

Yakima Basin Integrated Plan Technical Projects Update

Ellensburg, WA
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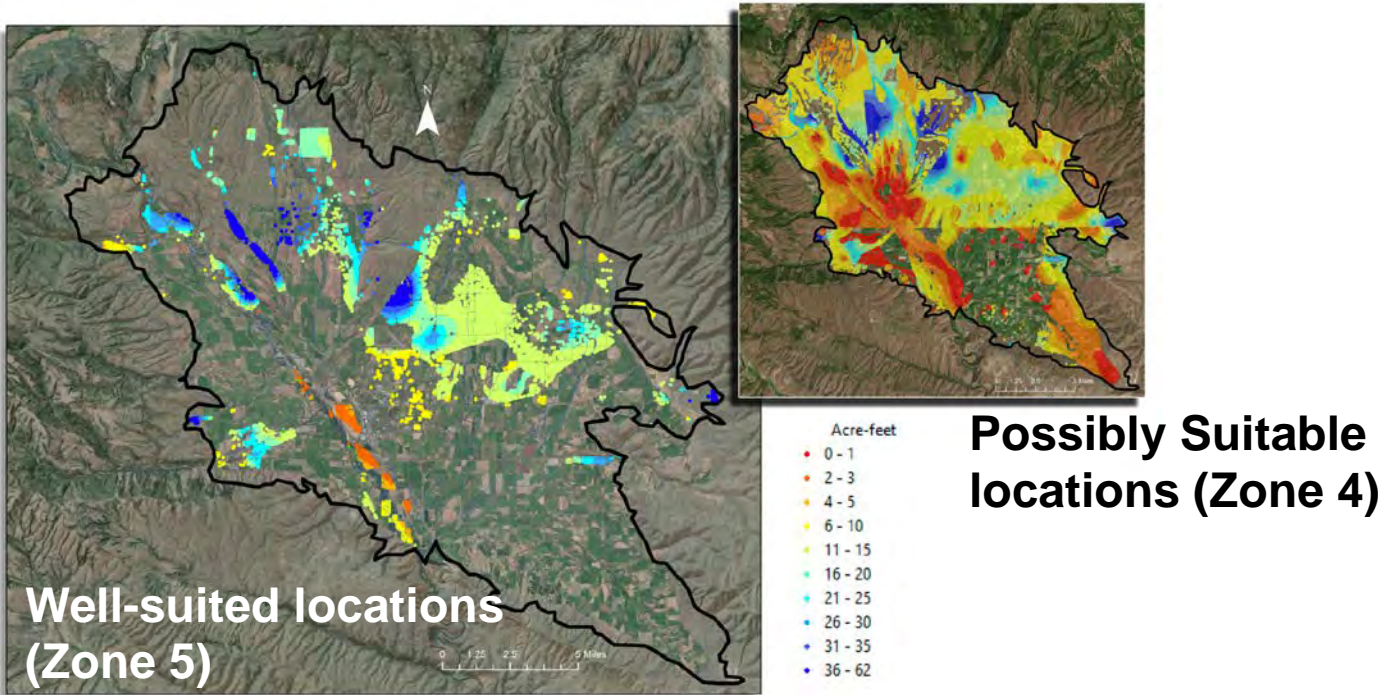


Groundwater Storage



Groundwater Storage Element

Groundwater Storage Potential in the Yakima River Basin: A Spatial Assessment of Shallow Aquifer Recharge and Aquifer Storage and Recovery, (Gibson and Campana, 2018)



Groundwater Storage Element

- Current actions
 - Kittitas Reclamation District – Yakima Basin Groundwater Storage Study
 - Indian Creek Groundwater Dynamics
 - Toppenish Fan Monitoring Wells



