

Washington State Senate
Agriculture, Water & Rural
Economic Development
Committee

November 30, 2012



*Overview of the Yakima River Basin
Integrated Water Resource Management Plan*

Presented by:

Derek Sandison, Director

Office of Columbia River

Washington State Department of Ecology

YAKIMA RIVER BASIN INTEGRATED PLAN
IMPLEMENTATION COMMITTEE



Land Cover

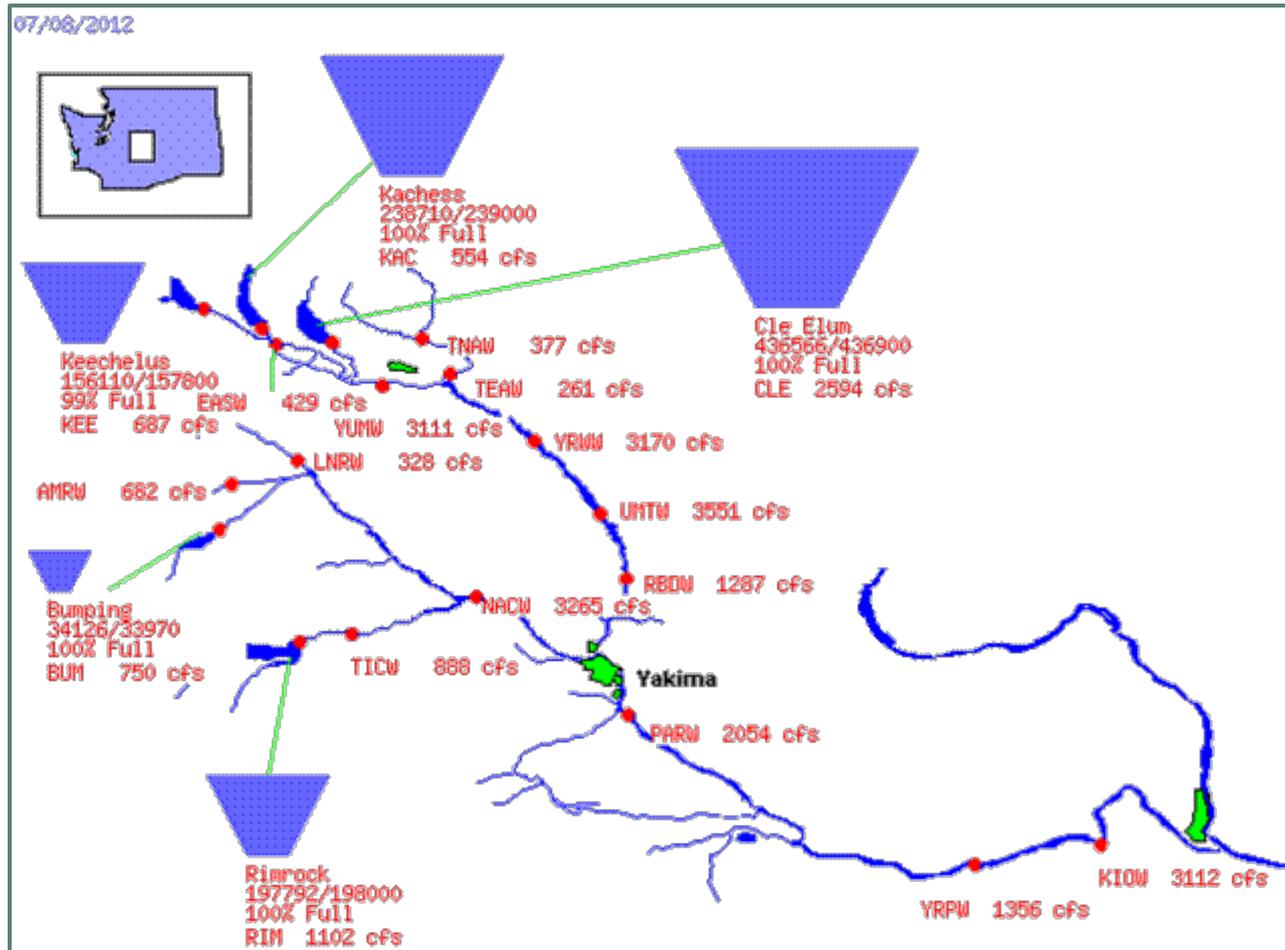


Yakima Basin Water Management

- Managed by Bureau of Reclamation
- Five reservoirs with 1 million acre-feet of capacity
(average annual runoff 3.3 million acre-feet)
- Irrigation deliveries: 1.7 million acre-feet
- Snowpack is the “sixth reservoir”



