

# YAKIMA BASIN INTEGRATED PLAN



WHATCOM COUNTY CLIMATE ACTION AND NATURAL RESOURCES  
COMMITTEE, JUNE 6, 2023

Presented by:

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**Urban Eberhart**, Kittitas Reclamation District

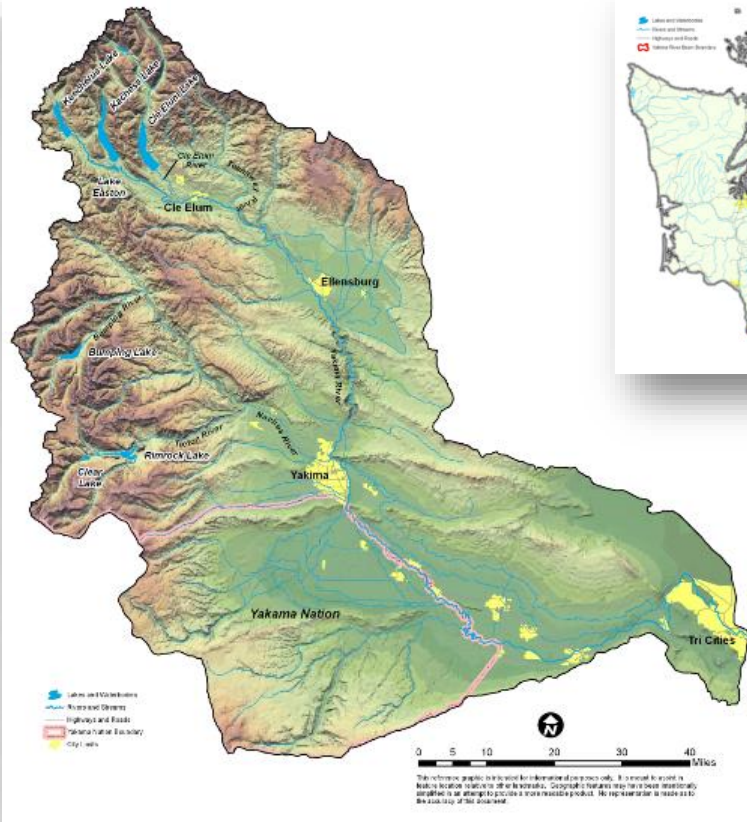
**Steve Malloch**, consultant to American Rivers

# OUTLINE



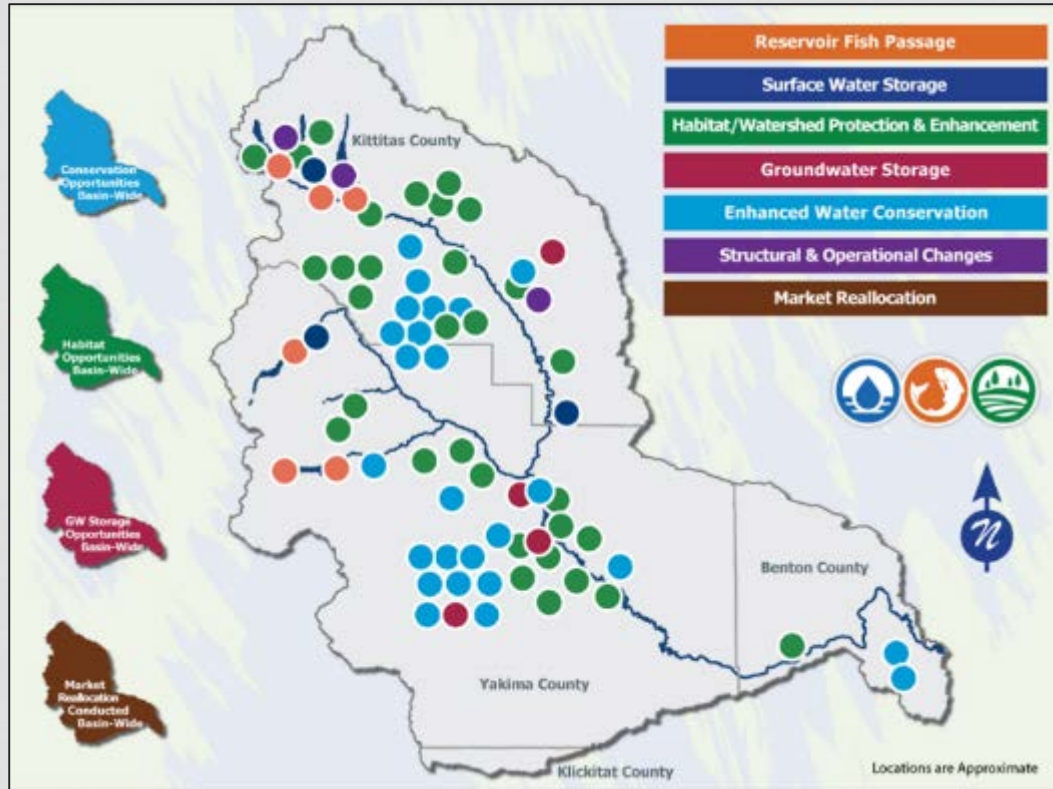
- Overview – Yakima Basin Integrated Plan
- YBIP Status Update
  - Habitat/Watershed Protection and Enhancement
  - Surface Water Storage Element
  - Structural and Operational Changes - Cle Elum Pool Raise
  - Fish Passage – Cle Elum Reservoir
- Lessons Learned Discussion

