

Yakima Basin Integrated Plan



County Leadership Conference

Vancouver, WA

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CONFLICT TO COLLABORATION

Climate Change Is Ravaging the Colorado River. There's a Model to Avert the Worst.

Success in the Yakima River Basin in Washington holds lessons for the seven states at war over water in the American West.

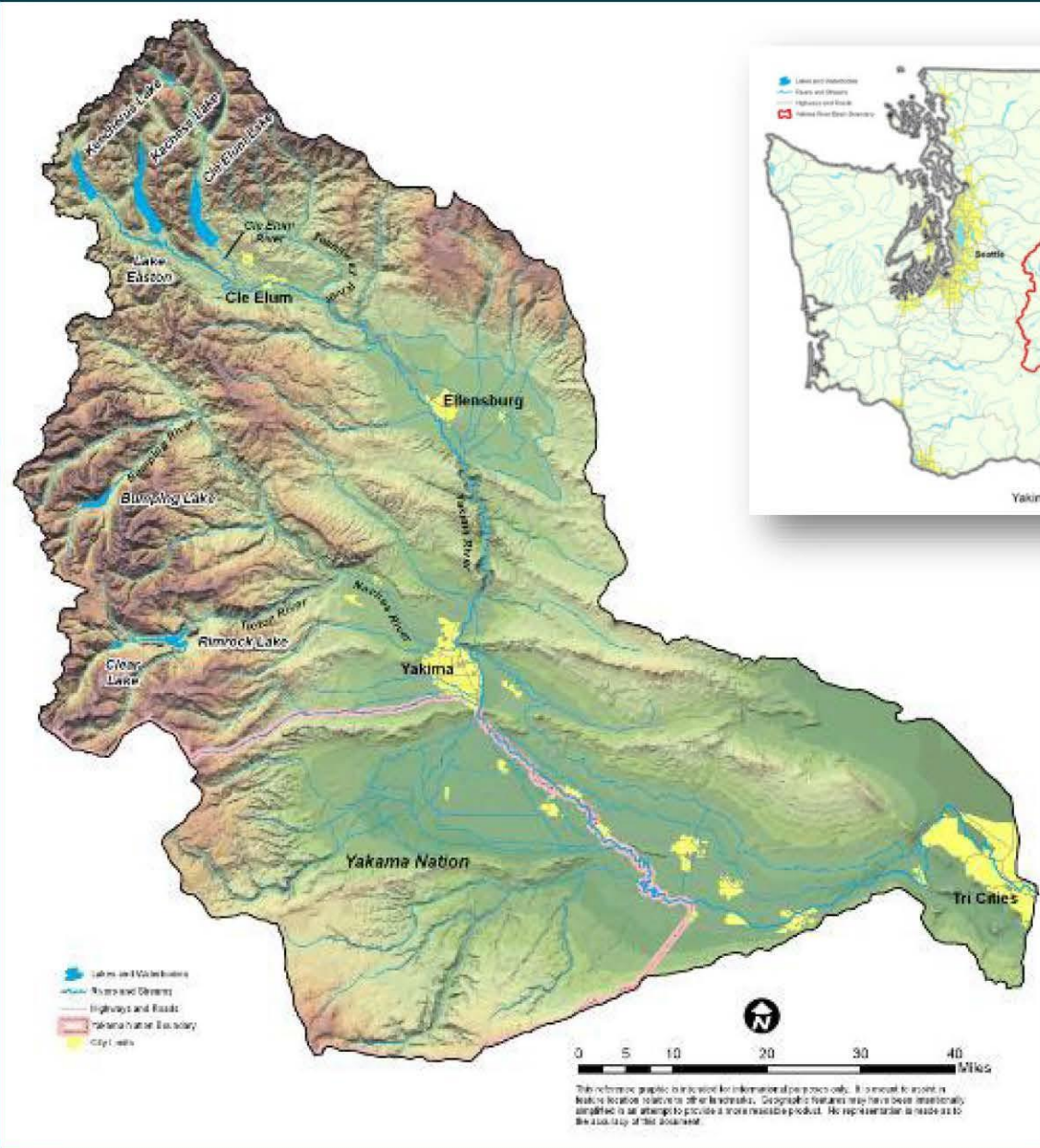


Pipes and canals that carry irrigation water to farms in the Yakima River Basin in Central Washington.

