

January 12, 2022

RE: Klamath Drainage District Infrastructure Modernization Project

Dear stakeholders,

Klamath Drainage District (KDD or the District) is seeking federal funding through the Natural Resources Conservation Service's (NRCS) Watershed Protection and Flood Prevention Program, Public Law 83-566 (PL 83-566). This funding would be invested to modernize irrigation canals, laterals, and other infrastructure throughout the District. As a part of this effort, we are starting public scoping about a potential project and its associated resources. The purpose of this letter is to:

- transmit the Scoping Document for this project,
- advise you about the public comment period from January 12, 2022 to February 25, 2022, and
- advise you on how to submit comments on the proposed project.

Federal investments through PL 83-566 need to comply with both the program's requirements as outlined in the Principles, Requirements, and Guidelines for Water and Land Related Resources Implementation Studies and Federal Water Resource Investments (PR&G) and the National Environmental Policy Act (NEPA) process. NRCS is the lead federal agency managing the NEPA process for the Klamath Drainage District Infrastructure Modernization Project.

Public scoping is the first step in the NEPA process and is required under PL 83-566. Under this step, NRCS releases a Scoping Document to resource agencies, interested stakeholders, and the public to inform them of the need for NEPA and PR&G analyses, and to learn of any information or concerns relevant to the analyses. The Scoping Document identifies the proposed project and framework for analyzing the resources that have the potential to be affected by the proposed project.

The District and NRCS will discuss the Scoping Document during a virtual public scoping meeting to be held on January 27, 2022. The purpose of this meeting is to collect both NEPA-related comments and comments on PR&G-specific analyses regarding which resources should be included moving forward as well as the appropriate level of analyses. NRCS will use the comments gathered during public scoping to inform the next step in the NEPA and PL 83-566 program process.

Comments related to the issues discussed during the meeting and/or the review of the Scoping Document are due February 25, 2022. Comments and questions can be emailed to: [klamath.dd.comments@gmail.com](mailto:klamath.dd.comments@gmail.com) or mailed to Farmers Conservation Alliance/102 State Street/Hood River, OR 97031.

The District thanks you for your interest in the infrastructure modernization project and looks forward to your participation.

Sincerely,

Scott White, District Manager

# Scoping Document for the Klamath Drainage District Infrastructure Modernization Project

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Prepared by Farmers Conservation Alliance on behalf of the Natural Resources Conservation Service

Winter 2022

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## Abbreviations

°F	degrees Fahrenheit
BMP	Best Management Practice
CFR	Code of Federal Regulations
CSWRCB	California State Water Resources Control Board
EA	Environmental Assessment
FCA	Farmers Conservation Alliance
KDD or the District	Klamath Drainage District
KSD	Klamath Straits Drain
LKNWR	Lower Klamath National Wildlife Refuge
NEE	National Economic Efficiency
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife
ODSL	Oregon Department of State Lands
PL 83-566	Watershed Protection and Flood Prevention Program, Public Law 83-566
Plan-EA	Watershed Plan-Environmental Assessment
PR&G	Guidance for Conducting Analysis Under the Principles, Requirements, and Guidelines for Water and Land Related Resources Implementation Studies and Federal Water and Resource Investments
Reclamation	Bureau of Reclamation
SHPO	State Historic Preservation Office
THPO	Tribal Historic Preservation Office
TMDL	Total Maximum Daily Load
TLNWR	Tule Lake National Wildlife Refuge
USACE	United State Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service

# 1 Introduction

Klamath Drainage District (herein referred to as KDD or the District) seeks federal funding through the Natural Resources Conservation Service's (NRCS) Watershed Protection and Flood Prevention Program, Public Law 83-566 (PL 83-566), authorized by Congress in 1954, to implement an irrigation infrastructure modernization project within Klamath County, Oregon, and Siskiyou County, California.

