulch, Macks Creek Park, Mores Creek Park, Robie Creek Park, and a variety of boat-in sites. The state of Idaho operates Lucky Peak State Park at three locations (Discovery Unit, Sandy Point Unit, and Spring Shores) on Lucky Peak Lake. The fiscal year 2015 visitation to Lucky Peak Lake was more than 921,000.

Recreational activities at the proposed trail area are currently limited to individuals who can boat into the semi developed camp and picnic sites. While walk-in access is theoretically possible the rugged terrain and distance from roads make existing walk-in access use dismissible. Activities include boating, hunting, fishing, picnicking, swimming, camping, limited hiking, birdwatching, dog walking, and other activities. Picnic areas include sites with shelters and boat ramps. The area provides approximately 30 picnicking and/or camping sites with boat ramps for access. Expected trail use would affect the Foote park and Lydle Gulch trailheads, and all the picnic/camping sites on the south side of the reservoir.

3.10.2 Environmental Consequences

Alternative 1: No Action

The primary management activities associated with the No Action Alternative would be treatments to contain the invasive and nuisance plants as authorized under the Walla Walla District Pest Management Program. The invasive plant treatments would have minimal negative impacts on recreation, possibly including closures of some areas when weed treatments would occur. Increasing recreational use on existing facilities, such as cross-country hiking in non-developed areas may lead to the creation of unauthorized trails, cause erosion and have negative impacts to vegetation through trampling, reducing recreation experiences for some visitors (Figure 16).

Alternative 2: Proposed Action

Activities associated with the construction, maintenance, and use of Alternative 2, the proposed multi-purpose trail would have both positive and negative impacts to recreation in the area. User access to the area and camping sites are expected to substantially increase, especially in the initial portions of the trail. The access improvement increases the potential for fire, weeds, and erosion. The production of sediment in riparian areas of tributary streams during construction of the proposed trail would be minor and of short duration and unlikely to be transported to Lucky Peak Lake.

After construction of the trail, there would be opportunities for hiking, hunting, fishing, mountain biking, bird watching, etc. in a portion of the Project area where access was previously limited due to steep terrain. It would create land access to recreation areas that were previously only available by boat. The ability to access the area without having to use watercraft would allow access to individuals who do not have the income to purchase and maintain a boat.

Alternative 3: Pedestrian Loop Trail

Activities associated with the construction, maintenance, and use of the proposed Alternative 3 loop trail on recreation would be the similar to Alternative 2. Alternative 3 would differ in that it would offer only 1.8 miles of recreation as opposed to 15 miles for Alternative 2. Alternative 3 would only provide recreational trail access to the Chimney Rock area for user groups that can access the area with boats. This limitation would limit the amount of use of the trail, as well as limit specific activities such as biking.

The trail would only be accessible by watercraft and could limit users that do not have the income to purchase and maintain a boat.