# 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, 2015 and 2019
- Reduced Fisheries
- \$4.5 Billion agriculture economy

# YAKIMA BASIN INTEGRATED PLAN



# YAKIMA BASIN INTEGRATED PLAN - GOALS



- Goals:
  - Restore and enhance environment, fish and wildlife, including fish passage at federal dams
  - Improve water supply during drought years (70% proratable supply)
  - Provide for efficient and adaptable water supply management
  - Contribute to sustainable economy and environment

# YRBWEP WORKGROUP MEMBERS



- **Federal Agencies**
  - Bureau of Reclamation
  - National Marine Fisheries Service
  - U.S. Fish and Wildlife Service
  - U.S. Forest Service
  - U.S. Army Corps of Engineers
- **Yakama Nation**
  - Yakama Nation Natural Resources
  - Yakima/Klickitat Fisheries Project
- **Washington State Agencies**
  - Department of Ecology
  - Department of Agriculture
  - Department of Fish and Wildlife
  - Department of Natural Resources
- **Local Governments**
  - Benton County
  - Kittitas County
  - Yakima County
  - City of Yakima
- **Irrigated Agriculture**
  - Kennewick Irrigation District
  - Kittitas Reclamation District
  - Roza Irrigation District
  - Sunnyside Valley Irrigation District
  - Yakima-Tieton Irrigation District
- **Other Stakeholders**
  - American Rivers
  - Yakima Basin Fish & Wildlife Recovery Board
  - Yakima Basin Storage Alliance
  - Trout Unlimited

# YAKIMA BASIN INTEGRATED PLAN ACCOMPLISHMENTS 2013-2022



- **Fish Passage**

- Completed: Sunnyside interim
- In construction: Cle Elum, Nelson, Roza
- In design: Tieton, Clear Creek, Bateman Island, Wapato

- **Water Supply Reliability**

- 58,868 acre-feet conserved
- Cle Elum Pool Raise
- Kachess Drought Relief Pumping Plant

- **Habitat**

- 40+ restoration projects
- 62,375 acres acquired

- **Yakama Nation**

- Wapato Irrigation Project Modernization Plan
- RCPPs 2015-2017 - \$15.75M (total funding)

- **\$600M+ in federal and state funding**





# HABITAT

# HABITAT



- **Habitat Restoration**

- Supports salmon, steelhead, and bull trout recovery
- Reaches approach – major restoration underway in 4 of 5 reaches
- Targeted restoration strategies based on setting and constraints

