FINDING OF NO SIGNIFICANT IMPACT

SUMMER LAKE DIKE MAINTENANCE

DOI-BLM-OR-L050-2011-0009-EA

The Bureau of Land Management, Lakeview District, Lakeview Resource Area (BLM), has analyzed several alternative proposals to maintain 150 feet of water control dike adjacent to the Summer Lake Wildlife Area (SLWA). This dike falls within the Diablo Mountain Wilderness Study Area (WSA) located on BLM land (see Map 1). The purpose of this project is to maintain the dike in order to help regulate the water flow from the northern end of the SLWA to the southern end of the SLWA.

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

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

Rationale: Based on the analysis contained in the attached EA, none of the alternatives would have either significant beneficial or adverse impacts on the human environment. There would be no impacts to air quality, geology or minerals, prime and unique farmlands, flood plains, ground water quality, designated wilderness areas, areas of critical environmental concern, research natural areas, wild or scenic rivers, land tenure, livestock grazing, wild horses, or low income or minority populations from any of the alternatives analyzed (pages 8 & 9).

The potential impacts to hydrology, water quality, greenhouse gas emissions, soil, biological crusts, vegetation, noxious weeds, wildlife, special status species, wilderness study areas, cultural and paleontological resources, recreation, visual resources, and socioeconomics were addressed within Chapter 4 of the attached EA and found not to be significant (pages 8-16).

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

Rationale: None of the alternatives analyzed in detail in the attached EA would have significant impacts on public health or safety because the project area is not located near any populated rural or urban area. For this reason, there would also be no impacts to low income or minority populations (page 8). Further, there are no known hazardous waste sites in the project area (page 3). There are no drinking water sources located in the project area (page 8). Potential impacts to surface water quality were analyzed and found not to be significant (pages 8, 9 & 15).

3) Would any of the alternatives have significant adverse impacts on unique geographic characteristics (cultural or historic resources, park lands, prime and unique farmlands, wetlands, wild and scenic rivers, designated wilderness or wilderness study areas, or ecologically critical areas (*ACECs, RNAs, significant caves*)) (40 CFR 1508.27(b)(3)? ( ) Yes (X) No

Rationale: There are no park lands, prime or unique farmlands, wild and scenic rivers, ecologically critical areas or designated wilderness areas located in the project area (page 8).

Impacts to riparian, wetlands, cultural resource values, and the adjacent state Summer Lake Wildlife Refuge have been analyzed in the attached EA and found not to be significant (pages 10-16).

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

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Rationale: The BLM has extensive expertise planning, analyzing impacts, and implementing the type of maintenance project proposed and addressed in the attached EA. The potential impacts of these actions on hydrology, water quality, soil, biological crusts, vegetation, noxious weeds, wildlife, special status species, wilderness study areas, cultural and paleontological resources, recreation, visual resources, greenhouse gas emissions, and socioeconomics can be reasonably predicted based on existing science and professional expertise. The attached EA analyzed these impacts (pages 8-16). The nature of these impacts is not highly controversial, nor is there substantial dispute within the scientific community regarding the nature of these effects. The BLM finds that there are not any highly controversial effects, as defined under 40 CFR 1508.27(b)(4).

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

Rationale: The BLM has extensive expertise planning, analyzing impacts, and implementing the type of maintenance project proposed and addressed in the attached EA. The potential impacts of these proposed actions on hydrology, water quality, greenhouse gas emissions, soil, biological crusts, vegetation, noxious weeds, wildlife, special status species, wilderness study areas, cultural or paleontological resources, recreation, visual resources, and socioeconomics can be reasonably predicted based on existing science and professional expertise. The attached EA analyzed these impacts (pages 8-16). The nature of these impacts is not highly uncertain nor does it involve unique or unknown risks.

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

Rationale: The BLM has extensive expertise planning, analyzing impacts, and implementing the type of maintenance project proposed and addressed in the attached EA. None of the alternative actions represent a new, precedent-setting management technique or would establish a precedent for future similar actions with potentially significant effects.

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

Rationale: Based on the analysis contained within the Cumulative Effects section of Chapter 4 of the attached EA, none of the alternatives would have significant cumulative effects within the project area, even when added to the effects of other past, present, and reasonably foreseeable future actions (pages 14-16).

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

Rationale: Potential impacts to cultural and historic resources and areas of Native American religious concern have been analyzed in Chapter 4 of the attached EA and found not to be significant (pages 12 & 13).

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

Rationale: None of the alternatives analyzed in detail in the attached EA would have significant impacts on Federally-listed threatened or endangered species or their critical habitats (pages 11 &12).

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

Rationale: All of the alternatives analyzed in the attached EA would comply with all Federal, State, and local environmental laws or other environmental requirements. In accordance with the Federal Land Policy and Management Act, the alternatives were reviewed for conformance with the current land use plan and other applicable plans and policies. The purpose and need for the proposed action conforms to the management direction

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contained in the *Lakeview RMP/ROD* (pages 30-32, 42-44, 50-52, 70-80 and 88) (BLM 2003). The EA conforms to the requirements of the National Environmental Policy Act.

Finding

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

_____ _____

Thomas E. Rasmussen, Field Manager Date
Lakeview Resource Area

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Summer Lake Dike Maintenance
Environmental Assessment
DOI-BLM-L050-2011-0009-EA

I. INTRODUCTION

Purpose and Need for Action

In September 2010, the Oregon Department of Fish and Wildlife (ODFW) notified the Bureau of Land Management, Lakeview District (BLM) that a small section (approximately 150 foot long) of an existing dike system that controls and diverts water from Schoolhouse Lake through Deep-water Canal to the southern half of the Summer Lake Wildlife Area (SLWA) was damaged in 2010 by high water flows. The dike diverts water to about 7,600 acres of wetland habitats managed by the ODFW for wildlife, fish, and plant species. Most of this dike falls within the Diablo Mountain Wilderness Study Area (WSA) on lands administered by the BLM.

The purpose of the proposed project is to maintain the dike section in order to retain the ability to manage water flows to the southern half of the SLWA while also maintaining wilderness values within the WSA. The BLM will determine whether or not to grant ODFW permission to maintain this section of dike, based on the analysis contained in this environmental assessment (EA).

Project Location

The dike is located on the northeast side of the SLWA at T30S, R17E, and Section 21 wm. (see Map 1). The dike is directly adjacent to lands managed by the ODFW within the SLWA. The dike sits just inside the boundary of the Diablo Mountain WSA.

