RECLAMATION
Managing Water in the West

Environmental Assessment

Horsefly Irrigation District WaterSMART Grant: Dairy and Yonna Canals Piping Project

Klamath County, Oregon

2017-EA-008

U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
Klamath Basin Area Office

November 2016

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitment to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water related resources in an environmentally and economically sound manner in the interest of the American public.

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Section 1: Introduction and Background Information

1.1 Introduction

This Environmental Assessment (EA) has been prepared to examine the potential direct, indirect, and cumulative impacts to the affected environment as a result of the Bureau of Reclamation's Klamath Basin Area Office (KBAO) WaterSMART provision of grant funding for Horsefly Irrigation District's (HID) Dairy and Yonna Canals Piping Project.

This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) (42 U.S.C. §4321 et seq.), the Council on Environmental Quality Regulations for implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations (CFR) Parts 1500-1508), and the Department of the Interior regulations for the Implementation of the NEPA (43 CFR Part 46). If there are no significant environmental impacts identified as a result of the analyses, a Finding of No Significant Impacts (FONSI) can be signed to complete the NEPA compliance process.

Background
This project includes the conversion of open canal to subterranean piping in an effort to conserve water by eliminating seepage and evaporation. Pipe materials include polyvinyl chloride (PVC) and high density polyethylene (HDPE). HID has discovered that after piping 5 miles of their open canal system, they have conserved approximately 30% of the water which is delivered through these systems. The District anticipates an estimated water savings of 720 acre-feet per year, as a result of the proposed project.

HID canals are privately owned, and the District receives its water supply from several different sources. HID collects water from the Lost River, flowing from Clear Lake Reservoir, with a priority right of 1903 and also holds a water right from the Big Springs that originates from the Lost River in Bonanza, Oregon. HID is also in contract with Reclamation for 4,200 acre-feet of storage from Clear Lake Reservoir as well as 3,800 acre-feet of natural flow from the Lost River. There are approximately 90 landowners served within HID over an area of roughly 10,000 acres; the major crops produced include alfalfa, grain, potatoes, and irrigated pasture.

In recent years, specifically 2012, 2013, 2014 and 2015, the Klamath Basin has experienced severe droughts resulting in limited water supplies to Reclamation's Klamath Project. With limited water supplies available to Project contractors, conservation measures, at both the district and the individual level, are becoming increasingly important.

1.2 Need for the Proposal

The purpose of this undertaking is to address the seepage and evaporation losses that are occurring along HID's irrigation canals. Through its existing open-unlined canals, HID is experiencing a net loss of available water which reduces the limited surface water supply and the amount of irrigated acres within HID and the Klamath Project. By implementing this project, which includes the installation of roughly 1.22 miles of subterranean pipe, HID anticipates an annual water savings of 720 acre-feet. This project also achieves the goals of the WaterSMART Program by conserving water within the District, which, in turn, provides benefits to other Klamath Project irrigators and fish and wildlife in the Lost River system.

Section 2: Proposed Action and Alternatives

This EA considers two possible actions including the No Action Alternative and the Proposed Action. The No Action Alternative reflects conditions without the Proposed Action and serves as a basis of comparison for determining potential effects to the human environment as a result of implementing the Proposed Action.

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not provide $185,800.00 under the WaterSMART Grant program to HID to complete the proposed project as designed. Irrigation water would continue to seep through the canal bottoms, evaporation from open canals would continue, and overall net loss of Project water would continue. Due to this fact, the No Action Alternative does not the meet the purpose and need of the project; however, it will continue to be evaluated throughout this EA.

2.2 Proposed Action

Under the Proposed Action Alternative, Reclamation would provide $185,800.00 to HID for the installation of pipe at three distinct sites (see maps in Figure 1 and photographs in Appendix A): Yonna Canal, Dairy Canal southern segment, and Dairy Canal northern segment (also known as the Nobel lateral off of the Dairy Canal). The sites are located in Section 36, Township 38S, Range 11.5E and Sections 8 and 9, Township 39S, Range 11E of the Willamette Meridian. Pipe would be installed along approximately one mile (5,280 feet) of open canal and approximately 0.22 miles (1,160 feet) across a cultivated field. The Yonna Canal installation includes approximately 0.70 miles (3,700 feet) of 30" HDPE pipe (see Figure 2); the Dairy Canal southern segment includes roughly 0.19 miles (1,000 feet) of 30" HDPE pipe (see Figure 3); the Dairy Canal northern segment consists of a total of approximately 0.33 miles (1,740 feet) of 24" PVC pipe in which 0.11 miles (580 feet) would be installed within the open ditch and 0.22 miles (1,160 feet) would be installed under a cultivated field rather than within an existing ditch (see Figure 4). The proposed project activities would be performed by HID staff and

would occur during the non-irrigation season between the months of October and March. The Proposed Action Alternative will be further evaluated throughout the EA.

2.3 Proposed Tasks

HID anticipates to begin this construction project at the Dairy Canal northern segment (Nobel lateral) site. The second construction site would be the Yonna Canal segment, and the final construction site would be the Dairy Canal southern segment. The steps listed below describe the activities that HID would perform for the pipe installations. No additional excavation to widen or deepen the open ditch segments of the Yonna and Dairy Canals is expected; however, excavation of new trench, roughly 1,160 feet in length, across a cultivated field would be necessary at the Dairy Canal northern segment.