Yakima Project Reservoirs



Surface Water Users in the Yakima Basin



Senior Water Rights

Pre-1905 priority date:
receives full water right



Proratable Water Rights

1905 priority date:
receives ~ 1/3 to full water
right depending on supply



Junior Water Rights

Post-1905 priority date:
receives no water once
rationing occurs



No Water Rights

Surface water use
without a water right
is unlawful



Declining Water Supply

- Surface water is over-appropriated
- Droughts in 1992-1994, 2001 and 2005
- Proratable irrigation districts reduced to as little as 37% of allotments
- Instream flows greatly reduced by out-of-stream diversions



Reduced Fisheries

- Historic salmon and steelhead run size: 800,000 fish
- Average run size last 10-15 years: 15,000-20,000 fish
- Native sockeye and summer Chinook: Extirpated, sockeye being reestablished
- Native coho: Once extirpated, now reestablished
- Spring and fall Chinook: Seriously reduced
- Steelhead and bull trout: ESA Threatened species

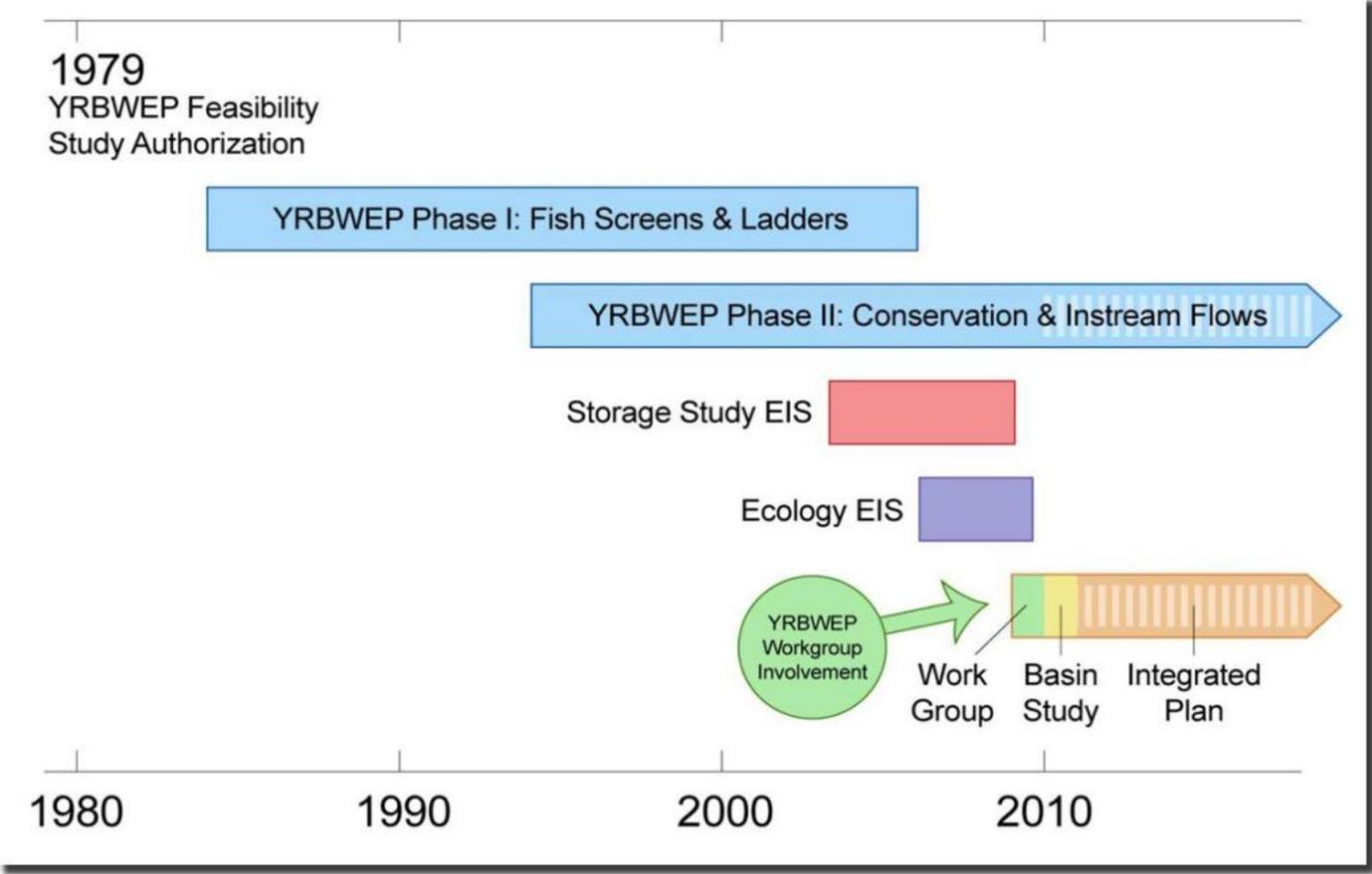


Municipal and Domestic Needs

- Cities and Counties anticipate continued growth
- USGS Study showed connectivity with surface flows



Integrated Plan Grew from the YRBWEP Program



Members of the YRBWEP Workgroup

Federal Agencies

Bureau of Reclamation
National Marine Fisheries Service
U.S. Fish and Wildlife Service
U.S. Forest Service¹

Yakama Nation

Yakama Nation Natural Resources
Yakima/Klickitat Fisheries Project

Irrigated Agriculture

Kennewick Irrigation District
Kittitas Reclamation District
Roza Irrigation District
Sunnyside Valley Irrigation District
Yakima-Tieton Irrigation District

