

Yakima Basin Integrated Plan – Initial Development Phase Major Projects

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Overview

- **Integrated Plan Objectives**
- **Initial Development Phase Background**
- **Keechelus-to-Kachess Conveyance**
- **Kachess Drought Relief Pumping Plant**
- **Bull Trout Enhancement**
- **Cle Elum Pool Raise**
- **Cle Elum Dam Fish Passage Facilities**



Water Supply Objectives

- **Improve drought year supplies to water-short irrigation districts (70% proratable supply)**
- **Provide water for growth in municipal and domestic well uses**
- **Improve security of junior water rights in the basin**



Ecological Objectives

- **Improved stream flow conditions**
- **Improved operational flexibility to manage flows and adapt to climate change**
- **Improved connectivity/viability of bull trout populations**
- **Improved habitat in floodplain, riparian zone, and forested watersheds**
- **Increased populations of Chinook, coho, steelhead and sockeye**



Initial Development Phase

- **Addresses first implementation in first 10 years of 30 year plan**
- **Advances all seven plan elements**
- **Represents just under 1/3 of estimated plan costs (about \$900M)**



Initial Development Phase (cont)

- **Kachess Drought Relief Pumping Plant (\$205M)**
- **Keechelus-to-Kachess Conveyance (\$159M)**
- **Aquifer Storage and Recovery (\$6M)**
- **Agricultural Conservation (\$85M)**
- **Water Marketing (\$0.5M)**



Initial Development Phase (cont)

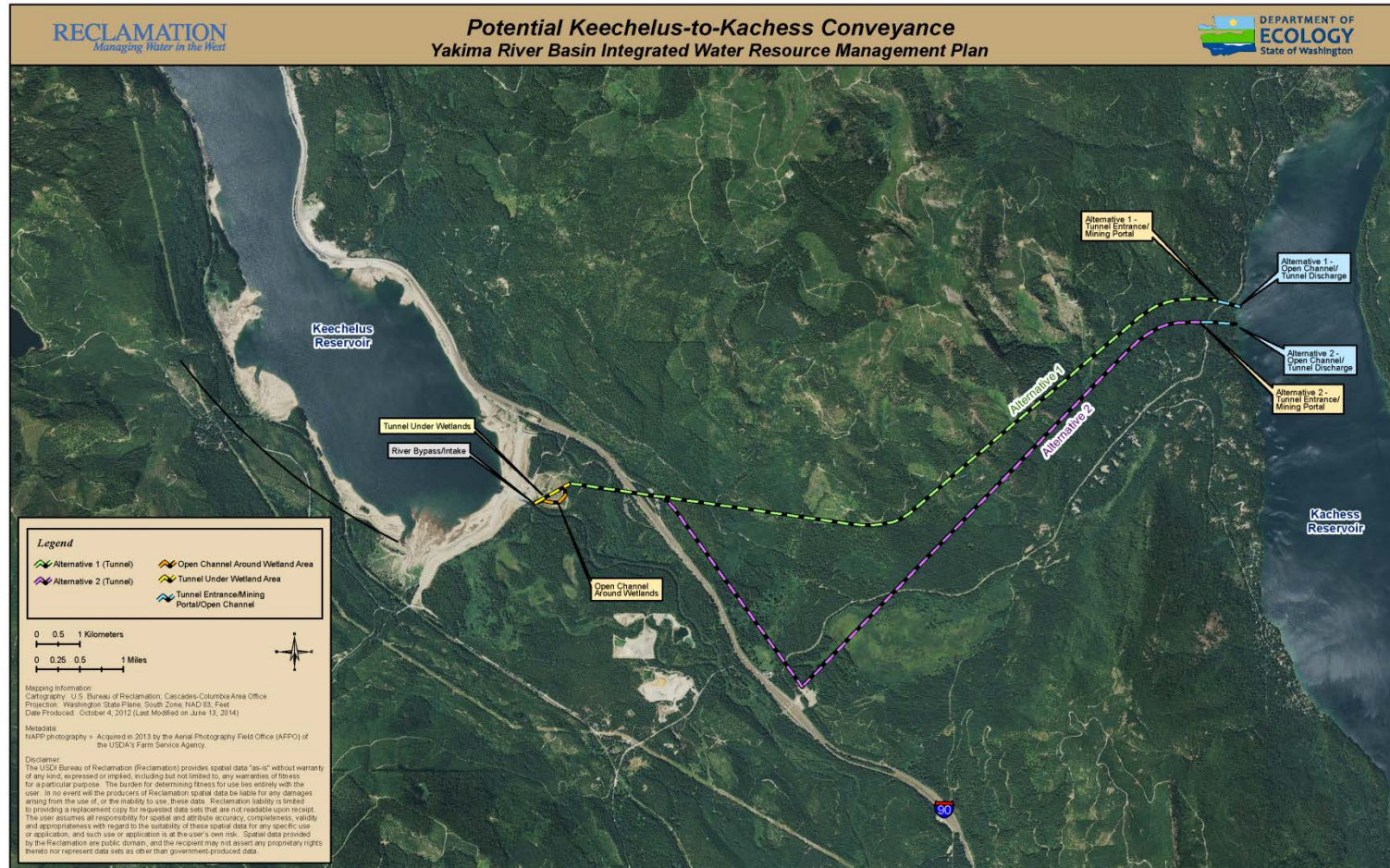
- **3 foot pool raise at Lake Cle Elum (\$18M)**
 - **Cle Elum Reservoir Fish Passage (\$100M)**
 - **Evaluate, Design, Construct Second Fish Passage Facility at Tieton Dam (\$100M)**
 - **Habitat and Land Acquisitions (\$100M)**
 - **Seek Wild and Scenic River Designations beginning with upper Cle Elum River**
- * Costs are preliminary based on studies to date**