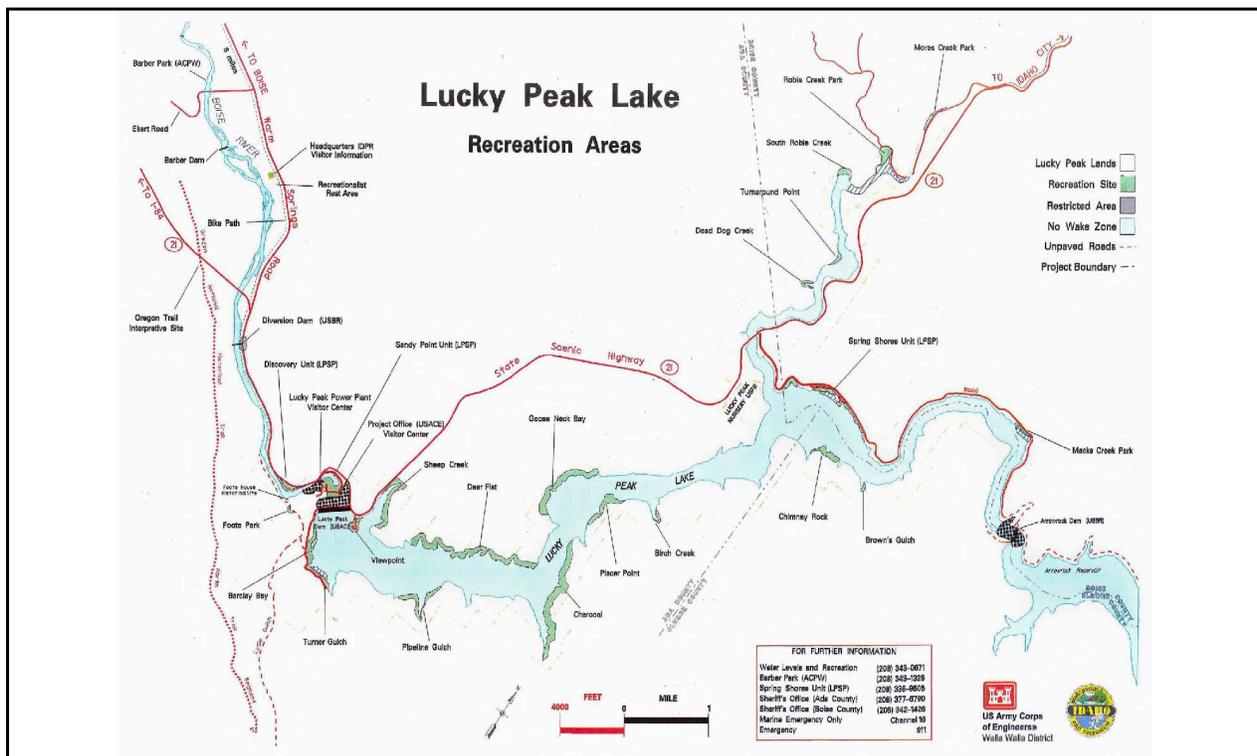


Figure 16. Recreation Areas at Lucky Peak Project.

3.11 Climate Change

3.11.1 Affected Environment

The Proposed Action area includes a variety of resources that could be affected by climate change. Within the Inland Northwest, the climate is trending towards warmer temperatures and drier conditions.

Predicted changes in temperature and precipitation would continue to decrease snow pack, and would affect stream flow and water quality throughout the Inland Northwest region. Warmer temperatures would result in more winter precipitation falling as rain rather than snow throughout much of the Inland Northwest, particularly in mid-elevation

basins such as this area, where average winter temperatures are currently near freezing. The predicted changes would result in:

- Less winter snow accumulation
- Higher winter streamflows
- Earlier spring snowmelt
- Earlier peak spring streamflow and lower summer streamflows in rivers that depend on snowmelt (most rivers in the Inland Northwest).

The decline of the region’s snowpack is predicted to be greatest at low to middle elevations due to increases in air temperature and less precipitation falling as snow. The average decline in snowpack in the Pacific Northwest was about 25% of the last 40 to 70 years, with most of the decline due to the 2.5 degrees F° increase in cool season air temperatures over that period. As a result, seasonal stream flow timing would likely shift significantly in sensitive watersheds (Littell et al., 2009).

3.11.2 Environmental Consequences

Alternative 1: No Action

There would be no direct impacts of the No Action Alternative on climate change, but climate change may negatively impact conditions at Lucky Peak.

Alternative 2: Proposed Action

There would be no quantifiable effects from the Proposed Action of Alternative 2 on climate change.

Alternative 3: Pedestrian Loop Trail

There would be no quantifiable effects from the Proposed Action of Alternative 2 on climate change.

3.12 Summary of Environmental Consequences

The following table (Table 6) summarized the environmental effects of the alternatives considered.

Table 6 Summary of Environmental Effects of Alternatives

Resource Area	Alternative 1 (No Action)	Alternative 2 (Multi-purpose Trail)	Alternative 3 (Loop Trail)
Soils	Invasive plant treatments, which would continue under the No Action Alternative, would cause no detrimental impacts to the soil	Direct impacts would be limited to the trail prism covering approximately 3.6 acres over the proposed 15 miles of trail construction. Impacts include soil displacement, erosion, loss of	Direct impacts would be limited to the trail prism covering less than .5 acres. Additional impacts would be similar to Alternative 2.

Resource Area	Alternative 1 (No Action)	Alternative 2 (Multi-purpose Trail)	Alternative 3 (Loop Trail)
	resource. There would be no additional, detrimental impacts from current recreation activities.	vegetation cover. Proposed construction methods and best management practices would minimize negative impacts to the soil.	
Aquatic Habitats	Invasive plant treatments, which would continue under the No Action Alternative, would cause no detrimental impacts to aquatic habitats. There would be no additional, detrimental impacts from current recreation activities.	Direct impacts caused by the temporary loss of riparian vegetation, increased turbidity, from soil erosion and displacement would be minor and limited to proposed trail crossing locations over linear riparian areas along seasonally dry tributary streams. Bridges and/or retaining walls constructed over these areas would minimize negative impacts of erosion caused by bike and pedestrian traffic passing through the site.	Impacts similar to Alternative 2.
Vegetation	Invasive plant treatments, which would continue under the No Action Alternative, would be positive, reducing the distribution of weeds and allowing native species to maintain their presence.	Direct impacts of the proposed action would be the elimination of approximately 3.6 acres of existing vegetation due to construction of the trail. The trail may impede fires started near the reservoir reducing wildfire vegetation losses. Trail construction could be an entry point for invasive plant species.	Direct impacts of the proposed action would be the elimination of less than .5 acres of existing vegetation due to construction of the trail. Trail construction could be an entry point for invasive plant species.
Wildlife	Invasive plant treatments, which would continue under the No Action Alternative, would improve habitat conditions for a variety of wildlife species. There would be no additional, detrimental impacts from current recreation activities.	Direct impacts to wildlife from trail construction would be minimal. Trail use impacts to mule deer and elk are expected to be minimal due to a seasonal closure. Trail use would be monitored to assess negative wildlife impacts, particularly during the closure period. Trail use periods and Phase 2 construction to Chimney Rock would be contingent on minimal levels of observed trespass.	Direct impacts to wildlife from trail construction would be minimal. Trail use impacts to mule deer and elk are expected to be minimal due to a seasonal inaccessibility.
Fisheries	Invasive plant treatments, which would continue under the No Action Alternative, would cause no detrimental impacts to fisheries. There would be no	There would be no direct detrimental impacts to fisheries from the proposed trail construction. Any sediment produced during trail construction would be unlikely to reach Lucky Peak Lake due	There would be no direct detrimental impacts to fisheries from the proposed trail construction. Any sediment produced during trail construction would be