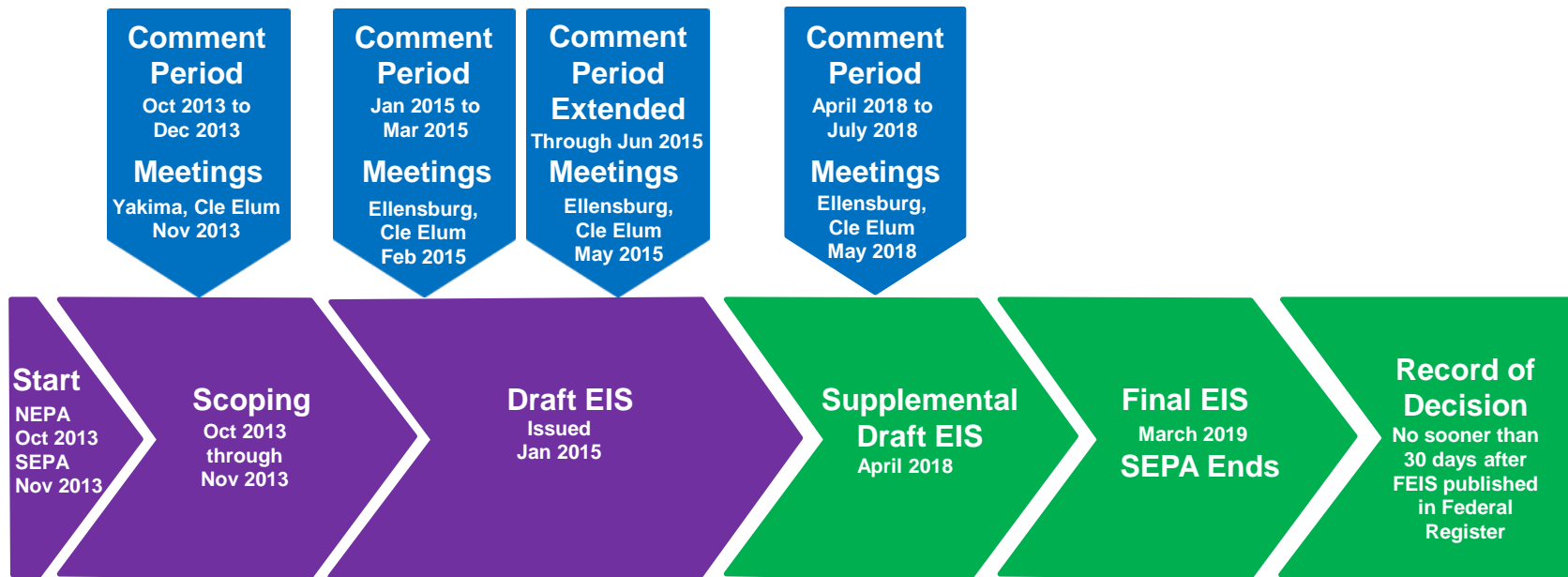
Kachess Drought Relief Pumping Plant and Keechelus to Kachess Conveyance

