

# YAKIMA RIVER BASIN WATER ENHANCEMENT PROJECT



## WATER CONSERVATION OVERVIEW



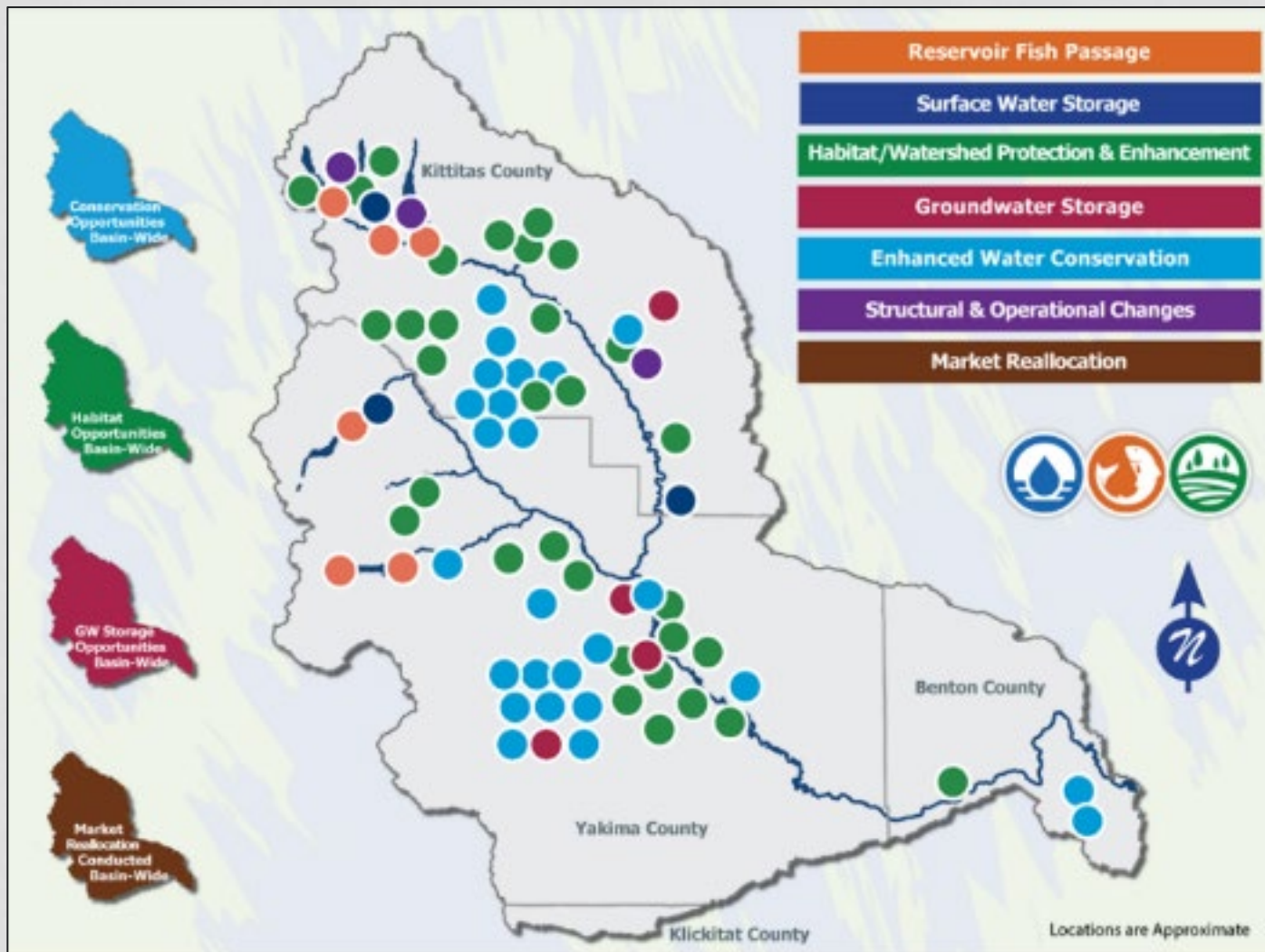
2<sup>ND</sup> ANNUAL WATER LAW CONFERENCE, SPOKANE, WA  
MAY 22, 2025