Resource Area	Alternative 1 (No Action)	Alternative 2 (Multi-purpose Trail)	Alternative 3 (Loop Trail)
	additional, detrimental impacts from current recreation activities.	to the implementation of BMPs and distance.	unlikely to reach Lucky Peak Lake due to the implementation of BMPs and distance.
Threatened and Endangered Species	The No Action Alternative would have no effect on any of the ESA listed species potentially occurring in the Lucky Peak area.	The Proposed Action would have no effect on any of the ESA listed species potentially occurring in the Lucky Peak area.	The Proposed Action would have no effect on any of the ESA listed species potentially occurring in the Lucky Peak area.
Cultural Resources	The No Action Alternative would have no effect on cultural resources in the Lucky Peak area.	The Proposed Action would have no effect on cultural resources in the Lucky Peak area.	The Proposed Action would have no effect on cultural resources in the Lucky Peak area.
Recreation	Invasive plant treatments, which would continue under the No Action Alternative, would cause no detrimental impacts to recreation. Increasing recreational use on existing facilities may cause erosion and negative impacts to vegetation.	The Proposed Action would create opportunities for hiking, mountain biking, bird watching, etc. where access was previously limited due to steep terrain. It would create land access to recreation areas that were previously only available by boats.	The Proposed Action would create opportunities for hiking, bird watching, etc. where access was previously limited due to steep terrain.
Climate Change	There would be no direct impacts of the No Action Alternative on climate change.	There would be no quantifiable effects of the Proposed Action on climate change.	There would be no quantifiable effects of the Proposed Action on climate change.

3.13 Cumulative Effects

The National Environmental Policy Act and the Council on Environmental Quality regulations implementing the Act require federal agencies to consider the cumulative impacts of their actions. Cumulative effects are defined as, “the impact on the environment which results from the incremental impact of an action when added to other past, present and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions” (40 CFR § 1508.7). Cumulative impacts can result from individually minor, but collectively significant actions taking place over time.

The primary goal of a cumulative effects analysis is to determine the magnitude and significance of the environmental consequences of the proposed action in the context of the cumulative effects of other past, present, and reasonably foreseeable future actions.

3.13.1 Resources Considered

The Corps used the technical analysis conducted in this EA to identify and focus on cumulative effects that are “truly meaningful” in terms of local and regional importance. While the EA addresses the effects of alternatives on the range of resources representative of the human and natural environment, not all of those resources need to be included in the cumulative effects analysis – just those that are relevant to the decision to be made on the Proposed Action. The Corps has identified wildlife and recreation as notable for their importance to the area and potential for cumulative effects.

Resources are discussed in terms of their cumulative effect boundary (spatial and temporal), the historic condition and impacts to the resources, present condition and impacts to the resources, reasonably foreseeable future actions that may affect the resources, and the effects to the resource by the various alternatives when added to other past, present, and future actions.

This section evaluates the cumulative effects of actions that could potentially affect the same environmental resources as those discussed earlier in this EA. The scope of this analysis extends beyond the Lucky Peak Project to other areas that sustain the resources of concern. A resource may be differentially impacted in both time and space. The implication of those impacts depends on the characteristics of the resource, the magnitude and scale of the project’s impacts, and the environmental setting (EPA 1999).

3.13.2 Geographic and Temporal Scope of Cumulative Impact Analysis

Guidance for setting appropriate boundaries for a cumulative effects analysis is available from CEQ (1997) and EPA (1999). Generally, the scope of a cumulative impact analysis should be broader than the scope of analysis used in assessing direct or indirect effects. “Geographic boundaries and time periods used in a cumulative impact analysis should be based on all resources of concern and all of the actions that may contribute, along with the project effects, to cumulative impacts” (EPA 1999). The analysis should delineate appropriate geographic areas including natural ecological boundaries, whenever possible, and should evaluate the time period of the project’s effects.

Discussed below are the past, present, and reasonably foreseeable future actions that were considered for the cumulative impact analysis, the effects of the actions on the resources assessed, and a summary of the cumulative effects of the alternatives. Table 7 summarizes the geographic and temporal boundaries used in this cumulative impact analysis.

Table 7. Geographic and Temporal Boundaries of the Cumulative Effects Area.

Resource	Geographic Boundary	Temporal Boundary
Wildlife	Boise River Wildlife Management Area (Boise Front, Charcoal Creek, and Spring Shores Segments)	20 years
Recreation	Boise, Idaho Metropolitan Area	

The geographic boundary for the cumulative effects analysis for wildlife includes actions taking place in the Boise Front Segment, Charcoal Creek Segment, and Spring Shores Segment of the Boise River Wildlife Management Area near Lucky Peak Lake (Figure 17). Recreation cumulative effects are evaluated within the Boise, Idaho Metropolitan area. The timeframe of 20 years was based on a typical planning period for recreation projects. A timeframe of ten years into the future is used for consideration of actions that are reasonably foreseeable to occur. To be reasonably foreseeable, there must be a strong indication that an action/event will occur or be conducted.

