

**Discussion Draft Integrated Package
YRBWEP 2009 Work Group
Summary**

PHASE I PROJECTS (Near-term = 0 to 10 Years)

Agricultural Conservation – Implement water conservation program to reduce water demands for irrigators and improve stream flows in targeted reaches.

Municipal Conservation – Implement municipal system, household and landscape irrigation efficiencies through conservation projects and programs, to reduce water demand.

Wymer Reservoir – 162 KAF off-channel reservoir located on Lmuma Creek, filled by a pump station located near Thorp and a canal/pipeline around Kittitas Valley, and with power generation.

Bumping Lake Enlargement – Replace existing Bumping Lake Dam with a 160 to 190 KAF dam

Reservoir Inactive Storage - Extract during drought years up to 100 KAF inactive storage from one existing reservoir

Keechelus-to-Kachess Pipeline - Transfer water from Keechelus Reservoir to Kachess Reservoir through approximately 5 miles of pipeline

Complete Wapatox Project - Modify the conveyance to reduce water needed to convey irrigation water

Subordinate Power at Roza¹ - Reduce or eliminate flows diverted from Roza Dam March through May to supply Roza Power Plant during smolt migration. May also need to replace power for Roza pumping if BPA determines power generation no longer economically viable.

Subordinate Power at Chandler - Reduce or eliminate flows diverted from Prosser Dam March through May to supply Chandler Power Plant during smolt migration. May also need to replace power for KID pumping if BPA determines power generation no longer economically viable.

Raise Cle Elum Dam - Raise dam 3 feet by modifying the spillway gates and use additional supply to enhance instream flows.

Kittitas Reclamation District (KRD) Main Canal and South Branch Modifications - Replace lateral canals on the South Branch Canal with pressured pipe systems to allow water discharge directly to tributary creeks or to supply water users currently diverting from tributary creeks

Institutional Improvements to Facilitate Market-Based Water Transfers - Continue existing programs and policies and take additional steps to reduce impediments to transfers between and out of irrigation districts, and participating individual irrigators

Municipal Aquifer Storage and Recovery - Inject treated Naches River water into wells around the City of Yakima to replace current surface water diversions

Groundwater Infiltration Prior to Storage Control – Pilot and initiate groundwater recharge efforts in Kittitas, Toppenish and Roza areas prior to storage control: land

¹ Roza Roller Gate project is not included because it is currently being implemented. This project may also help reduce a portion of the smolt outmigration flow need that would be met through subordination.

application and check structures on drains; increase return flows for downstream benefits and withdraw groundwater through wells and pump stations on drains

Fish Passage at Cle Elum, Bumping, and Clear Lake² Dams - Install up and downstream passage for adult and juvenile salmonids

Mainstem Floodplain Restoration Program – Finalize reach-level priorities and implement projects with emphasis on Tier I and II reaches.

Tributaries Habitat Enhancement Program – Implement projects with emphasis on passage and screening, upper and middle Yakima tributaries, Wilson/Naneum and the Yakama Reservation. Fund headwaters restoration and emergent opportunities.

PHASE II PROJECTS (MID-TERM = 11-30+ YEARS)

Includes all elements of Phase 1, plus:

Additional Water Conservation - Implement enhanced water conservation projects (listed in attached Appendix 1 and 2 Tables)

Reservoir Inactive Storage - Extract during drought years up to 200 KAF inactive storage from one or more existing reservoirs

Institutional Improvements to Facilitate Market-Based Water Transfers - Continue programs developed in Phase 1 and take additional steps to reduce impediments to transfers between and out of irrigation districts. and participating individual irrigators

Additional Groundwater Infiltration Prior to Storage Control – Expand groundwater recharge efforts in Kittitas, Toppenish and Roza areas prior to storage control: land application and check structures on drains; increase return flows for downstream benefits and withdraw groundwater through wells and pump stations on drains

Columbia River Pump/Storage - Pump water from the Columbia Basin, contingent on demonstrated need from climate change or other factors (options with storage or direct pump without storage).

Fish Passage at Tieton, Keechelus and Kachess Dams - Install up and downstream passage for adult and juvenile salmonids, dependent upon Phase I study findings

Mainstem Floodplain Restoration Program – Continue to implement projects with emphasis on Tier II and III reaches.

Tributaries Habitat Enhancement Program – Continue to implement enhancement program and fund headwaters restoration and emergent opportunities.

² Provide for upstream bull trout passage only.