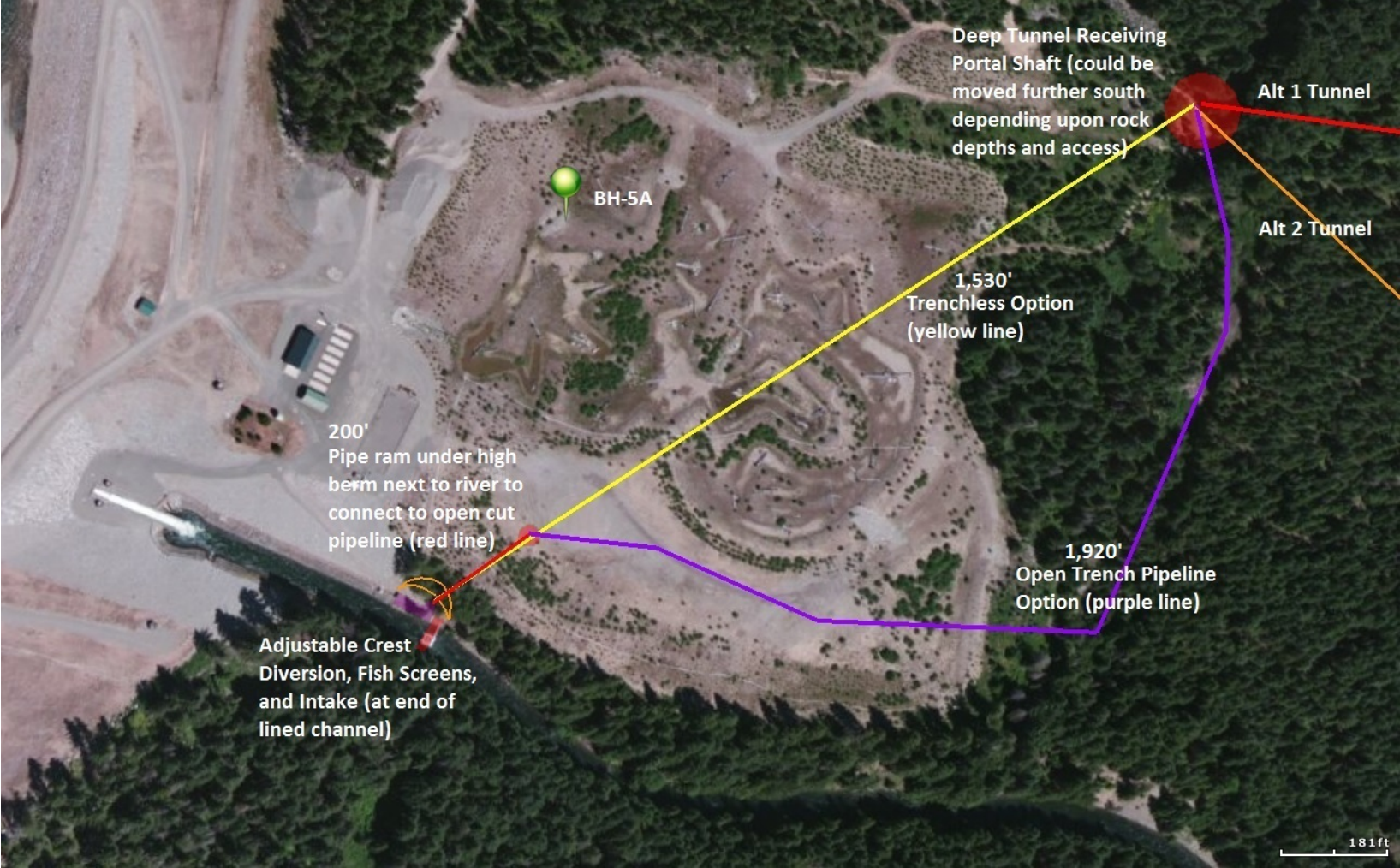
Keechelus-to-Kachess Conveyance