- **Watershed Lands Element**

- Conservation acquisitions
- Cle Elum watershed designation
- Forest Health



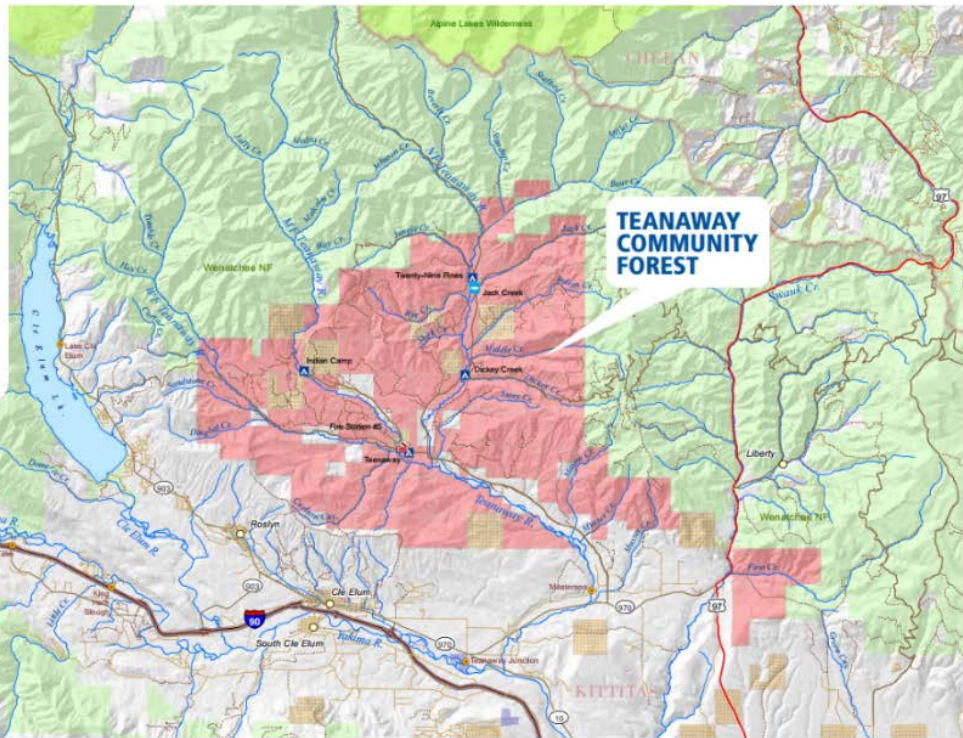
Schaake Project before, during, and after restoration project construction

# TEANAWAY COMMUNITY FOREST

The Teanaway Community Forest is a 50,272-acre forest situated at the headwaters of the Yakima Basin watershed. The forest will be managed through a partnership between the Washington state departments of Natural Resources (DNR) and Fish & Wildlife, with input from the local community and interested stakeholders.

DNR designed the community forest model, which was approved by state lawmakers in 2011. The model is a tool to involve local citizens in protecting working forests that support healthy communities through grazing, forestry, recreation, and conservation.

The Teanaway property was identified as part of the Yakima Basin Integrated Plan as an area of importance to safeguard the Yakima Basin water supply and associated habitat, and to support the economy by preserving working lands and enhancing recreation opportunities. The Basin Plan was developed by a coalition of public and private organizations committed to increasing the quantity and quality of water in the Yakima River Basin.



## FACILITIES

- Building
- Campground
- Acknowledgment Pond
- WDFW Water Access Sites

## ROADS

- Interstate
- Major Highway
- Road
- Local Road
- Unimproved Road

## HYDROGRAPHY

- Rivers
- Streams

## LAND MANAGEMENT

- Teanaway Community Forest
- Washington Dept. of Natural Resources
- USFS Wilderness Areas
- US Forest Service
- Washington State Parks
- Washington Dept. of Fish & Wildlife

0 0.5 1 2 3 4 Miles

LEARN MORE  
<http://bit.ly/teanaway>



# TEANAWAY COMMUNITY FOREST



Recreation, Working Lands & Floodplain Restoration





Project Location

YAKIMA  
RIVER

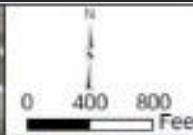
YAKIMA  
RIVER  
DELTA

BATEMAN  
ISLAND

COLUMBIA  
RIVER / McNARY  
POOL (NORMAL POOL  
EL 344 FT NAVD)