Conformance with Existing Land Use Plans

The proposed alternatives have been determined to be in conformance with the goals and/or objectives of the following applicable BLM plans, strategies policies, or guidelines:

1) *Lakeview Resource Management Plan/Record of Decision* (RMP/ROD; BLM 2003) - Operations and Maintenance Actions direction (page 100) states that "maintenance of existing and newly constructed facilities or projects will occur over time…. Normally, routine operation and maintenance actions are categorically excluded from NEPA analysis (with the exception of actions conducted within WSAs or ISAs). Such activities could include, but are not limited to, routine maintenance of existing roads, ditches, culverts and water control structures. Maintenance of existing facilities in WSAs or ISAs will be considered on a case-by-case basis."

Special Management Areas – Wilderness management direction (pages 70-73) states that any activities proposed within WSAs must follow the direction contained in the *Interim Management*

Policy and Guidelines for Lands under Wilderness Review (IMP; 1995) and either demonstrate conformance with the nonimpairment standard or qualify as an exception to the nonimpairment standard.

In addition, the Management Direction related to Plant Communities (pages 30-32), Aquatic Habitats (pages 42-44), Wildlife and Wildlife Habitat (pages 50-52), Cultural Resources (pages 74-79), Visual Resources (page 88), and Best Management Practices (Appendix D), generally supports ODFW's management goals for the SLWA.

2) Interim Management Policy and Guidelines for Lands under Wilderness Review (BLM 1995)- Wildlife Guidelines state that "the BLM will continue to cooperate with State wildlife agencies in the management of resident wildlife species…" (page 43) and "certain permanent installations may be permitted to maintain or improve conditions for wildlife and fish, if the benefitting natives species enhance wilderness values (page 44)."

3) Integrated Noxious Weed Control Program (BLM 2004) Vegetation Treatments using herbicides on Bureau of land Management lands in 17 Western States (BLM 2007) and Vegetation treatments using Herbicides on BLM Lands in Oregon (BLM 2010a). These plans spell out preventative measures to employ during project construction and would allow treatment of noxious weeds or invasive plant species should they become a problem within the project area after maintenance actions have been completed.

The proposed alternatives are also in conformance with applicable state (ODFW 2007), local, and tribal land use plans, to the extent feasible.

II. ALTERNATIVES INCLUDING THE PROPOSED PLAN

Introduction

This section describes the alternatives considered for this proposed project. The development of these alternatives is to provide a range of management options that would meet the purpose to maintain the dike in order to help regulate water from Schoolhouse Lake and Deep-water Canal and direct it to the south end of the SLWA.

Alternative 1-No Action Alternative

Under the No Action Alternative, the ODFW would not be granted permission to maintain or repair the eroded dike section. They would continue to manage water flows within the dike system, but would be less effective or capable of delivering water to the southern end of the SLWA.

Alternative 2- Preferred Alternative

Under this alternative, ODFW would be granted permission to maintain 150 feet of dike that has been damaged from high water flow events. The disturbance area would equal approximately 0.1

acres. It would take approximately 400 cubic yards of clean material to repair the existing dike. The fill material would come from a nearby gravel pit owned by the state of Oregon located at T29S, R16E, and Section 36 (Map 2) and would be transported by dump trucks. The material would be placed on top of the existing dike then would be leveled with a small bull dozer or back hoe. There would be no excavation of the existing dike material or new ground excavation. Fill material would only be placed on top of the existing surface and shaped to the original cross-section.

Alternatives Considered But Eliminated from Further Study

One alternative considered would have involved building or modifying a dike system outside of the WSA boundary. This alternative was not considered viable since it would have disturbed about 100 acres directly adjacent to the WSA and would have resulted in greater overall impacts to the wilderness values within the WSA.

Another alternative would have excavated the old dike material to rebuild the damaged dike. This alternative was not considered viable because it would have caused additional ground disturbance to BLM lands within the WSA boundary and would have had greater overall impacts to wilderness values.

III. AFFECTED ENVIRONMENT

Introduction

This section presents a description of the existing environment within the project area. It serves as a baseline from which the impacts of the alternatives can be assessed.

There are no areas identified by the BLM as designated wilderness, areas of critical environmental concern, research natural areas or wild and scenic rivers within the project area (BLM 1980, BLM 1989, BLM 1991, BLM 2003). There are no known hazardous waste areas, areas of religious concern, threatened or endangered species, special status plants, cultural plants, range and woodland vegetation or prime or unique farmlands in the Project Area (BLM 2003).

Greenhouse Gas Emissions and Climate

Most climate scientists agree that average global temperatures have generally been rising over the past century. While an analysis of temperature anomaly data collected since 1998 indicates that average global temperatures have leveled off (NOAA 2009), there is still debate as to the timing and magnitude of temperature change and its effect on regional and global precipitation and weather patterns. Predictions of future climate conditions are based on outputs from broad-scale computer modeling studies. These predictions vary greatly depending upon which model is used and the assumptions and data that are plugged into the model. Further, the predictions are difficult to step down to the regional or project scale in a meaningful manner and cannot be tested in real time.

While many factors are known to have an effect on temperature (i.e. long-lived greenhouse gases, ozone, aerosols, water vapor, aviation contrails, surface albedo, and solar irradiance), not all have been studied at the same level of detail (Forster *et al.* 2007, Taylor 2009). Greenhouse gas levels represent one factor that has been widely studied in recent years. Forster *et al.* 2007 (pp. 129-234) reviewed scientific information on atmospheric constituents and radiative forcing and concluded that human-caused increases in greenhouse gas emissions since 1750 are extremely likely (95% confidence level) to have exerted a "substantial" warming influence on climate. Based on its own review of available science, the National Oceanic and Atmospheric Administration (NOAA) estimates that about 50% of the recent global warming is likely due to greenhouse gas increases caused by humans (NOAA undated). This implies that up to 50% of the global warming trend may be attributed to other causes.

The Council on Environmental Quality (CEQ) has stated that it is not currently useful within a given NEPA analysis to attempt to link specific climatological changes, or the environmental impacts thereof, to a particular project or emissions; as such direct linkage is difficult to isolate and understand. CEQ also states that estimating greenhouse gas emissions can serve as a reasonable proxy for assessing potential impacts to climate (page 3; CEQ 2010). The U.S. Geological Survey recently reviewed the latest science on greenhouse gas emissions and concluded that it is currently beyond the scope of existing science to identify a specific source of greenhouse gas emissions or sequestration (storage) and designate it as the cause of specific climate impacts at a specific location (May 14, 2008 memorandum to the U.S. Fish and Wildlife Service). For these reasons, the BLM will not discuss the potential effects of the various alternatives on climate change, but will focus the discussion on potential changes in greenhouse gas emissions.