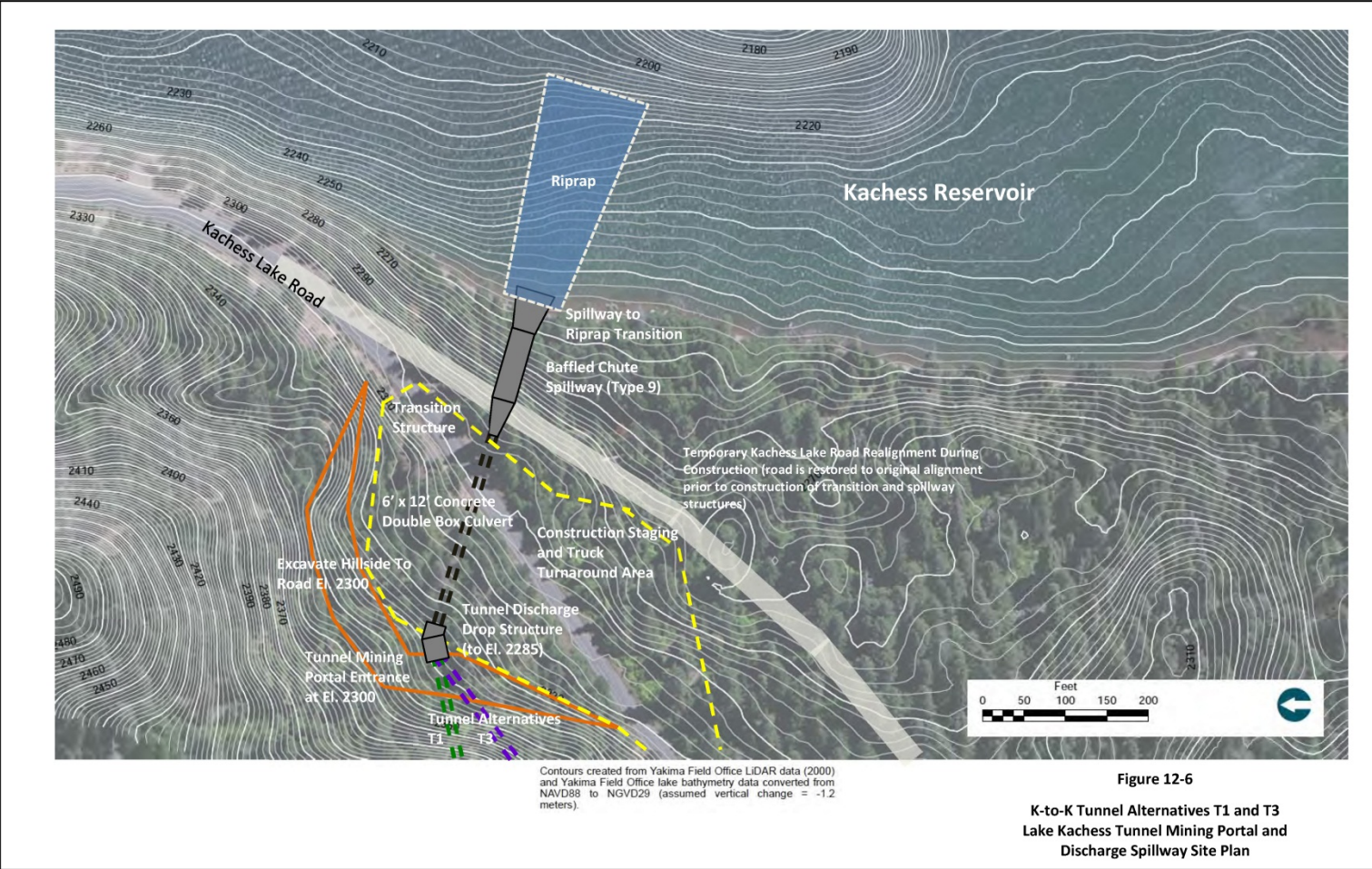
Keechelus-to-Kachess Conveyance Feasibility Alternative Alignments



