Governing Council & Principal Investigators Annual Meeting

11 August 2025

Vancouver, WA

Welcome, Introductions, & Call to Order

Jan Newton, NANOOS Executive Director

Andrew Barnard, NANOOS Governing Council Board Chair

Agenda Review:

2025 NANOOS Governing Council - Principal Investigators Meeting

11 August 2025

Washington State University – Vancouver

8:30	Coffee and goodies	
9:00	Call to Order, Introductions, & Overview	J. Newton, Executive Director A. Barnard, GC Board Chair
9:15	NANOOS Director Update	J. Newton
9:50	IOOS Program Office Update IOOS Association Update	K. Arzayus, IOOS Deputy K. Yarincik, IOOS Assn
10:30	**BREAK**	
10:45	NANOOS Committee Update • Education, Engagement, & Outreach • DMAC • User Products	 R. Wold, OEE Lead S.Travis, DMAC Lead T. Tanner, UPC Lead
11:30	"Tell me what you want to do."	T. Tanner, R. Wold
12:30	**LUNCH (provided)**	
1:30	Member Updates from the Floor	All
2:30	NANOOS BIL and IRA Updates	J. Newton
3:00	**BREAK**	
3:15	NANOOS Governance: Executive Council	
3:30	Next 5-y NOFO Response	
4:15	Diversifying NANOOS funding	
4:45	Action Item Review and All Other Business	
5:00	**ADJOURN**	
6:30	**Dinner at WildFin American Grill** • **Join us for a no-host happy hour and dinner**	

NANOOS Update

NANOOS
Northwest Association of Networked Ocean Observing Systems

IOOS

Governing Council *last updated: August 2025*

1. Ocean Inquiry Project
2. OR Dept of Land Conservation & Development
3. Surfrider Foundation
4. The Boeing Company
5. Oregon State University
6. Oregon Sea Grant
7. Puget Sound Partnership
8. University of Washington
9. Washington Sea Grant
10. WET Labs, Inc.
11. Oregon Health and Science University
12. Quileute Indian Tribe
13. OR Dept of Geology and Mineral Industries
14. Humboldt State University
15. Marine Exchange of Puget Sound
16. WA Dept of Ecology
17. Pacific Northwest National Laboratory
18. Port of Newport
19. Puget Sound Harbor Safety Committee
20. Sound Ocean Systems, Inc.
21. Council of American Master Mariners
22. Pacific Northwest Salmon Center
23. Northwest Indian Fisheries Commission
24. Sea-Bird Scientific
25. Western Association of Marine Laboratories
26. Leidos
27. OR Dept of Fish and Wildlife
28. King County Dept Natural Resources & Parks
29. Quinault Indian Nation
30. Western Resources and Applications
31. OR Dept of State Lands
32. Columbia River Crab Fishermen's Association
33. Port of Neah Bay
34. Northwest Research Associates
35. Pacific Ocean Shelf Tracking Project
36. WA Dept of Fish and Wildlife
37. Northwest Aquatic and Marine Educators
38. Seattle Aquarium
39. NOAA Northwest Fisheries Science Center
40. Port Gamble S'Klallam Tribe
41. The Nature Conservancy
42. Portland State University
43. NOAA Olympic Coast National Marine Sanctuary
44. University of Victoria
45. University of Oregon
46. Port Townsend Marine Science Center
47. Intellicheck-Mobilisa
48. NortekUSA
49. Grays Harbor Historical Seaport
50. Pacific Coast Shellfish Growers Association
51. US Army Corps Engineers
52. Olympic National Park
53. Oak Harbor Middle School
54. Vancouver Island University
55. Ocean Networks Canada
56. Lower Columbia Estuary Partnership
57. Western Washington University
58. Raincoast GeoResearch
59. WA Dept of Health
60. NOAA PMEL
61. Hakai Institute
62. Salish Sea Expeditions
63. Long Live the Kings
64. Rockland Scientific
65. Northwest Indian College
66. Pacific Shellfish Institute
67. Weatherflow
68. Oceans Blue Corp
69. Columbia River Inter-Tribal Fish Commission
70. World Ocean Council
71. Ocean Aero
72. RBR Ltd
73. Scoot Science
74. Astraeus Ocean Systems
75. Tini Scientific
76. MRV Systems
77. BeadedStream
78. Washington Maritime Blue