1. Hauling and staging of materials and equipment to the project sites from the initial storage area located at the HID Headquarters yard. Materials and equipment include a D4 laser loaded Caterpillar dozer, backhoe, excavator, dump truck (as necessary), pipe, and fabricated steel box cleanouts. The Yonna Canal and Dairy Canal southern segment project sites would consist of staging areas for materials and equipment along HID owned canal access roads at the area of immediate construction. Staging areas in the cultivated field at the Dairy Canal northern segment site would be located adjacent to and along the proposed line of entrenchment as permitted by the property owner.
2. Removal of existing check/drop structures that would impede the placement of the pipe in the canals. A total of two structures will require removal; one each in both the Dairy Canal southern and northern segments.
3. Removal of current fencing in the area that would prohibit construction access and/or activities. Coordination with affected property owners would be required in order to avoid trespassing.
4. Grading of the existing open canal beds with heavy equipment, including a D4 Caterpillar fitted with a laser level, would occur to properly level the canal beds to an average depth of roughly four feet. The canal beds would be leveled to ensure that the pipe lay properly at grade to allow for gravity flow through the piping system. Fill, using surplus material resulting from the leveling procedure, would be placed at the bottom of the canal beds as necessary to provide suitable pipe support.
5. Using heavy equipment, excavation of a trench measuring approximately 4 feet wide, five feet deep, and 1,160 feet long across the existing agricultural field adjacent to the Dairy Canal northern segment would be performed. HID would coordinate with the affected property owners beforehand in order to obtain access to the field. Excess material would be hauled away to an appropriate disposal site or stored at HID Headquarters or nearby construction sites for later use as fill material.
6. Once the canal beds and newly excavated trench are leveled, installation of the pipe would commence: 30” HDPE in the Yonna Canal and Dairy Canal southern segment, and 24” PVC in the Dairy Canal northern segment.
7. Cleanouts, a type of pipe fitting that allows access for inspection, maintenance, and flow measurement of the pipeline, would be constructed and fitted around the installed pipe at roughly 1000 foot length increments. The cleanout structures would consist of 3/16” plate steel and would be fabricated at both HID Headquarters and the construction sites and installed within the canals.
8. After installation of the pipe and cleanout structures, HID would backfill the installed pipe using existing native soils from the canal banks and excess soils remaining from the entrenchment

procedure. Newly installed 30” HDPE would receive a cover of approximately two feet while the 24” PVC would receive a cover of roughly three feet. In order to not distort the underlying pipe, compaction of the covering soil would be minimal.