Photo: Ruth Fremson | The New York Times
Story: Henry Fountain | The New York Times

- Yakima Basin Integrated Plan
- 2008 - Roza and Yakama Nation proposal to Ecology
 - Reject water imports - Black Rock
 - Yakima Basin-centered approach
 - “All of the above” solution set
- 2009-2011
 - Ecology convened workgroup
 - Bureau of Reclamation basin study
- 2011-2012
 - Federal/State Programmatic EIS
- 2013- 2043
 - Implementation

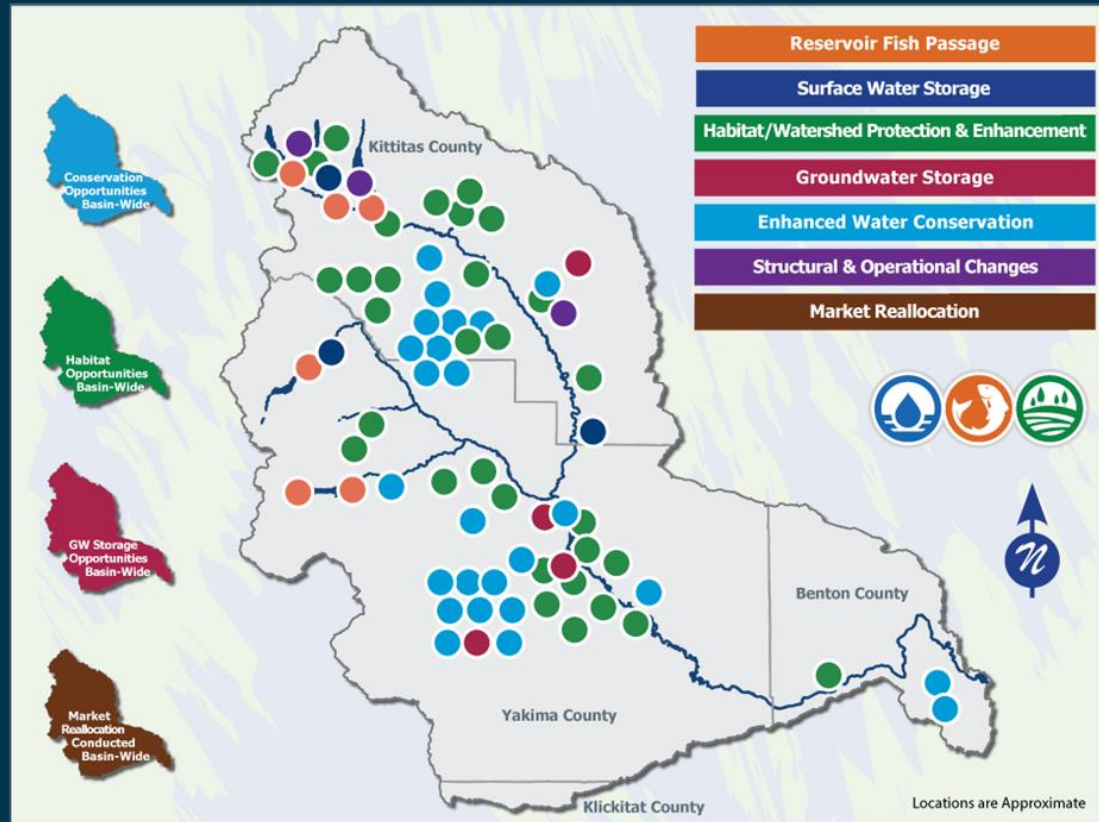
Yakima River Basin Overview



Yakima Project – 1905 & Yakima River Basin Water Enhancement Project - 1979

- 6,155 sq. miles with 464,000 irrigated acres.
- 5 reservoirs w/ 1M AF capacity; irrigation deliveries 2.3M AF
- \$4.5 Billion agriculture economy
- More frequent droughts
- Reduced Fisheries
- ESA Listed Species: Bull Trout and Steelhead

