Yakima River Basin
Integrated Water Resource Management Plan
Cle Elum Reservoir Projects

Columbia River Policy Advisory Group
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Yakima River Basin Overview

- 6,155 sq. miles w/464,000 irrigated acres
- 5 reservoirs w/ 1M AF capacity, irrigation deliveries 2.3M AF
- Reduced Fisheries
- $4.5 Billion agriculture economy
Integrated Plan Overview

**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 outmigation 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. Chelan
  4. Tieton (Renrock)
  5. Keechelus
  6. Kachess

**Surface Water Storage**
1. Build a 162,500 ac-ft off-channel surface storage facility at Wymer on Lemna 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.

**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.

**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.
Cle Elum Pool Raise

Structural and Operational Changes
Cle Elum Pool Raise

14,600 acre-feet for Yakima River instream flows

- Modify radial gates
- Shoreline protection
- Land acquisition
Cle Elum Pool Raise

• Radial Gate Modification – completed April 2017

• Shoreline Protection
  – Completed
    • Dikes raised Sept 2016
    • Cle Elum River Campground Nov 2017
  – Ongoing
    • Award Speelyi Day Use Area Summer 2018, Construction Fall 2018
    • Preparing construction contracts
    • Continued coordination with USFS and landowners

• Land Acquisition
  – Ongoing
    • Negotiation and coordination with landowners
Cle Elum Dam Pool Raise
Radial Gates Complete
Cle Elum Pool Raise

Shoreline Protection

USFS Facilities
Cle Elum Reservoir New Shoreline

Cle Elum River Campground
Cle Elum Reservoir Existing Shoreline

Speelyi Beach
### Cle Elum Pool Raise Project Contracts/Timeline

<table>
<thead>
<tr>
<th>Cle Elum Dam Pool Raise Contracts</th>
<th>Duration</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radial Gates</td>
<td>2 years</td>
<td>Completed – April 2017</td>
</tr>
<tr>
<td>Cle Elum River Campground</td>
<td>2 months</td>
<td>Completed – Nov 2017</td>
</tr>
<tr>
<td>Speelyi Beach Day Use</td>
<td>1 year</td>
<td>Award - 2018</td>
</tr>
<tr>
<td>Wishpoosh &amp; Speelyi Beach</td>
<td>1 to 2 years</td>
<td>Award - 2019</td>
</tr>
<tr>
<td>Sandelin</td>
<td>1 to 2 years</td>
<td>Award – TBD*</td>
</tr>
<tr>
<td>Domerie Bay</td>
<td>1 to 2 years</td>
<td>Award – TBD*</td>
</tr>
<tr>
<td>Timber Cove</td>
<td>1 to 2 years</td>
<td>Award – TBD*</td>
</tr>
<tr>
<td>Anna Bell</td>
<td>1 to 2 years</td>
<td>Award – TBD*</td>
</tr>
<tr>
<td>Morgan Creek &amp; Night Sky Drive</td>
<td>1 to 2 years</td>
<td>Award – TBD*</td>
</tr>
</tbody>
</table>

*Contingent on funding
Cle Elum Dam
Fish Passage Facilities

Reservoir Fish Passage
Cle Elum Dam Fish Passage - Secant Pile Construction – Secant with completed cap beam
Cle Elum Dam Fish Passage - Secant Pile Construction – Secant Vault Excavation
Cle Elum Dam Fish Passage - Secant Pile Construction – Secant Vault Excavation
# Cle Elum Dam Fish Passage Facilities Contracts/Timeline

<table>
<thead>
<tr>
<th>Cle Elum Dam Fish Passage Project Contracts</th>
<th>Construction Duration</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads and Bridge</td>
<td>1 year 3 mo</td>
<td>Completed - 10/16</td>
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<tr>
<td>Secant Pile</td>
<td>2 to 3 years</td>
<td>Construction In Progress</td>
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<tr>
<td>Tunnel</td>
<td>2 Years</td>
<td>Awarded - 08/17 Construction 2018-19</td>
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<tr>
<td>Intake Structure, Gate &amp; Helix</td>
<td>3 years</td>
<td>Award – 2018 Construction 2019-21</td>
</tr>
<tr>
<td>Adult Facility</td>
<td>2 years</td>
<td>TBD</td>
</tr>
</tbody>
</table>
Questions?

For further information on the web:


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