KDD is part of the Bureau of Reclamation's (Reclamation) Klamath Project. The District delivers water to approximately 20,000 acres of private farmland, 7,000 acres of federally leased lands within the District's boundary, and to the Lower Klamath National Wildlife Refuge (LKNWR) south of the District. The District delivers that water through roughly 30 miles of irrigation canals and laterals, 121 gated turnouts from canals and laterals, and 55 lift pumps<sup>1</sup>. The District also has approximately 220 miles of drains to keep the water table below the crops' root zones during the growing season. When and where it is feasible, water is discharged from the drains into the laterals for reuse. All the drains within KDD terminate at the Klamath Straits Drain (KSD), located within the District's boundary.

In recent years, the Klamath Basin has faced unprecedented droughts that have severely limited the water supply to the Klamath Project and the LKNWR. As such, modernizing strategic sections of the District's water distribution system would increase water use efficiency and help address local water, fish, and wildlife resource concerns.

The National Environmental Policy Act (NEPA) of 1969 and other applicable laws require a complete analysis of the environmental effects of the proposed project, as well as the consideration of additional alternatives. The Principles, Requirements, and Guidelines for Water and Land Related Resources Implementation Studies and Federal Water Resource Investments (PR&G) require additional analyses, such as an economic analysis and inclusion of effects to ecosystem services, in order to meet the requirements of the program. NRCS as the lead federal agency will be meeting

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<sup>1</sup> Due to the flat topography of the District, lift pumps are required to facilitate water movement throughout the District.

requirements of both NEPA<sup>2</sup> and the PR&Gs<sup>3</sup> simultaneously through the Watershed Planning process. This Scoping Document and the associated scoping meeting meet NEPA and PR&G requirements for public participation. The scoping process is part of a systematic approach to obtain input from stakeholders about the project and to ensure that significant decision-making factors are addressed. The scoping process helps to ensure that the level of analysis for the proposed project is appropriate, and it helps to anticipate any significant impacts that may result in the need for an Environmental Impact Statement, or whether an Environmental Assessment (EA) should be prepared. At this time, NRCS anticipates that a Draft Watershed Plan-EA (Plan-EA) would be prepared following scoping.

The Draft Plan-EA will describe the proposed project in detail; look at alternatives to meet the purpose of and need for the proposed project; analyze the potential effects of the proposed project on cultural, social, and environmental resources in the vicinity; and analyze the potential costs and benefits of the proposed project. NRCS will release the Draft Plan-EA for public and agency comment upon completion.

## **2 Consultation and Participation**

### **2.1 Sponsors, Local Partners, Agencies, and Tribal Participation**

The scoping process is a collaboration between the District, NRCS, partners, agencies, tribes, and other stakeholders. There will be additional opportunities for input during the Watershed Planning Process and the development of the Draft Plan-EA.

Project sponsors are the parties involved in scheduling, facilitating communication, project design and development, and document writing. The lead sponsor for the project is KDD. NRCS is the lead agency managing the NEPA process, and Reclamation will most likely be a cooperating agency.

### **2.2 Permits and Compliance**

Project sponsors seek federal funding through PL 83-566. Therefore, the project will require an environmental assessment to comply with NEPA. Through the NEPA process, NRCS will identify

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<sup>2</sup>NEPA requirements include the Council on Environmental Quality regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500–1508); the U.S. Department of Agriculture’s (USDA) NEPA regulations (7 CFR Part 650); NRCS Title 190 General Manual Part 410; and the NRCS National Environmental Compliance Handbook Title 190 Part 610 (May 2016).

<sup>3</sup> NRCS requirements and guidelines are provided in the 2015 NRCS National Watershed Program Manual (NRCS 2015) and the 2014 NRCS National Watershed Program Handbook (NRCS 2014). Additional requirements are found in the 2013 Principles and Requirements for Federal Investments in Water Resources (NRCS 2013) and Interagency Guidelines and Agency Specific Procedures established in Departmental Manual 9500-013. These documents comprise the Guidance for Conducting Analysis Under the Principles, Requirements, and Guidelines for Water and Land Related Resources Implementation Studies and Federal Water and Resource Investments (PR&G) (NRCS 2017). The PR&G revised and replaced the 1983 Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies. The PR&G constitutes the comprehensive policy and guidance for federal investments in water resources.

