

Yakima River Basin Integrated Water Resource Management Plan Cle Elum Reservoir Projects

Columbia River Policy Advisory Group
March 1, 2018



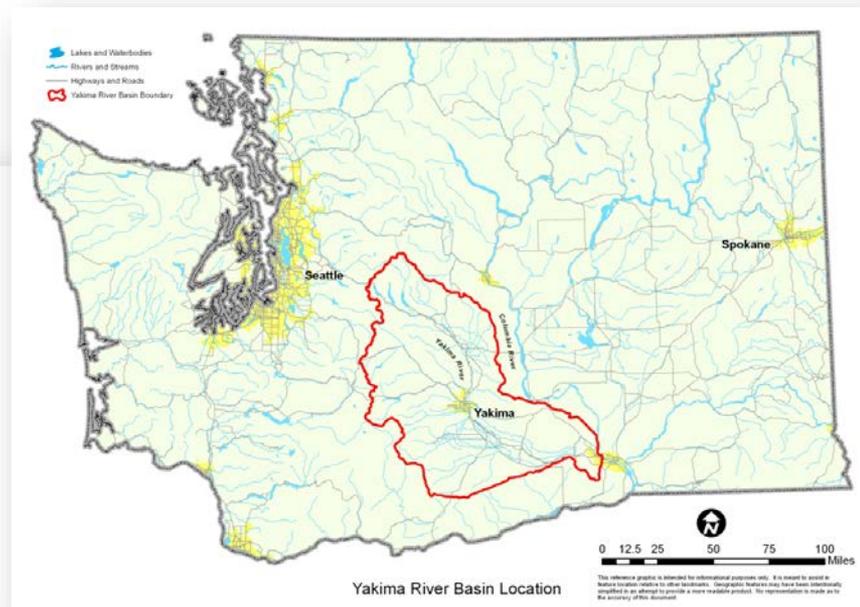
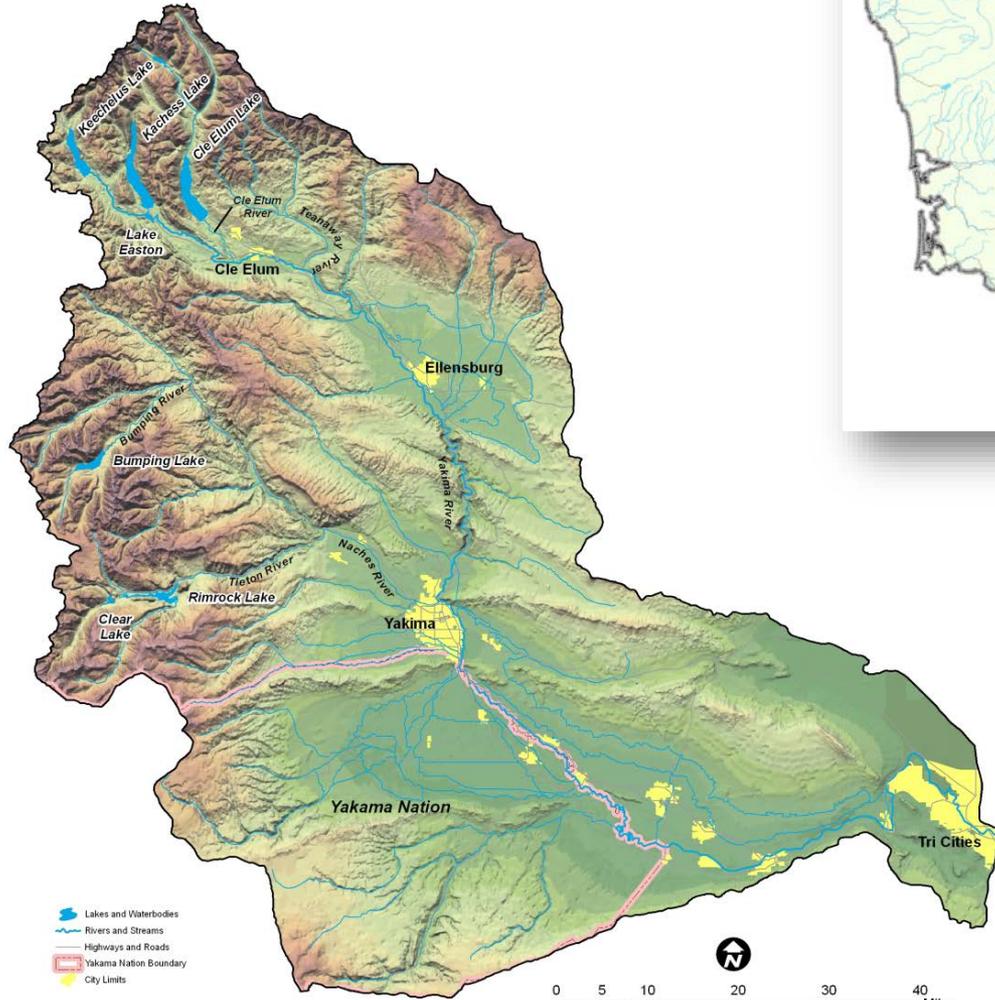
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Yakima River Basin Overview