Surface Water Storage and
Structural and Operational Changes



NEPA/SEPA Process

Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Projects



Time not to scale

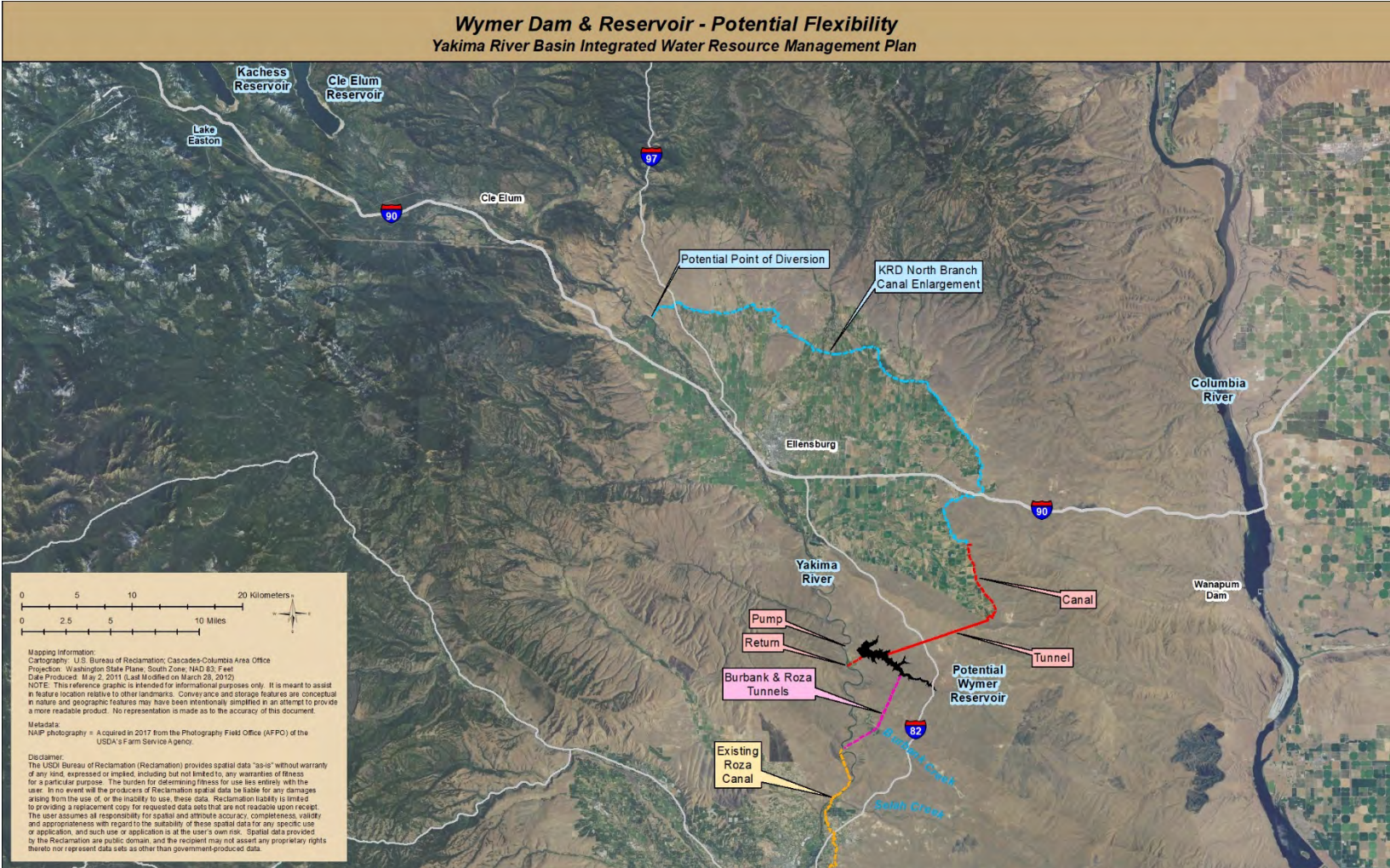


Upper Yakima System Storage

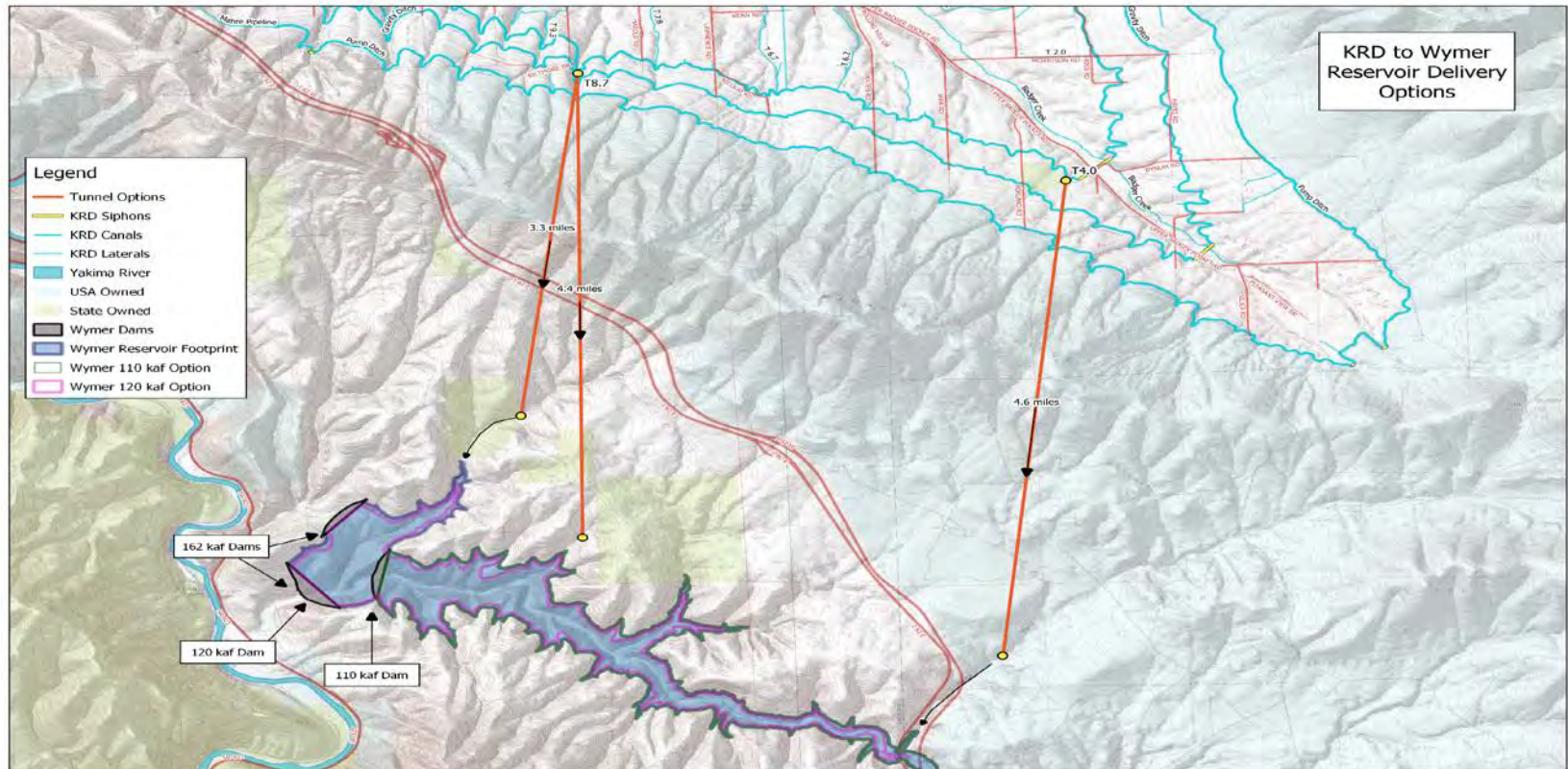