how the project would comply with all relevant state and federal permitting and regulations, including Section 106 of the National Historic Preservation Act (managed by the State Historic and Preservation Office [SHPO]), Section 7 of the Endangered Species Act (managed by the National Marine Fisheries Service and the U.S. Fish and Wildlife Service [USFWS]), and Sections 401 and 404 of the Clean Water Act (managed in Oregon by Oregon Department of State Lands [ODSL], Oregon Department of Environmental Quality [ODEQ], and the U.S. Army Corps of Engineers [USACE], and managed in California by the California State Water Resources Control Board [CSWRCB] and USACE). Permits that are not received during the NEPA process would be received prior to beginning construction of the proposed project.

## **2.3 Mitigation**

Mitigation for environmental, historical, or other social effects will be considered and described in the Draft Plan-EA when the potential effects to these resources have been identified; consultation with appropriate agencies will be conducted to agree on any mitigation plans.

## **3 Purpose and Need for Action**

The purpose of the proposed project is Watershed Protection<sup>4,5</sup> by improving District infrastructure in a manner that reduces District operational inefficiencies, which can affect water quality; prevents the entrainment of fish in District canals and laterals; and improves the ability of the District to deliver the amount of water patrons need at the time they need it. The District has identified the need to conserve energy, prevent the entrainment of fish and aquatic organisms in canals and laterals, reduce District operational spills that can negatively affect water quality in the Klamath River, and provide more reliable water delivery to patrons including the LKNWR.

### **3.1 Watershed Problems and Resource Concerns**

The following sections identifies watershed problems and resource concerns that this proposed project would seek to address.

#### **3.1.1 Improve Conditions for Fish Populations in Klamath River**

KDD's diversions on the Klamath River are not currently screened. With no screens in place, fish are able to pass from the river into the District's canal system. When fish pass into a canal system, they typically become stranded.

Currently, PacifiCorp produces hydropower at four out of a total six dams on the Klamath River downstream from KDD's diversions (PacifiCorp 2021). Following a ten-year-long Federal Energy Regulatory Commission re-licensing process, stakeholders signed the Klamath Hydroelectric

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<sup>4</sup> A description of Authorized Purposes can be found in 390-NWPM, Part 500, Subpart A, Section 500.3B.

<sup>5</sup> To meet NRCS requirements for a federal investment in a water resources project, the project must meet the Federal Objective set forth in the Water Resources Development Act of 2007 and must be an authorized project purpose under Sections 3 and 4 of Public Law 83-566.



Settlement Agreement in 2010 to provide a framework for the potential removal of PacifiCorp's Klamath River dams. Under the agreement, the Klamath River Renewal Corporation is expected to facilitate the dams' removals by 2023 or 2024. Dam removal would allow salmon, steelhead, and lamprey access to over 400 stream miles of historic spawning habitat upstream of the dams (KRRC 2021). Once the dam removal is complete, anadromous fish passing the District's unscreened diversions would be able to enter and become entrained in the District's canals.

### **3.1.2 Water Shortages Affecting Agriculture and Habitat**

In recent years, the Klamath Basin has faced droughts that have severely limited water supply to the Bureau of Reclamation's Klamath Project and the LKNWR. The limited water supply, coupled with current District operational inefficiencies, including the inability to monitor and adjust water conveyance in real time, make it difficult for the District to manage water deliveries.

Water shortages have also limited water deliveries to the LKNWR, the nation's first waterfowl refuge and home to many colonial nesting water birds and a diverse array of sensitive species (USFWS 2021). Due to limited water supply to the LKNWR, refuge wetland acres have declined by about 47 percent<sup>6</sup> since 2012 (USFWS 2021). As identified in the Water Supply Enhancement for LKNWR Draft Plan-EA (USFWS 2021), the refuge needs to secure additional water to provide adequate wetland and agricultural habitats; however, the existing system doesn't have the capacity to deliver additional water.