- 6,155 sq. miles w/464,000 irrigated acres
- 5 reservoirs w/ 1M AF capacity, irrigation deliveries 2.3M AF
- Droughts in 1992-1994, 2001, 2005, and 2015
- Reduced Fisheries
- \$4.5 Billion agriculture economy

This reference graphic is intended for informational purposes only. It is meant to assist in feature location relative to other landmarks. Geographic features may have been intentionally simplified in an attempt to provide a more readable product. No representation is made as to the accuracy of this document.



Integrated Plan Overview

YAKIMA RIVER BASIN INTEGRATED WATER RESOURCE MANAGEMENT PLAN

Structural & Operational Changes

1. Raise the Cle Elum Pool by three feet to add 14,600 ac-ft in storage capacity.
2. Modify Kittitas Reclamation District canals to provide efficiency savings.
3. Construct a pipeline from Lake Keechelus to Lake Kachess to reduce flows and improve habitat conditions during high flow releases below Keechelus and to provide more water storage in Lake Kachess for downstream needs.
4. Decrease power generation at Roza Dam and Chandler power plant to support outmigration of juvenile fish.
5. Make efficiency improvements to the Wapatox Canal.

Reservoir Fish Passage

Provide fish passage at:

1. Clear Lake
2. Cle Elum
3. Bumping
4. Tieton (Rimrock)
5. Keechelus
6. Kachess

Enhanced Water Conservation

1. Implement an agricultural water conservation program designed to conserve up to 170,000 acre-feet of water in good water years.
2. Create a fund to promote water use efficiency basin-wide using voluntary, incentive-based programs. Focus on outdoor uses as top priority.

Habitat/Watershed Protection & Enhancement

1. Protect ~70,000 acres of land by acquiring high elevation portions of the watershed and forest and shrub steppe habitat.
2. Evaluate potential Wilderness, Wild and Scenic River, and National Recreation Area designations to protect streams and habitat.
3. Create a habitat enhancement program to address reach-level floodplain restoration priorities and restore access to key tributaries.

Market Reallocation

Employ a water market and/or a water bank to improve water supply in the Yakima River basin. Market reallocation would be conducted in two phases:

The near-term phase would continue existing water marketing and banking programs in the basin, but take additional steps to reduce barriers to water transfers.

The long-term program would focus on facilitating water transfers between irrigation districts. This would allow an irrigation district to fallow land within the district and lease water rights for that land outside the district.