9. The disturbed areas on and neighboring the buried pipe would be revegetated with drought tolerant pasture grasses.

Figure 1: Dairy and Yonna Canals Piping Project Locations

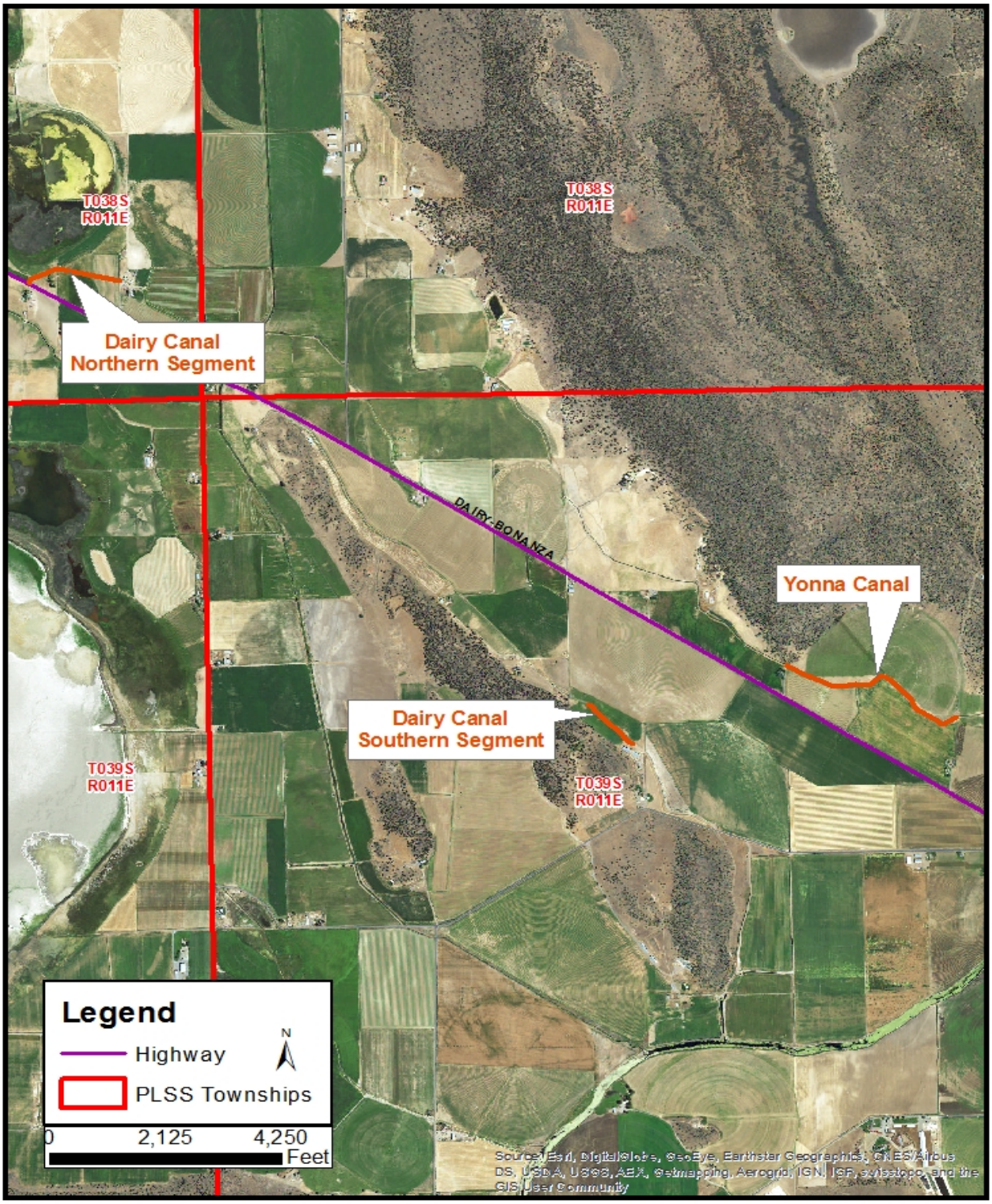


Figure 2: Yonna Canal Location

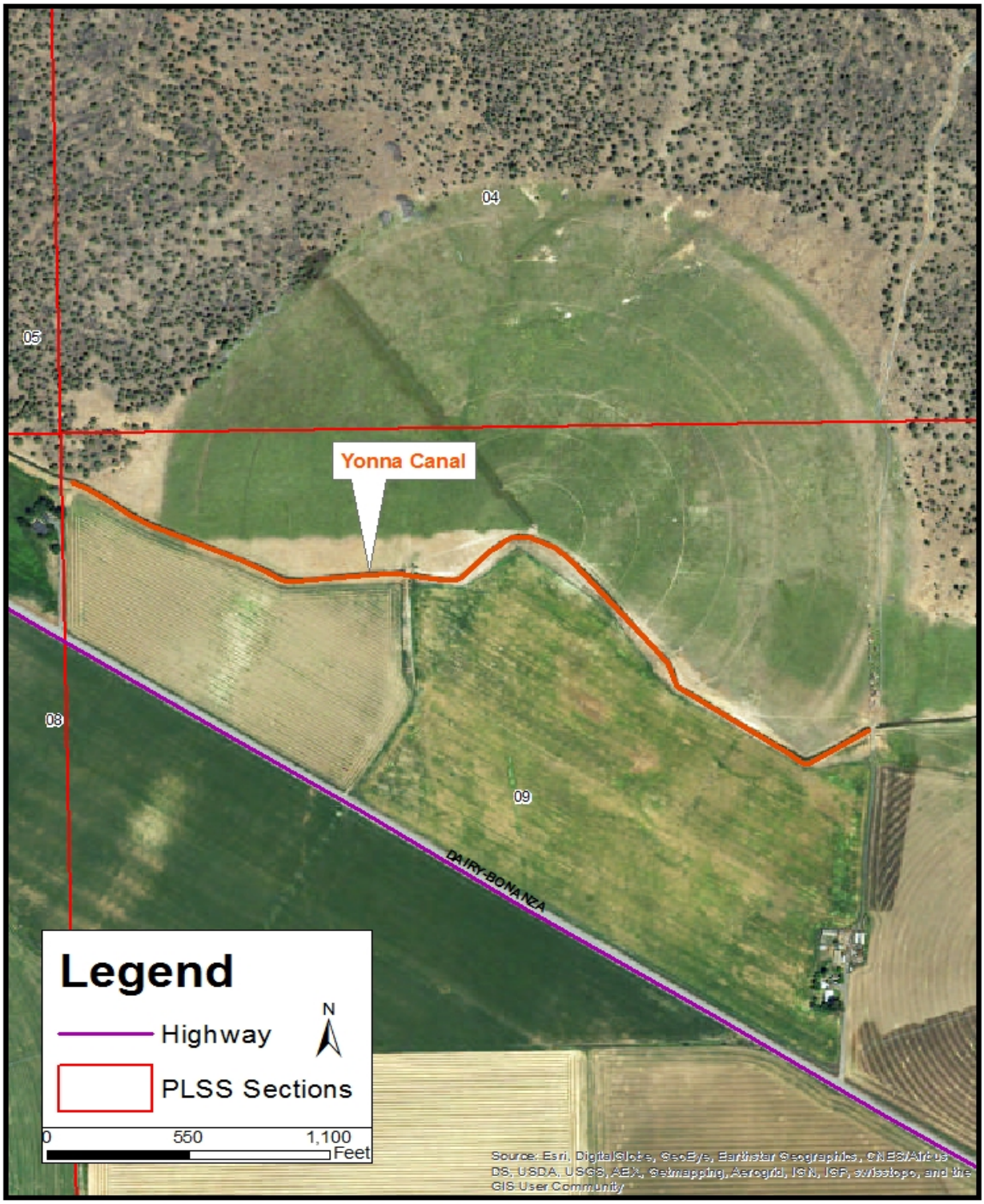
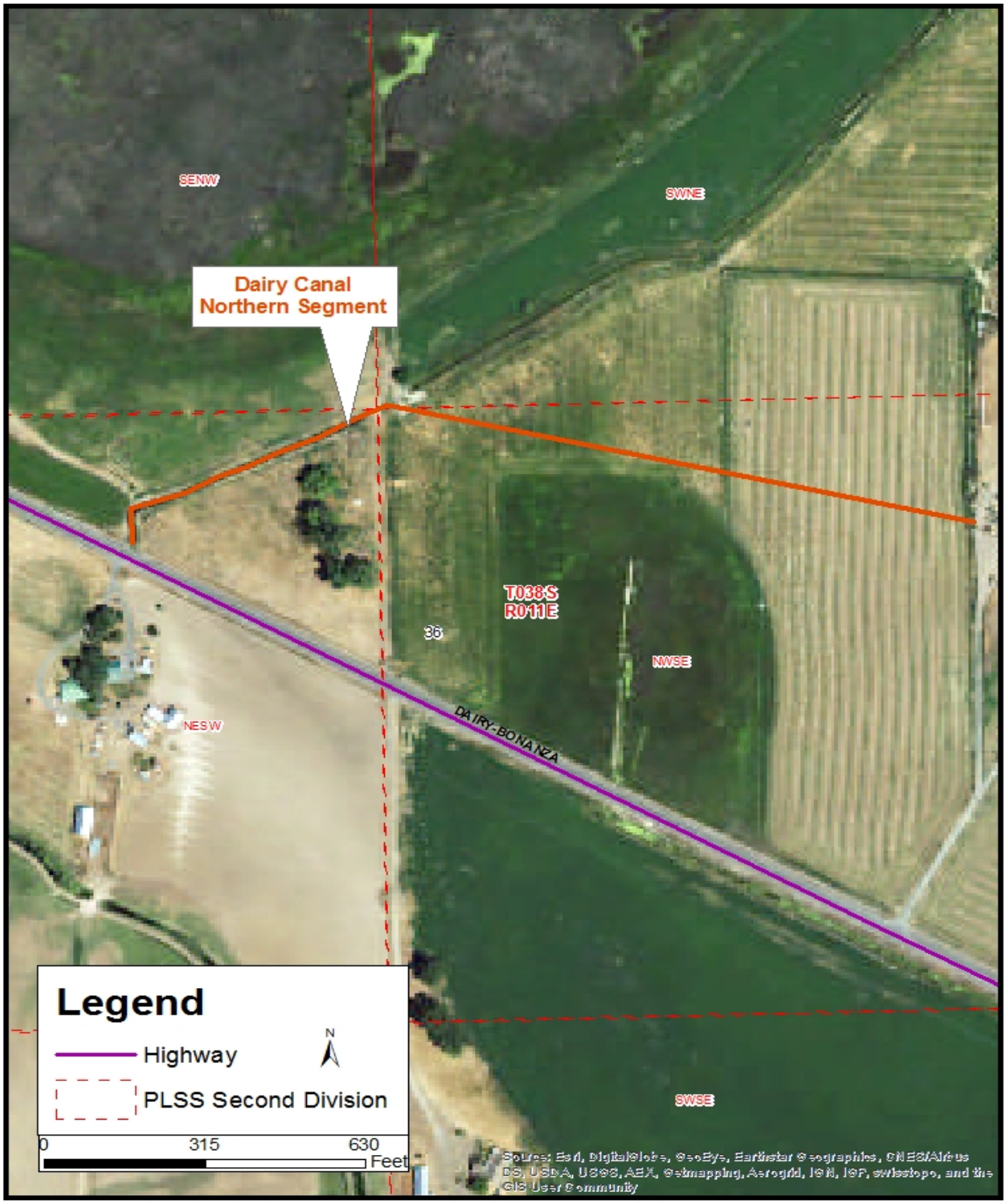