### **3.1.3 Klamath River Water Quality**

The District diverts irrigation water and returns drainage water to the Klamath River between the Link River and Keno Dam, where water quality is typically poor. Elevated chlorophyll *a*, ammonia, and pH levels, as well as low dissolved oxygen levels in this reach impair water quality with Total Maximum Daily Loads (TMDLs) still being developed or in place (Sullivan et. al 2014). As a result, the Klamath River was listed on the 303(d) list as impaired due to nutrients in 2004 and temperature in 2012 (Hiatt 2019). Reclamation and the U.S. Geologic Survey identify the KSD as a contributing non-point source of pollution to the Klamath River (Sullivan et. al 2014). The KSD collects drainage water from KDD and the entire Klamath Project, including water pumped into the KSD from the Tulalake and Lower Klamath National Wildlife Refuges. The KSD discharges to the river between the Link River and Keno Dam via the F&FF Pump Station. At times, the KSD contributes more than half of the Klamath River's flow above Keno Dam at nutrient concentrations higher than what exists in the river (Hiatt 2019).

## **4 Scope of the Environmental Assessment**

NRCS and KDD are conducting public scoping as a part of the project's NEPA and PR&G requirements to comply with the requirements of PL-566. Public scoping seeks to identify issues of

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<sup>6</sup> From 1982 to 2012, wetlands on LKNWR averaged 24,787 acres annually. From 2013 to 2019, wetlands on LKNWR have averaged 13,135 acres annually (USFWS 2021).

economic, environmental, cultural, and social importance that have the potential to be affected by the proposed project.

Following the scoping process, a Plan-EA would be drafted to determine if the proposed project meets the NEPA and PR&G requirements.

## **5 Affected Environment - Existing Conditions**

### **5.1 Project Location and Project Area**

The project area is the area where the KDD Infrastructure Modernization Project would occur (Figure 5-1). It consists of District infrastructure that would be modernized (i.e., upgraded or improved), areas where new infrastructure would be built, and associated rights-of-way and/or easements where construction would take place and/or be staged. Measures proposed in the District Infrastructure Modernization Project would occur near Midland, Oregon and within Klamath County, Oregon, and Siskiyou County, California.

#### **5.1.1 Current Infrastructure and Water Rights**

KDD delivers water to approximately 27,000 acres of farmland within the District's boundary, and to the LKNWR south of the District, through roughly 30 miles of irrigation canals, 121 gated turnouts from canals and laterals, and 55 lift pumps (Figure 5-1).

The KSD, located within the District, collects the majority of the Klamath Project's tailwater from all the Klamath Project districts. Tailwater from Klamath Project districts upstream in the system flows south into the Tule Lake National Wildlife Refuge in California (TLNWR). The tailwater is then pumped out of the TLNWR, through Sheepy Ridge in California, and into the LKNWR. Excess water is returned to the Klamath River through KDD via the KSD and to two lift stations. These two lift stations, the E&EE and F&FF, lift excess water and discharge it to the Klamath River (KDD 2015).

The District's contracts with Reclamation allow the District to receive year-round water deliveries through the Klamath Project, including deliveries of stored water from Upper Klamath Lake. In the Klamath Basin Adjudication, the District's water rights were recognized with a 1905 priority date. Additionally, KDD holds Oregon state-appropriated water rights for roughly 480 cubic feet per second to be delivered up to 3 acre-feet per acre from March 1 through September 30, and up to 1 acre-foot per acre from October 1 to March 1 for winter irrigation. These water rights exclude Area K lands<sup>7</sup> (KDD 2015).