CAUSEWAY

COLUMBIA  
PARK  
MARINA



Mid-Columbia Fisheries Enhancement Group  
Bateman Island

Causeway Concept Design Project  
Figure 1.1  
Project Location Map



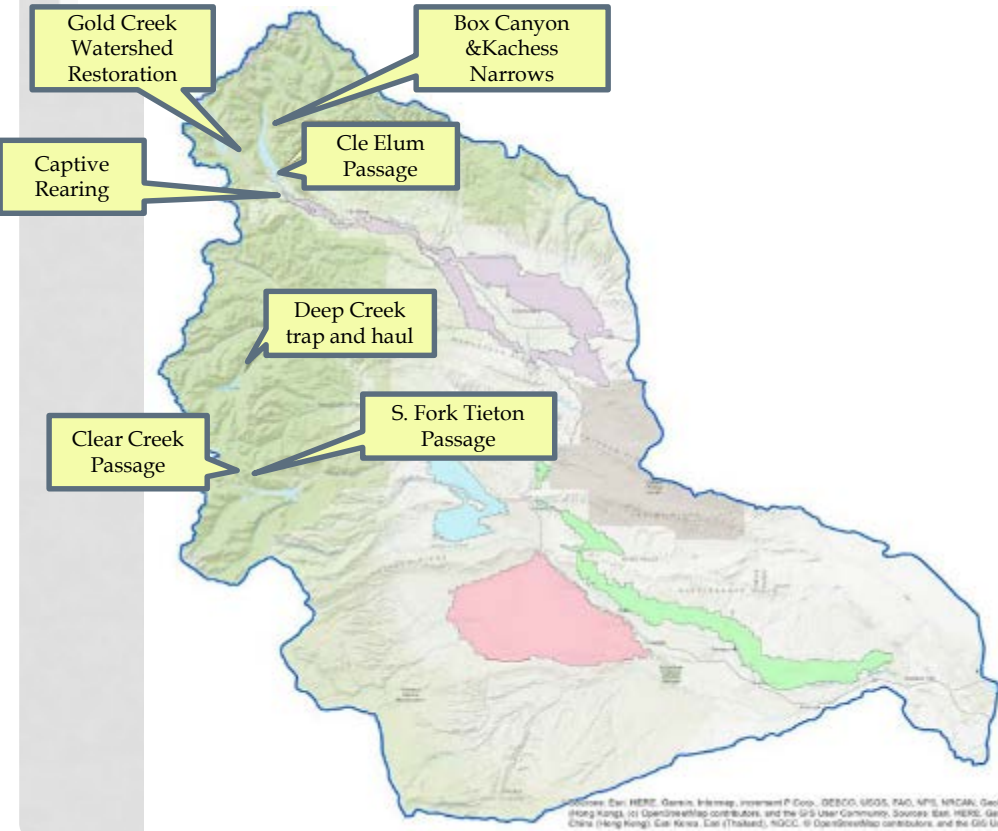
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# Yakima Delta Restoration

Critical temperature  
and predation  
problems

# BULL TROUT RECOVERY PROJECTS



MOU - Reclamation, Ecology, Yakama Nation, USFWS, WDFW, USFS – signed 2015

- Goal - healthy, harvestable stocks of bull trout throughout the Yakima Basin.
- Effective fish passage at Reclamation reservoirs and tributaries.
- Habitat enhancement in rivers and floodplains.
- Rescue, rearing and conservation hatchery programs.
- Robust surveys, science and planning.