Washington State Agencies

Department of Ecology
Department of Agriculture
Department of Fish & Wildlife

Local Governments

Benton County
Kittitas County
Yakima County
City of Yakima

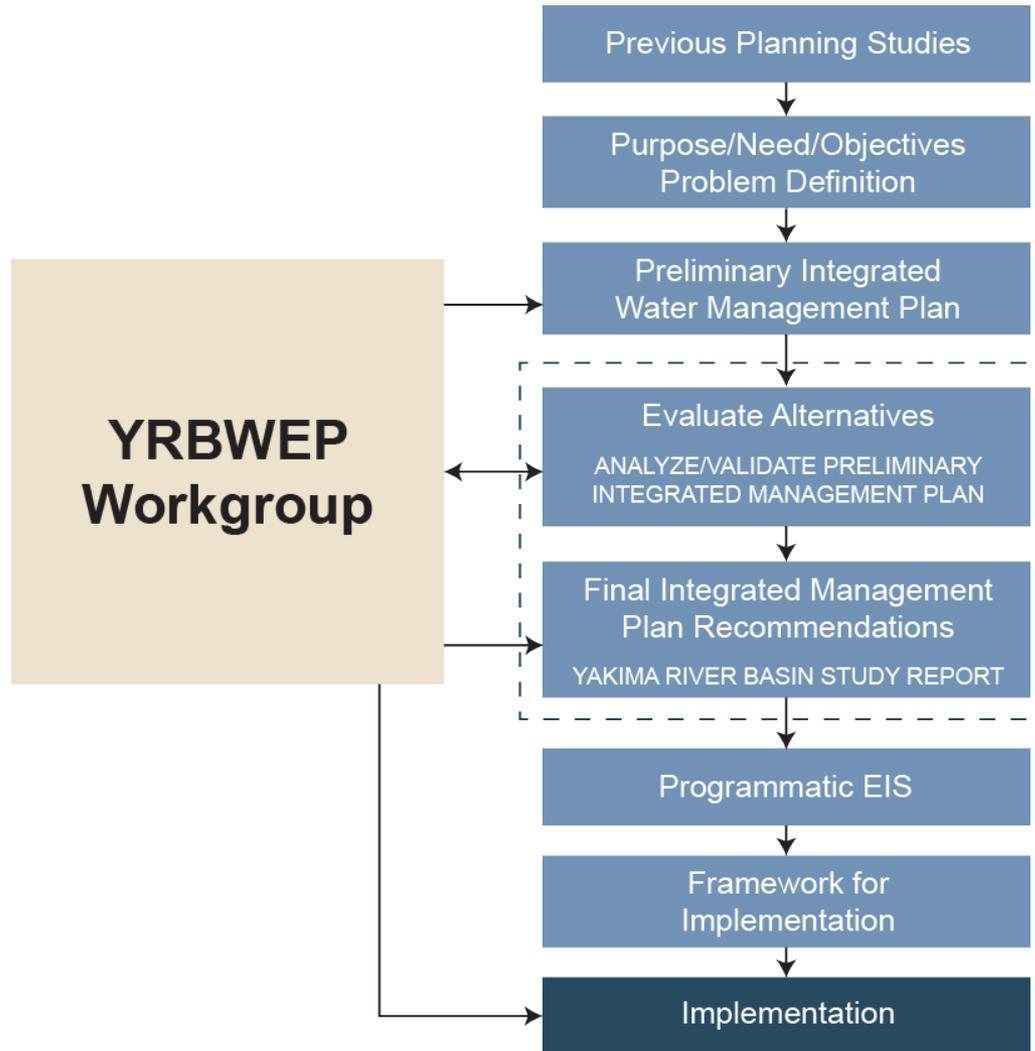
Other Stakeholders

American Rivers
National Wildlife Federation²
Yakima Basin Fish & Wildlife Recovery Board
Yakima Basin Storage Alliance

1. Joined Workgroup in 2012. 2. Alternate for American Rivers.



Process from 2009 to Present



Goals of the Integrated Plan

- Provide opportunities for ecological restoration and enhancement, including fish passage
- Improve water supply during drought years (70% proratable supply)
- Provide for efficient and adaptable water supply management
