

# UW ONRC MARINE PROGRAM

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(OCNMS Advisory Council 01/24/2014)

# Outline

- ONRC Origins
- Where ONRC fits into UW.
- Where the Marine Program fits into ONRC.
- A review of projects past, present & future.

# Olympic Natural Resources Center Origins

- 1988-89 Commission on Old Growth Alternatives recommends the creation of an institution like ONRC on the Olympic Peninsula.
- In 1991 the Washington State Legislature creates ONRC (ESB 1877) under the University of Washington Schools of Forestry and Fishery & Ocean Sciences.
- Groundbreaking on the facility begins in June of 1995 and it is open for business by the end of the year.
- Enabling legislation updated in 2012 to reflect its administration under the new College of the Environment.

# Olympic Natural Resources Center Mission

- To foster and support the research and education necessary to provide sound scientific information on which to base ecologically sustainable forest and marine industries.
- To demonstrate innovative management methods, through research and education, which successfully integrate environmental and economic interests into pragmatic management of forest and ocean resources;

University of Washington

College of the Environment

College of Arts & Sciences

...

...

Oceanography

School of Environmental & Forest Sciences

School of Environmental Marine Affairs

Aquatic & Fisheries Sciences

Friday Harbor Labs

Botanic Gardens

Olympic Natural Resources Center

Center for Sustainable Forestry at Pac Forest

Center for International Trade in Forest Products

Arboretum

Union Bay Conservation Area

# Olympic Natural Resources Center

Forest Research

Marine Program

Education and Outreach

Conference Center

GIS Services

Regional Data Clearinghouse  
(Marine Data porthole & meta data archive)

Rural Science Teaching Project

Rosemond Fund

Lightening Location Network

Willapa Bay  
Spartina Control

ORHAB  
(Olympic Region Harmful Algal Bloom monitoring)

Coastal Salmon Habitat Assessment & Restoration

Watershed Planning and Assessment

Marine Spatial Planning

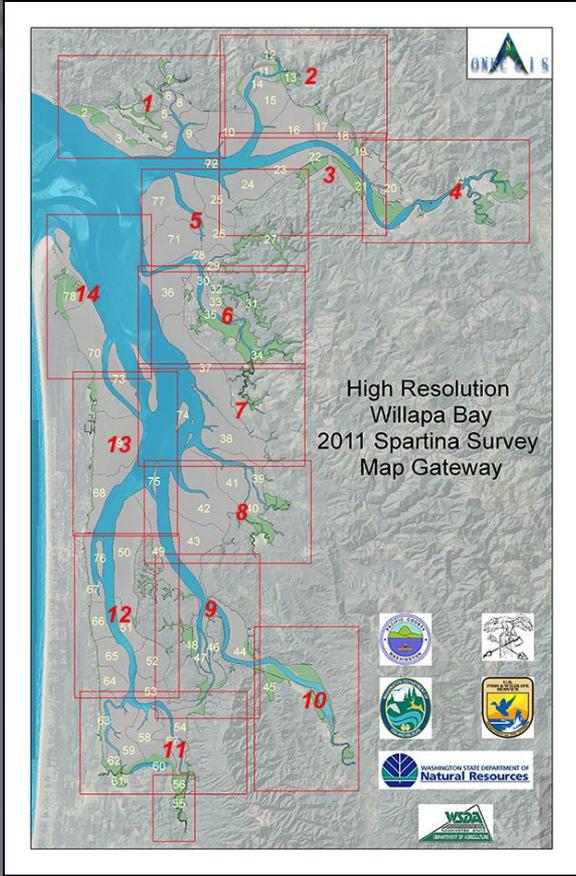
# ONRC Marine Program Implementation Areas

- Administering and managing scientific assessments and monitoring programs.
- Administering and facilitating Natural Resource Neutral Forums.
- Spatial data mapping, modeling and analysis using Geographical Information Systems (GIS).
- Web-based natural resource data access & archiving.

# Basic Marine Program Themes

1. Willapa Bay Spartina Control & Monitoring.
2. Olympic Region Harmful Algal Bloom (ORHAB) Partnership.
3. Coastal Salmon Habitat Assessment & Restoration.
4. Watershed Planning and Assessment.
5. Marine Spatial Planning (MSP).