The most common greenhouse gases include (in descending order of atmospheric composition): water vapor, carbon dioxide, methane, and nitrous oxide. Of the four, water vapor is the most abundant and important, representing over 90% of all greenhouse gases present in the atmosphere (Forster *et al.* 2007; Taylor 2009). Methane and nitrous oxide emissions represent a very small percentage of all greenhouse gases in the U.S. and have declined between 1990 and 2007 (U.S. EPA 2009). None of the alternatives analyzed would have any measureable effect on atmospheric water vapor, nitrous oxide, or methane, and will not be discussed further.

Each alternative would require the use of vehicles and heavy equipment in varying amounts during implementation. Based on vehicle emission analyses conducted recently for other projects within the Resource Area (BLM 2010a and 2010b), the estimated annual contribution of carbon dioxide from vehicle emissions associated with all the alternatives would represent an insignificantly small proportion of the total U.S. transportation-related emissions and, thus, will not be analyzed further.

Hydrology & Water Quality

The project area consists of an upland dike and the margins of a shallow palustrine wetland. Hydrology and groundwater conditions are typical for this type of wetland and manmade canal.

No water quality data exists for the site, although it is likely being degraded by the active erosion.

Soils & Biological Crust

Soils within the project area fall within the playa lake bottom soil series (NRCS 1991). The topography of the project area is a relatively flat (0-1%) slope, with very deep soil mostly made up of silty clay loam and stratified silty clay loam soils (NRCS 1991) There were no biological crusts found during a botanical survey.

Geology and Minerals

The geology of the area is typified by Basin and Range faulting with both north and northwest faulting forming the down-dropped graben that forms the prehistoric Chewaucan Lake-Summer Lake Basin. Thick sequences of pluvial sediments interspersed with widespread tephra deposits (ash, cinder) are found within the basin. Two fault zones, the Faults East of Summer Lake and the Winter Rim, border the project area to the east and west. A section of the Winter Rim Fault Zone, the Ana River Section extends southward from Klippel Point to the west of Schoolhouse Lake, 1 mile west of the project area. This section has been extensively studied and has been found to have had movement within the last 15,000 years, with an estimated movement rate of between 0.2 and 1.0 mm/year. This fault scarp has been extensively eroded during higher pluvial lake levels.

No active or closed mining claim or mineral material sale locations were found within the project area. An Oil and Gas Lease (OR26211) covered the project area but was closed in 1985. The master title plat identifies this parcel as a potential O&G lease area, but there has been little public interest in issuance of a lease for this area.

Vegetation

Terrestrial vegetation within the project area is salt grass (*Distichlis spicata*) that is growing on some of the existing dike. Riparian vegetation consists only of intermittent patches of tules (*Scirpus acutus*).

Noxious Weeds

No noxious weeds were found in the project area during a botanical survey. Fill material that is used to complete the dike maintenance would be taken from a weed-free pit or would be surveyed for the presence of noxious weeds prior to use of the material.

Wildlife Habitat

Wildlife species that use the alkaline playa and surrounding riparian habitat at the project area could include coyotes (*Canis latrans*), raccoons (*Procyon lotor*), chorus frog (*Pseudacris regilla*), Western toad (*Bufo boreas*), and Common garter snake (*Thamnophis sirtalis*), mink

(*Mustela vison*), muskrat (*Ondatra zibethicus*), Tundra Swan (*Cygnus columbianus*), Canada goose (*Branta canadensis*), Mallard (*Anas platyrhynchos*), Gadwall (*Anas strepera*), Cinnamon teal (*Anas cyanoptera*), Redhead, (*Bucephala clangula*), and Eared grebe (*Podiceps nigricollis*), Western grebe (*Aechmophorus occidentalis*), Pied-billed grebe (*Podilymbus podiceps*), Double-crested cormorant (*Phalacrocorax auritus*), and Great blue heron (*Aredea herodias*), Great egret (*Casmerodius albus*) and Sandhill crane (*Grus canadensis*), American avocet (*Recurvirostra Americana*), Black-necked stilt (*Himantopus mecicanus*), Willet (*Cataptrophorus semipalmatus*), and Long-billed curlew (*Numenius americanus*),Wilson phalarope(*Phalaropus tricolor*), Killdeer (*Charadrius vociferous*), Spotted sandpiper (*Actitis macularia*), Caspian tern (*Sterna caspia*) and Long eared myotis (*Myotis evotis*), little brown bat (*Myotis lucifugus*) and Yuma bat (*Myotis yumanensis*).

Although the above species are present or have suitable habitat within the Project Area, a survey of the site indicated that there are no nest sites, or significant foraging areas within the Project Area. Wildlife use of the dike would be limited to occasional foraging or use as a loafing area.

The SLWA has significant breeding and migrant populations of ducks, Canada geese, shorebirds and water birds that use the southern half of the wildlife area for foraging, loafing and nesting (ODFW 2007).

Populations nesting on SLWA are estimated at:

Western Canada goose	300-400 pairs
Mallard	2,000-3,000 pairs
Cinnamon Teal	1,500-2,000 pairs
Gadwall	2,000-2,500 pairs
Redhead	200-300 pairs
American avocet	300-350 pairs
Western willet	40-50 pairs
Black-necked stilt	75-100 pairs
Wilson's phalarope	75-100 pairs
Killdeer	200-300 pairs
Long-Billed curlew	10-20 pairs
Spotted sandpiper	5-10 pairs
Double-crested cormorant	20-25 pairs
Caspian tern	5-35 pairs
Forster's tern	5-10 pairs
Eared Grebes	25-30 pairs
Greater sandhill cranes	over 20 pairs

Three bat species have been confirmed to forage in the southern half of SLWA including long-eared myotis, little brown myotis and the Yuma bat. Buffleheads use the southern half of SLWA for foraging, migration and breeding. American bald eagles and peregrine falcons use the southern half of SLWA for foraging. The nearest Bald eagle nest is about 9 miles away located on Dead Indian rim. Peregrine falcons have been known to nest on a cliff along Winter rim located 5 miles west of the project area. Trumpeter swans winter throughout the SLWA, there

are between 30 and 50 swans. American white pelicans use the SLWA for nesting; there are 5-10 pairs of white pelicans.

Fish Habitat

Fish are not known to occupy habitat at the project site. Because the canal is not screened where it is diverted from Ana River, fish species that occupy the river, may occasionally inhabit the canal near the project site. The following fish are known or suspected to occupy habitat in the Ana River: Summer Basin tui chub (*Gila bicolor ssp.*), Pit roach (*Lavinia symmetricus mitrulus*), rainbow trout (*Oncorhynchus mykiss*), speckled dace (*Rhinichthys osculus*), and hybrid white/striped bass (*Morone chrysops/Morone saxatilis).*

Special Status Species

These include species which are officially listed as threatened or endangered, proposed for listing, or are candidates for listing as threatened or endangered under the provisions of the Endangered Species Act (ESA), and those designated by each BLM State Director as Bureau Sensitive.