- Contribute to sustainable economy and environment



Seven Elements

- Reservoir Fish Passage
- Surface storage
- Habitat/Watershed Protection
- Enhanced conservation
- Groundwater storage
- Market Reallocation
- Structural & Operational Changes



Reservoir Fish Passage Element

- Provide upstream and downstream fish passage
- Benefits:
 - Provide access to high quality habitat
 - Increase anadromous species abundance
 - Allow reintroduction of sockeye
 - Provide genetic interchange for bull trout



Surface Water Storage Element

Wymer Dam and Pump Station

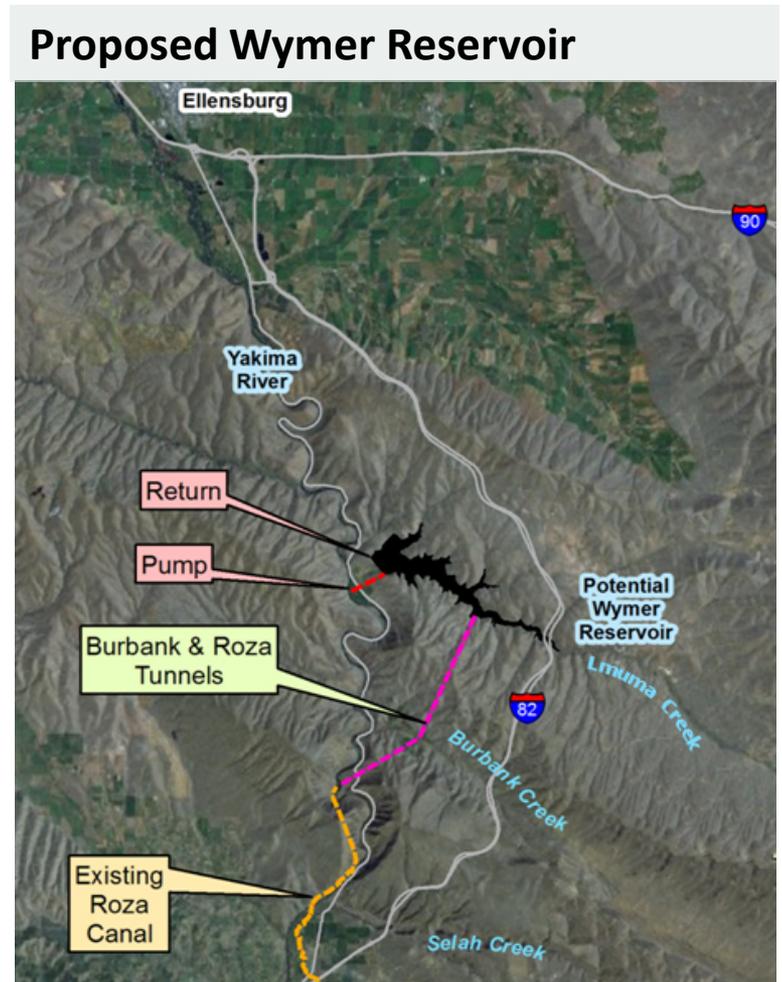
- New off-channel reservoir, 163,000 acre-feet