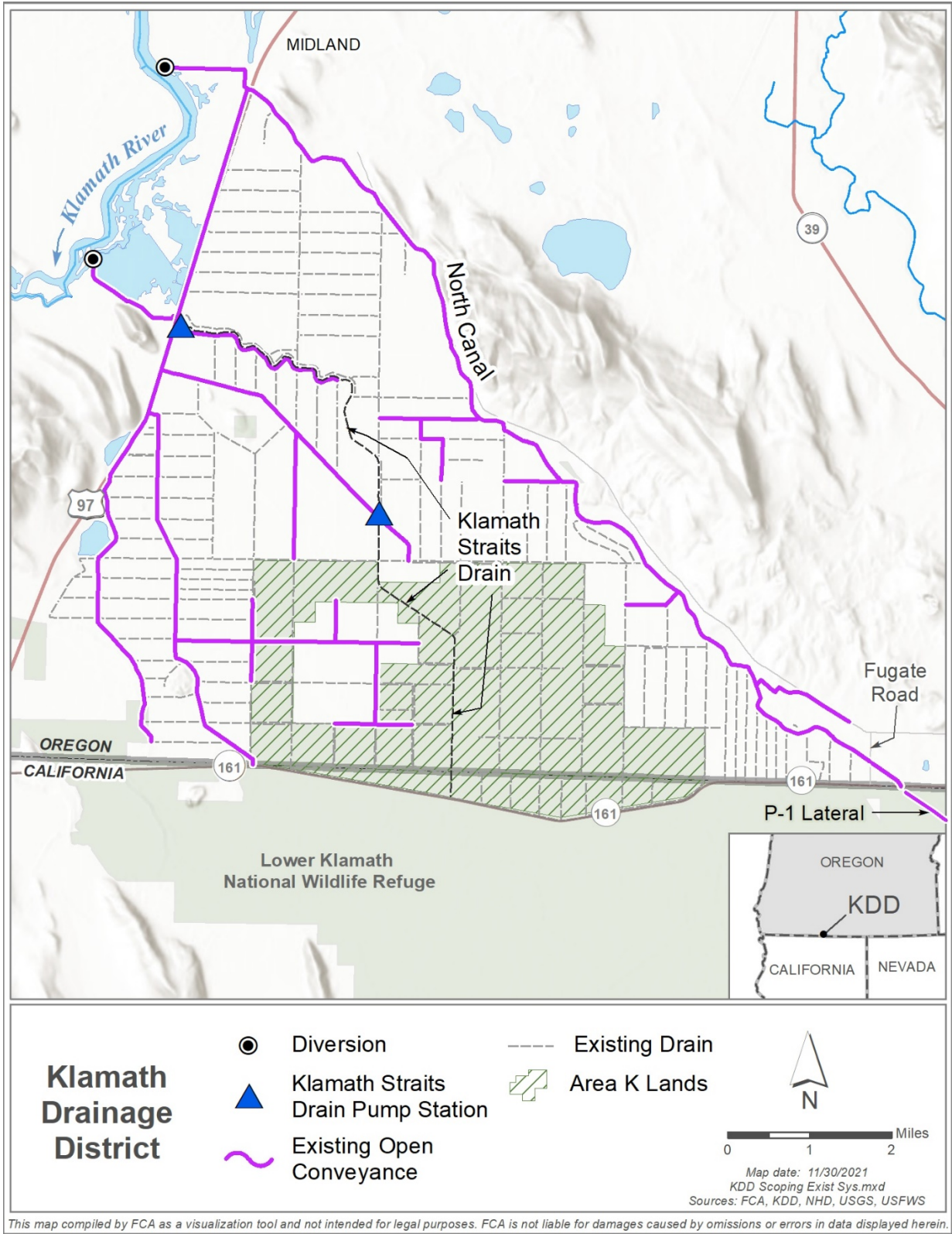
#### **5.1.2 Climate and Topography**

KDD is located at an elevation of approximately 4,100 feet above mean sea level. The climate is

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<sup>7</sup> The District delivers water to Area K lands, which are federally leased agricultural lands managed by the Lower Klamath National Wildlife Refuge.

dry with an annual average precipitation of 13.4 inches. Summer temperatures are mild with temperatures ranging from an average of 75 to 85 degrees Fahrenheit (°F) with occasional highs above 90°F. Winters are moderately cold with average temperatures in the low to mid 20s and occasional lows below 10°F. Typically, the growing season begins around mid-April and ends in early October (KDD 2015). The District is relatively flat, with a slope of about one foot per mile from the upper to the lower end of the District.