Surface Water Storage



Kittitas Reclamation District Overview



Potential Tunnel Options to Wymer Reservoir via KRD Canal



Cle Elum Pool Raise Project

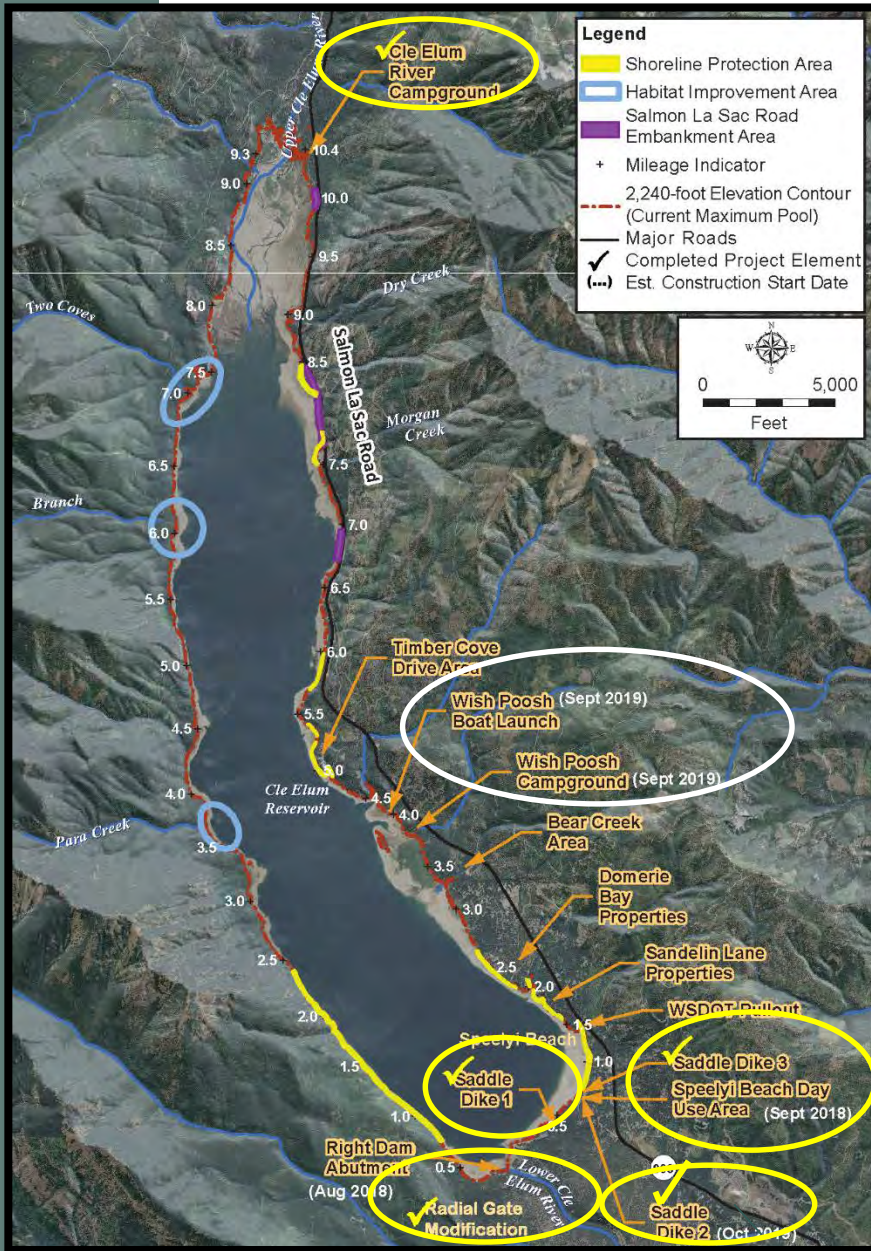
Structural and Operational Changes



Cle Elum Pool Raise

14,600 acre-feet for Yakima River instream flows