Keechelus-to-Kachess Conveyance Inlet Options Near Keechelus Dam



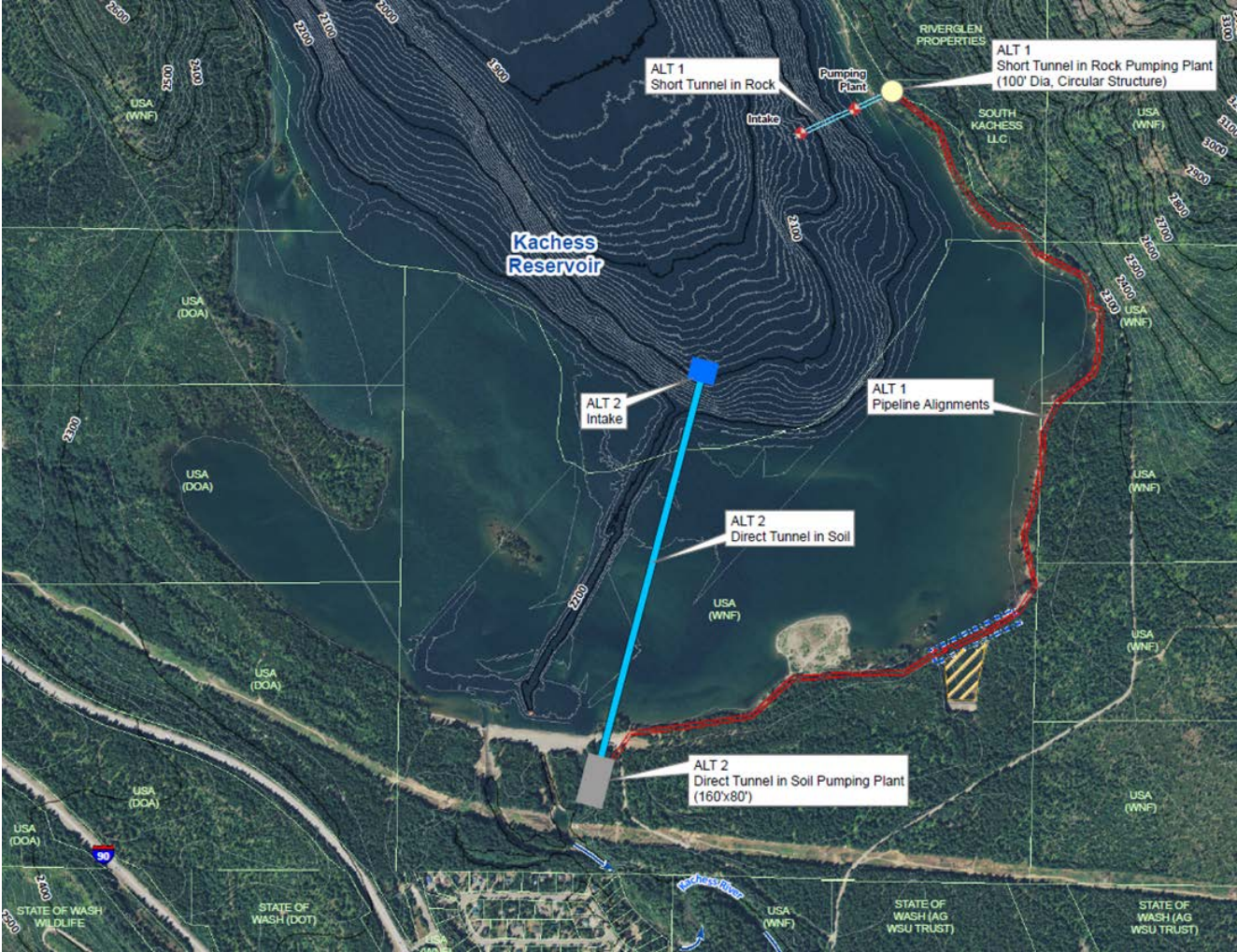
Keechelus-to-Kachess Discharge Structure