Boise River Wildlife Management Area

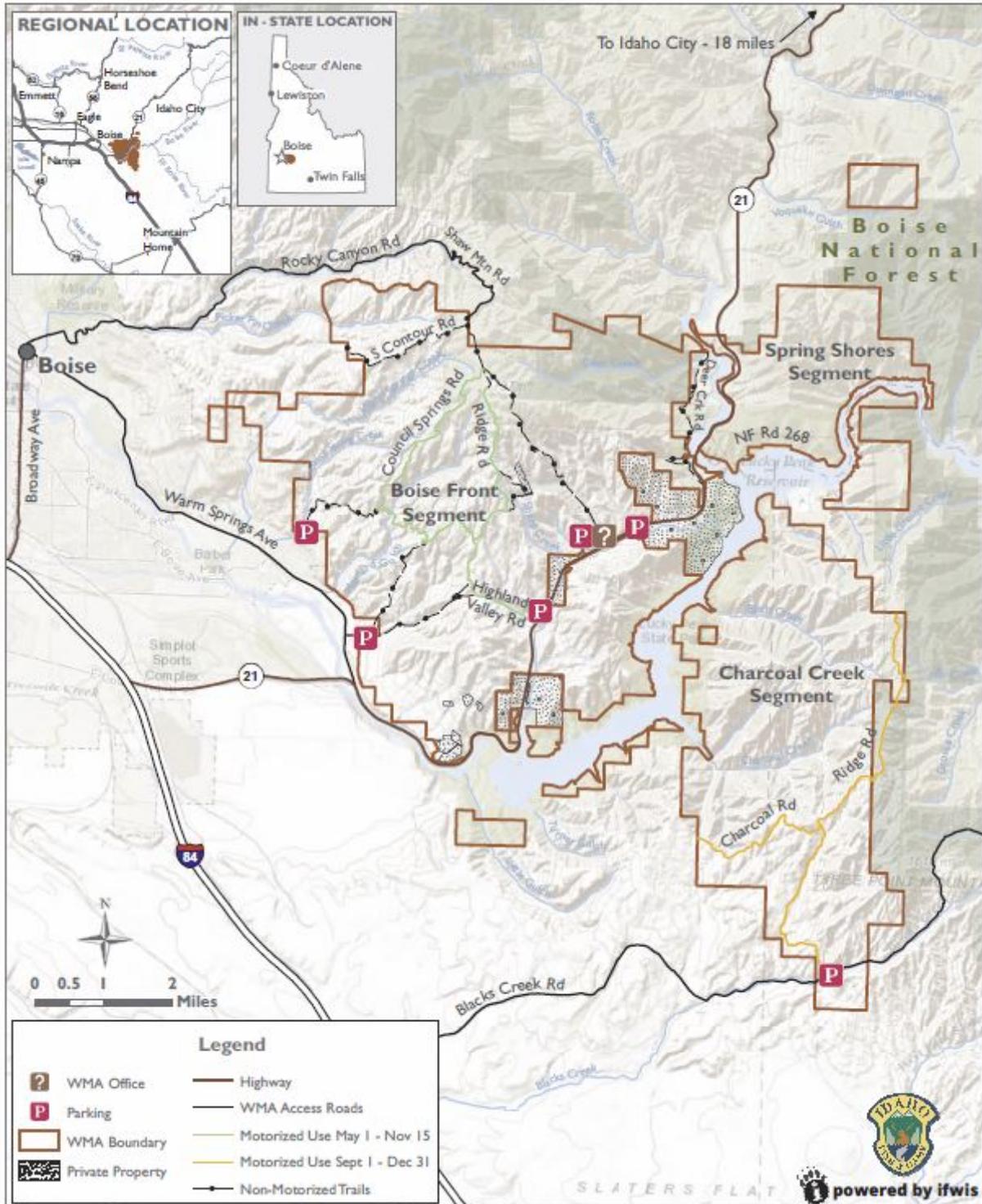


Figure 17. Boise River Wildlife Management Area (Segments near Lucky Peak).

3.13.3 Past, Present, and Reasonably Foreseeable Future Actions and Implications for Resources

The following sections present summaries of past, present, and reasonably foreseeable future actions considered in this cumulative impact analysis, and the effects of those actions on the resources considered.

3.13.3.1 Past Actions

Past actions include the construction of Lucky Peak Dam and Lake and associated facilities. Construction began in 1949 and the dam was dedicated June 23, 1955. An Environmental Impact Statement (EIS), which analyzed the impacts of continuing the operation, management, and maintenance of the Lucky Peak Project, was completed in 1976. Master Plans, which provide a guide for the use, development, and management of land and water resources, including recreation, at Lucky Peak Project were produced in 1955, 1964, and 1988. An EA was completed in 2012 for a disc golf course in Lydle Gulch.