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

Coastal ocean:
Northern extent of California Current
Winds, topography, freshwater input, ENSO & other climate cycles

Major inland basins:
Puget Sound-Georgia Basin, Columbia River
Urban centers, nearshore development, climate variation

Coastal estuaries:
Willapa Bay, Grays Harbor, Yaquina Bay, Coos Bay, +20
Resource extraction, development, climate

Shorelines:
Rocky to sandy, dynamic: storms, erosion
Winds, development, climate

Major rivers:
Columbia River (~75% FW input to Pacific from US West Coast); many rivers (e.g., Fraser, Skagit) via Strait Juan de Fuca
Dredging, water regulation, climate change

NANOOS Region User Groups:
Maritime: shipping, oil transport/spill remediation
Fisheries: salmon, shellfish, crab, groundfish, aquaculture
Environmental management: HABs, hypoxia, OA, MHW
Shoreline: erosion, inundation, tsunami
Hazards: search and rescue, national security
Educators: formal, informal, research
Marine recreation: boating, surfing, diving, fishing

NANOOS Objectives for Y5 / FY2025 funds

1. Maintain NANOOS as the U.S. IOOS **PNW Regional Association**
2. Maintain **surface current and wave** observations
3. Sustain and enhance buoys and gliders in the PNW **coastal ocean** in coordination with national and regional programs
4. Maintain multidisciplinary observational capabilities in PNW **estuaries and the nearshore,** in coordination with local and regional programs
5. Maintain core elements of **beach and shoreline** observing
6. Provide sustained support to a community of complementary re**gional numerical models**
7. Maintain, harden, and enhance NANOOS' **Data Management and Cyberinfrastructure** (DMAC) system for routine operational distribution of data and information
8. Continue to deliver existing and, to the extent possible, create innovative and transformative **user-defined products and services** for PNW stakeholders
9. Sustain and diversify NANOOS **engagement** to the extent possible

NANOOS BY THE NUMBERS

10 ISSUES

- Harmful Algal Blooms
- Ecosystem Assessment
- Ocean Acidification
- Tsunami Evacuation/Preparedness
- Maritime Operations/Safety
- Hypoxia
- Biodiversity
- Coastal Hazards/Erosion
- Marine Heat Waves
- Climate/Weather

77 MEMBER ORGANIZATIONS

- **12** Academia
- **16** Federal/State/Local
- **21** Industry
- **17** NGO
- **5** Research Institutes
- **3** Tribes
- **3** Tribal Organizations

232 ASSETS SERVED ON NVS

- **5** Cruises
- **65** buoys
- **7** Gliders
- **2** Ferry-boxes
- **38** River Gauges
- **6** Regional Models
- **98** Fixed Shore Stations
- **11** HF Radar

1334 DATA STREAMS ACCESSIBLE ON NVS INFORM **47** DATA PRODUCTS

13 USER-SPECIFIC NANOOS APPS

- Tsunami Evacuation Zones
- Beach & Shoreline Changes
- Boaters
- Climatology
- Beach View
- Tuna Fishers
- Surfers
- Shellfish Growers
- SeaCast
- Data Explorer
- Gliders
- Cruises
- Maritime Operations

NANOOS Budget Over Time

FY07-09: $1.4M + 0.4M = **$1,800,000**

FY10: $1.7M + 0.4M = **$2,100,000**

FY11-16: **$2,087,500 - $2,848,900**

FY17-21: **$3,216,463 - S3,932,271**
($2,457,136 core - $2,462,136 core)

FY22: **$4,034,112** ($3,076,136 core; $430k HABs; $29k HFR; $459k OA; $40k adds)
Year 16 or 2 of current award

FY23: **$4,231,964** ($3,091,136 core; $460k HABs; $205k HFR; $381k OA; $95k adds)
Year 17 or 3 of current award