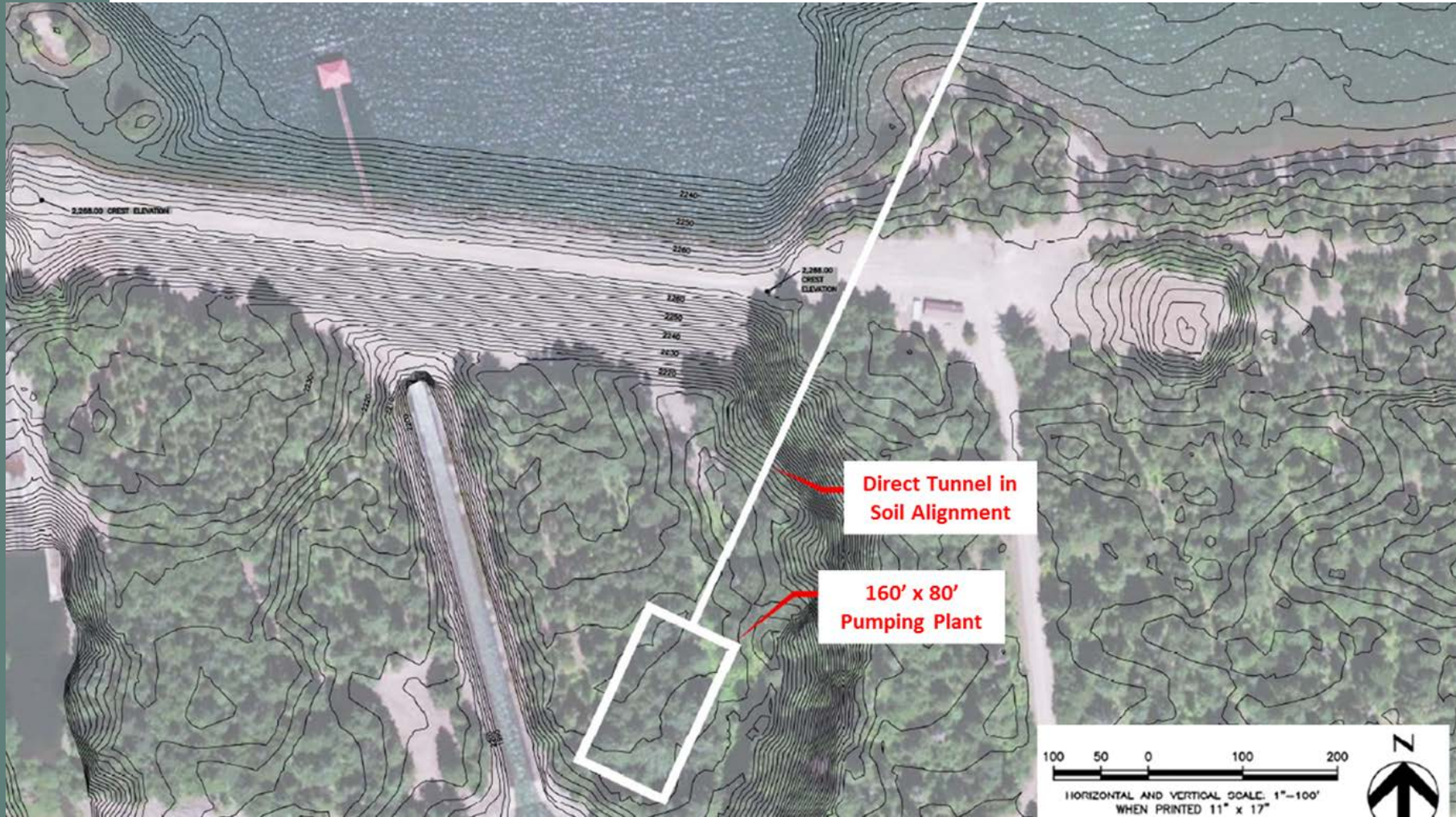
Kachess Drought Relief Pumping Plant



Kachess Drought Relief Pumping Plant Feasibility Alternative Alignments

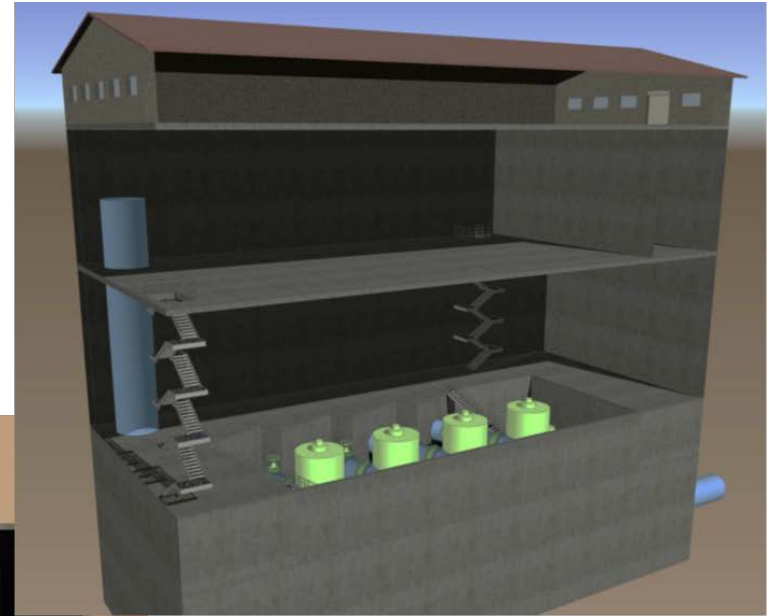


Kachess Drought Relief Pumping Plant Outlet Works Site Plan



Kachess Drought Relief Pumping Plant Station Alternative 2

Conceptual View of Interior



Keechelus-to-Kachess Conveyance and Kachess Drought Relief Pumping Plant Schedule

- **Feasibility - Fall 2014**
- **Draft Environmental Impact Statement - Fall 2014**
- **Final Environmental Impact Statement - Summer 2015**