The objectives of the special status species policy (BLM Manual 6840) are:

1. To conserve listed species and the ecosystems on which they depend.
2. To ensure that actions requiring authorization or approval by the Bureau of Land Management are consistent with the conservation needs of special status species and do not contribute to the need to list any special status species, either under provisions of the ESA or other provisions of this policy. Conservation is defined as the use of all methods and procedures which are necessary to improve the condition of Special Status Species and their habitats to a point where their Special Status recognition is no longer warranted.

Special Status Plants

There were no Special Status plants detected during a botanical survey. There is very little potential habitat in the project area for Special Status plants.

Special Status Terrestrial Animals

Some species of federal or state concern that use the alkaline playa and surrounding riparian habitats are Western snowy plover (*Charadrius alexandrines*), Bufflehead (*Bucephala albeola*), Trumpeter swan (*Cygnus buccinators*), American white pelican (*Pelecanus erythrorhynchos*) American bald eagle (*Haliaeetus leucocephalus*), and Peregrine falcon (*Falco peregrinus*).

Although the above species are present of have habitat within the Project Area, a survey of the site indicated that there are no nest sites, or significant foraging areas within the Project Area. Wildlife use of the dike would be limited to occasional foraging or use as a loafing area.

Special Status Fish

Summer Basin tui chub and Pit roach are Oregon/Washington BLM Sensitive species. There are no federally listed Threatened, Endangered, Proposed, or Candidate fish species in the Ana River or at the project site.

Wilderness Study Areas

The project area is located within the Diablo Mountain WSA (OR-1-58). The 113,120 acre WSA is characterized by long north to south ridges rising in elevation to the summit of Diablo Mountain on the east side. The western half of the WSA has low, rolling terrain and salt flats on the playa adjacent to Summer Lake. Vegetation on the WSA ranges from salt flats on the far west, to salt desert shrub communities in the central portion, with sagebrush/grasslands in the higher elevations on the east.

The Wilderness Characteristics of Diablo Mountain WSA below are summarized from the Oregon BLM Wilderness Study Report (BLM 1991).

> **Naturalness:** Diablo Mountain WSA is in essentially a natural condition. The natural processes have masked or removed signs of past activities. On this vast expanse of native desert range one can experience unlimited views of some the harshest and least altered native environments. A variety of game and nongame species inhabit or frequent the WSA including antelope, mule deer, coyote, rabbits, and other small rodents. The escarpments and rims in the area are used by prairie falcon, red-tailed hawk, golden eagle and other raptors. Other bird species include raven, chukar, canyon wren, sage sparrow and sage thrasher. Shoreline birds including snowy plover, avocet, and killdeer. Unnatural features that do exist include waterholes, earthwork mounds, fences, and 32 miles of vehicle ways. These developments are substantially unnoticeable in the WSA as a whole, and the terrain screens them from viewing outside their immediate location.
>
> **Solitude:** Outstanding opportunities of solitude are present throughout the Diablo Mountain WSA. The large size and topography, including draws and broken ridges, found within the WSA enhance opportunities for experiencing solitude across the WSA. Solitude is affected to a slight degree along the WSA boundary.
>
> **Primitive and Unconfined Recreation:** Opportunities for primitive recreation are outstanding within the WSA. The area offers excellent opportunities for hiking, backpacking, wildlife observation, photography, and nature study.
>
> **Supplemental Values:** Bighorn sheep and the bureau sensitive snowy plover habitat are present. The eastern shore of Summer Lake is potential nesting habitat for the plover. Raptors use rims across the WSA for nesting. Archaeological sites and homesteads of historic interest are also present. Fossilized mollusks and other fossils may similarly be found in sedimentary deposits on the western two-thirds of the WSA.

The BLM has recommended 90,050 acres of the WSA as suitable for wilderness designation and 23,070 acres as non-suitable. The project area is located within the portion that was recommended as non-suitable, to provide for enhancing wildlife management through manipulations to accommodate snowy plover habitat. However, until the WSA is either released by congress or designated as wilderness, the entire area must be managed in accordance with the IMP (BLM 1995).

Cultural and Paleontological Resources

The north end of the Summer Lake Basin is within the territory of the Yahuskin Band of the Northern Paiute Native American Tribe. Tribal members report that they used the area up to the period of contact with Euro Americans. Site types in the area range from major village locations with numerous house pits to small lithic scatters of just a few obsidian flakes on the surface of the ground. Known site types for the surrounding area include the following: house pit villages, stone ring house sites, rock cairns, rock walls, lithic scatters, burials, rock art and rock shelters and caves. The record of occupation in the Summer Lake Basin ranges from about 1900 back some 14,300 years before present. No known areas of Native American religious concern or paleontological resources exist within the project area.

Archaeological survey of the proposed project area revealed a very light scatter of obsidian and basalt flakes. No ground stone or other types of artifacts were observed. Nearly all of the observed flakes, of which there were seven within a 20 meter by 20 meter area, were within the stream channel which runs through the project area. Two of the observed flakes were observed outside of the channel. It would not be unusual for human activities to be concentrated near or upon the water source within the project area. Once you leave the water channel, little was found. Because the majority of flakes were observed in the eroded area of the stream, it is likely that further buried materials may be present in the area. The amount of cultural material located did not meet the criteria for recording of an archaeological site in the area. The flakes were recorded as an isolated find.

Socioeconomic Conditions

Lake County is made up of rural communities that have beautiful locations for recreation opportunities like hunting, camping, wildlife viewing and other outdoor recreation that the communities can benefit from. The SLWA is managed by the ODFW to provide habitat for many species of migratory and non-migratory wildlife (ODFW 2007).

Recreation Opportunities

Recreation on the BLM lands within the project area is typically non-motorized forms, particularly hiking, bird watching, hunting, and photography. Off-highway vehicles (OHV) use within the WSA is limited to existing roads and primitive motorized routes (ways). However, no roads or ways exits within the project area.

Nearby recreation opportunities within the SLWA are the primary draw for the nearly 10,000

visitors the area receives each year. The facilities are open year-round and include access roads, parking areas, restrooms, picnic areas, trails, a canoe launch, campsites, and many interpretive signs. Recreation opportunities include fishing for rainbow trout and hybrid bass along the Anna River, bird watching and wildlife photography during annual spring and fall migrations, canoeing, hiking, and camping. Most of the SLWA is open to many hunting seasons for waterfowl, upland birds, and big game. Hunting within the eastern units of SLWA is prohibited.

