



Pacific Northwest Waters *Gateway to Our Future*

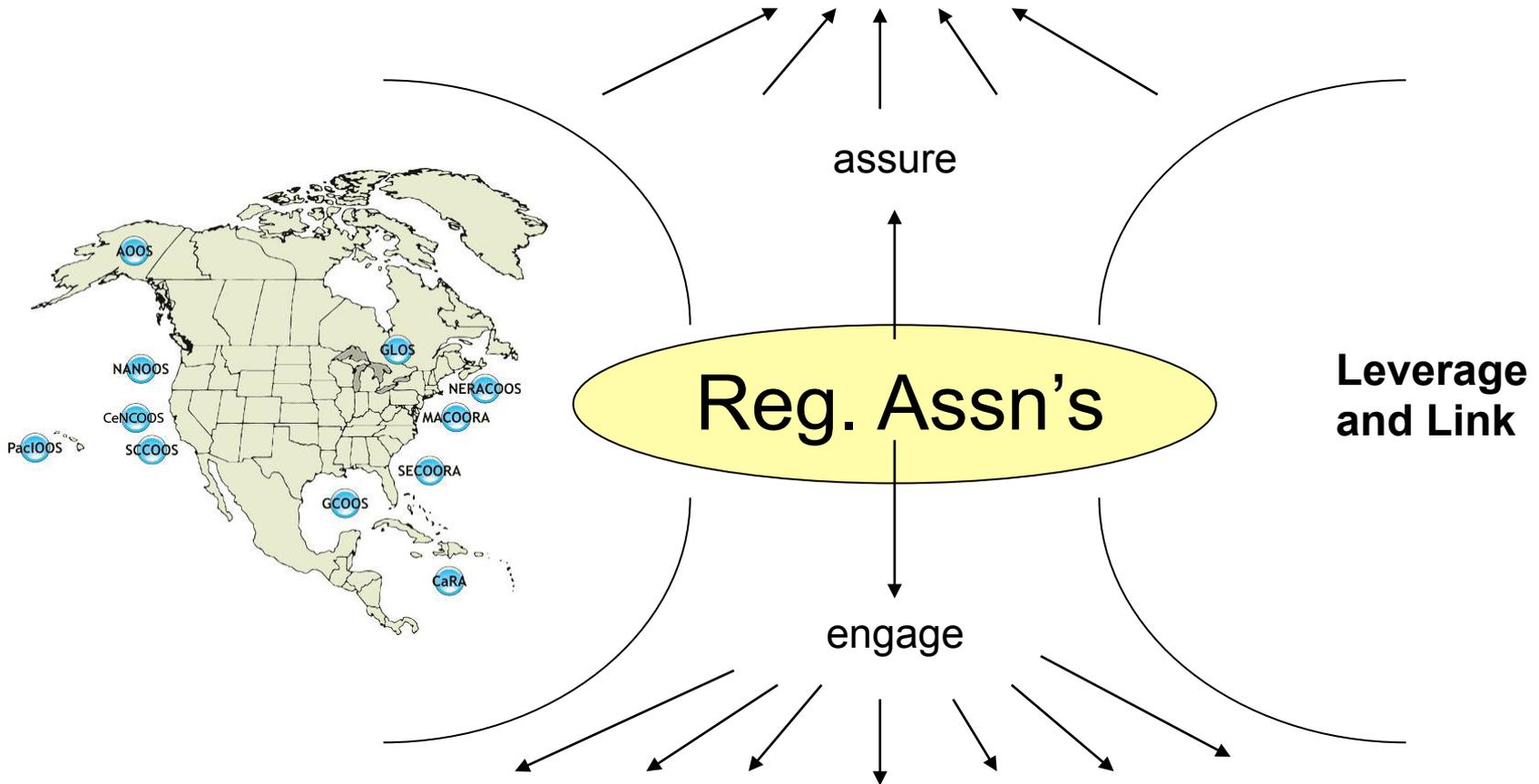
Delivering Observations in the Northwest Region

Jan Newton
NANOOS Executive Director





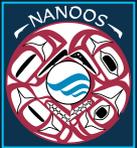
CONSISTENT NATIONAL CAPABILITY



DIVERSE LOCAL STAKEHOLDERS







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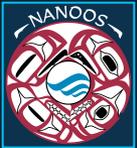
NORTHWEST ASSOCIATION OF NETWORKED OCEAN OBSERVING SYSTEMS



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Delivering Observations in the Northwest Region

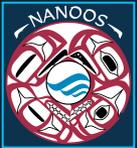
- What, for what purpose ?
- By whom ?
- How best ?