In the late 1980s, the Boise Front Coalition formed to develop a system of trails to connect neighborhoods to public lands in the Boise area. In the 1990s, the Ridge to Rivers cooperative partnership was formed consisting of: the City of Boise, Ada County, BLM-Boise District, Boise National Forest, and IDFG. Since that time over 190 miles of multi-use recreational trails have been established over an approximate 85,000-acre area west of the Project (Ridge to Rivers, 2016).

The Boise River Wildlife Management Area is managed by IDFG, and consists of land owned by IDFG, BLM, U.S. Forest Service, Corps, and Idaho Fish and Wildlife Foundation. The first land for the BRWMA was purchased in 1943 with the mission to conserve mule deer and elk wintering habitat.

Since 2000, mule deer harvests in Unit 39, the unit around the Project, has ranged from a low of 1,292 animals (for harvest by all weapons combined) in 2011 to a high of 4,175 in 2016 (data obtained from <https://idfg.idaho.gov/ifwis/huntplanner/stats/>). Mule deer hunter numbers have increased from 7,650 in 2001 to a high of 14,718 in 2017, and hunting success has ranged from a low of 15 percent in 2008 to a high of 33 percent in 2016.

The Idaho Transportation Department (ITD) installed a wildlife underpass on Highway 21 near mile marker 19. The project also included diversion fencing to funnel wildlife towards the underpass. Fencing consists of 8-foot tall fence with numerous “jump outs” and several pedestrian friendly one-way gates to allow passage for hunters, cyclists, and others.

3.13.3.2 Effects of Past Actions on Resources

Wildlife

Past human development in former winter range from Lake Lowell to Lucky Peak has reduced winter range and migratory patterns of mule deer such that mule deer are more dependent on existing winter range. Past, present, and future plans for residential, road, trail, and infrastructure development in the Boise Front Segment have and are further truncating the area in which mule deer and elk are able to over winter. The project area is within the Charcoal Creek Segment, an area that is relatively undeveloped and provides good winter habitat.

IDFG data since 2000 (<https://idfg.idaho.gov/ifwis/huntplanner/stats/>) show that mule deer harvest has been increasing from approximately 2,000 per year in the early 2000s to more than 3,000 animals per year since 2015. The creation of the BRWMA has promoted mule deer and elk populations in the area and mule deer numbers have increased, even as numbers of hunters have increased.

The installation of fencing to guide elk and deer to a safe crossing point under State Highway 21, has reduced mule deer collisions by 75 to 100 accidents per year and elk collisions by 5-10 each year.

Recreation

A variety of recreational opportunities increased with the creation of Lucky Peak Lake. Lucky Peak State Park, operated by the State of Idaho, developed three recreation units that offer swimming, picnicking, fishing, boating, biking and dog (on-leash) recreation. Recreational opportunities developed by the Corps include day use facilities, picnicking, hiking, boating, camping, hunting, wildlife viewing and other associated outdoor recreation opportunities. Water-based activities have become extremely popular in the area.

The development of multi-purpose trails through the Ridge to Rivers cooperative partnership resulted in a major increase in recreational activities, particularly mountain biking and day hiking. The Boise area has become a popular mountain biking destination, both for locals and visitors traveling from other areas.

3.13.3.3 Present Actions

Present actions include regular operation and maintenance activities at existing Corps recreational facilities at Lucky Peak, including regular treatment of invasive plants as weed locations are identified. Regular operation and maintenance activities occur on the three State Park recreation units operated by the State of Idaho.

Development and maintenance of recreational sites managed by the City of Boise, Ada County, BLM-Boise District, Boise National Forest, and IDFG continues in the surrounding area. Urban parks are being improved and new parks are being developed as population in the Boise area continues to increase. Other state and federal agencies

continue developing recreational facilities in rural locations to meet increasing use demands. There are two roads for motorized traffic that allow access into IDFG's Charcoal Creek subunit, (the subunit where the trail is proposed to be built) of the BRWMA. These roads are open for vehicular access into the deer and elk winter range until December 31st.

3.13.3.4 Effects of Present Actions on Resources

Wildlife

Present actions on Corps sites, including treatment of invasive plant species to maintain habitat for mule deer and elk. Management by IDFG in the BRWMA has resulted in some of the highest winter mule deer densities in Idaho. Mule deer hunting opportunities remain high and harvest success has been consistently high. Partnerships and coordination are used to minimize detrimental impacts to wildlife.

The effects of the proposed Lucky Peak hiking/biking trail that closes in mid-November, on winter range wildlife would have discountable impacts when assessed to the affects the existing motorized roads that run through the winter range and are open until the end of December.

Recreation

Present actions are providing for the development of additional facilities to address increasing levels of recreational demands in the area. As population in the Boise area continues to increase, use of existing facilities also increases. Trail partnerships, including the Ridge to Rivers cooperative partnership, are helping meet demands. Trail use in the Boise area is one of the most popular recreational uses and the continued development of new facilities would meet the increased demand and provide managed recreational opportunities.

3.13.3.5 Reasonably Foreseeable Future Actions

Current and future budget constraints within the Corps has reduced projected development in the Lucky Peak area for Corps projects. The Lucky Peak Trail has been made possible by the resource donation of a local bike club. For the near-term future, until budgets change, the Corps will primarily focus on operations and maintenance activities of existing facilities.