**Figure 5-1. Klamath Drainage District's current infrastructure.**

## 5.2 Resource Issues, Project-Related Effects, and Proposed Measures

Table 5-1 provides an overview of the resource issues identified to date that would potentially be affected by the project. It also provides an overview of KDD’s proposed measures to avoid adverse environmental effects during the construction and operation of its proposed infrastructure modernization project.

**Table 5-1. Overview of Currently Identified Resource Issues, Proposed Analyses, and Mitigation Measures to be Included in the Draft Watershed Plan-Environmental Assessment.**

Resource	Resource Issues to be Analyzed	Proposed Analyses and Mitigation Measures
Geology and Soils	Effects from erosion of exposed and disturbed soils (both surface and backfill) on soil resources and proximate surface waters, and effects to Prime and Unique farmlands as a result of construction	Review NRCS and other available soil survey and geology maps. Develop and implement an Erosion and Sediment Control Plan. Incorporate best management practices (BMP) during and post construction.
Cultural Resources	Effects of project construction and operation on historic resources that are, or may be eligible for inclusion in the National Register of Historic Places	Survey the project area and consult with SHPO and the Tribal Historic Preservation Office (THPO) prior to project construction. Develop and implement a Historic Properties Management Plan to provide a formal framework for the future treatment of all known historic properties within the area of potential effects that are eligible to be listed on the National Register of Historic Places.
	Effects of project construction and operation on archeological resources	Analyze previous archeological reports and potential effects and consult with the Klamath Tribes, SHPO, and THPO prior to project construction. Develop and implement an Unanticipated Discoveries Plan.
Vegetation	Potential for noxious weed distribution during and post construction	Incorporate noxious weed suppression BMPs during construction.
	Effects of project construction and operation on sensitive and/or rare plant species	Review state and federal listings specific to the project area. Determine measures based on species presence. If necessary, consult with USFWS and U.S. Forest Service during the planning phase.

<b>Resource</b>	<b>Resource Issues to be Analyzed</b>	<b>Proposed Analyses and Mitigation Measures</b>
Fish	Effects of project construction and operation on general fish species	The sponsors would like to install a fish screen along the Klamath River that would prevent the entrainment of fish and aquatic species in KDD's canal system. Consultation with USFWS, Oregon Department of Fish and Wildlife (ODFW), and the Klamath Tribes would occur during the planning phase.
	Effects of project construction and operation on Threatened and Endangered Species	Review state and federal listings specific to the project area and region. Determine measures based on species presence. If necessary, consult with USFWS during planning.
Wildlife	Effects of project construction and operation on general wildlife	Review available literature and communicate with USFWS and ODFW. Incorporate BMPs during construction.
	Effects of project construction and operation on Threatened and Endangered Species	Review state and federal listings specific to the project area. Determine measures based on species presence. If necessary, consult with USFWS and ODFW during the planning phase.
	Effects of project construction and operation on birds protected under the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act	A portion of the project area is located along the Pacific Flyway, a major north-south route of travel for migratory birds in the Americas. Determine measures based on species presence. If necessary, consult with USFWS during the planning phase.
Surface Water	Effects of increased turbidity during project construction due to exposed and disturbed soils	Develop and implement an Erosion and Sediment Control Plan. Incorporate BMPs during construction.
Groundwater	Effects of project construction and operation on groundwater near the project area	Review literature and consult with local experts. No measures proposed at this time.
Wetlands, Riparian Areas, and Floodplains	Effects of project construction and operation on wetlands near the project area	Review the National Wetlands Inventory Database, satellite imagery, and available literature. If jurisdictional wetlands are identified, consult with the USACE and ODSL. No measures proposed at this time.