- Modify radial gates
- Shoreline protection
- Land acquisition



Cle Elum Reservoir Shoreline Protection



Speelyi Day Use Area New Construction, not to scale



Cle Elum Reservoir Shoreline Protection

Speelyi Day Use
Area Construction



Installation of riprap along boat launch and vault toilet



Cle Elum Reservoir Shoreline Protection



Wishpoosh Campground and Boat Launch, not to scale



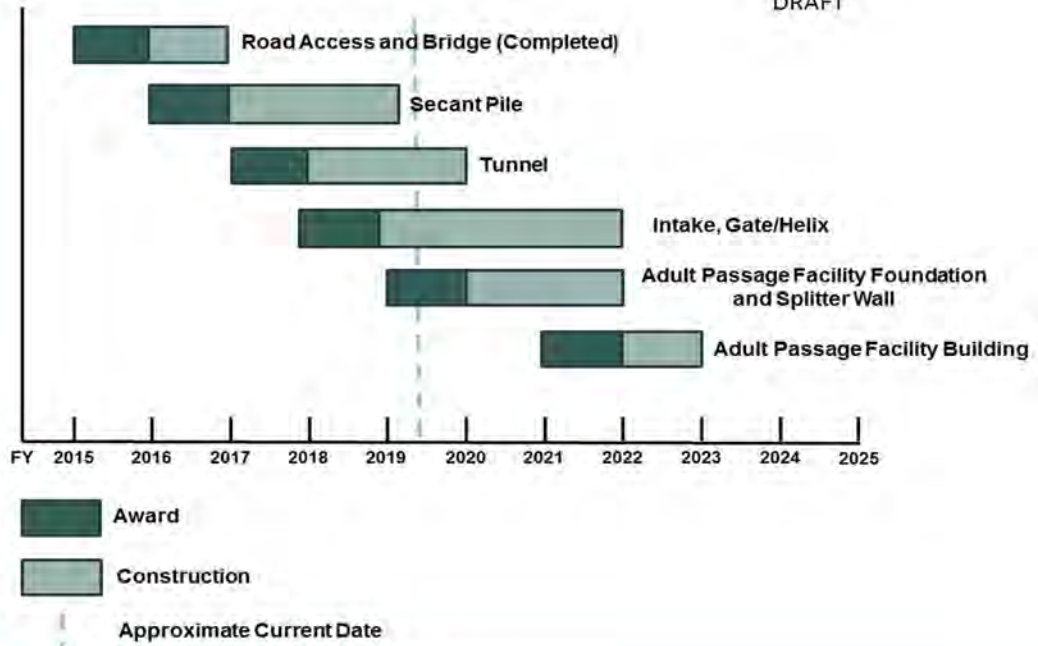
Cle Elum Dam Fish Passage Facilities

Reservoir Fish Passage



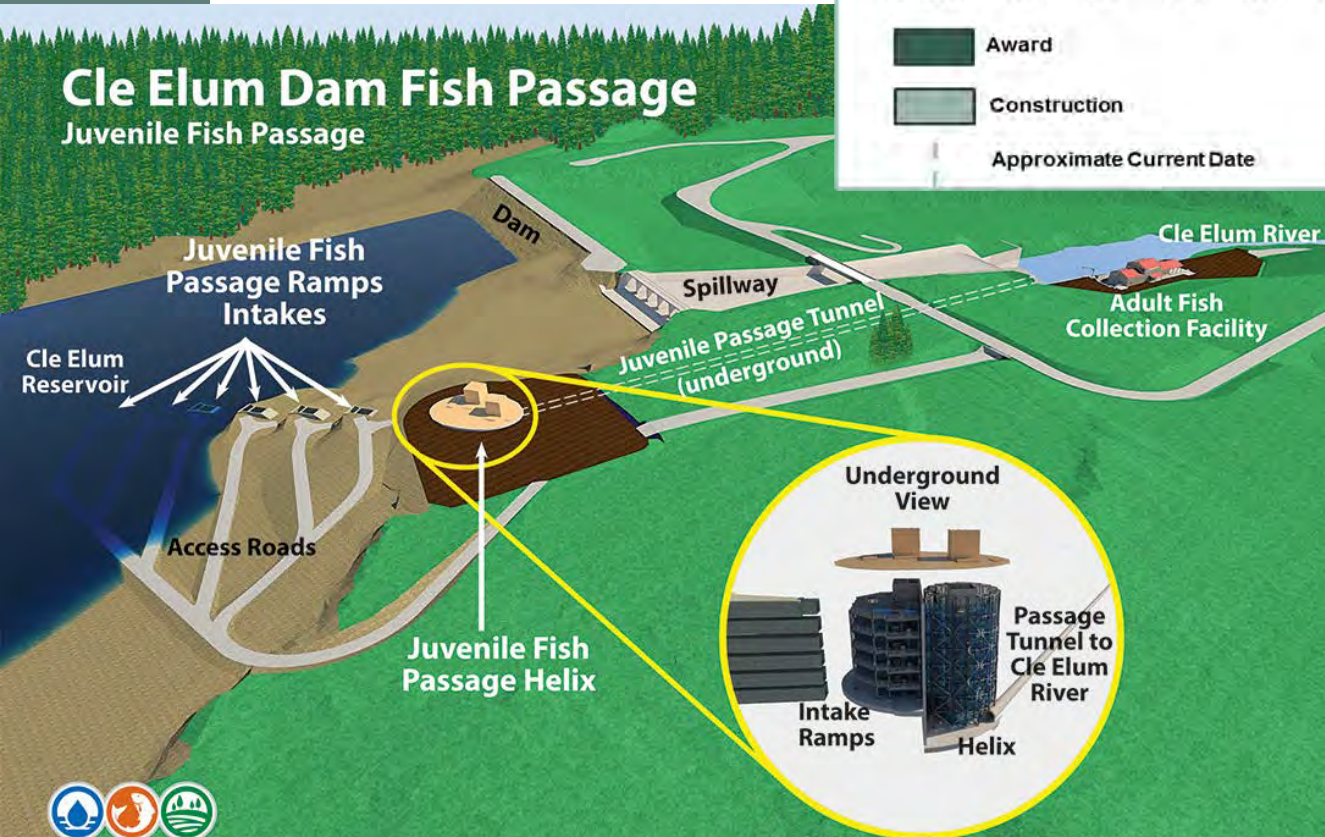
Cle Elum Dam Fish Passage