# NELSON DAM REMOVAL NATURE-LIKE CHANNEL



- City and County of Yakima
- Improves passage to 309 miles of habitat
- Decreases flood risk
- Improves water supply reliability
- USACE – Lead NEPA Agency w/ BPA and Reclamation
- Phase 1 Cost - \$18 M – July 2021

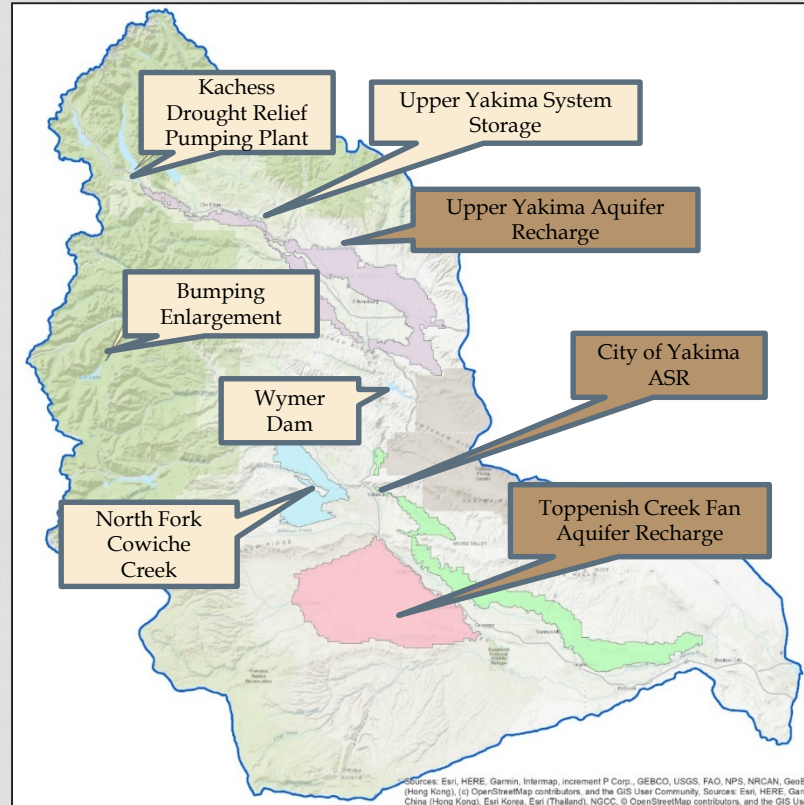


# WATER SUPPLY

# WATER SUPPLY RELIABILITY



- **Conservation** - System level conservation 59% of IDP goal of 85,000
- **Kachess Drought Relief Pumping Plant** - Existing Reservoir: Access up to 200,000 acre-feet from inactive storage pool in dry years
- **Upper Yakima System Storage** - New off-channel reservoir, 20,000 acre-feet
- **Bumping Dam & Reservoir Enlargement** - Replace existing dam to add 165,000 acre-feet
- **North Fork Cowiche Creek Reservoir** - New off-channel reservoir 30,000 to 35,000 acre-feet
- **Wymer Dam and Reservoir** - New off-channel reservoir, 163,000 acre-feet
- **Water Marketing**