NANOOS Governing Council Members 1/2012

1. Ocean Inquiry Project
2. OR Dept of Land Conservation & Development
3. Surfrider Foundation
4. The Boeing Company
5. Oregon State University
6. Puget Sound Partnership
7. University of Washington
8. WET Labs, Inc.
9. Oregon Health and Sciences University
10. Quileute Indian Tribe
11. OR Dept of Geology and Mineral Industries
12. Humboldt State University
13. Marine Exchange of Puget Sound
14. WA Dept of Ecology
15. Pacific Northwest National Laboratory
16. Port of Newport
17. Puget Sound Harbor Safety Committee
18. Sound Ocean Systems, Inc.
19. Council of American Master Mariners
20. Hood Canal Salmon Enhancement Group
21. Pacific Northwest Salmon Center
22. Northwest Indian Fisheries Commission
23. Sea-Bird Electronics, Inc.
24. Western Association of Marine Laboratories
25. Science Applications International Corporation
26. OR Dept of Fish and Wildlife
27. King County Dept Natural Resources & Parks
28. Quinault Indian Nation
29. Western Resources and Applications
30. OR Dept of State Land
31. Columbia River Crab Fisherman's Association
32. Port of Neah Bay
33. Northwest Research Associates
34. Pacific Ocean Shelf Tracking Project
35. WA Dept of Fish and Wildlife
36. Northwest Aquatic and Marine Educators
37. Seattle Aquarium
38. NOAA Northwest Fisheries Science Center
39. Port Gamble S'Klallam Tribe
40. The Nature Conservancy
41. Portland State University
42. NOAA Olympic Coast National Marine Sanctuary
43. VENUS/University of Victoria
44. University of Oregon
45. Port Townsend Marine Science Center

KEY:	Tribal Government	Academia/Research
Industry	NGO	Federal/State/Local Government

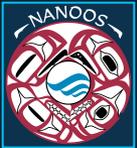


Stakeholder Priorities

The NANOOS GC selected five areas from among results of numerous regional workshops as the highest regional priorities because

“these issues represent those having the greatest impact on PNW citizenry and ecosystems and, we believe, are amenable to being substantively improved with the development of a PNW Regional Coastal Ocean Observing System”:

- Maritime Operations
- Ecosystem Impacts and Assessments
- Fisheries and Biodiversity
- Coastal Hazards
- Climate



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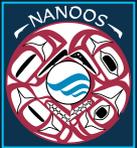
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Strategy to develop a PNW Observing System

1. Integrate what we have (assets, people, technologies)
2. Be strategic regarding what we need, based on priorities



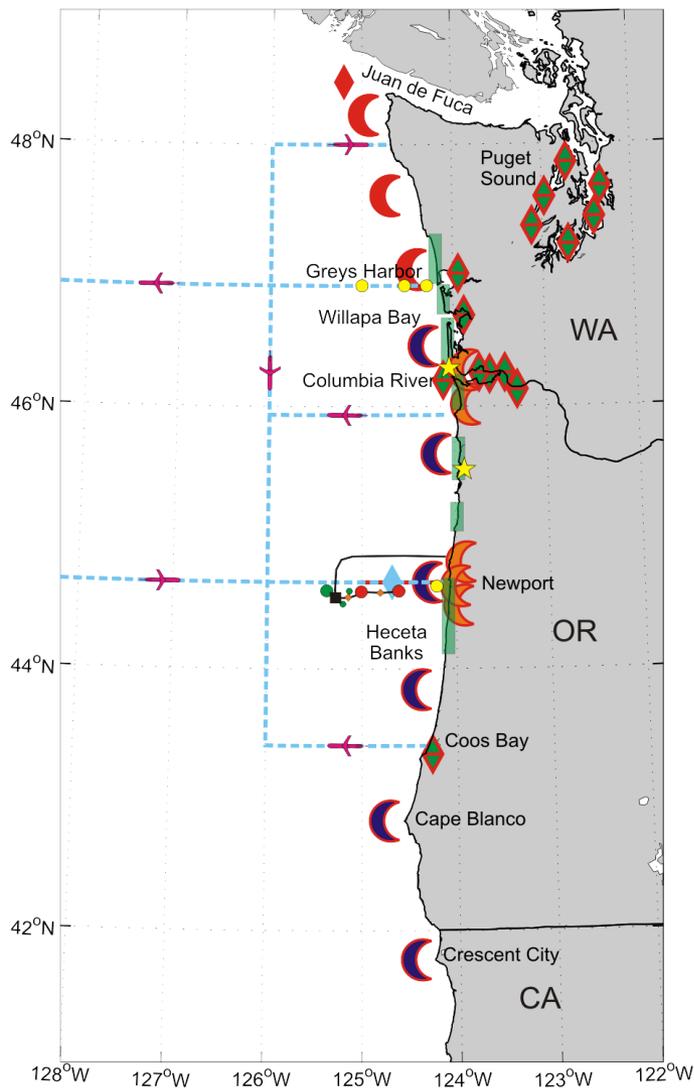
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PNW Ocean Observing Systems Design