Surface Water Storage

1. Build a 162,500 ac-ft off-channel surface storage facility at Wymer on Lmuma Creek.
2. Access an additional 200,000 ac-ft of water by tapping into inactive storage at Lake Kachess.
3. Construct a new dam at Bumping Reservoir to increase capacity to 190,000 ac-ft.
4. Begin appraisal of potential projects to transfer water from the Columbia River to the Yakima Basin.

Groundwater Storage

1. Construct pilot projects to evaluate recharging shallow aquifers via groundwater infiltration. Full scale implementation may follow.
2. Build an aquifer storage and recovery facility allowing Yakima City to withdraw water from the Naches River during high flow periods and store it underground for use during low flow periods.



Cle Elum Pool Raise

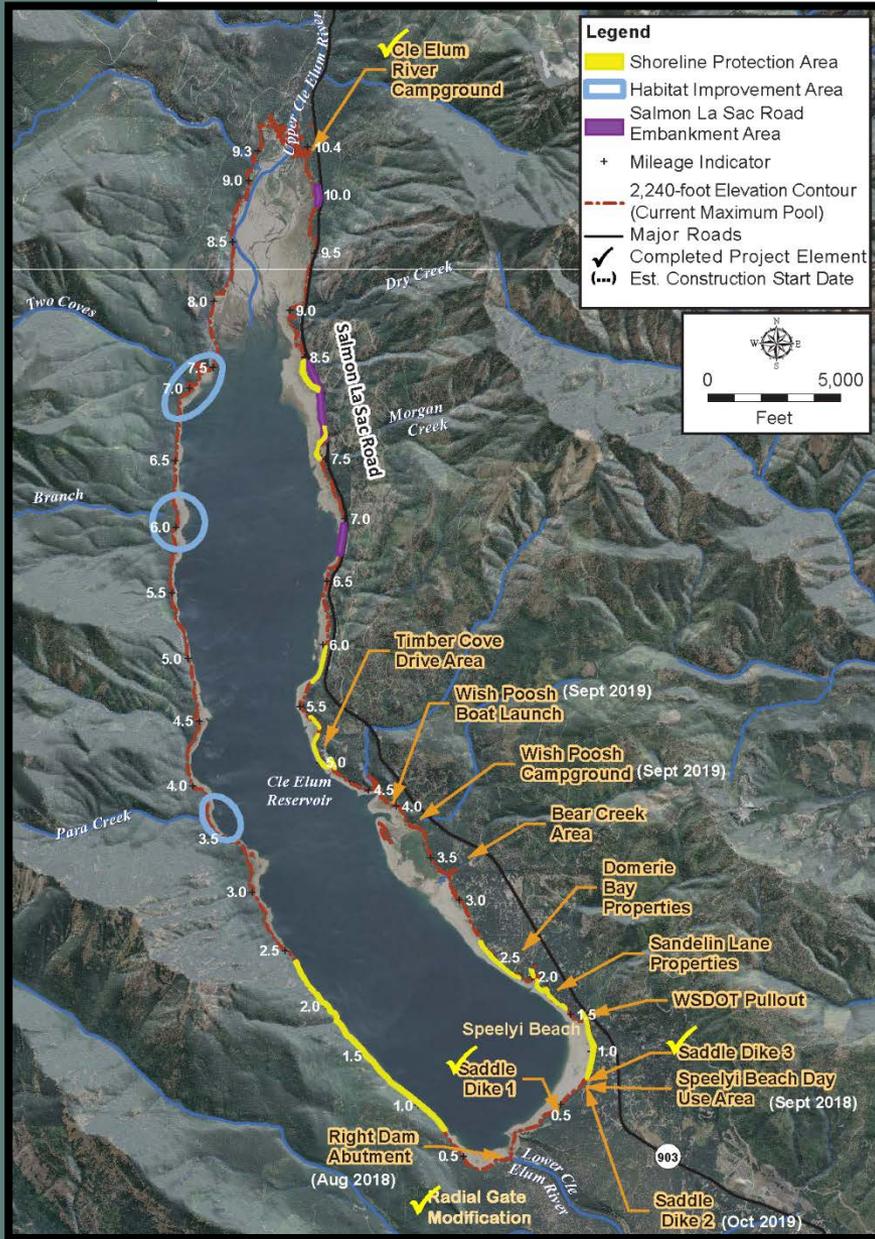
Structural and Operational Changes



Cle Elum Pool Raise

14,600 acre-feet for Yakima River instream flows

- Modify radial gates
- Shoreline protection
- Land acquisition



Cle Elum Pool Raise

- **Radial Gate Modification – completed April 2017**
- **Shoreline Protection**
 - **Completed**
 - **Dikes raised Sept 2016**
 - **Cle Elum River Campground Nov 2017**
 - **Ongoing**
 - **Award Speelyi Day Use Area Summer 2018, Construction Fall 2018**
 - **Preparing construction contracts**
 - **Continued coordination with USFS and landowners**
- **Land Acquisition**
 - **Ongoing**
 - **Negotiation and coordination with landowners**