<b>Resource</b>	<b>Resource Issues to be Analyzed</b>	<b>Proposed Analyses and Mitigation Measures</b>
	Effects of project construction and operation on floodplains in the project area	Present the proposed project to the Klamath County Flood Administrator to determine effects; measures would be determined. For project measures that are within the ordinary high-water mark, consult with the USACE.
	Effects of project construction and operation on riparian areas in the project area	Review available literature and consult with local experts. If necessary, consult with the USFWS and ODFW during the planning phase. If project measures are within the ordinary high-water mark, consult with the USACE. No measures proposed at this time.
Land Use and Recreation	Effects of project construction, operation, and maintenance on agricultural, residential, and other land uses near the project	Review spatial and zoning data and available literature. No measures proposed at this time.
	Effects of project construction, operation, and maintenance, including dust and noise, on recreational resources near the project	Review spatial data to determine the presence of trails and parks with the potential area to be affected. No measures proposed at this time.
Environmental Justice	Effects of project construction and operation on minority, low income, tribal, or indigenous community	Review socioeconomic data and spatial data. No measures proposed at this time.
Socioeconomic Resources	Effects of project construction, operation, and maintenance on the local economy in Klamath County, Oregon and in Siskiyou County, California	Prepare a National Economic Efficiency (NEE) and a Regional Impact Analyses as required by NRCS to determine the effect of the alternatives on the region's economy.
	Effects of project construction and completion on property values in the project area.	Review available literature. No measures proposed at this time.
Ecosystem Services <sup>1</sup>	Potential effects on provisional, cultural, and regulating ecosystem services	Review available literature. No measures proposed at this time.
Economic Benefits and Costs <sup>1</sup>	Economic costs and benefits of the project	Prepare a National Economic Efficiency Analysis

Notes:

1. These resources are not required under NEPA, they are required to be analyzed under the PR&Gs.

## **6 Alternatives**

### **6.1 Formulation Process**

To determine the most effective alternatives to meet the project’s purpose and need, NRCS and KDD are considering the needs of the water users, the goals for conservation and restoration, resources, the funding available for both the District and the water users, and the status of the District’s previous improvements.

### **6.2 Description of Alternatives Considered**

During the scoping process, the following alternatives will be analyzed to determine if they should be studied in detail or eliminated from further study. They will be evaluated based on the criteria in USDA (2017) and NRCS (2015). Pursuant to this guidance, alternatives that become “unreasonable due to cost, logistics, existing technology, social, or environmental reasons,” do not achieve the Federal Objective and Guiding Principles, or are unable to address the purpose and need for action may be removed from consideration.

#### **6.2.1 No Action Alternative (Future without Project)**

Under the No Action Alternative, the District would continue to operate and maintain the existing canal, lateral, drain, and pump system in its current condition. This alternative assumes that modernization of the District’s infrastructure would not be reasonably certain to occur, as funding at the large scale necessary to modernize the District’s infrastructure is not anticipated from other sources. The No Action Alternative would be a continuation of the District’s standard operations and maintenance.