FY24: **$4,482,669** ($3,091,136 core; $430k HABs; $203k HFR; $408k OA; $350k adds)
Year 18 or 4 of current award

FY25: $?,???,??? ($3,091,136 core?; $?k HABs; $?k OA; $?k adds)
Year 19 or 5 of current award

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FY25 (Year 5 of Current Award) Details

- **$?,???,???**
  - $3,091,136 core
  - National HAB-ON: PNW HAB Bulletin, SoundToxins, etc.
  - NOAA OAP support: OA measurements on Cha’ba & CB-06
  - Pass throughs & add-ons

NANOOS
Northwest Association of Networked Ocean Observing Systems

NANOOS Funding Streams

- **Core**
- **Non-core add-ons**
- IIJA (BIL) Y1-2; Y3-5
- IRA (5y funding, all awarded in Y1)
  - Topic 1 NANOOS directed
  - Topic 2 national and pan-regional:
    - Water levels, waves, webcams
    - Ecosystem change
    - Equitable service delivery

NANOOS
Northwest Association of Networked Ocean Observing Systems

NANOOS Funding Streams

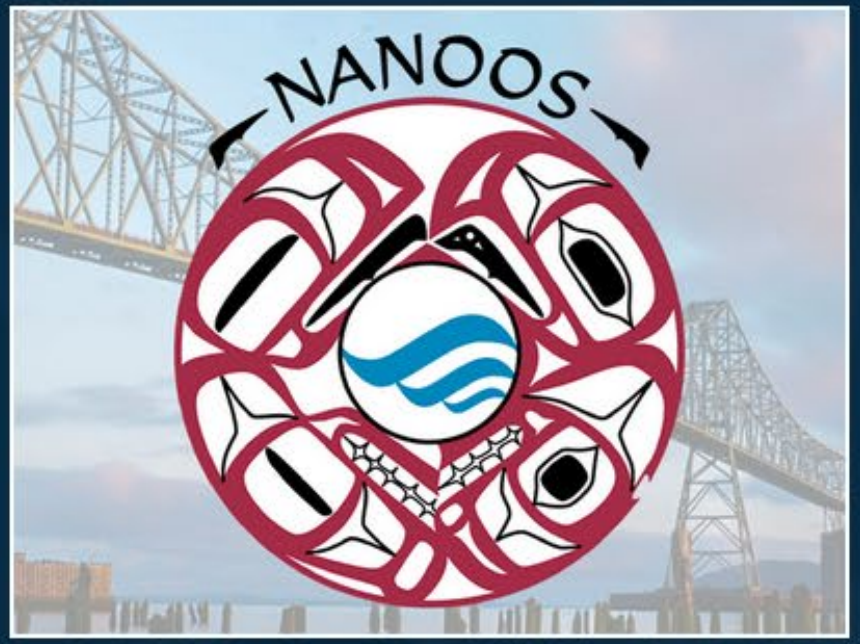
- Core
- Non-core add-ons
- **IIJA (BIL) Y1-2; Y3-5: we have Y3 & 4 now**
- **IRA (5y funding, all awarded in Y1)**
  - **Topic 1 NANOOS directed: we have all 5 years**
  - **Topic 2 national and pan-regional: we have Y1, soon to be Y2**
    - **Water levels, waves, webcams**
    - **Ecosystem obs**

NANOOS
Northwest Association of Networked Ocean Observing Systems

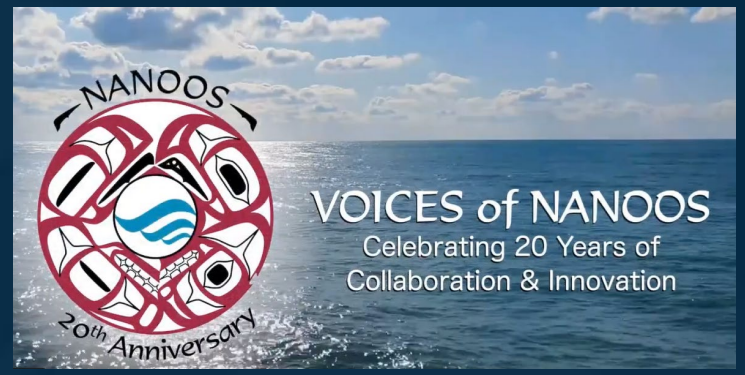
2024-2025 Highlights

We are now 22 years old!!!