Visual Resources

The project area is located within Visual Resource Management (VRM) Class I, the highest of all scenic quality management classes (Map VRM-3, BLM2003b). The objective of this class is to preserve the existing character of the landscape. This class provides for natural geological changes and allows limited management activity. The level of change that is allowable should be very low and must not attract attention.

VI. ENVIRONMENTAL CONSEQUENCES

Introduction

This section provides the analytical basis for the comparison of the alternatives and describes the probable consequences of each alternative on the resource values within the project area.

The following resource values have been considered and are either not present, or would not be significantly affected by any of the alternatives considered: air quality, geology or minerals, prime and unique farmlands, flood plains, ground water quality, designated wilderness areas, areas of critical environmental concern, research natural areas, wild or scenic rivers, land tenure, livestock grazing, or wild horses. There would be no impacts to low income or minority populations from any of the alternatives analyzed. These issues/resource values are not discussed further in this document.

Hydrology & Water Quality

Alternative 1 - No Action

Under Alternative 1, the dike at the project site would continue to erode, likely negatively affecting surface water quality. Any effects to water quality from continued erosion of the dike into the canal would be minimal, given the limited extent of the actively eroding area (0.1 acres). Also, any effects of continued dike erosion would be similar to the current condition as the dike is actively eroding and depositing fine sediment into Summer Lakebed.

Without repair, the dike may eventually washout completely, which would largely drain 7,600 acres of the adjacent shallow palustrine wetland, which would in turn, reduce the amount of suitable habitat for wildlife and aquatic/riparian vegetation. These impacts are discussed further under the Secondary, Indirect and Cumulative Impacts section.

Alternative 2 - Preferred Alternative

With Alternative 2, current hydrology, aquatic/riparian vegetation, and wetland resource values would be protected and maintained, as the eroding dike would be repaired. No aquatic/riparian vegetation would be impacted with construction, as material would be imported to the site and no excavation of the site would occur. No impacts from construction to water quality would occur as no material would be placed in any waterway.

Soils & Biological Crust

Alternative 1 - No Action

There would be no impacts to soils or biological crusts in the project area from the No Action Alternative. It is possible that if currently irrigated areas outside the project area go dry, that increased soil movement from wind erosion would occur.

Alternative 2 – Preferred Alternative

Impacts to soil resources from the proposed project would be minor because the type of the new material being placed on the existing dike would be similar to the existing dike material. Biological crusts were not present during a botanical survey of the project area completed in 2010. Therefore, this alternative would have no impacts to biological crusts.

Vegetation Impacts

Alternative 1 - No Action

No ground disturbing activity would occur within the project area so there would be no impact too the terrestrial and riparian vegetation.

Alternative 2 - Preferred Alternative

Salt grass found within the project area would be little impacted by this alternative due to it being a hardy perennial. It is one of the most resistant grasses to trampling and grazing.

Noxious Weed Impacts

Alternative 1 - No Action

There would be no increased risk of noxious weed infestation in the project area. The project area is free of noxious weeds at this time.

Alternative 2 - Preferred Alternative

The Preferred Alternative would pose little risk of noxious weed spread and infestation. The fill material used to complete dike maintenance would be taken from a certified weed-free pit or surveyed for noxious weeds prior to use. This would greatly reduce the likelihood of a noxious weed infestation being established from contaminated fill material.

Fish Habitat Impacts

Alternative 1 – No Action

No direct impacts would occur to fisheries within the project area. Secondary impacts are discussed further under the Secondary, Indirect and Cumulative Impacts section.

Alternative 2 - Preferred Alternative

No direct impacts would occur to fisheries from this alternative because all actions would take place above the high water mark. Secondary impacts are discussed further under the Secondary, Indirect and Cumulative Impacts section.

Wildlife Habitat Impacts

Alternative 1 - No Action

None of the wildlife species within the project area would be impacted by the No Action Alternative. Wildlife that uses the riparian habitats of the south end of the SLWA would be impacted by the loss of water due to the damaged dike. These impacts are discussed further under the Secondary, Indirect and Cumulative Impacts section.

Alternative 2 - Preferred Alternative

Because the existing dike would be repaired before it was completely eroded, no significant changes in water distribution to the southern end of the SLWA would occur. None of the wildlife species within the project area would be impacted by the Preferred Alternative because no major changes in the habitats would occur.

Species Special Status Species

Alternative 1 - No Action

Special Status Plants

The No Action Alternative would have no impact on Special Status plants as a botanical survey in 2010 did not find any Special Status plant species in the area.

Special Status Wildlife

The alkaline playa is used by the Western snowy plover for nesting and foraging there would be a slight impact from the No Action Alternative due to the potential flow of water coming over the dike and inundating this potential nesting area.

Special Status Fish

The only potential impacts to any special status fish species would be through continued active erosion of the dike contributing fine sediment to potential fish habitat in the adjacent canal. Any effects to substrate characteristics in the canal would be minimal, as substrate in in the canal is primarily fine material.

Alternative 2 - Preferred Alternative

Special Status Plants

The Preferred Alternative would not have any impacts to Special Status plant species as a botanical survey in 2010 did not find any Special Status plant species in the project area.

Special Status Wildlife

None of the federal or state sensitive species within the project area would be impacted by the Preferred Alternative because no major changes in the habitats would occur.

Special Status Fish

No impacts to any special status fish species are expected because no fish are known to occupy the site. In the case that fish are in the canal, any impacts would be minimal given that no excavation would occur in the canal.

Wilderness Study Areas

Alternative 1 - No Action

The No-Action Alternative would have both positive and negative direct impacts on wilderness values within the Diablo Mountain WSA. In the long run, as the dike continues to erode and revegetate, evidence of the structure's existence would gradually disappear. Thus, over time the naturalness of the WSA would see a slight improvement. Conversely, the deteriorating dike would divert less water to the southern end of the SLWA and portions of the WSA to the south.

Alternative 2 - Preferred Alternative

The proposed project would have both positive and negative impacts on the wilderness values within the Diablo Mountain WSA. In the short-run, negative impacts associated with the reconstruction of the dike would be minimal. The specific site of the proposed project is directly next to an obviously man-made levee and gravel road that runs parallel to and just a few feet

outside of the WSA boundary. The road and levee dominate the landscape in the general area. The existing dike within the WSA is substantially unnoticeable due to its short length, low height, and natural earthen material. Visual disturbances would likely be camouflaged further by grasses during the growing season.

Access to the area would be prohibited for only a few weeks, as would the associated impacts from heavy equipment such as noise, dust, and traffic. Thus, the proposal would have a negligible short-term impact to naturalness, solitude, and primitive and unconfined recreation. Conversely, the proposed project would also have positive impacts on the WSA. Maintenance of the existing dike would insure that water would reach the southern end of the SLWA and areas of the WSA to the south. Thus, the Preferred Alternative would have a positive impact to supplemental values associated with the WSA.