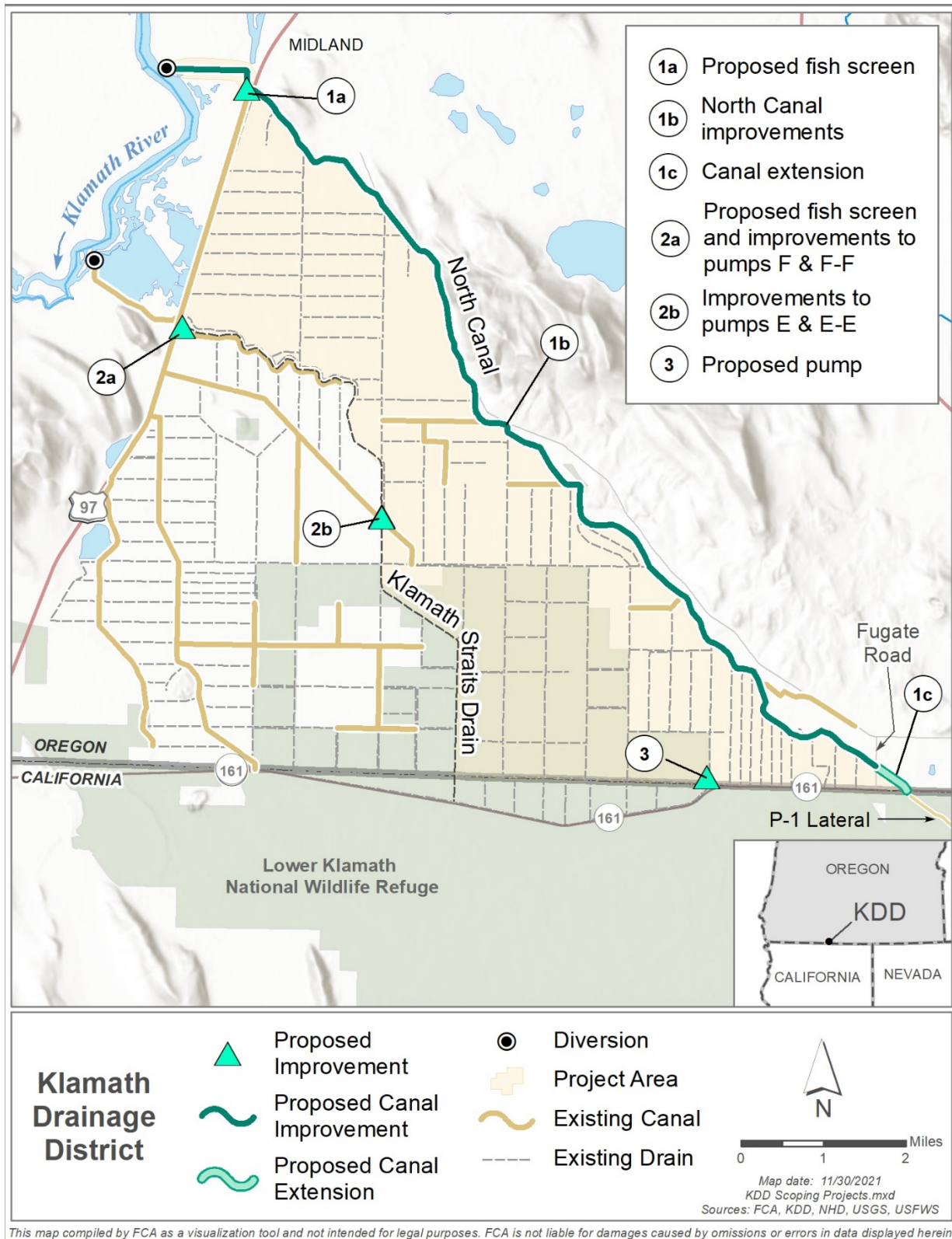
#### **6.2.2 District Infrastructure Modernization Alternative (Future with Project)**

Under the District Infrastructure Modernization Alternative, the District would perform the following modernization projects (Figure 6-1):

- Install fish screens at the District’s diversions on the Klamath River.
- Extend the North Canal from Fugate Road, across California State Highway 161, and connect it to the P-1 Lateral, where it would deliver water to the LKNWR.
- Modify the North Canal and the P-1 Lateral to allow increased flow and efficient delivery of water to the LKNWR.
- Install a new District recirculation pump and motor along the East Side State Line Drain to improve recirculation capability.



- Upgrade the Reclamation F&FF and E&EE pump stations along the KSD to a more common voltage and with variable frequency drives to operate more efficiently and to reduce pollutants to the Klamath River that currently exceed TMDL standards.
- Install flow monitoring and control structures throughout the project area to improve the performance of irrigation water management.



**Figure 6-1. District Infrastructure Modernization Alternative.**

### **6.3 Economics**

A National Economic Efficiency (NEE) analysis will be completed for the project during the Plan-EA process. The NEE is an economic analysis that evaluates costs and benefits associated with the proposed project and is required to be included in the Plan-EA under the PR&G.

## 7 References

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