Bull Trout Enhancement



Bull Trout Enhancement

- **Enhancement package – working with WDFW, USFWS, NMFS, USFS, and YN on plan for other creeks to include in KKC/KDRPP EIS**
- **Three optional designs at the Box Canyon Creek Area in process**



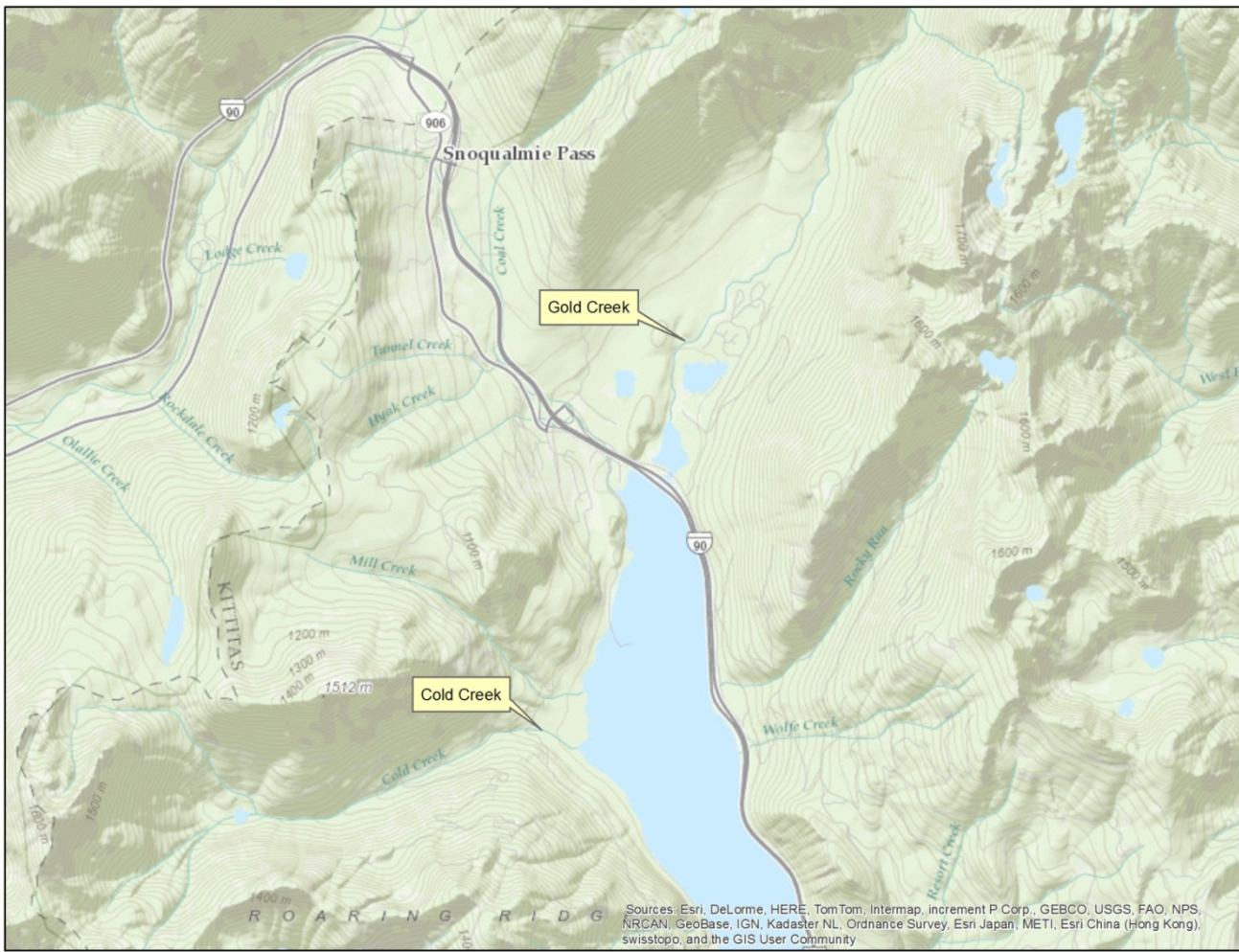
Kachess Reservoir



- Kachess River
- Mineral Creek
- Box Canyon Creek



Keechelus Reservoir

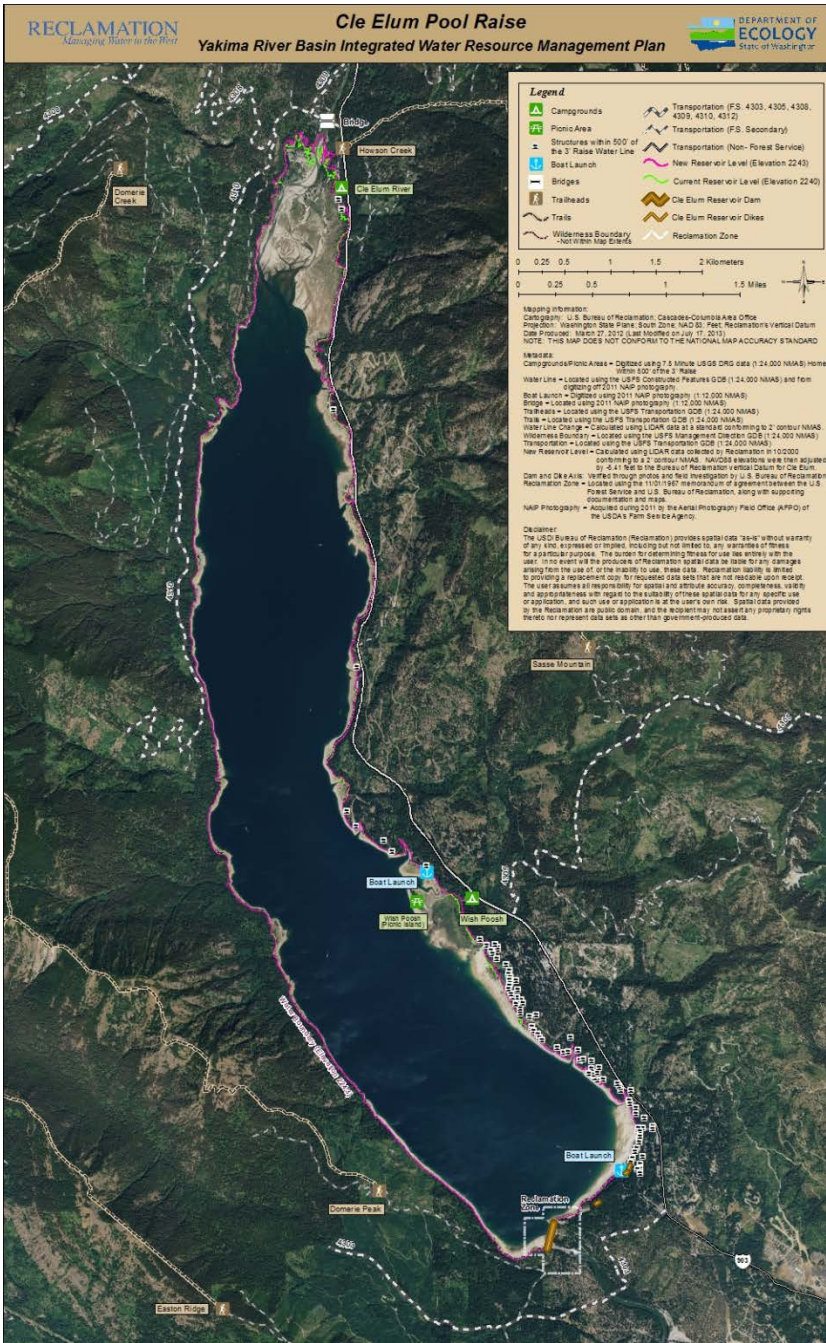