The proposal conforms to specific direction contained within the IMP. The IMP states that:

a) "Some lands under wilderness review may contain minor facilities that were found in the wilderness inventory process to be substantially unnoticeable… There is nothing in this IMP that requires such facilities to be removed or discontinued. On the contrary, they may be used and maintained … as long as this does not cause new impacts that would impair the area's wilderness suitability."

b) "Permanent installations to protect sources of water on which native wildlife depend … may be built if they enhance wilderness values, are substantially unnoticeable, and cannot be located outside the WSA boundary. Permanent riparian, wetland, and aquatic enhancement installations may be permitted as long as their purpose is to enhance wilderness values, protect or maintain natural conditions, and restore deteriorated habitat."

The proposed project would meet the nonimpairment standard outlined in the IMP. Firstly, the existing dike would be maintained in the same manner as it was originally constructed. The action would take place on previously disturbed ground, would be substantially unnoticeable, and would not create any new impacts that would impair the area's wilderness suitability. Secondly, the proposed project would protect sources of water on which wildlife depend and thereby maintain and/or enhance the WSA's supplemental values. Lastly, the dike could not be practicably constructed outside of the WSA boundary.

Cultural and Paleontological Resources

Alternative 1 - No Action

In this action, there would be no impacts upon the present condition of any cultural resources in the area. Natural erosion would continue to take place. It would neither harm nor benefit cultural resources in the area.

No known areas of Native American religious concern or paleontological resources exist within the project area, therefore no impacts to these resources would occur.

Alternative 2 - Preferred Alternative

In this action, there is potential to harm cultural resources if there is surface disturbance. No site was recorded for the area since the amount of cultural materials did not reach the threshold for a site. However, further buried materials are always possible. It is proposed that fill to rebuild the dike would be transported out the existing dike and dumped and spread on the surface. No excavating of the present surface would occur; therefore project would have no impact upon the isolated resources present. No known areas of Native American religious concern or paleontological resources exist within the project area, therefore no impacts to these resources would occur.

Socioeconomic Impacts

Alternative 1 - No Action

There would be no impacts to socioeconomics from the No Action Alternative.

Alternative 2 - Preferred Alternative

There would be no impacts to socioeconomic from the Preferred Alternative.

Recreation

Alternative 1 - No Action

The No-Action Alternative would have negative impacts on recreation opportunities in the surrounding area. In the long run, the dike would divert less water to the southern end of the SLWA and areas of the WSA to the south, negatively impacting habitat for a variety of wildlife, Thus, wildlife dependent recreation opportunities such as hunting, bird watching, and big game viewing would be negatively impacted.

Alternative 2 - Preferred Alternative

The Preferred Alternative would have both positive and negative direct impacts to recreation. For public safety, access to the area would be restricted for a few weeks during construction. Thus, visitors would be displaced for a short time. Visitors recreating in other areas of the SLWA or Diablo WSA would likely also experience a minimally diminished recreational experience due to noise, dust, and traffic associated with construction activities.

However, upon completion, the Preferred Alternative would result in immediate positive impacts to recreation. A new, fully functional, dike would improve water distribution to the southern end of the SLWA and areas of the WSA to the south. In so doing, the alternative would improve and expand habitat for a variety of wildlife species, which would result in an enhanced recreational

experience as visitors seeking wildlife viewing, wildlife photography, and hunting opportunities would likely be more successful in these pursuits.

Visual Resources

The degree to which a management activity may affect the visual quality of a landscape depends on the visual contrast created between a project and the existing landscape. The contrast can be measured by comparing the project features with the major features in the existing landscape. The basic design elements of form, line, color, and texture are used to make this comparison.

Alternative 1 - No Action

There would be positive impacts to visual resources under the No-Action Alternative. The dike would gradually erode back to the natural grade or slope of the land and revegetate. Thus, returning to a more natural appearance in form, line, color and texture congruent with VRM Class I objectives.

Alternative 2 - Preferred Alternative

The Preferred Alternative would have little to no impacts on visual resources in the Project Area. The degree of contrast from the existing landscape in the design elements of form, line, color, and texture would be weak. As the Project Area is located in a depression, blocked from view by an existing dike, and due to a low angle of observation the area can only be seen for a few minutes while walking within a distance of less than a few hundred yards. Thus, the Preferred Alternative would be commensurate with the VRM Class I objectives, as visual impacts would not attract attention by the casual observer.

Secondary, Indirect, and Irreversible/Irretrievable Impacts

Alternative 1 - No Action

If water from Schoolhouse Lake and Deepwater Canal does not reach the south end of SLWA it would result in:

1) adverse effects to hydrology, water quality, aquatic/riparian vegetation, and wetland resources by resulting in less water, and less riparian and wetland habitat at the south end of the SLWA.

2) the loss of about 7,600 acres of habitat for several wildlife species that use the southern half of SLWA area for breeding, nesting, loafing and foraging.

The 7,000 acres of wildlife habitat in the northern half of SLWA would not be impacted by this project.

No fish habitat is available within the wetland areas on the SLWA, but the canal systems do

provide some marginal habitats for those fish species listed in the Affected Environment section. Negative impacts to fish within the canal system would occur as the dike continues to erode and less water becomes available in the canal systems within the southern part of the SLWA. These impacts would be minor since the canal systems periodically dries up during late summer months or when SLWA managers de-water some sections of the wetlands for management purposes.

If no water is available in the south end of the SLWA would cause a reduction in the budget to help manage SLWA. This would also have a negative economic impact to the Town of Summer Lake, the loss of waterfowl habitat, fewer birdwatchers, fewer hunters and less money being earned.

Alternative 2 - Preferred Alternative

The secondary impacts on the identified resources would generally be positive under Alternative 2. The project would improve the ability for ODFW to regulate water from Schoolhouse Lake and Deep-water Canal and provide timely flooding and receding levels to improve food availability, maintain desirable emergent plant growth and invertebrate populations for the southern half of the SLWA. It would allow ODFW to maintain or enhance about 7,600 acres of wildlife habitat for many different wildlife species.

The personnel time, energy, and funds expended on the dike maintenance would be the only irretrievable or irreversible effects that would result from the Preferred Alternative.

Cumulative Impacts

Introduction

This section discusses potential cumulative impacts of past, present and reasonably foreseeable future BLM, other agency, and private actions within the Project Area. For the purposes of this analysis, cumulative impacts are considered at the Project Area geographic scale. The BLM selected this geographic scale for its analysis because the BLM has adequate knowledge of other on-going and potential reasonably foreseeable actions that may occur within the area. Many of these potential future actions have been identified in the *Lakeview Resource Management Plan/Record of Decision*, Appendix E (BLM 2003b) or other documents (BLM 2004). The timeframe of the cumulative effects analysis is defined as 10-20 year lifetime of the RMP/ROD. Impacts from most projects or management actions would likely be negligible after this timeframe.