Seattle Technology Event



NANOOS GC-PI & Celebration



NANOO
Video

Community Workshop

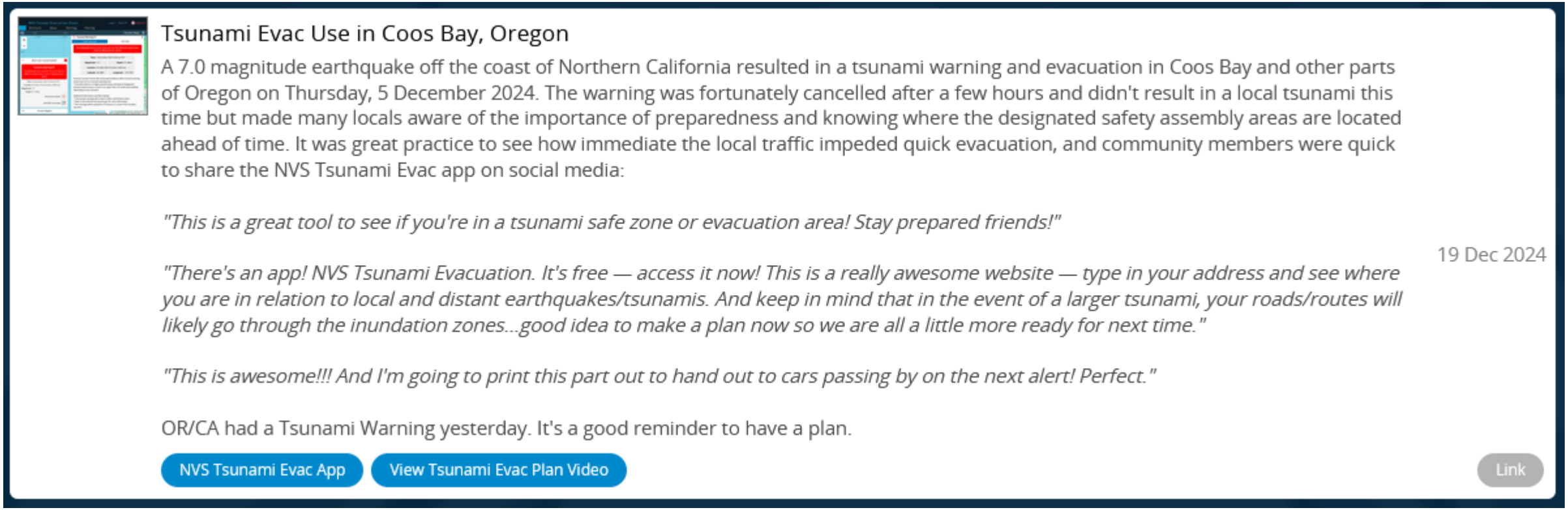
NANOOS celebrated its 20th anniversary with a series of events:

Since then:

- 2024
- 2025

5 December 2024 earthquake

- Much user input, app got great reviews



Tsunami Evac Use in Coos Bay, Oregon

A 7.0 magnitude earthquake off the coast of Northern California resulted in a tsunami warning and evacuation in Coos Bay and other parts of Oregon on Thursday, 5 December 2024. The warning was fortunately cancelled after a few hours and didn't result in a local tsunami this time but made many locals aware of the importance of preparedness and knowing where the designated safety assembly areas are located ahead of time. It was great practice to see how immediate the local traffic impeded quick evacuation, and community members were quick to share the NVS Tsunami Evac app on social media:

"This is a great tool to see if you're in a tsunami safe zone or evacuation area! Stay prepared friends!"