Cle Elum Dam Pool Raise Radial Gates Complete





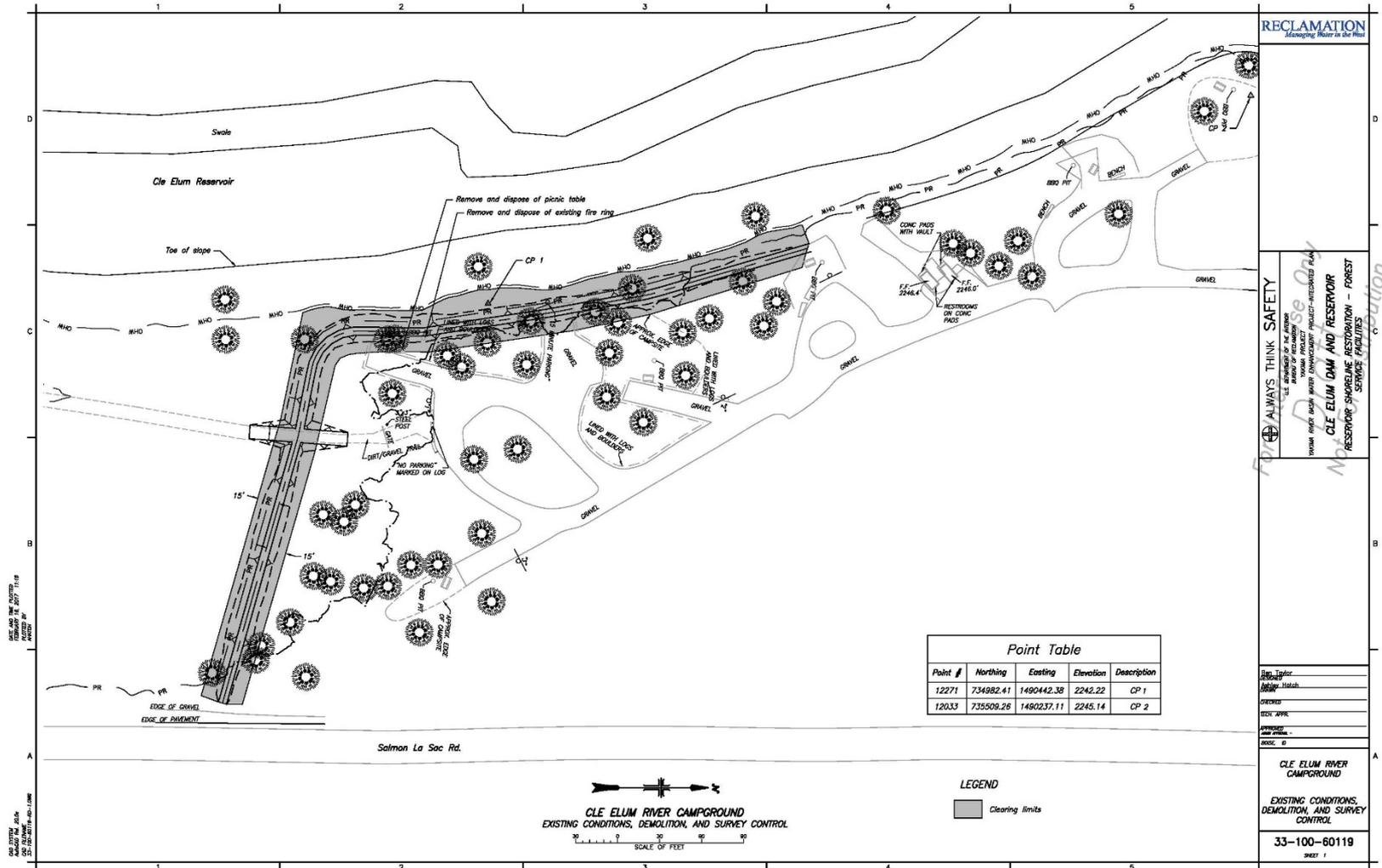
Cle Elum Pool Raise

Shoreline Protection

USFS Facilities



Cle Elum Reservoir Shoreline Construction



Cle Elum River Campground



Cle Elum Reservoir Existing Shoreline



Cle Elum River Campground



Cle Elum Reservoir New Shoreline



Cle Elum River Campground