YAKIMA BASIN INTEGRATED PLAN



- 30 - year plan
- \$4 billion
- 7 elements
- 3 phases
- Move forward together
- Now in Initial Development Phase

YBIP GOALS

- **Reliable Irrigation Water Supply**
 - 70% delivery in dry years to proratable rights
- **Increase Municipal Water Supply**
 - Authorize M&I use
 - 50,000 acre-feet
- **Restore Fishery**
 - “Self-sustaining harvestable populations”
 - Fish passage
 - Habitat protection and restoration
- **Adapt to Climate Change**
 - Increase storage
 - Make best use of existing supplies
- **Robust Economy**



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.



WATER SUPPLY RELIABILITY



- **GOAL –**
 - 70% pro-ratable irrigation supply in drought years
 - Fishery flows needed to sustain YBIP fishery goals
 - M&I supply
- **APPROACH –**
 - Conservation
 - System level reengineering
 - Drought supply
 - Increased surface storage
 - Managed aquifer recharge
 - Marketing

WATER SUPPLY RELIABILITY

- **Conservation**
 - System level conservation – BOR/BIA/State/Districts
 - On farm conservation – NRCS
 - “Conservation opens opportunity”
 - Limited only by funding
- **Water Marketing**



WATER CONSERVATION OPPORTUNITIES



- Save water seepage from the canals.
- Provide for more consistent water deliveries to customers within the district.
- Create more capacity in the canal system.
- Help threatened species within the vicinity of the districts canal distribution system.