19 Dec 2024

"There's an app! NVS Tsunami Evacuation. It's free — access it now! This is a really awesome website — type in your address and see where you are in relation to local and distant earthquakes/tsunamis. And keep in mind that in the event of a larger tsunami, your roads/routes will likely go through the inundation zones...good idea to make a plan now so we are all a little more ready for next time."

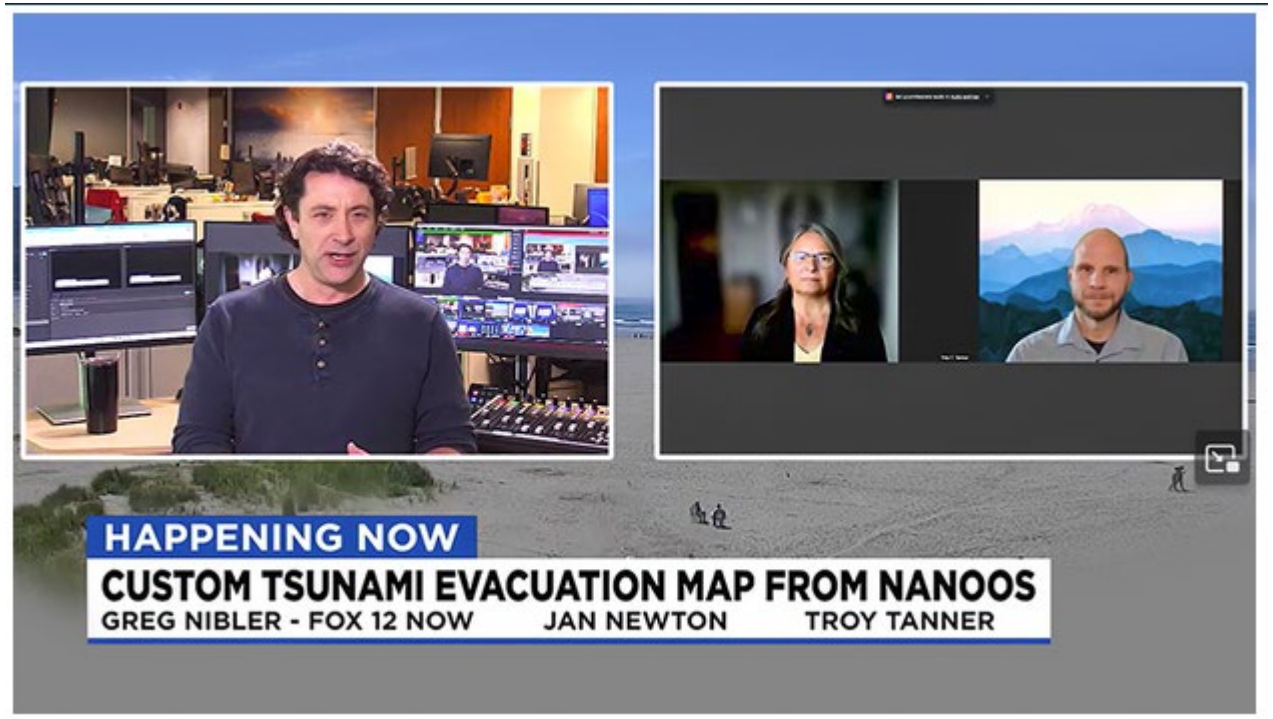
"This is awesome!!! And I'm going to print this part out to hand out to cars passing by on the next alert! Perfect."