NANOOS RCOOS Enhancement Conceptual Design



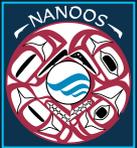
- ◆ Proposed new coastal buoy
- ◆ Existing coastal buoy to be sustained
- ◆ Existing estuarine buoys* to be sustained in partnership
- Existing glider track to be sustained
- ☾ Proposed new long-range HF site
- ☾ Existing long-range (180 km range) HF site to be sustained in partnership
- ☾ Existing standard-range (50 km range) HF site to be sustained in partnership
- ★ Proposed new port wave radars
- █ Shoreline assessment to be sustained in partnership

*estuarine buoys are more numerous than symbols

OOI Conceptual Design



- Coastal mooring
- Cabled mooring
- Deepwater column mooring
- High voltage primary node
- ◆ Medium voltage primary node
- ~ RSN cable
- Glider track ✈ Glider



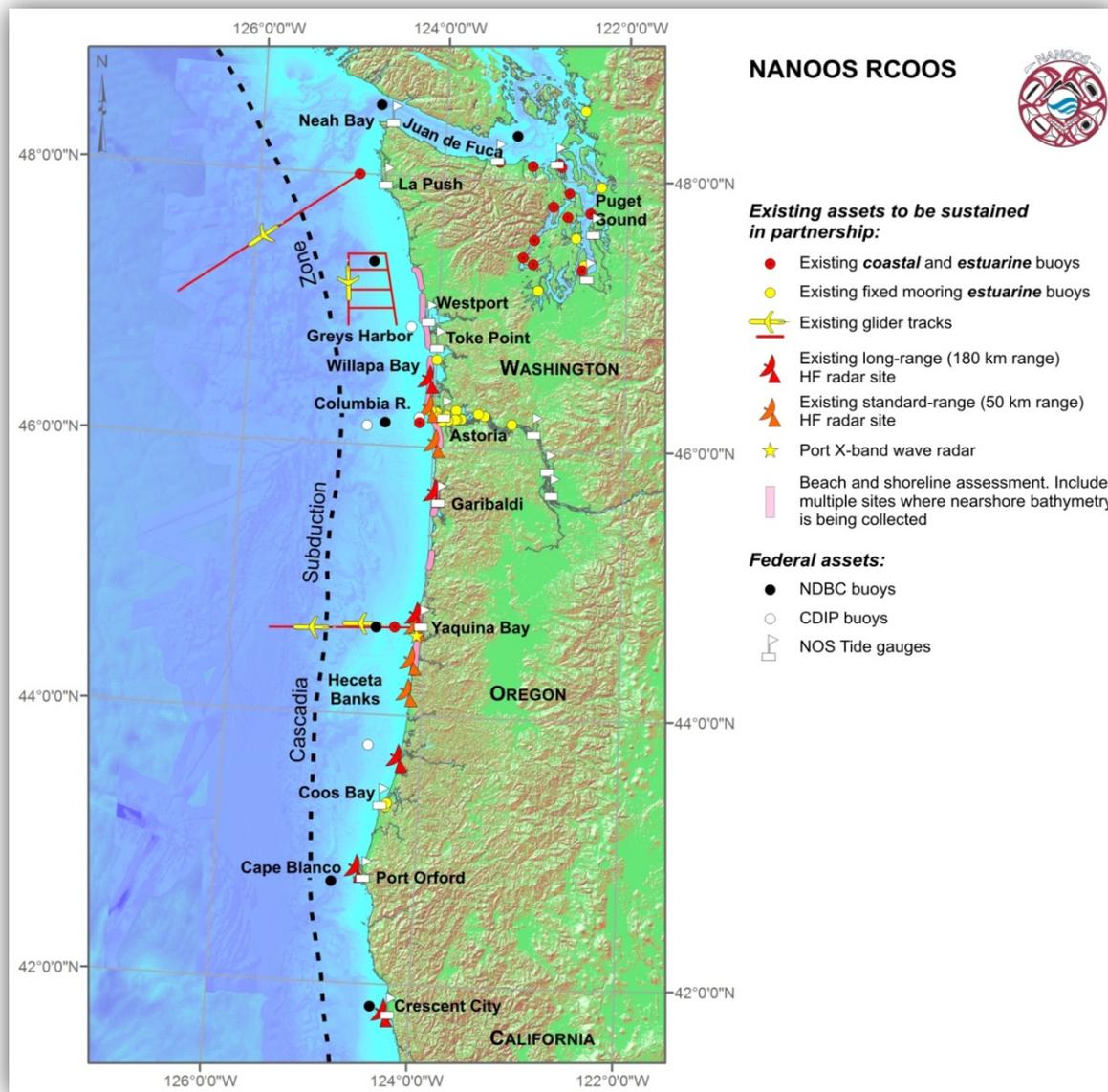
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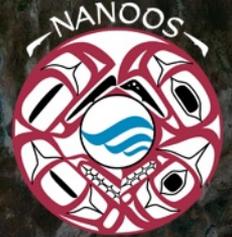
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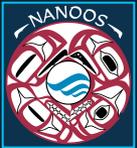
Elements of the NANOOS Regional Coastal Ocean Observing System (RCOOS)