The Corps is currently considering relocating the Lucky Peak office at the bottom of the Dam to an area above the dam. One of the locations being considered is across the road from Barclay bay approximately a half mile from the proposed trailhead. However, no decision on the final location has been made and project also lacks funding at this time.

Future actions include increased development of parks in urban areas. Regular operation and maintenance activities would continue at existing facilities. Trail use in the Boise area is likely to remain a very popular recreational activity and the continued

development of new trails is likely to occur. Technology developments for recreational equipment, may lower the physical ability needed and monetary expenditure required to access the area.

In 2021, a wildlife overpass is planned for construction near mile marker 20 to facilitate movement of big game across the highway corridor.

In 2018 the Boise area was listed as the fastest growing city in the United States (Forbs 2018). This growth is expected to continue in the near future, with the increased demand on recreational activities in the Lucky Peak area.

3.13.3.6 Effects of Future Actions on Resources

Wildlife

The effects of future actions on wildlife would be similar to impacts from past and present actions. Recreational demands would occur and is expected to increase on Corps lands and other ownerships in the area. Operation and maintenance actions of weed control, structure repair, and road maintenance would continue to occur in existing locations. Potential conflicts between wildlife and future actions may develop, resulting in the need for seasonal closures, modification of facilities, and regular monitoring to minimize potential impacts, from increased recreational activities, short term extreme weather event, and wildfires.

Recreation

Future actions would result in increasing levels of recreational opportunities and use in the area. As the Boise area population continues to increase, demand for a variety of recreational facilities would grow. Allocation of lands for these resources on local, state, federal, and private lands would be increasingly challenging. Prioritization of recreational development would be important, and coordination and partnerships would be essential for success.

Increased population would be the most likely future action impact in the area. As the Boise area continues to grow, a proportional growth in recreation demands can be expected.

Technology developments would be expected to produce equipment that may allow handicapped and people with limited physical mobility the ability to enter recreational areas that previously were beyond their capability. This has the potential to increase the amount and types of impacts to an area. Improvements in recreation equipment, such as lighter gear, improved ground pads, and sleeping bags, is expected to continue that may allow previously austere camping to be less demanding allowing for a wider range of individuals to pursue camping at the existing campsites and along the trail.

3.13.4 Summary of Cumulative Effects of Past, Present, and Reasonably Foreseeable Future Actions on Resources

The Corps construction of Lucky Peak Dam and Lake and associated recreational facilities, along with the rapid overall growth in the Boise area has had the biggest impact on wildlife and recreational opportunities in the local area in the past, present, and reasonably foreseeable future.

Several local, state, federal, and private entities have coordinated and cooperated on numerous joint ventures, including parks, trails, wildlife management areas, etc., in and adjacent to Corps managed lands at Lucky Peak. The Boise area has been experiencing consistent high levels of growth and the importance of partnerships and coordination is critical to meet varied recreation demands with minimal detrimental impacts on wildlife.

The Corps has historically been one of the biggest local providers of recreational opportunities in the area and will continue to do so into the future. Corps actions have minimized impacts on wildlife in the past, and continued partnerships and coordination with IDFG and other local landowners are essential to maintain wildlife populations and habitat in the future.

The Corps, after consideration of the Purpose and Need (Section 1), alternative screening criteria (Section 2), potential environmental effects (Section 3); compliance with other applicable environmental laws (Section 4) and required coordination, consultation, and public involvement (Section 5) has, subject to additional public comment on this EA, identified Alternative 2 as the Preferred Alternative.

Section 4 - COMPLIANCE WITH APPLICABLE ENVIRONMENTAL LAWS AND REGULATIONS

The following paragraphs address the principal environmental review and consultation requirements applicable to the Preferred Alternative. Pertinent Federal statutes, executive orders (EOs), and executive memorandums are included.

4.1 Laws Considered

4.1.1 National Environmental Policy Act of 1969 (NEPA)

As required by NEPA and subsequent implementing regulations promulgated by the Council on Environmental Quality, this EA was prepared in order to determine whether the Preferred Alternative constitutes a "...major Federal action significantly affecting the quality of the human environment..." and whether an EIS is required. This EA documents the evaluation and consideration of potential environmental effects associated with the Preferred Alternative.

This EA has been prepared and is being circulated to agencies, Tribes, and the public for review and comment pursuant to requirements of NEPA. No impacts significantly affecting the quality of the human environment have been identified at this time. If no such impacts are identified during the public review process, compliance with NEPA would be documented by the signing of the Finding of No Significant Impact (FONSI).

4.1.2 Endangered Species Act of 1973, As Amended (ESA)

The Corps prepared a Programmatic Biological Assessment (BA) in February 2013 in accordance with section 7(a)(2) of the ESA, which analyzed potential effects of management actions to include trail construction such as the Preferred Alternative on ESA listed species and designated critical habitat. The Corps previously consulted with the USFWS to ensure that the Preferred Alternative is not likely to jeopardize the continued existence of endangered or threatened species, or adversely modify or destroy their critical habitats. The Corps sent copies of the Programmatic BA to the USFWS on February 19, 2013 for their review and concurrence (Appendix A, Lucky Peak Natural Resource Management Activities Programmatic Biological Assessment and USFWS Concurrence Letter). The Corps received a letter of concurrence from USFWS on March 12, 2013 (Appendix A, Lucky Peak Natural Resource Management Activities Programmatic Biological Assessment and USFWS Concurrence Letter).