Tucker Creek, Kittitas County

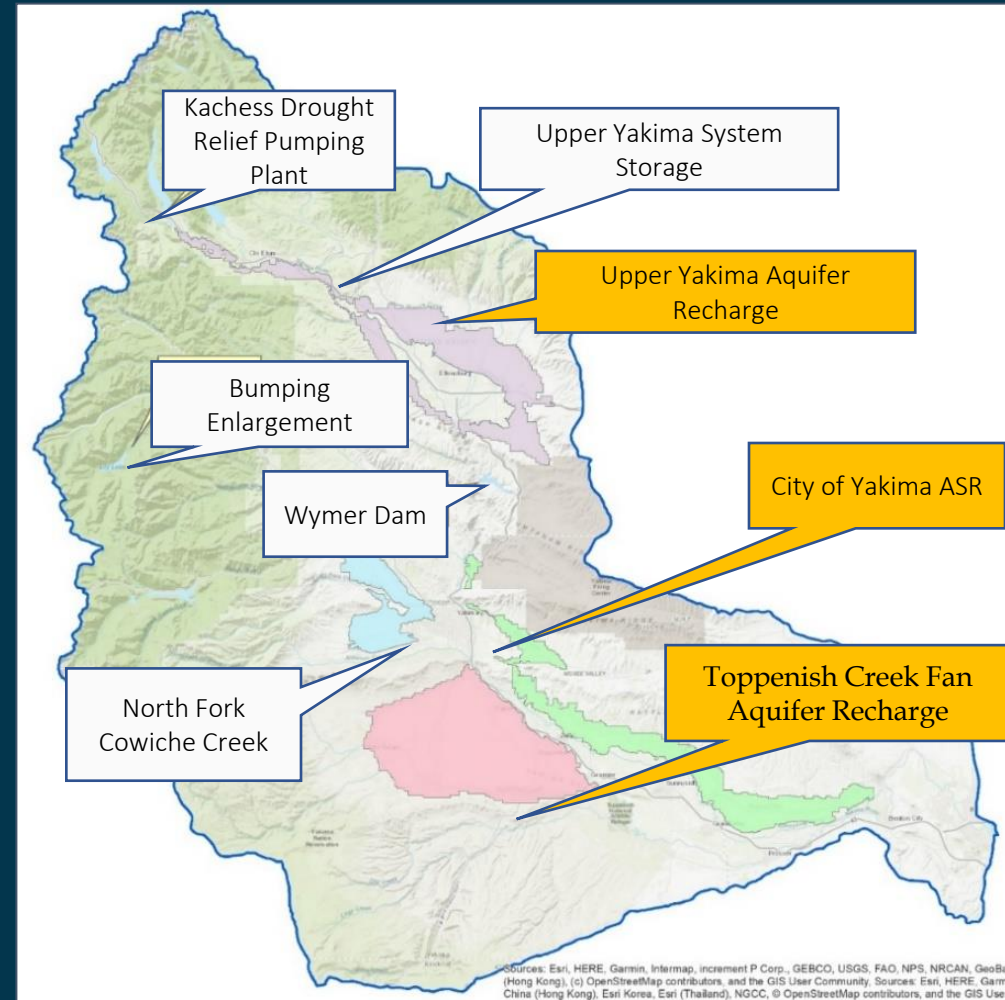
Benefits of Canal Conservation Projects

- Canal improvements create more capacity.
- Increase in capacity allows for infrastructure to carry water for:
 - Tributary supplementation
 - Surface/ground water storage

WATER SUPPLY RELIABILITY - STORAGE

Water Supply Options

- YBIP Goal: 450,000 acre-feet of new storage.
- Water Supply Framing process underway.
- Range of projects – small, large, surface, groundwater.



FISHERY

- Goal: “Self-sustaining harvestable populations”
- Approach:
 - Steelhead – Model and sequence YBIP actions to satisfy ESA consultation and YBIP goals
 - Bull trout – MOU to implement restoration projects
 - Support non-ESA fish
- Passage, Flows, Habitat



FISH PASSAGE

- Cle Elum
 - Completion 2026
 - Contracts 1-4 funded, final contract award FY22/FY23
- Clear Creek – in design
- Main Stem Yakima Diversions
 - Roza – in construction
 - SDBOC – interim completed 2021
 - Wapato – in design
 - Other lower river diversions – TBD
- Nelson Dam
 - Completion 2023
- Bateman Island – Corps 1135 project