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

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

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

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

Reasonably Foreseeable Actions

The BLM does not currently have any knowledge of future projects on surrounding BLM or private lands. However, the BLM would continue to manage lands within the Diablo Mountain WSA in accordance with the Wilderness IMP (BLM 1995).

ODFW may modify the water control structure that regulates water from the Schoolhouse Lake and Deep-water Canal in the future. This would help manage the extreme water flow events from Ana River and the release of water from the Desert Springs Trout Farm to the southern half of the SLWA.

Alternative 1 - No Action

No additive or incremental cumulative impacts would occur as a result of the No Action Alternative. WSA values would continue to be protected by following the Wilderness IMP.

Alternative 2 - Preferred Alternative

If the ODFW replaces the water control structure within the next 3-5 years, cumulative impacts to the project area would occur. These impacts would be minor in nature due to the limited area

of impact for both project areas (less than 0.2 acres combined) and the fact that both project areas are adjacent to each other. Additive or incremental cumulative impacts would slightly increase the possibility of introduction of invasive plants. This would only be slight increase due to addition ground disturbance and would be mitigated by washing equipment and maintaining weed free material sources.

The construction zone would be monitored for vegetation establishment and potential weed invasion for several years following project completion. Any weeds that are found would be treated in accordance with the current integrated weed management plan (such as BLM 2004). WSA values would continue to be protected by following the Wilderness IMP (BLM 1995). No other cumulative impacts to any other resources are expected to occur from Alternative 2.

V. CONSULTATION AND PUBLIC INPUT

Oregon Department of Fish and Wildlife (ODFW) attended a meeting with Lakeview resource Area staff to request this project.

A conference call was held with the ODFW and the Oregon Natural Desert Association (ONDA) to discuss the proposed project. Scoping comments were collected via this conference call.

A 30-day public review opportunity was provided for this EA and FONSI.