- Gold Creek
- Cold Creek
- Other Small Tributaries



Cle Elum Pool Raise





Cle Elum Pool Raise

- Modify radial gates
- Shoreline protection
- Land acquisition



Cle Elum Radial Gates - Modifications



Cle Elum - Before Shoreline Protection



Cle Elum - After Shoreline Protection



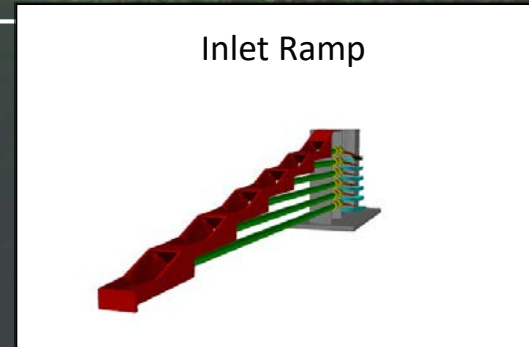
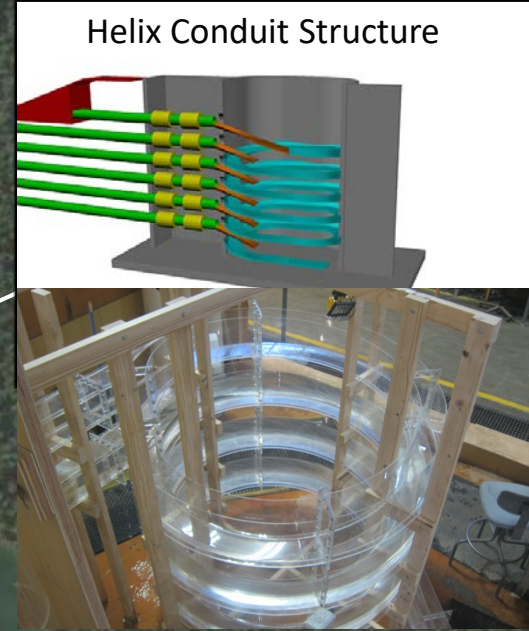