FISH FLOWS

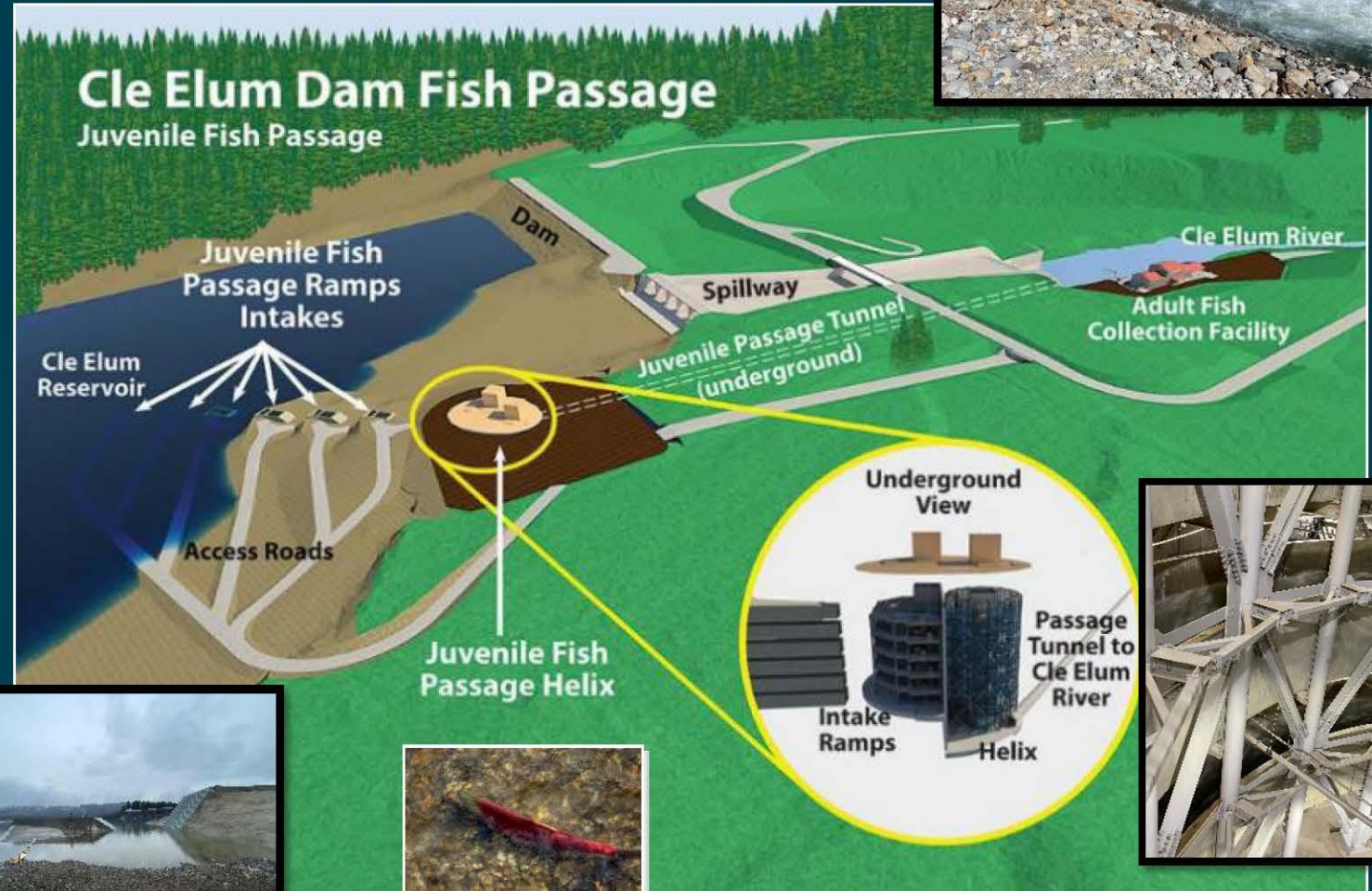
- Cle Elum Pool Raise
 - Shoreline stabilization – 2026
 - 14,600 AF
- Conservation
 - YRBWEP II
 - 49,159 AF instream flow
 - 260,000 AF reach-specific instream flow
 - YBIP – 21,513 AF instream flow
- Tributary Re-hydration – ongoing/expanding
- IJA projects in planning
 - Small surface storage projects
 - Managed Aquifer recharge



Case Study

Cle Elum Dam Fish Passage

- Adult and juvenile passage in process
- \$220M innovative project
- Cost Share Reclamation/WA
- Final contract (adult collection) in construction 2024
- Anticipate operational – 2026/27