*Presented by:*

**Chad Stuart**, Yakima Field Office Manager, Bureau of Reclamation

# YAKIMA BASIN INTEGRATED PLAN



- 30 - year plan
- \$6- 8 billion
- 7 elements
- 3 phases
- Now in Initial Development Phase

# YAKIMA BASIN INTEGRATED PLAN STRATEGY



## Water Supply Reliability

- Best use of existing supplies, efficiencies through conservation
- Storage (surface and groundwater)
- Market Reallocation
- Regulatory risk management (ESA)

## Fishery Restoration

- Safe Passage (upstream and downstream)
- Flow Improvements
- Habitat

## Habitat

- Acquisitions (Forest, Riparian, Shrub Steppe)
- Restoration – Mainstem + Tributary
- Forest Management
- Designations

# YAKIMA BASIN WATER CONSERVATION

## Programs:

- Yakima River Basin Water Enhancement Project, Phase II, 1994 – Basin Conservation Program – funded by Reclamation, Ecology and Irrigation District
  - Cost share – 65% Reclamation, 17.5% Ecology, 17.5% Irrigation District
  - Instream/Out of Stream – 2/3 instream, 1/3 drought year for irrigation district
- Yakima River Basin Water Enhancement Project, Phase III, 2019 – Enhanced Water Conservation Program – funded by Reclamation and Ecology
  - Cost share – varies
  - Instream/Out of Stream - varies
- WaterSMART – Water and Energy Efficiency Grants (WEEG)
- Ecology – Water Resources Program - funding
- Irrigation Districts – funding

# YRBWEP PHASE II – BASIN CONSERVATION PROGRAM



## Projects Completed or in Progress

	<u>Yield</u>
• SS Phase I Sunnyside Canal Improvement Project –	29,162 acre-feet
• Benton Irrigation District Pressurized Piping System –	4,346 acre-feet*
– (new downstream BID diversion keeps 21,044 acre-feet instream for add'l 72 miles)	*+2,524 acre-feet
• SS Phase II –Lateral Improvement Projects -	24,750 acre-feet
• Roza Irrigation District – Reregulation Reservoir –	<u>8,284 acre-feet</u>
Sub Total	69,066 acre-feet

Potential Projects to add more conservation...

## Conservation Feasibility Investigations Complete:

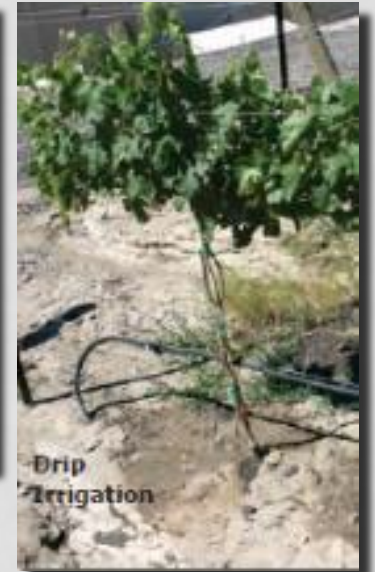
○ KRD – Canal Lining Lateral Piping and Rereg Reservoirs –	39,300 acre-feet
○ Selah-Moxee ID – Piping open ditch canals –	10,190 acre-feet
○ Union Gap ID – Piping open ditch canals –	<u>9,317 acre-feet</u>
Sub Total	58,807 acre-feet
Total	<u>127,873 acre-feet</u>



# ENHANCED WATER CONSERVATION ELEMENT

## Agricultural Conservation

- Lining/piping/sealing canals & laterals
- Water measurement devices
- Re-regulation reservoirs
- On farm irrigation efficiency
  - to reduce seepage, evaporation, & spills



## Municipal and Domestic Conservation Program

- Promote efficient landscape irrigation practices
- Expand education/incentives to encourage voluntary efficiency
- Establish best practice standards



# ENHANCED WATER CONSERVATION ELEMENT

## Legislation

- Washington State – **2013 RCW 90.38**
- Federal – **2019 Dingell Act**



***This River Runs Forever***  
**Yakima Basin Integrated Plan**

## Goals

- **Initial Development Phase (2013-2029)**
  - 85,000 acre-feet conserved in first 10 years (per Dingell Act)
  - By 2029
- **Total overall YBIP Goal**
  - 170,000 acre-feet conserved

# ENHANCED WATER CONSERVATION

- Goals
  - Improve instream flows in critical stream reaches to benefit priority fish species
  - Improve water management with more precise water delivery and operational efficiency
  - Improve water supply reliability and drought resiliency