# KACHESS DROUGHT RELIEF PUMPING PLANT

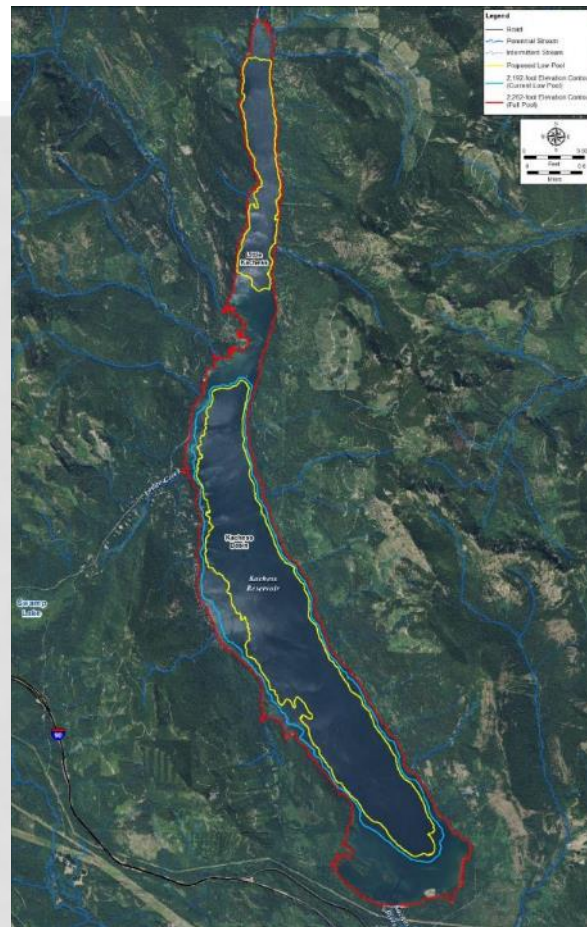


Water Supply: Up to 200,000 acre-feet in a drought year

Drawdown: Up to 80 feet

Surface Area:  
Up to 20% less surface area than existing minimum pool

Authorized in P.L. 116-9



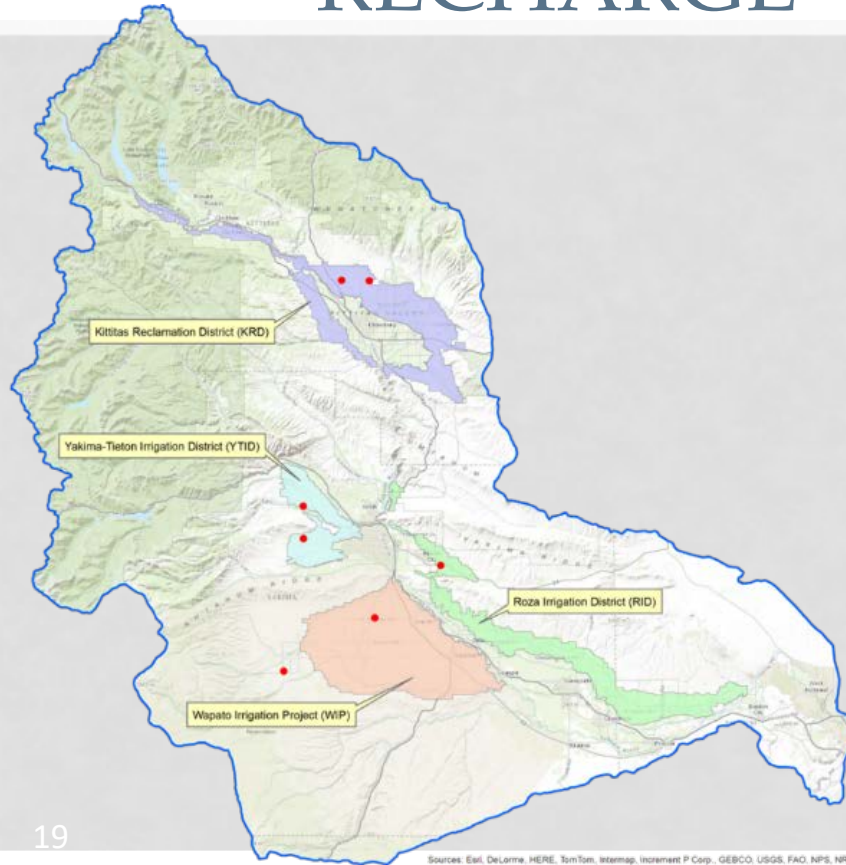
# KACHESS DROUGHT RELIEF PUMPING PLANT



## FLOATING PUMPING PLANT OPTION - FEIS 2019

Photo of Kachess Dam and Reservoir from October 2015

# GROUNDWATER MANAGED RECHARGE



- Proposed Areas for managed aquifer recharge
- Implementation on the Yakama Nation Toppenish Fan
- Pilot studies ongoing at Kittitas Reclamation District



# STRUCTURAL AND OPERATIONAL IMPROVEMENTS/FISH PASSAGE





# CLE ELUM POOL RAISE PROJECT



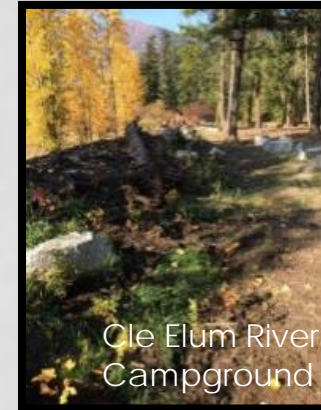
## Completed Projects

- Radial Gates Modification
- Saddle Dikes 1, 2, & 3
- Cle Elum River Campground
- Speelyi Beach Day Use Area
- Salmon La Sac Road Embankments
- Wish Poosh Campground & Boat Launch