DRAFT



Cle Elum Dam Fish Passage

Juvenile Fish Passage



**Six Contracts
Over Project
Schedule**



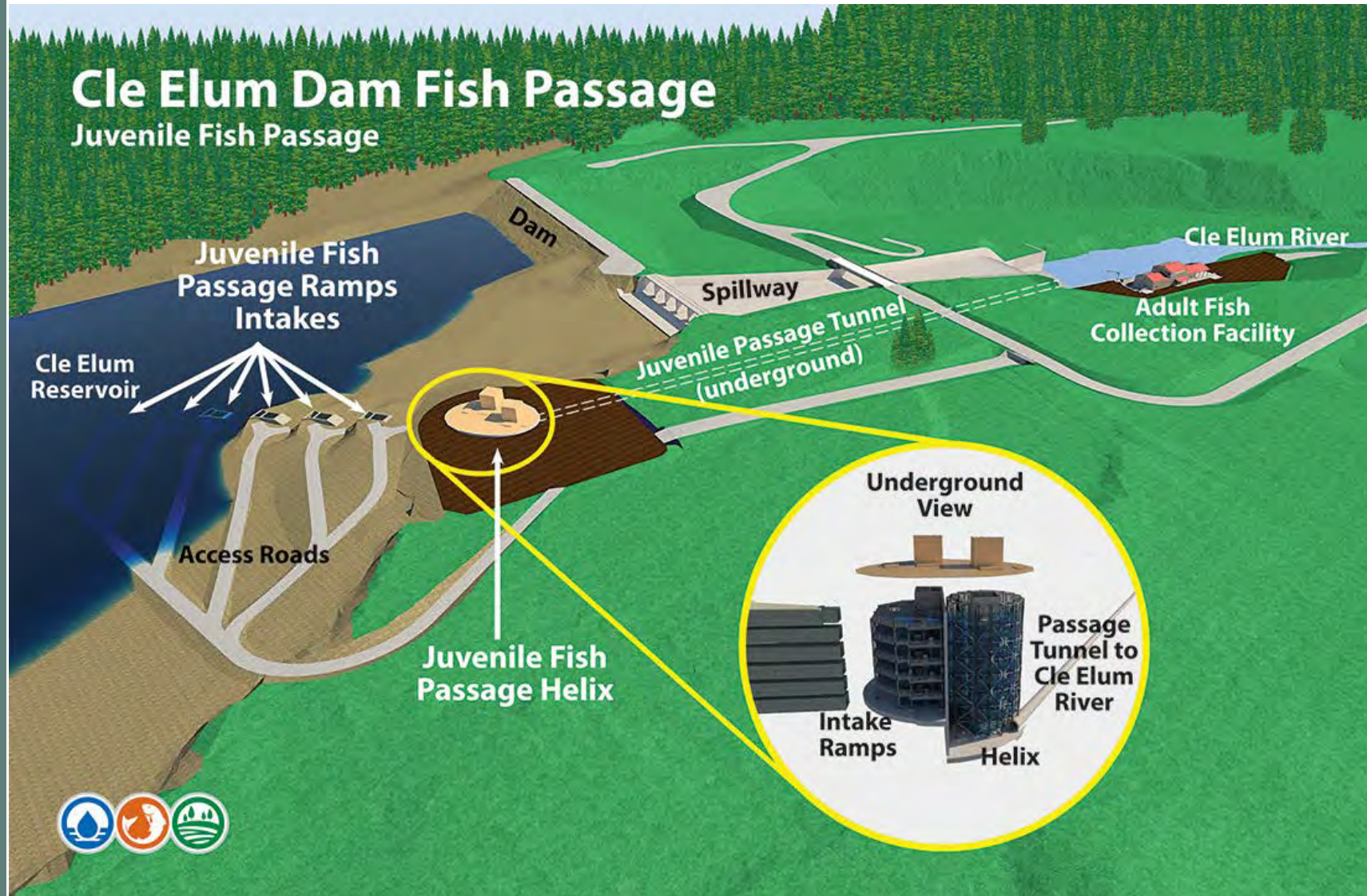
Secant Pile Contract – Complete



Completion of Cle Elum Secant Pile Contract
Cle Elum Dam Fish Passage Project, Washington
2016 – 2018



