

# LOWER COLUMBIA RIVER ESTUARY HABITAT RESTORATION

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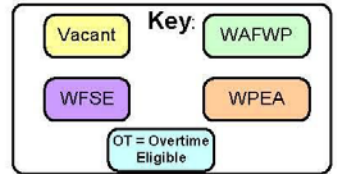


- **Overview of the Washington Estuary Habitat MOA**
- **Summary of Intertidal Habitat Restoration Projects**

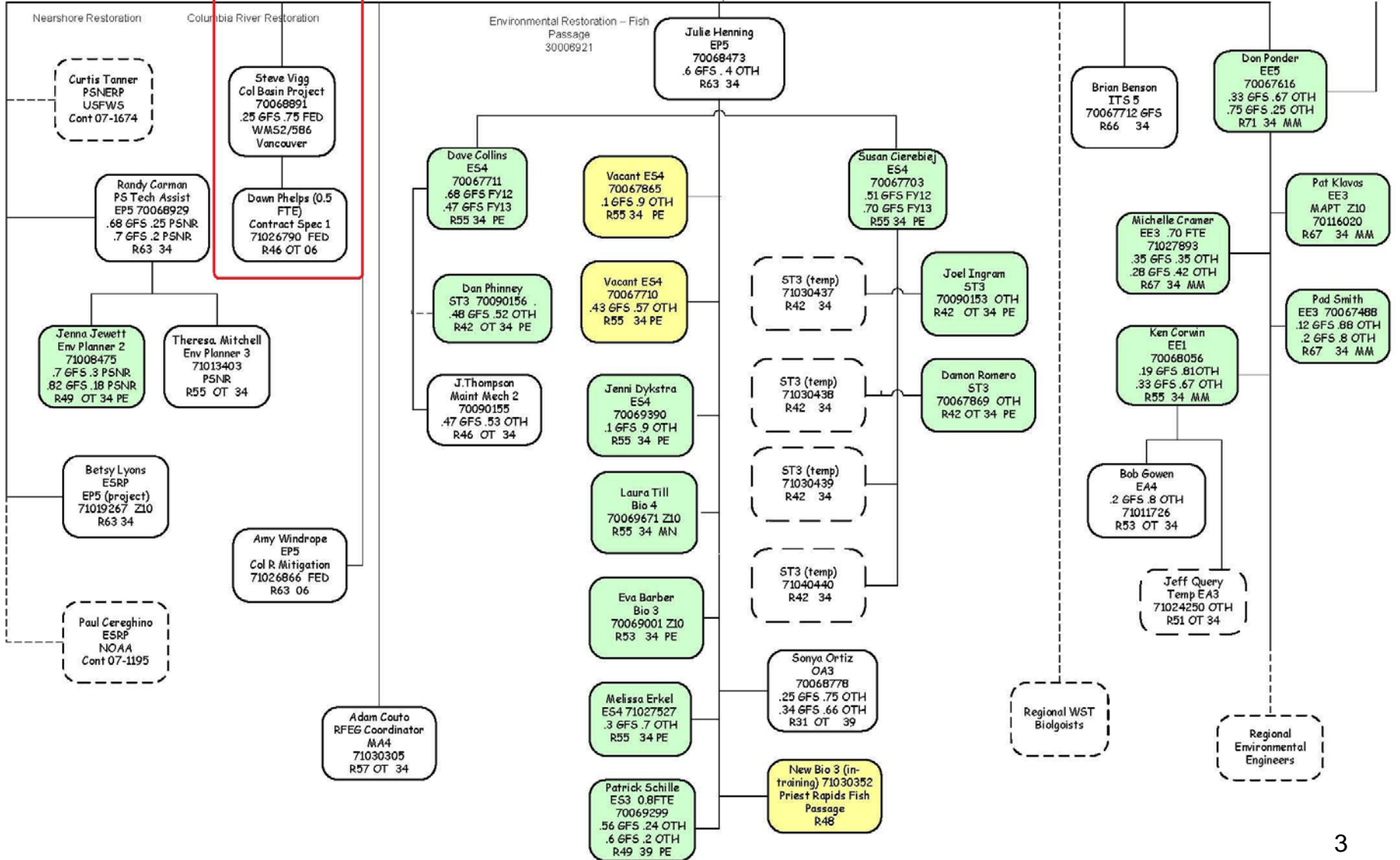
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# Estuary MOA Driver

## Federal Columbia River Power System Biological Opinion (FCRPS BiOp)

- Judge Redden remanded the 2008 BiOp
- Especially concerned with the absence of estuary actions