Figure 3: Dairy Canal Southern Segment Location

Figure 4: Dairy Canal Northern Segment (Nobel Lateral) Location



Section 3: Affected Environment & Environmental Consequences

This section identifies the potentially affected environmental resources and the environmental consequences that could result from the Proposed Action and the No Action Alternatives.

3.1 Resources Not Analyzed in Detail

Impacts to the following resources were considered and found to be minor or absent. Brief explanations for their elimination from further consideration are provided below:

3.1.1 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in assets that are held in trust by the United States for federally recognized Indian tribes or individuals. As indicated in Appendix B, there are no Indian reservations, Rancherias or allotments in the project area, the nearest ITA is the Klamath Tribal Designated Statistical Area approximately 10.6 miles west of the nearest project site. On September 13, 2016, Reclamation's KBAO ITA Coordinator, Kristen Hiatt, stated that "based on the nature of the planned work it does not appear to be in an area that will impact Indian hunting or fishing resources or water rights nor is the proposed activity on actual Indian lands, [and] it is reasonable to assume that the proposed action will not have any impacts on ITAs."

3.1.2 Indian Sacred Sites

Sacred sites are defined in Executive Order 13007 (May 24, 1996) as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site." The Proposed Action would not affect and/or prohibit access to and ceremonial use of Indian sacred sites.

3.1.3 Environmental Justice

Executive Order 12898 requires each Federal agency to identify and address disproportionately high and adverse human health or environmental effects, including social and economic effects of its program, policies, and activities on minority populations and low-income populations. Reclamation has not identified adverse human health or environmental effects on any population as a result of implementing the Proposed Action. Therefore, implementing the Proposed Action would not have a significant or disproportionately negative impact on low-income or minority individuals within the Proposed Action area.

3.1.4 Climate Change and Greenhouse Gases

Climate change refers to significant change in measures of climate (e.g., temperature, precipitation, or wind) lasting for decades or longer. Many environmental changes can contribute to climate change (e.g., changes in sun's intensity, changes in ocean circulation, deforestation, urbanization, burning fossil

fuels) (EPA 2016). Climate change implies a significant change having important economic, environmental, and social effects in a climatic condition such as temperature or precipitation. Climate change is generally attributed directly or indirectly to human activity that alters the composition of the global atmosphere, additive to natural climate variability observed over comparable time periods.

There would be no impacts contributing to climate change or greenhouse gases (GHG) under the No Action Alternative. Under the Proposed Action Alternative, Reclamation would provide $185,800.00 to HID in order to execute its Dairy and Yonna Canals Piping Project that would conserve water by eliminating seepage and evaporation in the modified canal sections. Potentially minor and temporary impacts to climate change or GHG could result from the use of backhoes, excavators, dump trucks, and other motorized equipment for intermediate periods over the course of construction. Any impacts to climate change or increases in GHG would be expected to be insignificant due to the size and scope of the project, small change from current conditions, duration of use that is limited to the project construction, and compliance with pollution related laws and regulations. Furthermore, HID would comply with applicable Federal, state, or local air pollution laws and regulations.

3.1.5 Noise

The proposed project area is typically impacted by the noise of farming machinery and nearby highway traffic, thus the additional temporary noise associated with construction is not expected to be a significant impact. HID would coordinate with neighboring property owners as appropriate during construction to notify them of the temporary noise escalations. Noise impacts would be minimized by reducing construction activities from 7:00 A.M. to 7:00 P.M., Monday through Sunday. If work hours outside of this period are required HID would need approval in advance by Reclamation. Upon approval, HID would be required to contact adjacent landowners prior to commencement of the adjusted work schedule to inform them of the potential change in work hours. There would be no long-term increases to the ambient noise levels from the implementation of the Proposed Action.

3.1.6 Socioeconomics

The Proposed Action would create a short term demand for construction related products and services that would support local vendors and may create short term employment opportunities. In general, the project would have an insignificant impact on socioeconomic conditions in the project region.