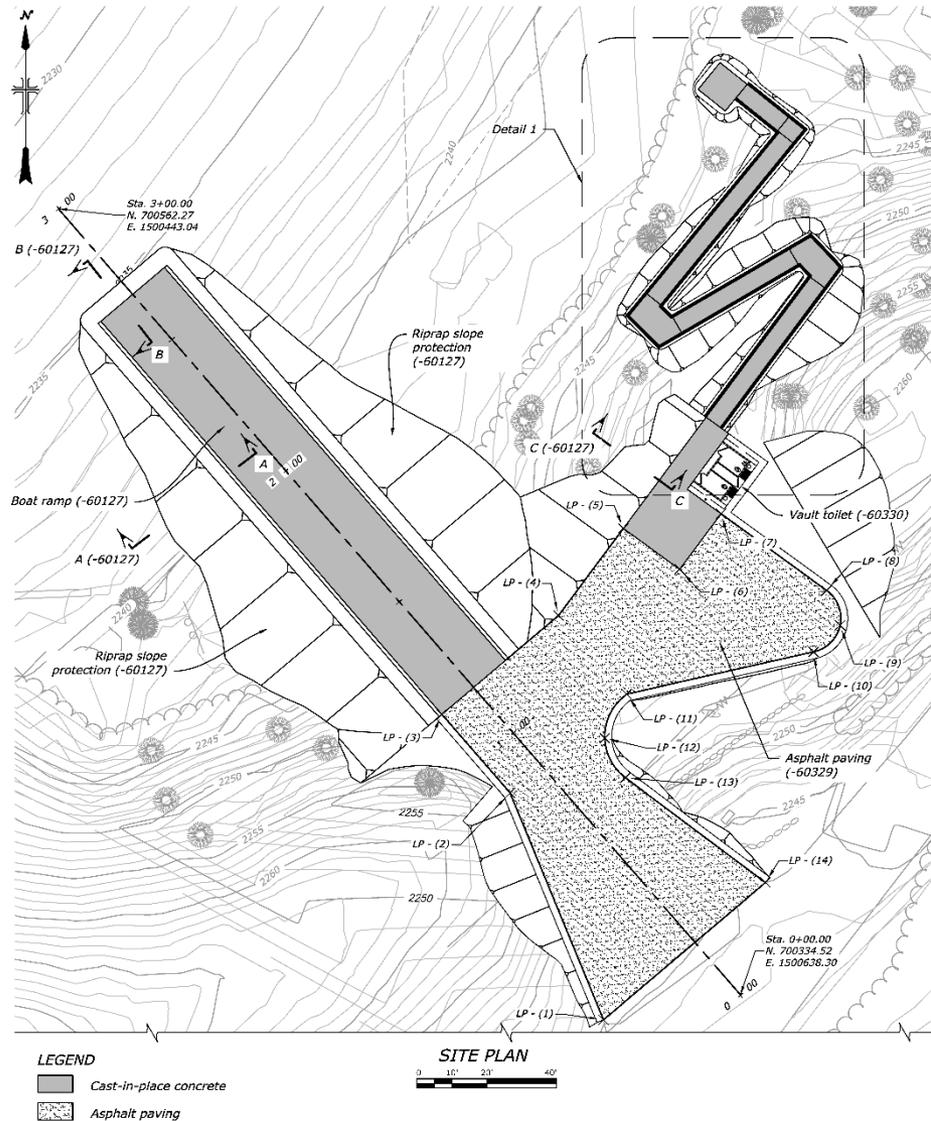
Cle Elum Reservoir Existing Shoreline



Speelyi Beach



Cle Elum Reservoir Shoreline Construction



Speely Day Use Area New Construction



Cle Elum Pool Raise Project Contracts/Timeline

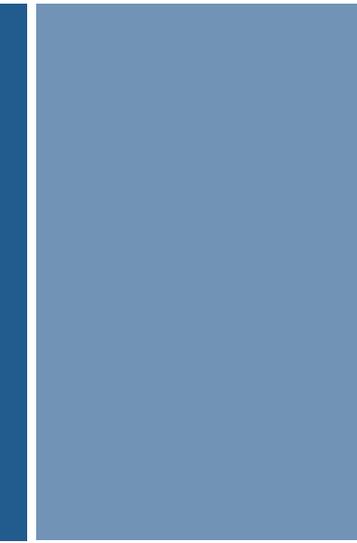
Cle Elum Dam Pool Raise Contracts	Duration	Status
Radial Gates	2 years	Completed – April 2017
Cle Elum River Campground	2 months	Completed – Nov 2017
Speelyi Beach Day Use	1 year	Award - 2018
Wishpoosh & Speelyi Beach	1 to 2 years	Award - 2019
Sandelin	1 to 2 years	Award – TBD*
Domerie Bay	1 to 2 years	Award – TBD*
Timber Cove	1 to 2 years	Award – TBD*
Anna Bell	1 to 2 years	Award – TBD*
Morgan Creek & Night Sky Drive	1 to 2 years	Award – TBD*