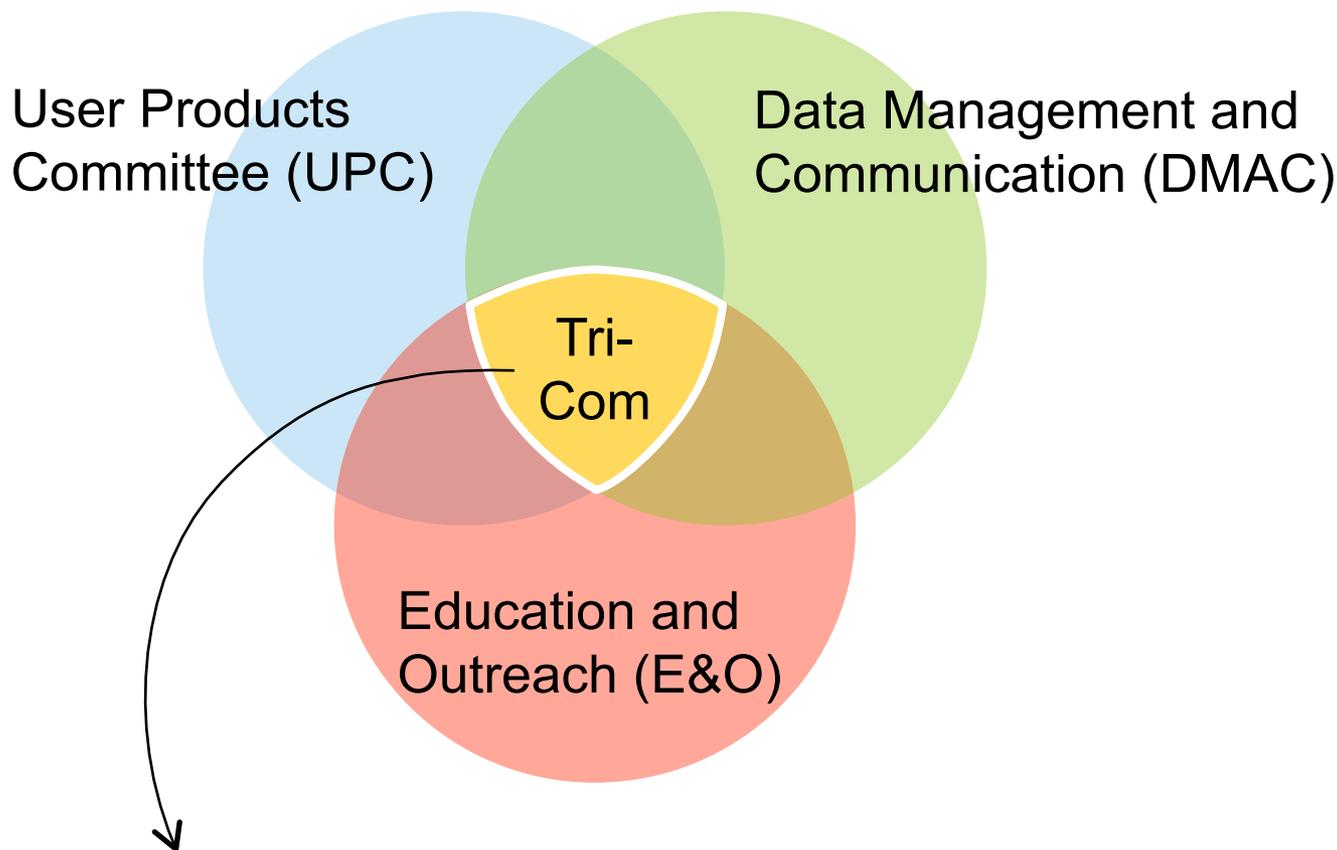
NANOOS Observing Assets

- Funded 100% by NOAA IOOS
- Funded Partially by NOAA IOOS
- Funded 0% by NOAA IOOS

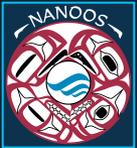




NANOOS Standing Committees and Integration



The three committees meet for Tri-Committee (Tri-com) meetings to jointly establish priorities and activities; in addition, some members span more than one committee



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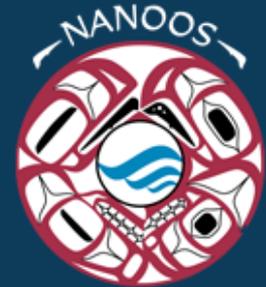
NANOOS Website

IOOS INTEGRATED OCEAN OBSERVING SYSTEM



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Welcome to NANOOS, the Pacific Northwest regional ocean observing system of IOOS (Integrated Ocean Observing System), an integrated network of [regional systems](#).

NANOOS is creating customized information and tools for Washington, Oregon, and Northern California with these areas of emphasis:

- ◆ [Maritime Operations](#)
- ◆ [Ecosystem Assessment](#)
- ◆ [Fisheries & Biodiversity](#)
- ◆ [Coastal Hazards](#)
- ◆ [Climate](#)

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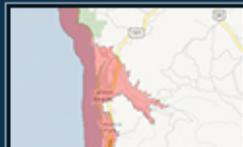
NANOOS Visualization System - Version 2.5

Announcing the release of NVS 2.5. New features include settings for how units are displayed and the range of plot y-axis. If you are logged into your myNANOOS account, the settings are automatically saved. New forecast overlays from CMOP (Coastal Margin Observation & Prediction) and NAM (North American Mesoscale) are also available. Try NVS 2.5 and tell us what you think.



Honshu Earthquake and Tsunami 2011

An informational page about the magnitude 9.0 earthquake that occurred off the eastern coast of Japan on March 11, 2011, and the resulting tsunami that hit the US Pacific Northwest 9 hours later.



Tsunami Evacuation Zones for the Oregon Coast - Interactive Map

The Oregon Department of Geology and Mineral Industries and the NANOOS User Products and DMAC team, is pleased to announce the release of new tsunami inundation maps developed for the southern Oregon coast (Bandon to Brookings) and for Cannon Beach on the north coast, now accessible through the NANOOS/DOGAMI Tsunami Hazards Portal.