# PROGRAM AREA: Willapa Bay Spartina Control

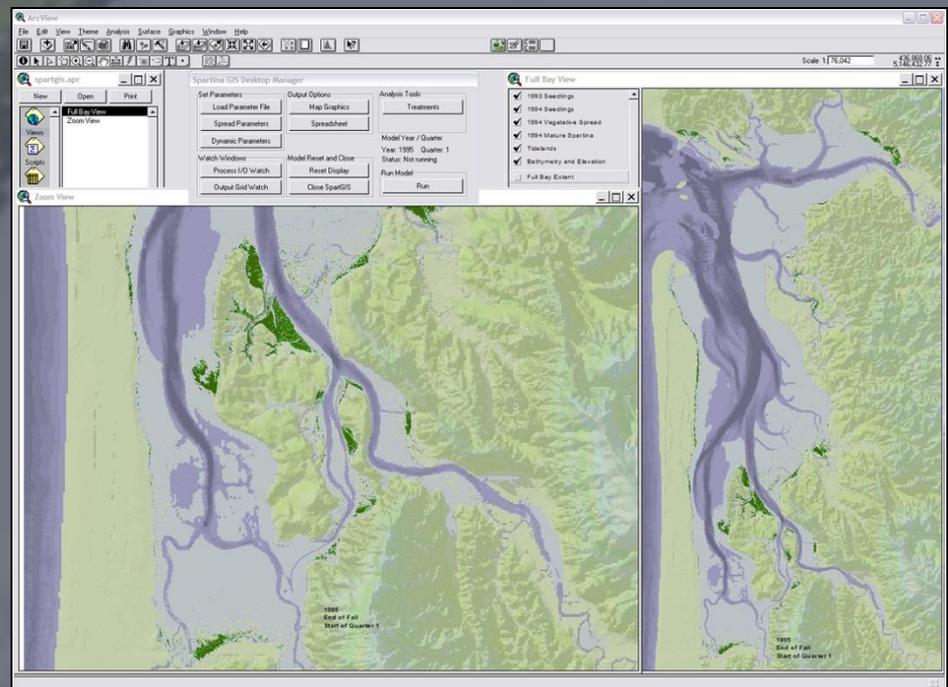
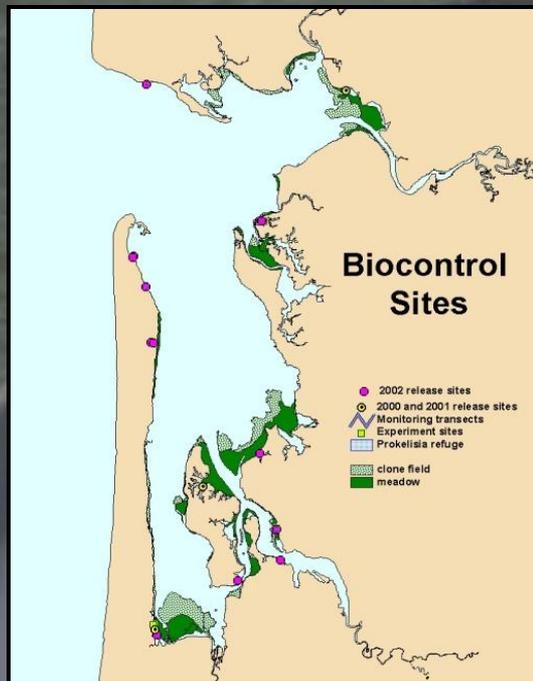


**GOAL:** Systematically exterminate invasive spartina in Willapa Bay using best available science in support of restoring the ecological conditions necessary for continued shellfish aquaculture.

**PRINCIPAL INVESTIGATORS:** Miranda Wecker & Keven Bennett

**1997 to PRESENT**

- ONRC key player since 1997
- Led Bio-control Feasibility Analysis
- Provided critical mapping services
- Now assisting last stage in eradication effort
- Peak ~ 9,000 net acres, now less than 2 net acres



**TITLE: ORHAB (Olympic Region Harmful Algal Bloom Partnership)**



**GOAL:** Coastwide Monitoring of Domoic Acid/Plankton Blooms. Provide real time monitoring, notification and longterm archiving of harmful algal blooms on the coast for governments, and shellfish harvesters.

**PARTNERSHIPS:** NOAA, NW Fisheries Science Center, WDH, Coastal Treaty Tribes

**1999 to PRESENT**

**PRINCIPAL INVESTIGATORS:** Miranda Wecker & Anthony Odell

# ORHAB



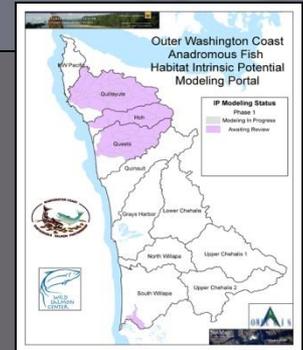
- Continuing coastwide domoic acid and plankton sampling
- Dedicated account from license fee surcharge
- Battelle has been a partner since the beginning
- Project has expanded in many directions: basic research on Juan de Fuca Eddy and Hecata Bank Eddy as sources of blooms in cooperation with UW Oceanography.
- Investigated function of domoic acid production by plankton
- Explored whether sub-lethal doses are more harmful than we think
- Explored remote sensing/ modeling for early warning system

# PROGRAM AREA: Coastal Salmon Habitat Assessment & Restoration

**GOAL:** Mapping and modeling of coastal salmon habitat in support of regional stakeholder prioritized salmon habitat restoration projects.