# YBIP ENHANCED WATER CONSERVATION

1. Conservation project began in with Ecology 2013 and Reclamation in 2019.
2. Defined as an agricultural or municipal improvement project resulting in conserved water
3. Not part of the Title XII, Section 1203 Basin Conservation Program



Yakima Heritage Garden



KRD Canal Lining



Wapato Irrigation Project - Unit 2 L672  
Pipeline



# ENHANCED WATER CONSERVATION TO DATE

- YBIP Goal – 170,000 acre-feet
  - 85,000 acre-feet by 2029
- Phase III to date:
  - 196 projects
  - \$336M invested (\$4,400/acre-ft)
  - 77,000 acre-feet conserved/in progress
  - 90% of 2029 Initial Development Phase Goal
  - Note – increase on farm conservation, conversion to more efficient method, drip



*Kittitas Reclamation District South Branch Canal piping  
March 2024*

# CURRENT STATUS: ENHANCED CONSERVATION

- **Current status:** working on accounting for existing conservation and proposal to prioritize projects to meet initial development phase goal (by 2029)
- Identify projects for future conservation to develop draft proposal
- Meet with partners to review proposal, get feedback, and refine proposal

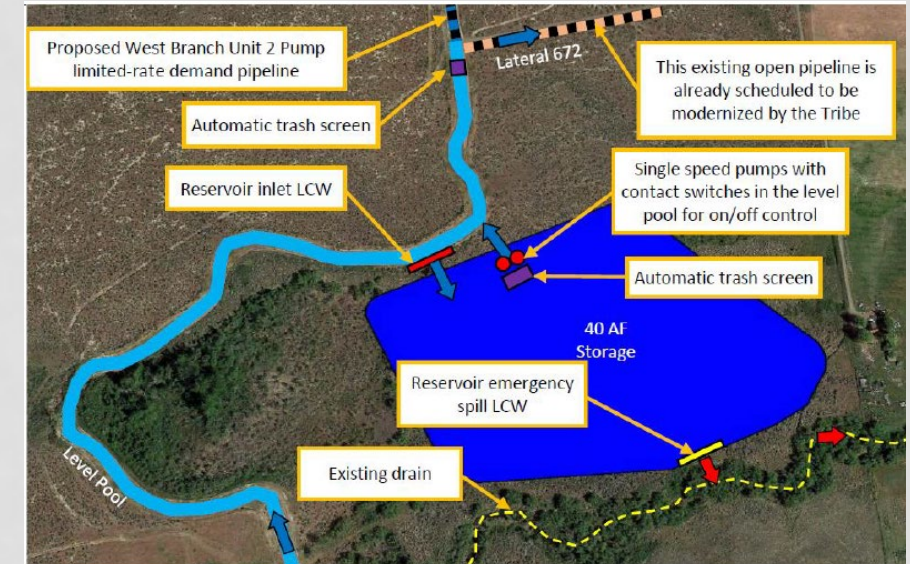


Figure 5-21. Conceptual control of the proposed West Branch Unit 2 Pump regulating reservoir

Left: Roza canal sealing  
Above: Proposed Unit 2  
reregulating reservoir as  
part of WIP



# PLAN – ENHANCED WATER CONSERVATION

- Develop plan, budget and schedule
- Finalize & Implement
- Monitor
- Document Results
- Use to inform additional conservation to achieve total 170,000 acre-ft for future Integrated Plan phases.



Left: KID canal lining  
Above: On farm irrigation efficiency (drip irrigation)



# YAKIMA RIVER BASIN CONSERVATION



## Overall

- Yakima River Basin Water Enhancement Project (YRBWEP) Phase II
  - Basin Conservation Program, 127,873 acre-feet
- Yakima River Basin Integrated Water Resource Management Plan (IP) – YRBWEP Phase III
  - Enhanced Conservation goal: 170,000 acre-feet
  - Initial Development Phase (2013-2023) goal: 85,000 acre-feet
- Potential conservation with Phase II and Phase III: 212,873 acre-feet
- To date: (Phase II) 69,066 + (Phase III) 77,000 = 146,066 acre-feet

# THANK YOU!



*Photos: Manastash Creek at Cove Road before and after stream supplementation*

For further information on the web:

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

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

## QUESTIONS?