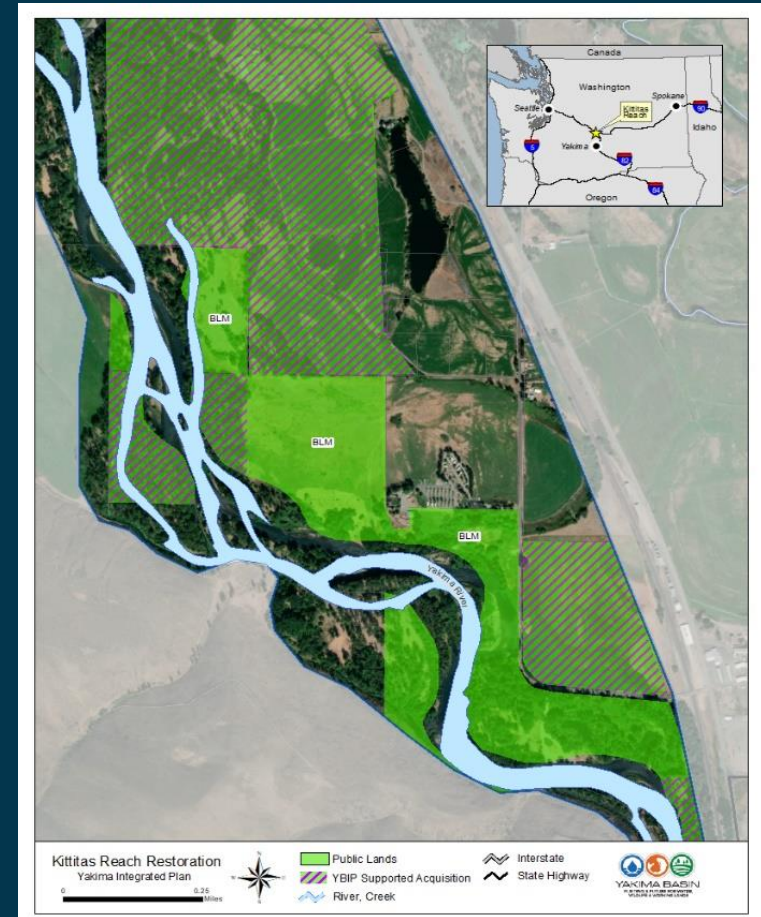
Cle Elum Dam Fish Passage – Sockeye Smolts



It works!! - April 30, 2024

HABITAT

- **Goal –**
 - Protect watershed and shrub steppe lands
 - Restore floodplain, river, tributary habitat
 - Forest health – fire and water supply
 - Economic support – water, fish, recreation
- **Approach -**
 - Strategic land acquisition
 - Designations
 - Restoration projects



Yakima Basin Integrated Plan Accomplishments 2013-2024

Success breeds success

- **Fish Passage**
 - Complete Construction: Naches, Cle Elum (2026/27)
 - Start construction: Roza, Clear Creek
 - In design: Tieton,
- **Water Supply Reliability**
 - Conservation - 74,000 acre-feet
 - Cle Elum Pool Raise – 14,600 acre-feet (in construction)
 - Kachess Drought Relief Pumping Plant – 200,000 ac-ft (feasibility)
 - Groundwater – 670 acre-feet
 - Springwood – 68,000 acre-feet (feasibility)
- **Habitat**
 - 40+ restoration projects
 - 80,000 acres acquired
- **Yakama Nation**
 - Wapato Irrigation Project Modernization Plan
- **\$850M in federal and state funding (\$44 FY24)**
- **\$38M FY24 WaterSMART funding to YBIP**
- **\$16M FY24 Inflation Reduction Act**



WaterSMART Workshop - November 2022

YBIP INFRASTRUCTURE “SHOVEL WORTHY” PROJECTS

- Project Types
 - Water Storage
 - Fish passage
 - Habitat
 - Water conservation
 - Structural/operational



- YBIP Projects FY22-26
 - 96 projects identified
 - Additional projects anticipated
 - \$1.237 Billion

COLLABORATIVE GOVERNANCE

“The processes and structures of public policy decision making and management that engage people constructively across the boundaries of public agencies, levels of government, and/or the public, private and civic spheres in order to carry out a public purpose that could not otherwise be accomplished.”

- Conditions essential to whether the collaborative process can be sustained:
 - (1) Environment,
 - (2) Membership characteristics,
 - (3) Process and Structure,
 - (4) Communication,
 - (5) Purpose, and
 - (6) Resources.



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



15-Year Anniversary – June 2009 to June 2024

Everyone will get some of what they need, but not everything they want.

Finding Common Ground

COLLABORATIVE LEADERSHIP IN WASHINGTON STATE

A documentary film

Synopsis

Finding Common Ground: Collaborative Leadership in Washington State is a documentary film that tells the story of people with diverse interests overcoming differences to resolve some of the most complex conservation challenges in the Pacific Northwest. It's a story about taking conflict out of the courts and into our living rooms and local meeting spaces where people can really connect.



Thank you!

Yakima Basin Integrated Plan Partners