*Contingent on funding

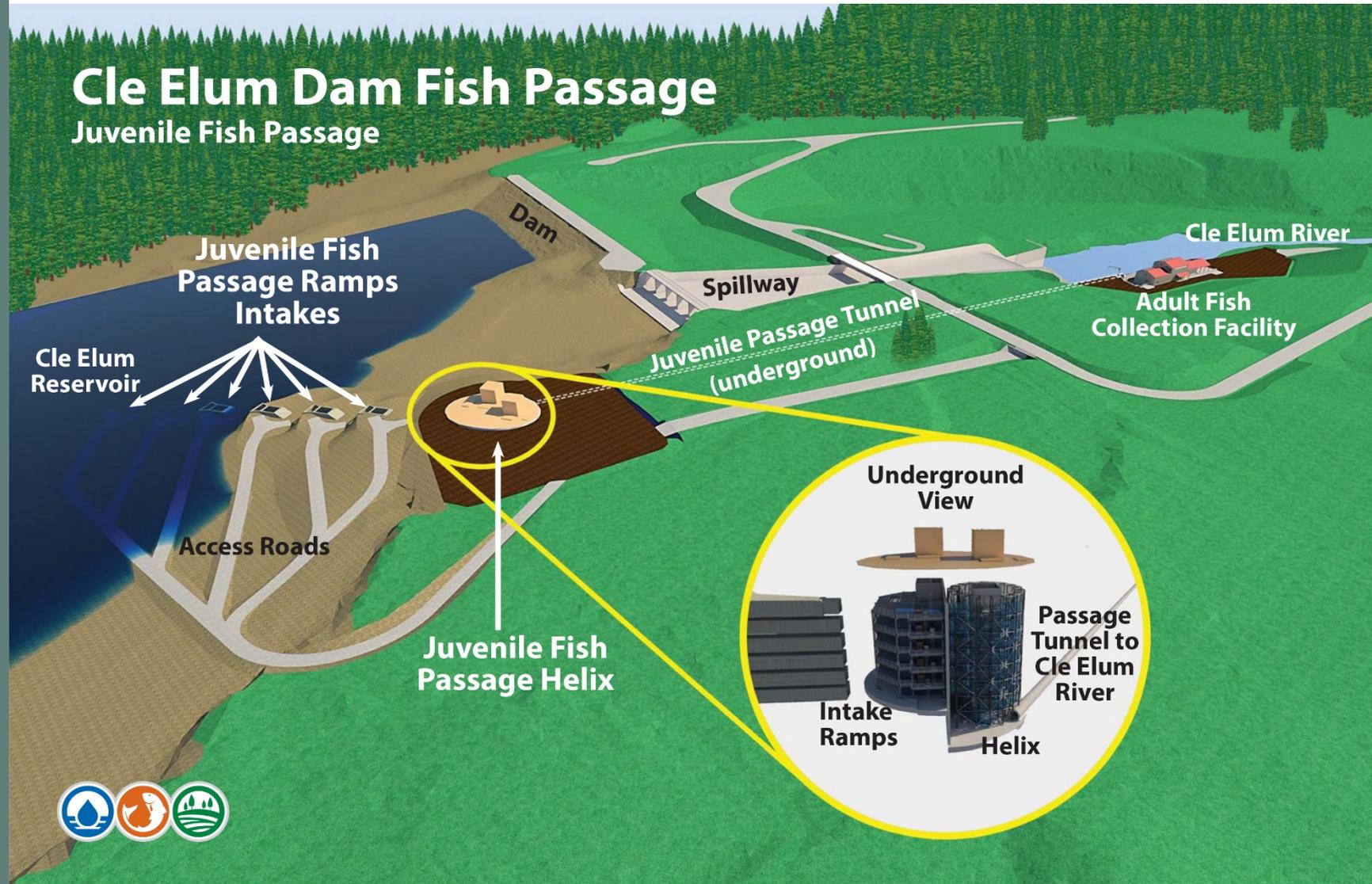


Cle Elum Dam Fish Passage Facilities

Reservoir Fish Passage



Cle Elum Dam Fish Passage



Cle Elum Dam Fish Passage Construction

7/15/2014



7/13/2017



Cle Elum Dam Fish Passage - Secant Pile Construction – Secant with completed cap beam



Cle Elum Dam Fish Passage - Secant Pile Construction – Secant Vault Excavation



Cle Elum Dam Fish Passage - Secant Pile Construction – Secant Vault Excavation



Cle Elum Dam Fish Passage Facilities Contracts/Timeline

Cle Elum Dam Fish Passage Project Contracts	Construction Duration	Status
Roads and Bridge	1 year 3 mo	Completed - 10/16
Secant Pile	2 to 3 years	Construction In Progress
Tunnel	2 Years	Awarded - 08/17 Construction 2018-19
Intake Structure, Gate & Helix	3 years	Award – 2018 Construction 2019-21
Adult Facility	2 years	TBD



Questions?

For further information on the web:

<http://www.usbr.gov/pn/programs/yrbwep/2011integratedplan/>

<http://www.ecy.wa.gov/programs/wr/cwp/YBIP.html>