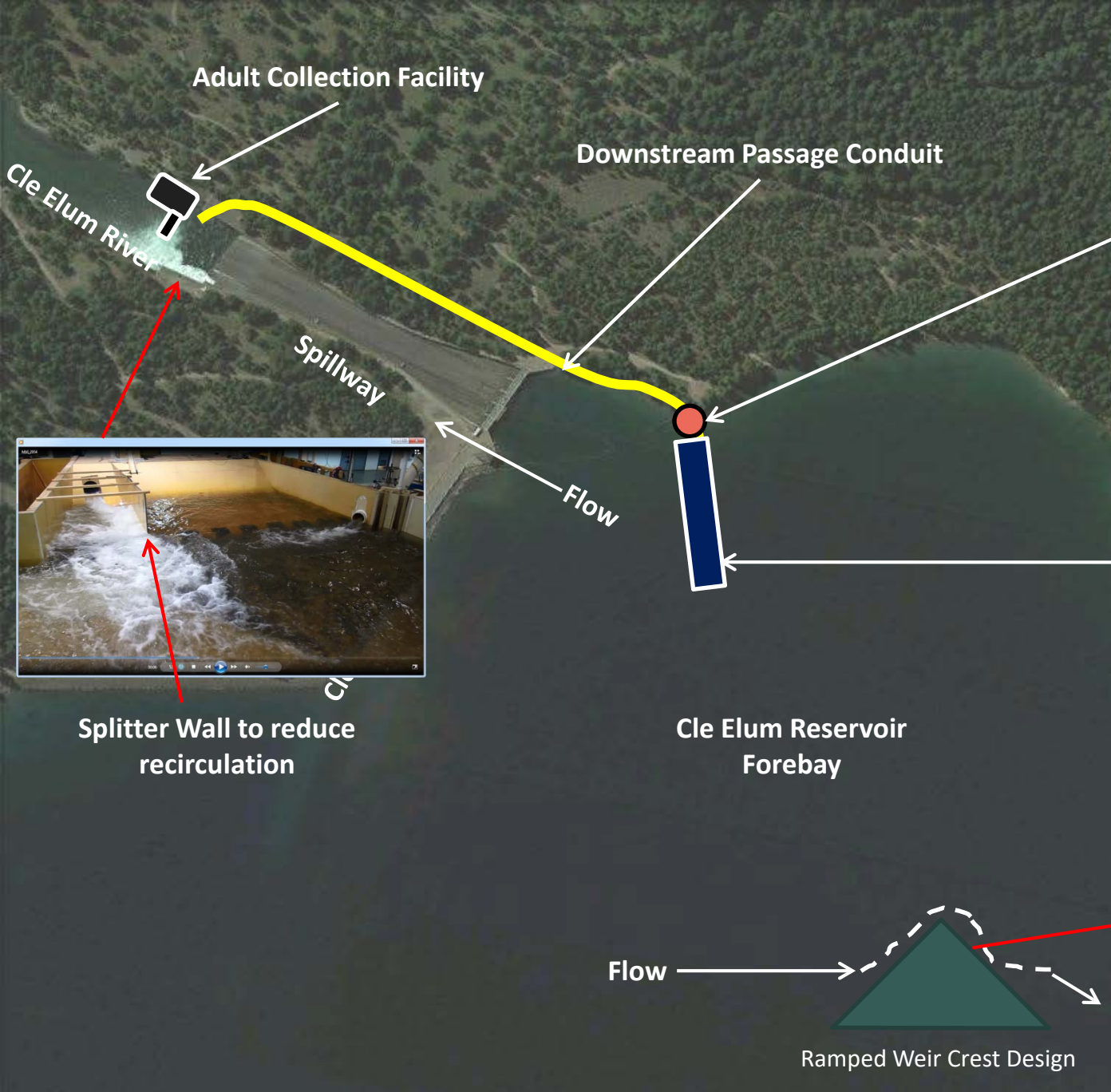
Cle Elum Pool Raise Schedule

- **Final design - Summer 2014**
- **Draft Environmental Impact Statement - Summer 2014**
- **Final Environmental Impact Statement - Early 2015**
- **Construction – Summer/Fall 2015**



Cle Elum Dam Fish Passage Facilities





Cle Elum Fish Passage Facilities Schedule

- **Final Design – Summer 2015**
- **Construction Phase I – Summer/Fall 2015**