3.2 Resources Analyzed in Detail

This EA will analyze the affected environment of the Proposed Action and No Action Alternative in order to determine the potential impacts and cumulative effects to the following environmental resources:

3.2.1 Water Resources

3.2.1.1 Affected Environment

The water resources potentially affected would be surface water originating from the Lost River and Clear Lake Reservoir system which is subsequently conveyed through HID-owned canals and laterals for irrigation purposes within the boundaries of HID.

3.2.1.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not provide $185,800.00 under the WaterSMART Grant program to HID for completion of the proposed project as designed. Project water would continue to seep through the canal bottoms, evaporation from open canals would continue, and overall net loss of Project water would continue. Under this Alternative, water resources within the existing open unlined canals would continue to be delivered for irrigation purposes and no improvements for reducing or eliminating seepage or evaporation would occur. HID would continue to experience a net loss of approximately 720 acre-feet throughout the season. Additionally, water resources present in the open unlined canals would continue to take in sediment and nutrients from adjacent agricultural activities.

Proposed Action

Under the Proposed Action, Reclamation would provide funding to implement HID's WaterSMART piping project on the Diary and Yonna canals to improve water delivery efficiency. Upon project completion, HID could achieve a reduction in water loss of roughly 720 acre-feet per year and thus result in more water resources for the greater Klamath Project.

Construction activities associated with the Proposed Action do include minimal disturbances to the ground surface. Materials used during construction could contain chemicals that are potentially harmful to water resources; additionally, oil and other petroleum products used to maintain and operate construction equipment could pose potential threats to water quality. Impacts to water quality are expected to be minor, however, as the project activities would occur during the non-irrigation season when no water is present within the ditch system. A small amount of turbidity within the ditches may occur during periods of rain in which rainwater would accumulate and pass through the ditch system. Standard management practices would be included in the proposed project to avoid or minimize the release of sediments, pollutants, and chemicals into the environment during construction.

Overall, potential water quality impacts including temporary increases in turbidity and contribution of sediment would be negligible, localized, and temporary in nature and only persist during construction activities. Furthermore, standard management practices would be implemented during the project to reduce turbidity and sediment transport by working in as dry as possible conditions. The activities associated with the proposed project are expected to have a beneficial effect on the quantity of the surface water resource due to the anticipated 720 acre feet water savings. Therefore, no significant impacts to surface water resources would occur as a result of the Proposed Action.

3.2.1.3 Cumulative Impacts

As the Proposed Action activities are proposed to take place during the non-irrigation season while no water is present in the canals, the Proposed Action would have a minor temporary and localized impact to water resources. After completion of the Proposed Action, benefits to water quality may be present, though unquantified, as nutrient loading would be reduced through piping. Overall water quantities would likely increase due to a reduction in evaporation and seepage losses. Similar projects within HID, and from neighboring irrigation districts, would augment the beneficial results of the Proposed Action.

3.2.2 Biological Resources

3.2.2.1 Affected Environment:

A list of federally registered endangered, threatened, proposed, and candidate species potentially occurring within the project area is shown in Table 1. The listing was generated by accessing and querying the U.S. Fish and Wildlife Service database at http://www.fws.gov/klamathfallsfwo/es/es.html.

3.2.2.2 Environmental Consequences

No Action:

Under the No Action Alternative, Reclamation would not provide funding to implement HID's Dairy and Yonna Canals Piping Project. As a result, HID would not install pipe within their open canal system and both evaporation and seepage losses would continue. No conserved water would be made available to the Klamath Project and the Lost River. Current conditions would remain the same as the existing condition if no action were taken, and there would be no impact to wildlife, including threatened and endangered species, or their critical habitat.

Proposed Action:

The potential impacts to all species listed in Table 1 as a result of the construction activities of the Proposed Action Alternative have been considered, and it has been determined that the Proposed Action Alternative would have no effect on these species or their habitats as construction would occur in the previously disturbed context of HID's irrigation delivery system during the non-irrigation system when the ditches are dry. Benefits to wildlife, particularly aquatic species, may be realized, though unquantified, upon project completion as conserved water is anticipated to remain within the Lost River and could improve aquatic habitat. This decision is based on analysis of current information on the potential effects of the action, known existing populations, and habitat requirements for the species.

3.2.2.3 Cumulative Impacts

Construction activities associated with the Proposed Action would be temporary and localized and, therefore, would not contribute to cumulative impacts to the resource. Long term impacts resulting from the Proposed Action would include the potential for improved wildlife habitat within the Lost River and adjacent riparian environments. Furthermore, similar proposed activities from nearby irrigation districts, and within HID, would supplement the goals of this Proposed Action for the resource.

Table 1: Endangered, Threatened, Proposed, and Candidate Species that May Occur in Klamath County, Oregon

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Klamath Falls Fish and Wildlife Office
1936 California Avenue, Klamath Falls, Oregon 97601
(541) 885-8481 FAX (541)885-7837
kfalls@fws.gov

LISTED, PROPOSED, AND CANDIDATE SPECIES THAT MAY OCCUR IN KLAMATH COUNTY, OREGON

Status: **Endangered**

Phylum	Common Name	Scientific Name	Critical Habitat
Fish	Lost River sucker	*Deltistes luxatus*	Designated
Fish	Shortnose sucker	*Chasmistes brevirostris*	Designated
Mammal	Gray wolf	*Canis lupus*	
Plant	Applegate's milk-vetch	*Astragalus applegatei*	
Plant	Green's tuctoria	*Tuctoria greenei*	Designated