# Washington Estuary MOA

- ✓ MOA between the HydroPower Action Agencies and State of Washington
- ✓ Provides \$41 million from BPA (1/3) and the Corps (2/3) over 9 Years (2009 - 2018)
- ✓ WDFW contributes project development, access to state aquatic lands, work-in-kind, O&M
- ✓ The objective is tidal habitat restoration for ESA-listed anadromous salmonids

# The Best Projects

- Large
- Connected
- Multispecies
- Maintained





# Tidegates & Culverts



# Dikes and Berms





# Large Wood





# Channel Diversity



August 3-4, 2012, Commission Meeting



# Current Estuary Restoration Projects



# Shillapoo

- 1,900 acres unavailable to salmon
- Project involves connecting the lake via historic channels
- Large benefit to juvenile salmon

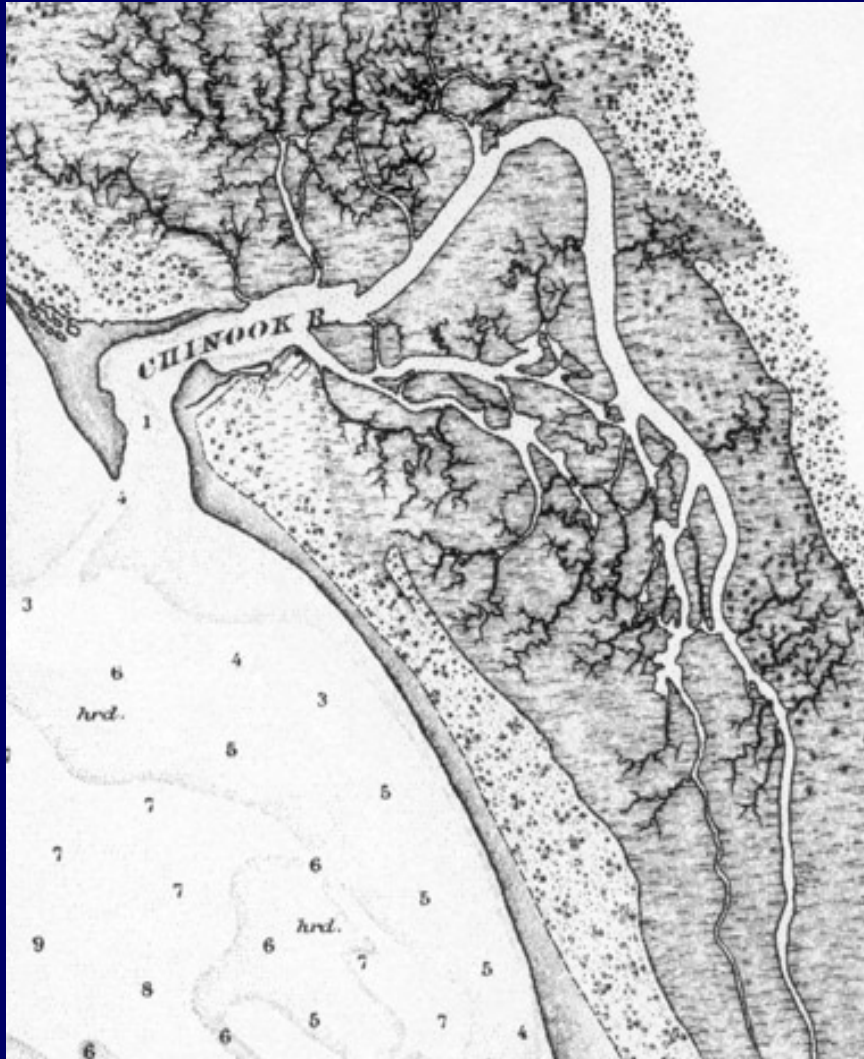
## Challenges include:

- private land in-holding
- Pipeline
- WDFW land restrictions



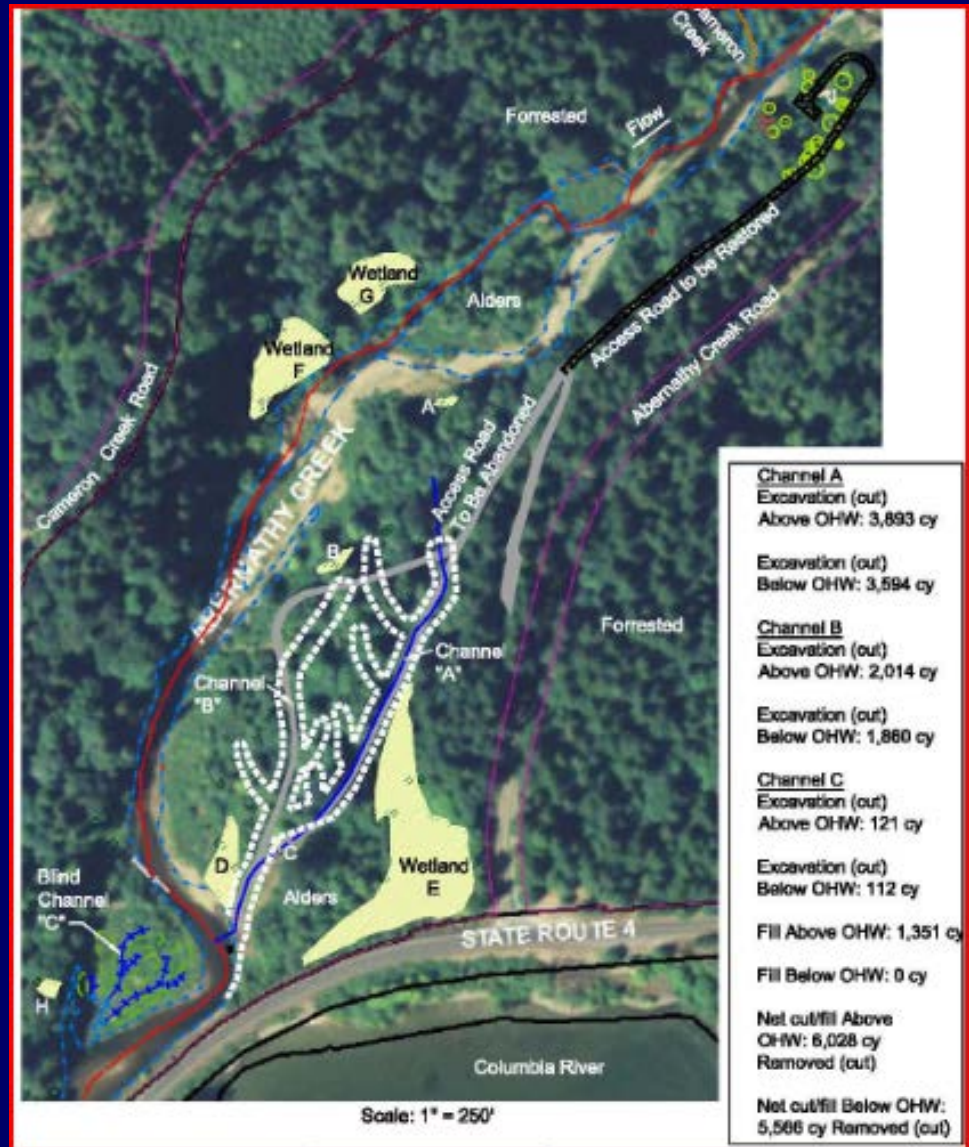


# Chinook Estuary



# Abernathy Creek

- Side channel recreation
- Large wood
- Road relocation
- Enhance wetlands





# Elochoman Creek

- 400 acres of wetland connection
- 4 culverts/tidegates
- Road abandonment

- WDOT partners





# Spawning Channels

## Duncan and Hamilton Creek





# Current MOA Projects & Funding Summary (2009-2014)

Project	WDFW Plan Budget
<b>Scoping Project (4 years)</b>	\$1,400,000
<b>Abernathy Tidal Restoration</b>	\$900,000
<b>Hamilton/Duncan Cr. Chum Channels</b>	\$400,000
<b>Chinook River Estuary Restoration (projected)</b>	\$2,500,000
<b>Shillapoo Floodplain Reconnect (initial)</b>	\$400,000
<b>Elochoman Slough Tidal Restoration (projected)</b>	\$1,600,000
<b>WDFW Total</b>	<b>\$7,200,000</b>

# Alignment with Agency Priorities

## Conservation Initiative

- Restore ecosystems for the long-term benefit of people, and for fish, wildlife and their habitat
- Collaborate with conservation partners to achieve shared goals
- Work across disciplines
- Integrate ecological, social and institutional perspectives into our decision making

# Partnerships

- ✓ Lower Columbia River Estuary Partnership
- ✓ Columbia Land Trust
- ✓ Columbia River Estuary Task Force
- ✓ Cowlitz Indian Tribe
- ✓ PC Trask & Assoc.
- ✓ Battelle – PNNL
- ✓ USFWS/NOAA
- ✓ University of Washington
- ✓ Lower Columbia Fish Recovery Board

# Parking Lot



# WDFW is a Unique Estuary Partner:

- Sovereign Status
- F&W Management Authority
- State Lands
- Environmental Engineering
- Capacity to Implement
- LCFRB Partnership
- Decades of Science