VI. LIST OF PREPARERS

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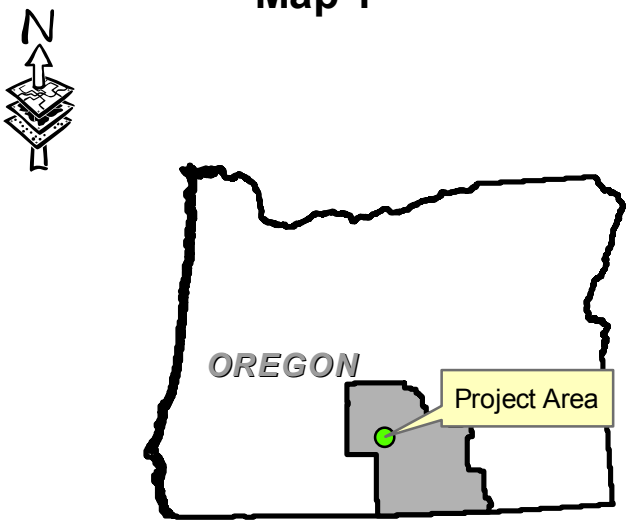
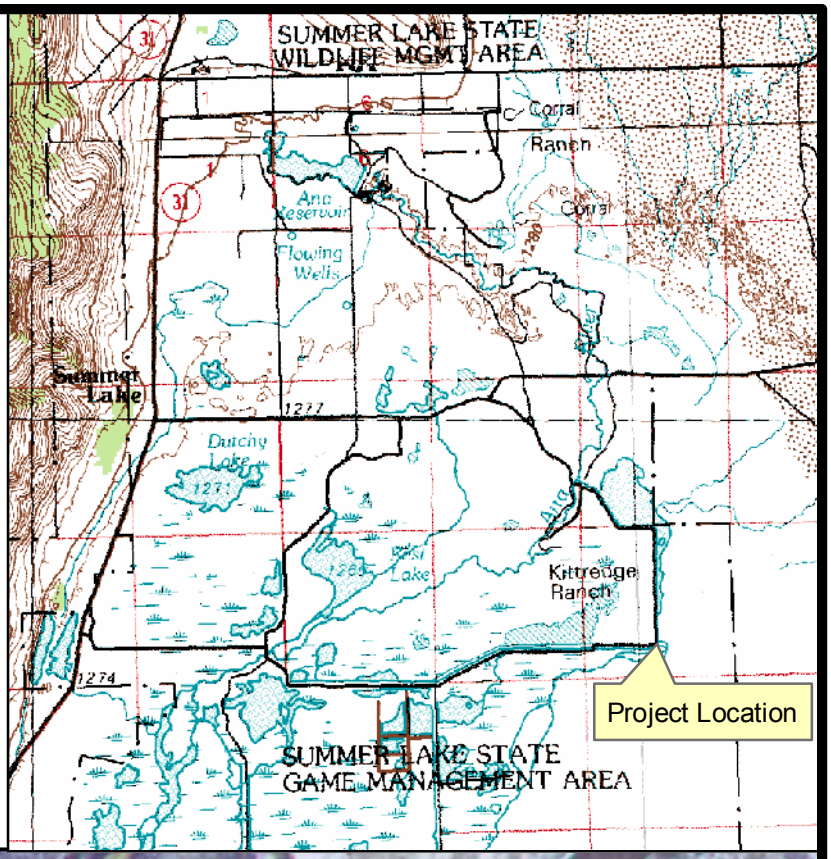
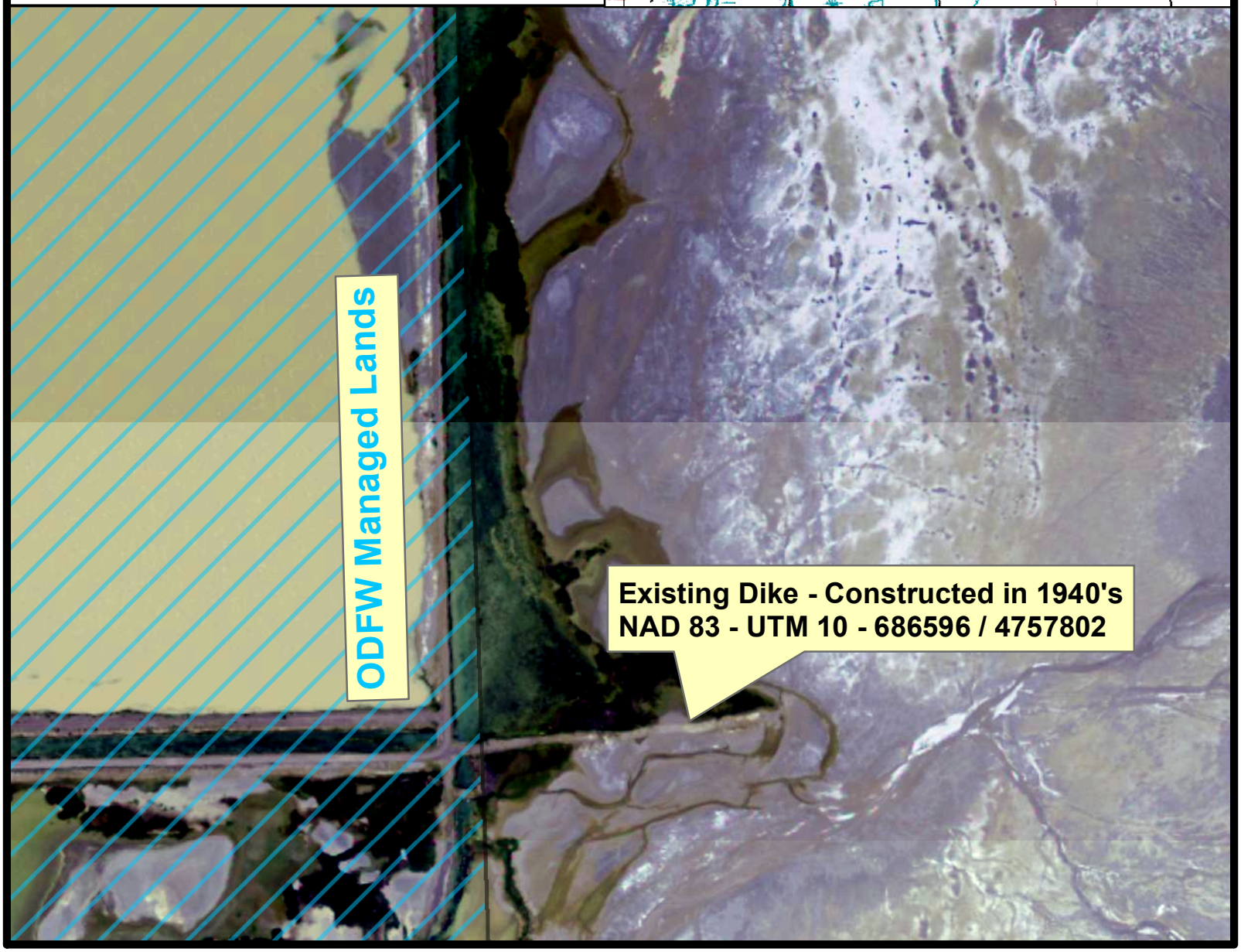
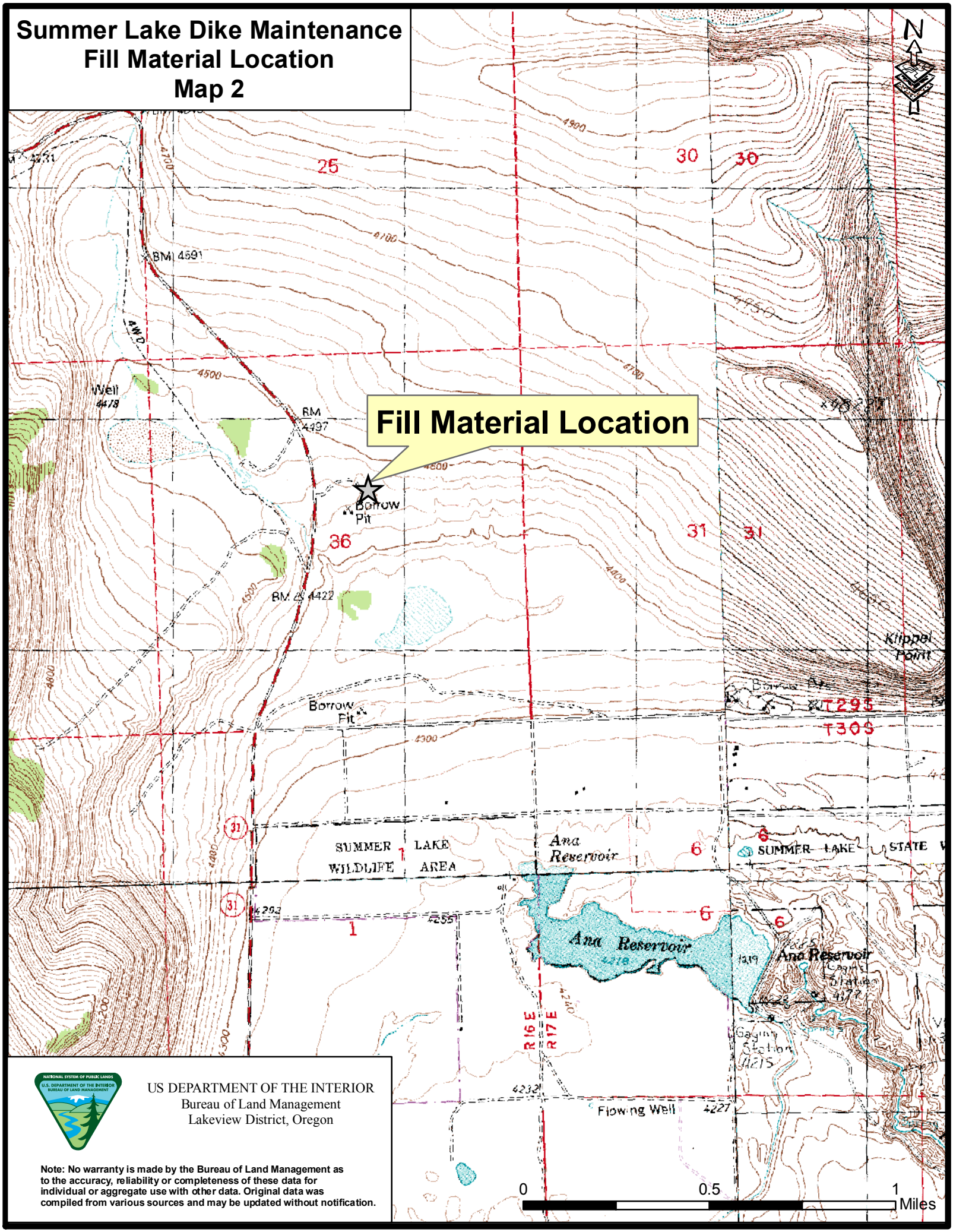
Summer Lake Dike Maintenance
Project Location and Vicinity
Map 1







Summer Lake Dike Maintenance
Fill Material Location
Map 2



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Bureau of Land Management
Lakeview District, Oregon

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