The Corps has concluded that none of the alternatives would have an effect on ESA listed species, bull trout, yellow-billed cuckoo, and slickspot pepper grass or their critical habitat within the project area. The other endangered species listed in the February 2013 BA have either been delisted or are not found in the Proposed Action area. Those species are Bliss Rapids snail, Canada lynx, Snake River Physa snail, wolverine, and the candidate species whitebark pine.

4.1.3 National Historic Preservation Act of 1966 (NHPA), as Amended

The NHPA of 1966 as amended, directs Federal agencies to assume responsibility for all cultural resources under their jurisdiction. Section 106 of NHPA requires agencies to consider the potential effect of their actions on properties that are listed, or are eligible for listing, on the National Register of Historic Places. The NHPA implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, requires that the federal agency consult with the State Historic Preservation Officer (SHPO), Tribes, and interested parties to ensure that all historic properties are adequately identified, evaluated, and considered in planning for proposed undertakings.

Both the No Action Alternative and the Preferred Alternative would have no effect to cultural resources. The Project has been surveyed several times in the past with the identification of three cultural resource sites. A survey was conducted along the route of the proposed multi-purpose trail and six additional resources (two historic sites and four isolated finds) were identified, all of which were recommended as not eligible for the National Register of Historic Places. The Corps has complied with Section 106, through archeological investigation and consultation with the aforementioned SHPO and Tribes. The Idaho SHPO replied with a concurrence letter dated January 25, 2017, that sites in the action area were not eligible for the National Register and that the action would have no effect on historical properties. This EA will be sent to the Idaho SHPO and the Burns Paiute Tribe, Shoshone-Bannock Tribes, and the Shoshone-Paiute Tribes

4.1.4 Migratory Bird Treaty Act of 1918 (MBTA) As Amended

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§ 703-712, as amended) prohibits the taking of and commerce in migratory birds (live or dead), any parts of migratory birds, their feathers, or nests. Take is defined in the MBTA to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing, or transporting any migratory bird, nest, egg, or part thereof.

The Proposed Action is in a park and wildland setting operated by the Corps. There is already frequent human activity in the area to which birds in the area have already acclimated. Neither of the assessed actions are expected, to take any migratory birds or destroy any active nests. As such, the Corps has determined that there would be no take of migratory birds as a result of implementing the Preferred Alternative.

4.1.5 Bald and Golden Eagle Protection Act of 1940

The Bald and Golden Eagle Protection Act (BGEPA) prohibits the taking or possession of and commerce in bald and golden eagles, with limited exceptions primarily for Native American Tribes. Take under the BGEPA includes both direct taking of individuals and take due to disturbance. Disturbance is further defined in 50 CFR 22.3.

Bald eagles are not known to nest in the vicinity of the proposed trail, although they have been known to roost and hunt along the Boise River and Lucky Peak Lake from November through April.

Because there are no eagle nests in the vicinity, the Corps has determined there would be no disturbance or take of eagles as a result either Alternative 2 or Alternative 3.

4.1.6 Federal Water Pollution Control Act (Clean Water Act of 1972)

The Federal Water Pollution Control Act (33 U.S.C. §1251 et seq., as amended) is more commonly referred to as the Clean Water Act (CWA). This act is the primary legislative vehicle for Federal water pollution control programs and the basic structure for regulating discharges of pollutants into waters of the United States. The act was established to restore and maintain the chemical, physical, and biological integrity of the Nation's waters and sets goals to eliminate discharges of pollutants into navigable water, protect fish and wildlife, and prohibit the discharge of toxic pollutants in quantities that could adversely affect the environment. The act has been amended numerous times and given a number of titles and codifications.

Section 402 of the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) program, pertains to discharge of pollutants. No pollutants would be discharged into waters of the U.S. by activities proposed in this EA.

Section 402 of the Clean Water Act also regulates ground disturbance that could potentially cause stormwater run-off into waters of the U.S. Implementation of the Preferred Alternative would not result in stormwater runoff into Lucky Peak Lake or tributary streams, so the Federal action does not involve activities subject to the Act.

Section 404 of the Clean Water Act established a program to regulate the discharge of dredge or fill material into waters of the United States. Implementation of either Alternative 2 or Alternative 3 would not result in the discharge of dredge or fill material into waters of the U.S., therefore the Federal action does not involve activities subject to the act.

4.1.7 Fish and Wildlife Coordination Act of 1958

The Fish and Wildlife Coordination Act (FWCA) authorizes the USFWS to evaluate the impacts to fish and wildlife species from proposed Federal water resource development projects that could result in the control or modification of a natural stream or body of water that might have effects on the fish and wildlife resources that depend on that body of water or its associated habitats. The FWCA does not apply for this action since it is not a water resource development project.

4.1.8 Rivers and Harbors Act of 1899

The Rivers and Harbors Act of 1899 does not apply because implementation of the Preferred Alternative would not involve the construction of any structure in or over any navigable water, and would not result in work affecting the course, location, condition, or physical capacity of such waters.