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<http://www.nanoos.org>



NANOOS Visualization System (NVS)

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NVS VISUALIZATION SYSTEM

NVS v2.5

Assets

Chart List Help

myNANOOS

Map

Filters

Assets

Overlays

Regions

Settings

Legend

Assets

Cruises & Gliders (6)

Expand All Collapse All

Cruise

- HCDOP Cruises
- PRISM Cruises

Glider

- APL-UW La Push Glider
- CMOP SW WA Glider
- OSU Bob Glider
- OSU Jane Glider

In-Situ Assets (134)

Expand All Collapse All

Buoy

- APL-UW NPB-1
- APL-UW NPB-2
- APL-UW Chá?ba
- CDIP Cape Mendocino
- CDIP Clatsop Spit
- CDIP Grays Harbor
- CDIP Humboldt Bay
- CDIP Station Papa
- CDIP Umpqua
- CMOP Saturn02

100 mi 200 km

MODIS

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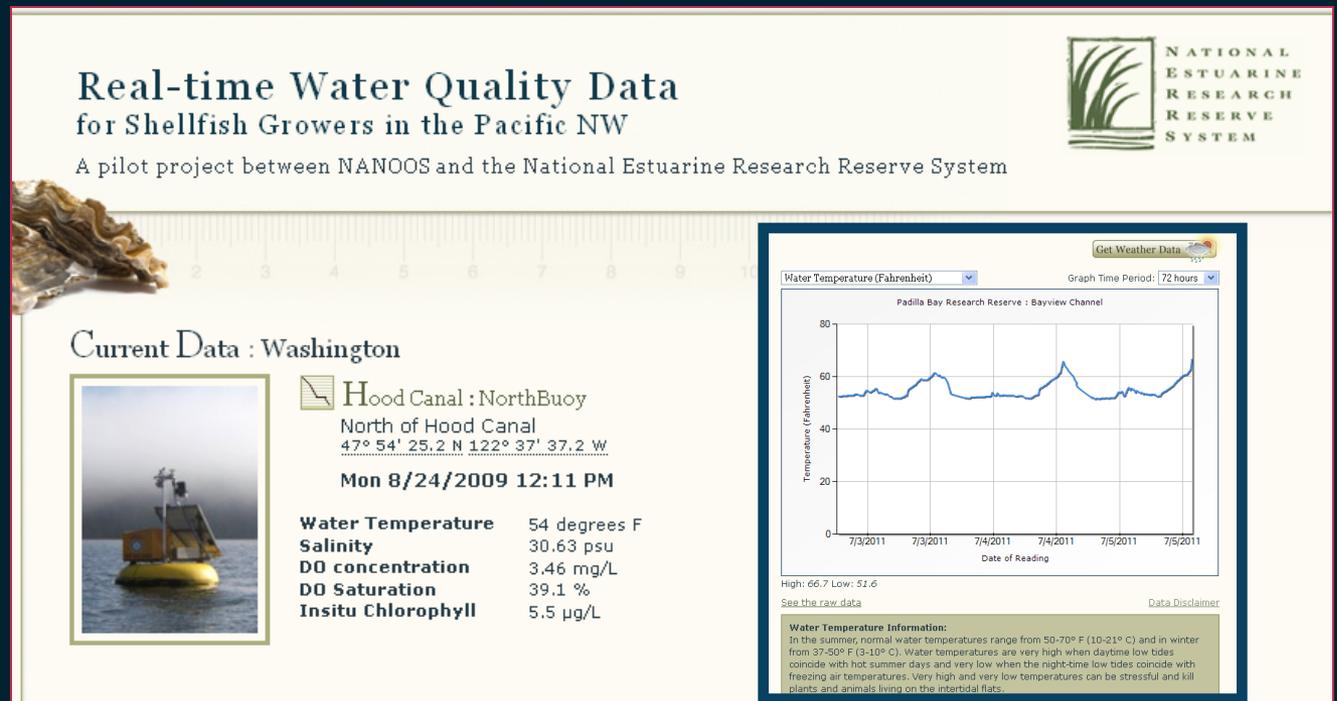
<http://www.nanoos.org/nvs>



Tailored User Products

NANOOS and NERRS worked with the Pacific Coast Shellfish Industry to produce REAL-TIME WATER QUALITY DATA access in an application they designed.

