Wallooskee Youngs Confluence Project

Drone photo during construction, Summer 2015
Courtesy: The Wetlands Group

Cowlitz Indian Tribe
Natural Resources Department
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To protect, conserve, restore and promote culturally relevant species and landscapes integral to the unique identity of the Cowlitz People. To further educate the community and inspire future leaders and participants in this vision.
Habitat Restoration Program Goals and Philosophy

**Goals:**
1. Protect intact or functioning habitat
2. Restore habitat forming-processes

**Objectives:**
- Develop and maintain partnerships
- Assess and discover opportunities for habitat protection through acquisition
- Investigate and develop restoration priorities throughout Cowlitz country
- Fund habitat acquisition and restoration project implementation through grants and partnerships
- Monitor activities and define success (Adaptive Management)

**Implicit Philosophy:**
- Implement Process Based Restoration
- Protect and conserve places where habitat forming processes occur
- Recognize shifting baselines
- Embrace chaos

*Future of Our Salmon Conference August 16, 2016*
Columbia Estuary Ecosystem Restoration Plan (CEERP)

CEERP Goals:

• Increase the opportunity for access by aquatic organisms to and for export of materials from shallow water habitats.
• Increase the capacity and quality of estuarine and tidal-fluvial ecosystems.
• Improve ecosystem realized functions.
Linkage to Columbia River Estuary Module

CRE 1.4: Restore riparian areas, adding shoreline habitat and complexity for juvenile salmon refugia: 0.75 miles

CRE 9.4: Restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality: 23.45 acres

CRE 10.1: Breach or lower the elevation of dikes and levees; create and/or restore tidal marshes, shallow-water habitats, and tide channels: 168.61 acres

CRE 15.3: Implement projects to address infestations: 193.11 acres
Wallooskee – Youngs Confluence

220.92 acres, upland and tidal

193.11 acres, tidal and associated riparian buffer
**Action: Tidal Channels and Ditch Network**

- Based on tidal prism/reference sites
- Enhance relic channels (11.53 acres) and create new channels (11.92 acres)
- CRE 9.4: Restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality: **23.45 acres**
- More dendritic channel network as site evolves
- Fill 6,117 feet of other constructed ditches at the site
- Fill 4,719 feet of borrow ditches adjacent to the levee
- Disable drain-tiles
- Promote natural channel formation
Topography
**Action: Levee breaching and lowering**

- Restore hydrologic processes, accelerate levee erosion, promote openings within the remaining levee, and inhibit invasive plants

- Selective lowering of **4980 ft** of the levee (63%) to 8.5 ft NAVD88

- Targeted removal of vegetation over **2112 ft** (27%) of the levee

- Promote both tidal and riverine sediment transport and accretion on 7,922-foot-long levee

- Five Breaches: 829 ft

- CRE 10.1: Breach or lower the elevation of levees; restore tidal marshes, shallow-water habitats, and tide channels
Existing Levee Profile
Proposed Levee Profile
**Action: Invasive Control**

- Saline conditions will inhibit invasives
- Restoration of tidal conditions will aid in colonization of a native vegetation community and reduce invasives
- Grubbing and tidal overtopping of levee will help control invasives
- Active vegetation management will focus on treatment of invasive species to allow for passive colonization by native species
**Native Vegetation**

- Species outside levee are predominantly native, saline-tolerant species

- Existing elevations are 4.12 feet to 11.81 feet NAVD88: restored floodplain suitable elevation to recruit native tidal marsh vegetation

- Youngs Bay: High sediment accretion rates: 0.63 to 2.55 cm per year at reference sites

- Rapid tidal and riverine sediment transport and accretion
Impacts of the Project for the Cowlitz People

- Tribal Ownership
  - Cultural Restoration
  - Maintain and gather culturally significant plants for ceremonial and cultural knowledge transmission
- Cultural Events
  - Canoe Journeys
  - Kids Camp
- Education and Outreach
- Property will remain on the tax roll
Top: March 2012
Bottom: Feb 2016
Questions?

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