4.1.9 Magnuson-Stevens Fishery Conservation and Management Act of 1976

The consultation requirement of section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) directs Federal agencies to consult with National Marine Fisheries Service (NMFS) on all actions, or proposed actions that may adversely affect Essential Fish Habitat (EFH). Adverse effects include the direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality or quantity of EFH. Adverse effects to EFH may result from actions occurring within EFH or outside EFH, and may include site-specific or EFH-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810)

Both Alternative 2 and Alternative 3 fall within the Boise River watershed, identified as currently inaccessible to anadromous fish species due to the Hell Canyon Complex of dams. Therefore, the Corps has determined that implementation of the Preferred Alternative would not adversely affect EFH.

4.2 Executive Orders Considered

4.2.1 Executive Order 11988, Floodplain Management, May 24, 1977

This order outlines the responsibilities of Federal agencies in the role of floodplain management. Each agency must evaluate the potential effects of actions on floodplains and avoid undertaking actions that directly or indirectly induce development in the floodplain or adversely affect natural floodplain values. Alternatives considered for this action would maintain designed levels of flood damage reduction and would not further alter the floodplain nor induce floodplain development.

4.2.2 Executive Order 11990, Protection of Wetlands, May 24, 1977

This order directs Federal agencies to provide leadership in minimizing the destruction, loss, or degradation of wetlands. Section 2 of this order states that, in furtherance of NEPA, agencies shall avoid undertaking or assisting in new construction located in wetlands unless there is no practicable alternative. Wetlands are not anticipated in areas of the Proposed Action due to the steep terrain and presence of well drained soils. Possible wetlands in riparian locations would not be impacted using construction techniques including bridges and other drainage structures.

4.2.3 Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, November 6, 2000

The Corps invited participation of the Burns Paiute Tribe, the Shoshone-Bannock Tribes, and the Shoshone-Paiute Tribes by letter on July 19, 2013 in the development of a programmatic agreement between the Corps and the Idaho State Historic Preservation Officer. The Tribes were sent copies of the programmatic agreement for their review and no comments were received from the Tribes. The Tribes did not request Government to Government consultation on the project. The Corps will engage the Shoshone-Bannock and the Shoshone-Paiutes on this EA. The BLM will engage the Shoshone-Bannock and Shoshone-Paiute Tribes through a separate consultation process.

4.2.4 Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, January 10, 2001

Implementation of the Preferred Alternative would not impact either migratory bird species or their habitat subject to this EO and the accompanying Memorandum of Understanding (MOU) with the USFWS.

4.2.5 Executive Order 13112, Invasive Species, February 3, 1999

This order directs Federal agencies to: prevent the introduction of invasive species; detect and control populations of such species; monitor invasive species populations; provide for restoration of native species and habitat conditions in ecosystems that have been invaded; conduct research on the control of invasive species; and promote public education on invasive species. Implementation of Alternative 2 or Alternative 3 would not contribute to the spread of invasive species due to ongoing treatment actions as outlined in the Corps Integrated Pest Management Plan.

Section 5 -COORDINATION, CONSULTATION, AND PUBLIC INVOLVEMENT

5.1 Agency Consultation

The Corps initiated programmatic informal consultation with the USFWS for potential effects of a wide range of operation and maintenance activities on ESA listed species. The Corps sent its programmatic biological Assessment to USFWS on February 19, 2013 for their review and received a letter of concurrence on March 12, 2013.

The Corps initiated consultation with the Idaho State Historic Preservation Office (SHPO) on November 2, 2016 regarding the proposal to construct the proposed trail as described in Alternative 2. The Idaho SHPO received a copy of the cultural resource survey and provided concurrence on January 25, 2017 that the proposed action would have no effect on historic properties.

The BLM will conduct consultation with the Shoshone-Paiute Tribes and the Shoshone-Bannock Tribes. The Corps will conduct a separate consultation process with these tribes.

IDFG was consulted with throughout the development of this EA through meetings and emails.

5.2 Public Involvement

The Corps has worked with a number of local individuals, public officials, Tribes, and interest groups to address future recreational needs at Lucky Peak. The Corps conducted a public scoping period from June 28 through July 28, 2017 to obtain public input on the Proposed Action. Eighty-five comments were received with approximately 90% in support of the proposed trail.

This EA and the Corps Draft Finding of No Significant Impact (FONSI) are being released for a 30-day public/agency/Tribal review and comment period from approximately May 22, 2020 to June 21, 2020. The EA and Draft FONSI will be emailed to identified stakeholders and also be made available on the Corps Environmental Compliance website:

<http://www.nww.usace.army.mil/EnvironmentalComplianceComment/>.

Comments received during that time would be evaluated and addressed by the Corps, with input from the BLM. If, after the public/agency/Tribal review period, no significant effects are identified, the Corps would sign the Final FONSI and implement the Preferred Alternative when funds are made available for that purpose.

The BLM would sign a Finding of No Significant Impact (FONSI) and Decision Record to adopt the EA if it meets BLMs requirements under the NEPA and BLM regulations.

Section 6 - LITERATURE CITED AND REFERENCED

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