Status: **Threatened**

Phylum	Common Name	Scientific Name	Critical Habitat
Bird	Northern spotted owl	*Strix occidentalis caurina*	Designated
Bird	Yellow-billed cuckoo (Western DPS)	*Coccyzus americanus occidentalis*	Proposed
Fish	Bull trout (Klamath River DPS)	*Salvelinus confluentus*	Designated
Amphibian	Oregon spotted frog	*Rana pretiosa*	Designated
Mammal	Canada lynx	*Lynx canadensis*	
Plant	Slender Orcutt grass	*Orcuttia tenuis*	Designated

Status: **Proposed**

Phylum	Common Name	Scientific Name	Critical Habitat
Mammal	Wolverine	*Gulo gulo luscus*	

Status: **Candidate**

Phylum	Common Name	Scientific Name
Plant	Whitebark Pine	*Pinus albicaulis*

Updated July 18, 2016

3.2.3 Cultural Resources

"Cultural Resources" is a broad term that applies to prehistoric, historic, and architectural resources, as well as to traditional cultural properties. Cultural resources can include both archaeological sites, which contain evidence of past human use, and the built environment, which consists of structures such as buildings, roadways, dams, and canals. The National Historic Preservation Act (NHPA) of 1966, as amended, is the primary Federal legislation that outlines the Federal government's responsibilities related to cultural resources. Section 106 of the NHPA requires the Federal government to take into consideration the effects of its undertakings on historic properties. Historic properties are, by definition, cultural resources that are included in, or eligible for inclusion in, the National Register of Historic Places (National Register). The evaluation criteria for National Register eligibility are outlined at 36 CFR Part 60.4.

Compliance with Section 106 of the NHPA follows a process outlined at 36 CFR Part 800. This process includes determining the area of potential effects (APE) for an undertaking, consulting with Indian tribes and other interested parties, identifying if historic properties are present within the APE, assessing the effects the undertaking will have on historic properties, and resolving any adverse effects to historic properties before an undertaking is implemented. The Section 106 process also requires consultation with the State Historic Preservation Officer (SHPO), or Tribal Historic Preservation Officer (THPO) where applicable, to seek concurrence with the finding of effect for the undertaking.

3.2.3.1 Affected Environment

The proposed project is located within HID's jurisdiction in areas that have been previously disturbed by the original construction of HID's privately owned water conveyances and appurtenant facilities. The project entails the installation of pipe within roughly one mile (5,280 feet) of three distinct open canal segments and across roughly 0.22 miles (1,160 feet) of a cultivated field for a cumulative total of approximately 1.22 miles (6,440 feet) in length (see location maps in Figures 1 through 4). No additional excavation to widen or deepen the open ditch segments of the Yonna and Dairy Canals is expected; however, excavation of a new trench, measuring roughly 1,160 feet in length, four feet in width, and five in depth, across a cultivated field would be necessary at the Dairy Canal northern segment

In an effort to identify historic properties within the area of potential effects (APE), a cultural resources inventory was conducted by Native-X, Inc. Archaeological Services, a consultant hired by HID. A records search, background information, historic context, and field survey were completed as part of this cultural resources report. As a result of the studies, no archaeological resources were identified and one built environment resource, the HID irrigation system (and its components the Dairy and Yonna canals) was identified. Based on information in the cultural resources report and supplemental information that Reclamation completed, Reclamation determined the HID irrigation system is not eligible for inclusion in the National Register. Reclamation identified and sent correspondence to the Klamath Tribes, as a Tribe in the area who might attach religious and cultural significance to historic properties within the APE. The Klamath Tribes responded on June 20, 2016, expressing interest in the project. Reclamation archaeologist Mr. Mark Carper spoke with Mr. Dennis Fleming, Klamath Tribes Cultural Resources Protection Specialist, on the phone on August 19, 2016, who requested final reports. Those reports were provided and no concerns were voiced for the undertaking. Reclamation consulted with the SHPO and received concurrence that the HID irrigation system is not eligible for inclusion in

the National Register. The lack of historic properties within the APE results in a finding of no historic properties affected pursuant to 36 CFR §800.4(d)(1) (see Appendix C).

3.2.3.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not provide funding to implement HID's Dairy and Yonna Canals Piping Project through the WaterSMART program. HID would not convert any of the proposed sections of open canal to subterranean piping. There would be no change to the existing facilities, and, consequently, there would be no change in impacts to cultural resources from current conditions under the No Action Alternative.

Proposed Action

Under the Proposed Action Alternative, Reclamation would release grant funding to HID to implement the Dairy and Yonna Canals Piping Project through the WaterSMART program to convert identified sections of open canal to subterranean piping. The use of federal funds would constitute an undertaking as defined by 36 CFR §800.16(y), and the Proposed Action is a type of activity that has the potential to cause effects on historic properties under 36 CFR §800.3(a). After consultation with the SHPO, concurrence on a finding of no historic properties affected pursuant to 36 CFR §800.4(d)(1) was determined. Should cultural resources be identified during construction, the project shall be halted, and Reclamation shall be contacted to discuss any such discovery and determine how to proceed.

3.2.3.3 Cumulative Impacts

As there are no historic properties identified within the project area, the Proposed Action would not contribute to cumulative impacts to historic properties.

3.2.4 Air Quality

Section 176 (c) of the Clean Air Act (CAA) (42 U.S.C. 7506 (c)) requires that any entity of the Federal government that engages in, supports, or in any way provides financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable State Implementation Plan (SIP) required under Section 110 (a) of the CAA (42 U.S.C. 7401 (a)) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with an SIP's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards (NAAQS) and achieving expeditious attainment of those standards. Each federal agency must determine that any action that is proposed by the agency and that is subject to the regulations implementing the conformity requirements will, in fact, conform to the applicable SIP before the action is taken.

On November 30, 1993, the U.S. Environmental Protection Agency (EPA) promulgated final general conformity regulations at 40 CFR 93 Subpart B for all Federal activities except those covered under transportation conformity. The general conformity regulations apply to a proposed Federal action in a non-attainment or maintenance area if the total direct and indirect emissions of the relevant criteria pollutant(s) and precursor pollutant(s) caused by the Proposed Action equal or exceed certain threshold amounts, thus requiring the Federal agency to make a determination of general conformity.