Lake Kachess Inactive Storage

- Existing Reservoir: Access 200,000 acre-feet from inactive storage pool in dry years

Bumping Lake Enlargement

- Replace existing dam to add 165,000 acre-feet



Habitat/Watershed Protection and Enhancement Element

- Three areas proposed for acquisition
 - 46,000 acres in Teanaway Basin
 - 15,000 acres in Yakima Canyon
 - 10,000 acres at Little Naches headwaters
- Consider protective designations on public lands and waters
- Mainstem Floodplain and Tributaries Fish Habitat Enhancement Program

Before



After



Habitat Restoration



Enhanced Water Conservation Element

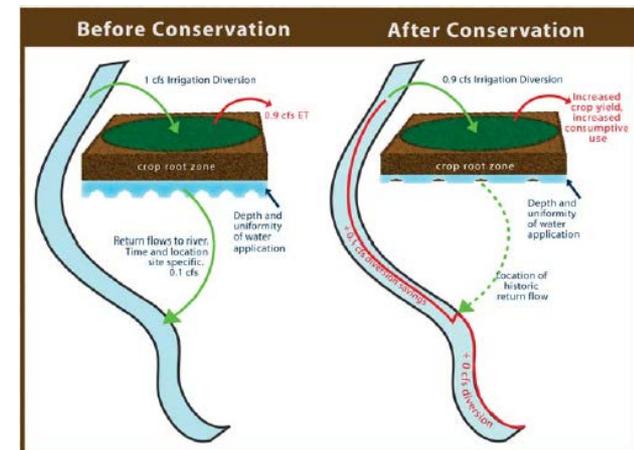
Agricultural Conservation – up to 170,000 acre-feet

- Lining/piping canals and laterals
- Re-regulation reservoirs
- Irrigation efficiency – reduce seepage, evaporation, and spills



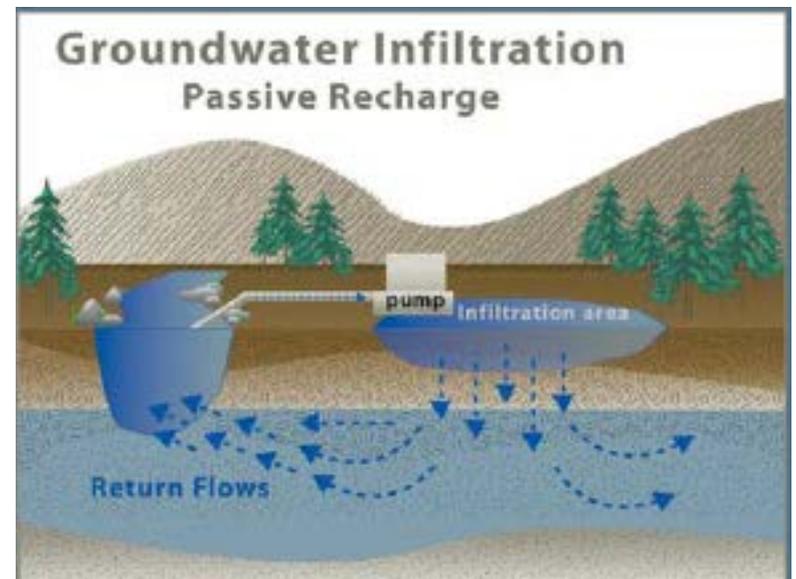
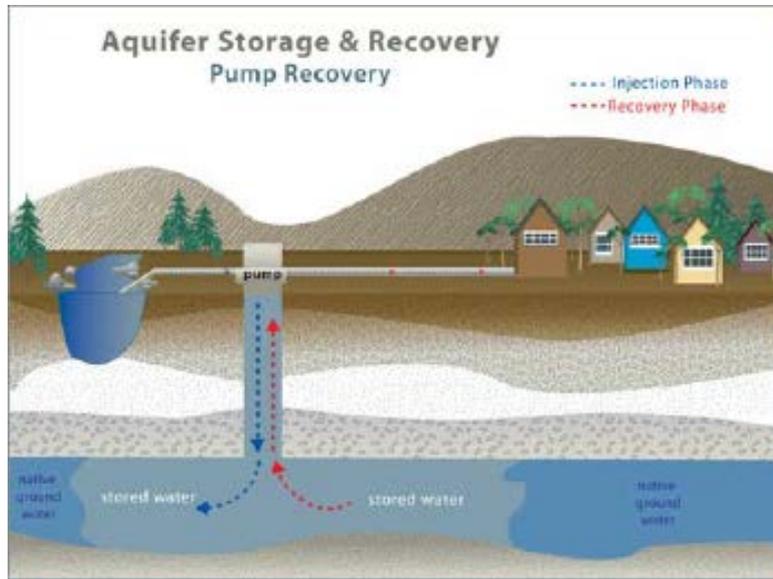
Municipal and Domestic Conservation Program