## Future - Shoreline Protection

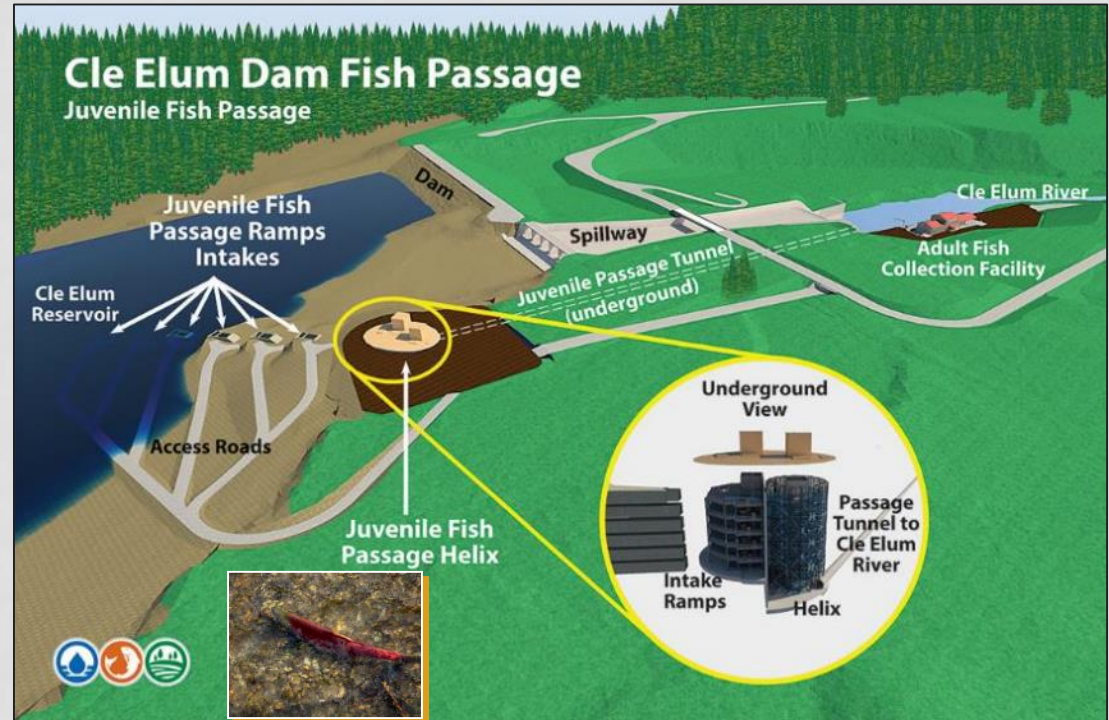
- Morgan Creek
- Night Sky, Domerie Bay & Timber Cove
- Sandelin
- Speelyi



# CLE ELUM DAM FISH PASSAGE



- Adult and juvenile passage in process
- \$200M innovative project
- Cost Share Reclamation/WA
- 4 of 5 contracts completed or in progress
- Fully funded Intake, Gate and Helix Contract FY22 (Awarded in FY18)
- Adult Collection Facility to be awarded in FY23
- Anticipate operational - 2026



# CLE ELUM DAM FISH PASSAGE



## Separation Wall Construction.

- Divides the secant structure into the “gate” chamber and the “helix” chamber.
- Isolates each chamber in case of leakage on one side or the other.
- Approximately 240 steps from the bottom of the helix chamber to the top of the secant structure.





# LESSONS LEARNED IN WORKING TOGETHER



# THANK YOU!



## Questions?

Website: [www.yakimabasinintegratedplan.org](http://www.yakimabasinintegratedplan.org)