3.2.4.1 Affected Environment

Air quality in the State of Oregon is regulated by the EPA and administered by the Oregon Department

of Environmental Quality (ODEQ). The NAAQS, established by the EPA under the CAA, specifies limits of air pollutants levels for seven criteria pollutants: carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen (N), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). The proposed project vicinity is outside the Klamath Falls non-attainment area for $PM_{2.5}$.

3.2.4.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not provide funding to implement HID's Dairy and Yonna Canals Piping Project through the WaterSMART program. HID would, therefore, not install piping in place of identified segments of its open canal system. Though no new construction, and associated emissions as a result of construction, would occur, regular operation and maintenance activities of HID's water conveyance system, which would require the use of vehicles and other powered equipment, would continue to occur as in the past and perhaps increase as the facilities continue to age. As a result, a potential for increased air quality impacts over the long term could materialize.

Proposed Action

Under the Proposed Action Alternative, Reclamation would provide funding to implement HID's Dairy and Yonna Canals Piping Project through the WaterSMART program, which would allow for the installation of approximately 1.22 miles of pipe in the HID water conveyance system. Impacts from the use of heavy equipment during construction activities, such as pollution and fugitive dust, may have minor negative impacts on air quality, but these impacts would be localized and temporary and would cease once construction is completed. Emissions resulting from construction activities would be minimized as reasonable precautions, such as the application of dust suppressant at project sites, are incorporated in the Proposed Action Alternative. These mitigation measures are consistent with the ODEQ Visible Emissions and Nuisance Requirements, Division 208 and the Oregon SIP which identifies how the State will attain and/or maintain the primary and secondary NAAQS set forth in section 109 of the CAA and 40 CFR 50.4 through 50.12 and which includes federally-enforceable requirements (EPA 2016).

3.2.4.3 Cumulative Impacts

Emissions associated with the construction of the Proposed Action would have temporary minor effects on air quality. Considering long-term operation, air quality impacts would be reduced as the need for canal maintenance actions on new/improved facilities would be decreased. HID anticipates piping more of its open canal infrastructure in the future; this action, as well as similar actions in neighboring irrigation districts, would yield the same benefit to air quality.

Section 4: Environmental Commitments

The following environmental commitments would be implemented before, during, and after construction to prevent or reduce the impacts of the Proposed Action.

- **Environmental Permitting –** HID would be responsible for complying with all environmental requirements identified in this EA and any other applicable Federal, State, and local permits.

- **Water Resources** – HID would perform all work when the irrigation facilities are dewatered to avoid contributing to surface water quality impacts. Standard management practices would be included in the proposed project to avoid or minimize the release of sediments, pollutants, and chemicals into the environment during construction.

- **Cultural Resources –** In the case that any cultural resources, either surface or subsurface, are inadvertently discovered during construction, construction in the area of the inadvertent discovery will cease, and Reclamation's Mid-Pacific Regional Archaeologist or a member of the cultural resources staff will be notified. Reclamation's cultural resources staff will make an assessment of the resource and conduct additional consultations as required. Work will not resume at that location until notified by Reclamation to proceed.

- **Air Quality** – Reasonable precautions for air quality would be implemented by HID to control emissions during construction activities. HID would follow Federal and State requirements to control methods for aggregate storage pile emissions to minimize dust generation, including the watering of staging areas and unimproved access roads as necessary. All loads that have the potential of leaving the bed of the truck during transportation would be covered or watered to prevent the generation of fugitive dust.

- **Access** – Construction access and staging of materials and equipment would utilize existing improved and unimproved roads whenever possible. HID will coordinate with local property owners as needed if such property must be traversed to access the construction sites.

- **Disturbed Areas** – Areas disturbed during construction would be graded and reseeded to as near their pre-project condition as practicable. In an effort to reduce soil erosion, seeding and planting would occur at appropriate times with weed-free seed mixes of pasture grasses and distributed where appropriate.

- **Noise Impacts –** HID would coordinate with adjacent property owners as appropriate during construction to notify them of the temporary noise disturbances. Construction activities would be conducted from 7:00 A.M. to 7:00 P.M., Monday through Sunday. Should work hours outside of this period be necessary, HID would require prior approval by Reclamation. Upon approval, HID would contact landowners prior to commencement of the adjusted work schedule to inform them of the potential change in work hours.

- **Monitoring** – Reclamation would monitor the Proposed Action activities, both pre and post construction to ensure compliance with the criteria noted within this EA.

- **Additional Analysis –** If the proposed action were to change significantly from the alternative described in this EA, additional environmental analyses would be undertaken as necessary.

Section 5: Consultation and Coordination

This section presents the agencies and parties that were coordinated or consulted with during development of the document.

5.1 Persons or Agencies Consulted During EA Development

- Oregon State Historic Preservation Officer
- HID
- Klamath Tribes

Section 6: References

Environmental Protection Agency. Climate Change – Basic Information. 2016. Website: http://www.epa.gov/climatechange/basicinfo.html

U.S. Fish and Wildlife Service. Request A Species List: Listed, Proposed, and Candidate Species Lists (Klamath County, Oregon). 2016. Website: http://www.fws.gov/klamathfallsfwo/es/es.html

Section 7: Appendices

Appendix A: Photographs of the Proposed Project Sites.

Figure 1: Yonna Canal

Figure 2: Dairy Canal Southern Segment (south end)

Figure 3: Dairy Canal Northern Segment

Appendix B: Reclamation Indian Trust Assets Coordination and Consultation.

Indian Trust Assets
Request Form (MP Region)

Submit your request to your office's ITA designee or to MP-400, attention Deputy Regional Resources Manager.