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



Groundwater Storage Element

Use surface water during periods of high runoff
Recharge aquifers for later withdrawal



Market Reallocation Element

Near-term effort

- Build on existing water market programs
- Take steps to reduce barriers

Longer-term effort

- Focus on water transfers between districts
- Allow fallowing within district, leases to outside district
- Requires substantial changes to existing laws/policies



Structural and Operational Changes Element

- Keechelus-to-Kachess Tunnel or Pipeline
- Kittitas Reclamation District canal modifications and new pump station
- Reduce power diversions at Roza and Chandler Dams
- Wapatox Canal improvements
- Raise Cle Elum Lake by 3 feet



Costs of the Integrated Plan

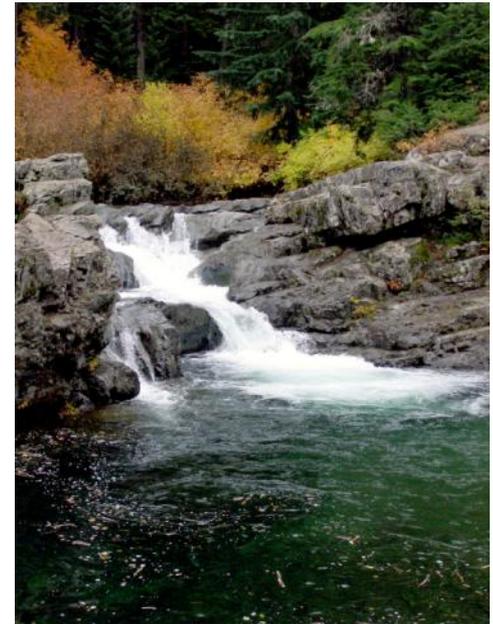
- If Constructed All at Once: \$4.2 Billion
(Could range from \$3.2 to \$5.4 billion)
- 100-Year Cost in “Present Value”: \$3.5 Billion
(Construction, O&M, and periodic replacement costs)

All costs expressed in 2012 dollars.



Ecological Benefits

- Improved stream flow conditions
- Improved operational flexibility to manage flows and adapt to climate change
- Improved connectivity/viability of bull trout populations
- Improved habitat in floodplain, riparian zone, and forested watersheds
- Increased populations of Chinook, coho, steelhead and sockeye



Water Supply Benefits

- Improve drought year supplies to water-short irrigation districts
- Provide water for growth in municipal and domestic well uses
- Improve security of junior water rights in the Basin



Schedule

- Final Programmatic EIS – Completed March 2012
- Framework for Implementation Document – Completed October 2012
- Formation of Federal Agency Support Group – Fall 2012
- State Legislation/Capital Budget Request – January 2013
- Workgroup Seeking Federal Funding – 2013 and beyond



Questions

- Ecology's Website:
<http://www.ecy.wa.gov/programs/wr/cwp/YBIP.html>
- Reclamation's Website:
<http://www.usbr.gov/pn/programs/yrbwep/2011integratedplan/index.html>