Shellfish Growers now use an interface with real-time water quality conditions so that they may strategize their growing activities (e.g., harvest, seeding, etc)



NANOOS Mobile Applications

- NANOOS has developed mobile applications (apps) for iPhone and Android devices for access to NVS.

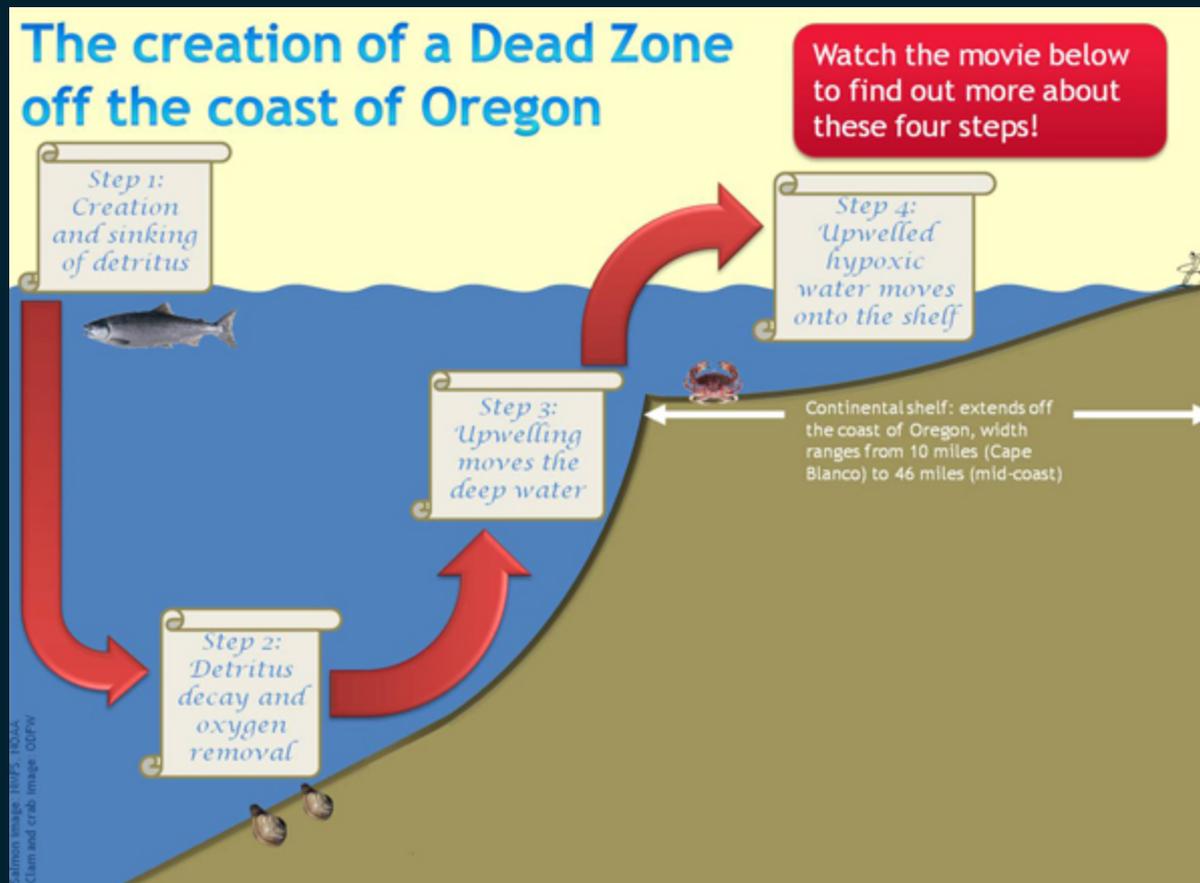


- Allows users in the field or on the move (e.g., fishers, boaters, first responders, scientists, etc.) access



NANOOS Learning Tools

- NANOOS works with regional scientists to collect information and display useful interfaces.





Delivering Observations in the Northwest Region

Northwest Association of Networked Ocean Observing Systems

The Integrated Ocean Observing System (IOOS®)

Regional Association for the Pacific NW



www.nanoos.org

www.facebook.com/NANOOS.PNW