Date: 9/14/16

Requested by (office/program)	Kirk Young, Natural Resource Specialist, KBAO
Fund	14XR0680A1
WBS	RY.30180006.HIDOR0E
Fund Cost Center	25320000
Region # (if other than MP)	
Project Name	Horsefly Irrigation District WaterSMART Grant: Dairy and Yonna Canals Piping Project
CEC or EA Number	KBAO-EA-2016-008
Project Description (attach additional sheets if needed and include photos if appropriate)	HID, through the WaterSMART Grant Program, is proposing the conversion of its privately owned open canal to subterranean piping at three distinct sites: Yonna Canal, Dairy Canal southern segment, and Dairy Canal northern segment (also known as the Nobel lateral off of the Dairy Canal). Pipe would be installed along approximately one mile (5,280 feet) of open canal and approximately 0.22 miles (1,160 feet) across a cultivated field. The Yonna Canal installation includes approximately 0.70 miles (3,700 feet) of 30" HDPE pipe (see Figure 2); the Dairy Canal southern segment includes roughly 0.19 miles (1,000 feet) of 30" HDPE pipe (see Figure 3); the Dairy Canal northern segment consists of a total of approximately 0.33 miles (1,740 feet) of 24" PVC pipe in which 0.11 miles (580 feet) would be installed within the open ditch and 0.22 miles (1,160 feet) would be installed under a cultivated field rather than within an existing ditch (see Figure 4). The proposed project activities would be performed by HID staff and would occur during the non-irrigation season. An outline of proposed construction tasks may be found in Exhibit C.

Indian Trust Assets Request Form 2015 (04-13-2015).docx Page 1 of 9

***Project Location (Township, Range, Section, e.g., T12 R5E S10, or Lat/Long cords, DD-MM-SS or decimal degrees). Include map(s)**	The sites are located in Section 36, Township 38S, Range 11.5E and Sections 8 and 9, Township 39S, Range 11E of the Willamette Meridian (see location maps in Exhibit B).

Kirk Young — Signature | KIRK YOUNG — Printed name of preparer | 9-14-16 — Date

ITA Determination:

The closest ITA to the proposed **Horsefly Irrigation District Dairy and Yonna Canals Piping Project** activity is the **Klamath Tribal Designated Statistical Area** about **10.6** miles to the west of the nearest project site (see attached image in Exhibit A).

Based on the nature of the planned work it **does not** appear to be in an area that will impact Indian hunting or fishing resources or water rights nor is the proposed activity on actual Indian lands. It is reasonable to assume that the proposed action **will not** have any impacts on ITAs.

Kristen L. Hight — Signature | Kristen L. Hight — Printed name of approver | 9/13/16 — Date

RECLAMATION | tessel
Search Reclamation
Native American Lands
Close App
This application locates Native American Lands trust assets within the selected search radius and lists the results with distances.
Step 1. Select a search radius (miles)
25
Step 2. Longitude and Latitude
If you CLICK on the map, the coordinates for the location will be inserted below. Or, you can type them manually.
Longitude:
-121.47873
Latitude:
42.23088
Step 3. Find closest Native American Lands
Search
Distance to closest native american land: 10.60 miles
Name: Klamath TDSA
Tribe: Klamath Indian Tribe of Oregon
Help
Indian Trust Asset
Distance = 10.60 miles
Name = Klamath TDSA
Tribe = Klamath Indian Tribe of Oregon
Zoom to
OREGON
CALIFORNIA
KLAMATH
BUTTE
Scale: 577,791 | Long: -121.41646, Lat: 42.07971

Appendix C: Reclamation Cultural Resource Coordination and Consultation.

CULTURAL RESOURCES COMPLIANCE
Division of Environmental Affairs
Cultural Resources Branch (MP-153)

MP-153 Tracking Number: 14-KBAO-243

Project Name: National Historic Preservation Act Compliance for Horsefly Irrigation District Yonna and Dairy canals Piping Project

NEPA Contact: Kirk Young, Natural Resource Specialist; Kristen Hiatt, Natural Resource Specialist

MP 153 Cultural Resources Reviewer: BranDee Bruce, Architectural Historian

Date: November 8, 2016

Reclamation proposes to provide Federal funding under a WaterSMART grant to Horsefly Irrigation District (HID) for the proposed project to construct a new lateral and pipe portions of the Yonna and Dairy canals, components of the HID irrigation system, in Klamath County, Oregon. This action constitutes an undertaking with the potential to cause effects to historic properties, assuming such properties are present, requiring compliance with Section 106 of the National Historic Preservation Act (NHPA) as amended.

Historic properties identification resulted in the HID Irrigation System and two of its components, the Yonna and Dairy canals, as the only properties within the project area of potential effect (APE). HID hired Native-X to perform background research, surveys, and evaluation of the APE. Native-X recommended that the HID Irrigation System was eligible for the National Register of Historic Places (National Register) under Criterion A, but that proposed project activities would not result in an adverse effect. Reclamation disagreed with the recommendations and prepared and submitted a supplemental report, providing additional analysis that the HID Irrigation System was not eligible for inclusion in the National Register. Due to the lack of any eligible properties within the APE, Reclamation determined the project would result in no historic properties affected pursuant to 36 CFR§800.4(d)(1).

Reclamation submitted the consultation package to State Historic Preservation Officer (SHPO) on October 8, 2016, providing information on proposed project activities, eligibility determinations, and finding of effect. Reclamation asked for an expedited review due to a need to begin construction on the project. After additional information was submitted to the State Historic Preservation Office (SHPO) staff, on November 1, 2016, SHPO concurred with Reclamations findings on the above ground resources within the APE (see attached). Consultation correspondence between Reclamation and the SHPO has been provided with this cultural resources compliance document for inclusion in the administrative record for this action.

I have provided comments on the Environmental Assessment (see attached). This document serves as notification that Section 106 compliance has been completed for this undertaking. Please note that if project activities subsequently change, or new design is reached for the gate replacements, additional NHPA Section 106 review, including further consultation with the SHPO, may be required.