## PROJECTS:

- WRIA 20 Watershed Committee facilitation.
- 2008 Salmon Validation Monitoring Workshop.
- Washington Coast Salmonid Intrinsic Potential Modeling.
- North Pacific Coast Lead Entity Coordination.
- Quinault Indian Nation Lead Entity Coordination.
- Washington Coast Sustainable Salmon Partnership Data Steward & Regional Technical Committee coordination.
- Southern Resident Killer Whale Critical Habitat Modeling project.



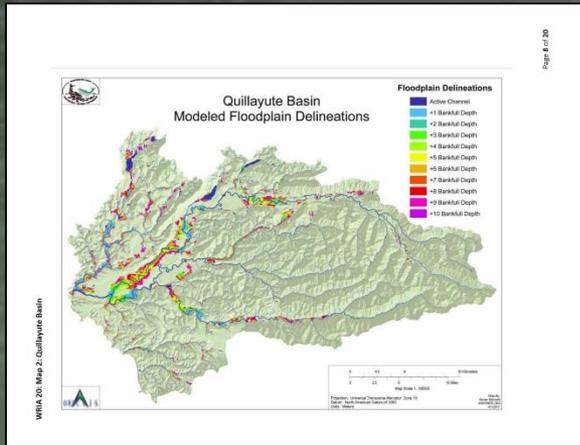
**PARTNERSHIPS:** WDFW , RCO, Wild Salmon Center, WCSSP, Coastal Treaty Tribes, NWFS (NOAA), The Whale Museum.

**PRINCIPAL INVESTIGATORS:** Miranda Wecker, Rich Osborne, Rebekah Brooks & Keven Bennett



# WATER RESOURCE INVENTORY AREA 20

## SALMON RECOVERY GIS DATASETS



Olympic Natural Resources Center

# CLEARINGHOUSE

FOR THE

# OLYMPIC PENINSULA

online archive for Olympic Peninsula geospatial and biological information



*metadata by theme*  
*tools and utilities*  
*metadata guide*  
*developers*

WRIA 20  
Salmon Recovery  
GIS Data

a pioneer regional resource in the WA State Geospatial Clearinghouse

Southern Resident Killer Whale Satellite Tagging - Northwest Fisheries Science Center



**4 January 2013 Update** - As of this morning, Friday, 4 January, K pod had continued traveling south and was off Tillamook Oregon. New map shows movements since Monday, 31 December 2012.



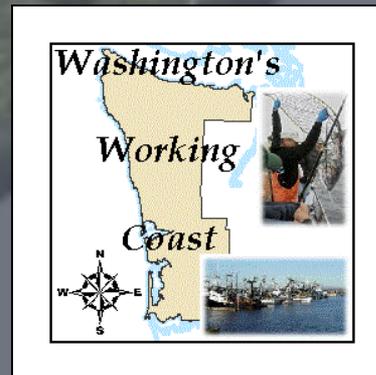
**3 January 2013 Update** - Since the last update on 31 December 2012 when K25 was off Pt. Renfrew, Vancouver Island, he (and most likely the rest of K pod) has traveled south along the Washington coast and as of 8PM on Wednesday, January 2, 2013 was located near the Quinalt Canyon. It was particularly interesting to see how close they traveled to the northern Washington coastline.

# PROGRAM AREA: MSP - Marine Spatial Planning

**GOAL:** Provide quick and inexpensive access to existing coastal resource data summaries and archival spatial data layers for the Washington Coast.

## PROJECTS:

- Washington Working Coast Reports.
- Coastal MSP Priorities Report.
- Marine Data Portal.



**Salmon Recovery Fund Allocation Models for Washington Coastal WRIAs 20 to 24**

Modeling procedures, discussions, and options



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Written and Submitted to the WCSSP Technical Committee for the March 2, 2011 Meeting at City Hall, Montesano, Washington

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**PARTNERSHIPS:** WDNR, WDOE, Coastal Marine Resources Committees, UW PoE, UW Oceanography, UW Sch. Env. & Marine Affairs.

**PRINCIPAL INVESTIGATORS:** Miranda Wecker, & Keven Bennett

## **PROGRAM AREA:** Watershed Planning and Assessment

**GOAL:** Provide spatial monitoring and assessment tools for local county, city and tribal government natural resource planning efforts.

### **PROJECTS:**

- **WRIA 20 SMP Shoreline Characterization report.**
- **Pacific County SMP Shoreline Characterization report.**
- **City of Forks UGA Map Cabinet.**
- **City of Forks Emergency Response Address Locator.**
- **City of Forks On-Line Web Portal.**



**PARTNERSHIPS:** Clallam County, Pacific County, City of Forks, WDOE.

# OLYMPIC NATURAL RESOURCES CENTER

COLLEGE OF THE ENVIRONMENT • SCHOOL OF ENVIRONMENTAL AND FOREST SCIENCES

UNIVERSITY of WASHINGTON



*Investigating critical issues in forestry  
and coastal marine resources*