Tunnel Contract Status



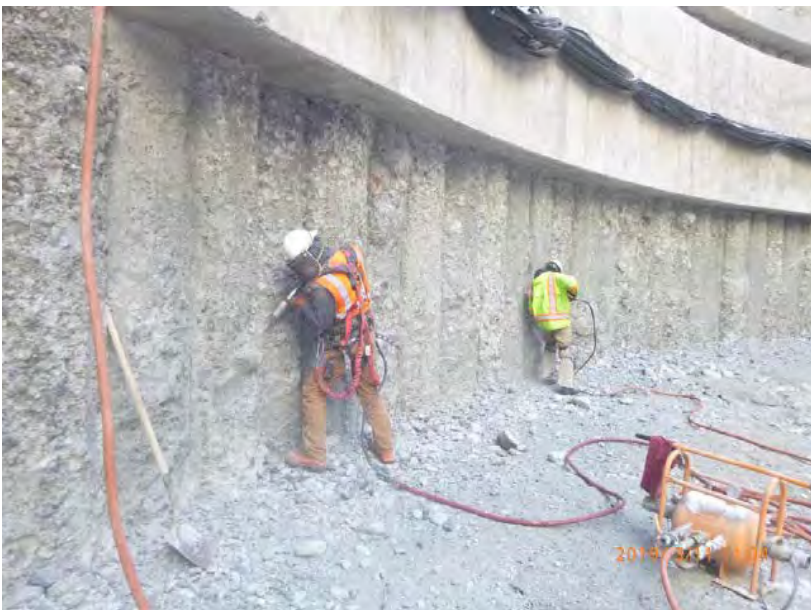
Tunnel Contract – Secant Vault Work



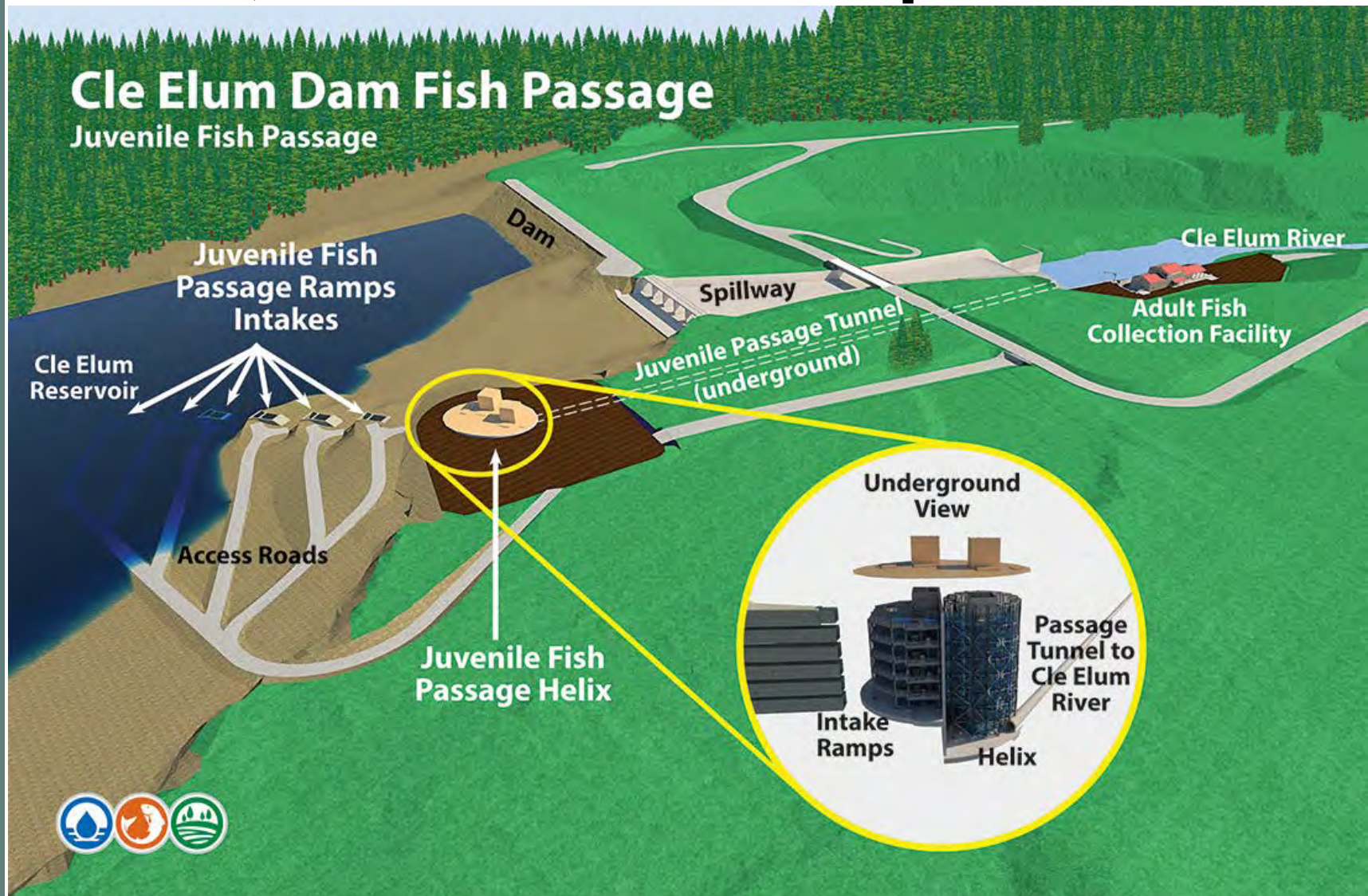
Tunnel Contract – Secant Vault Work



Tunnel Contract – Secant Vault Work



Intake, Gate and Helix Update



Mobilize April 2019



Bull Trout Population Restoration & Monitoring Project

Yakama Nation

**Todd Newsome
Russ Byington**



Bull Trout Population Restoration and Monitoring Project



Priority Actions

1. Create Bull Trout Management Implementation Planning Team (MIPT)
2. Work with WDFW (William Meyer & Scott Kline) on expanding rescue operations.
3. Work with WDFW (Marc Divens) on comprehensive Bull Trout Redd Surveys
4. Finish permitting for the captive rearing program
5. Initiate rearing the summer of 2019
6. Coordinate PIT Tag array installations

Captive Rearing

- Rescue fish from dewatering reaches
- Transport to LaSalle Rearing Facility
- Rear up to 1 year on a natural diet
- PIT Tag and sample prior to release
- Release back into natal habitat



PIT Tag Arrays

Monitor tagged fish over time to determine movement, survival, and spawning success

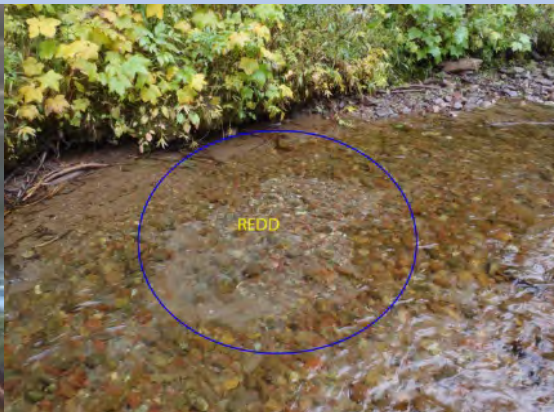


2nd Tier Actions

1. Begin finalizing Taneum Creek Reintroduction Plan, for reconsultation.
2. Begin creating a pilot project on Brook Trout eradication in Teanaway River.
3. Compile all known Bull Trout data to create a centralized database.

Products

- Create a White Paper on captive rearing of Bull Trout.
- Begin writing a publication on the use of captive rearing and reintroduction of Bull Trout.



Project Goal

Increase spawning Bull Trout populations over time through rescue and captive rearing efforts



Questions?