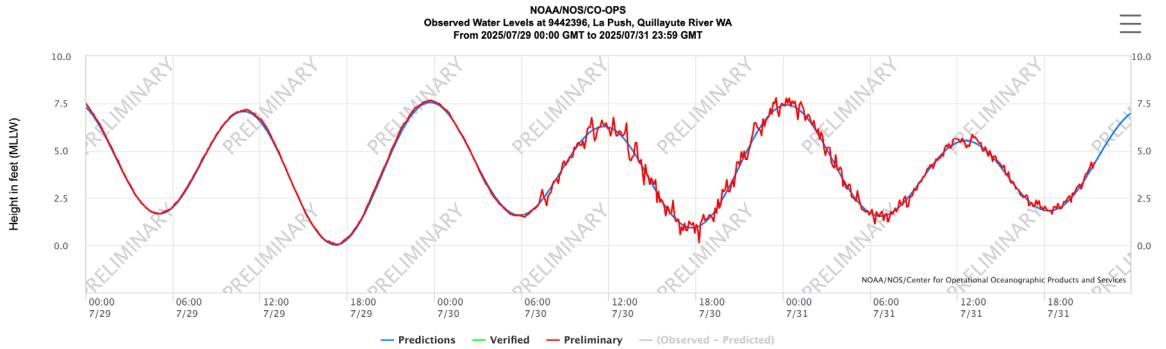
OR/CA had a Tsunami Warning yesterday. It's a good reminder to have a plan.

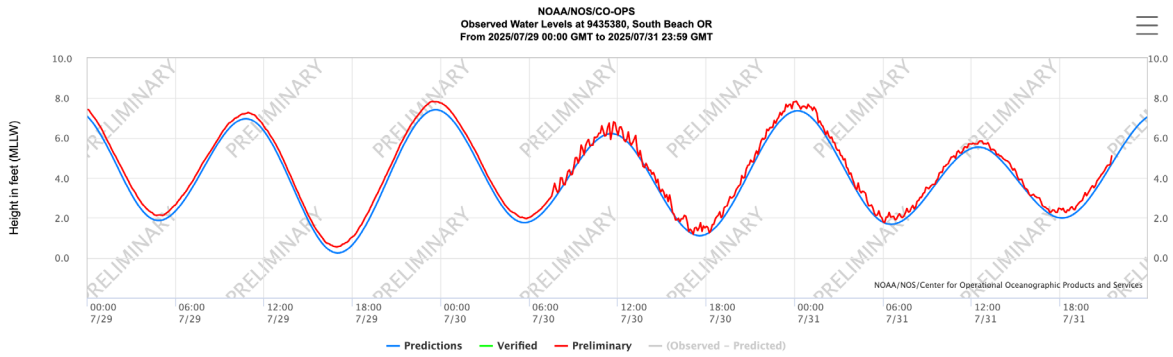
NVS Tsunami Evac App | View Tsunami Evac Plan Video | Link

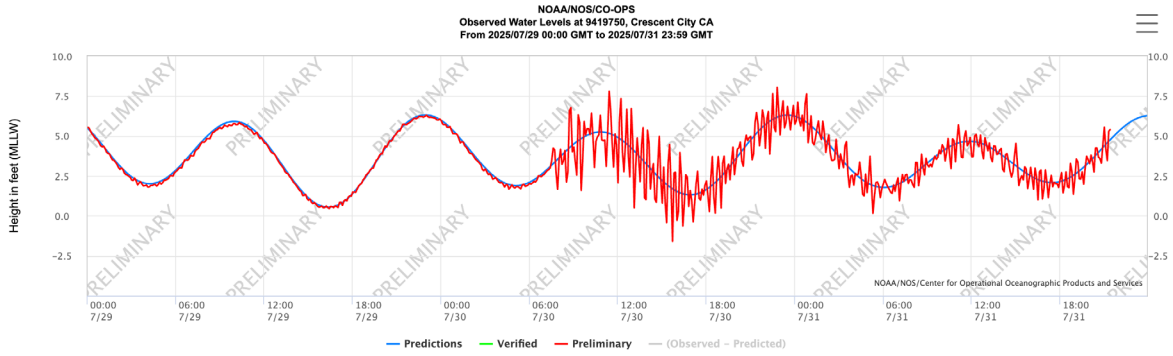
30 July 2025 earthquake

- Bump of over 1000 downloads in 1 day
- Regional media found us









- We were lucky
- We are thankful
- We need to be prepared…

Thank You Coast Guards!

This storm season has been unusually intense this year, with multiple major storm tracks including a bomb cyclone generating a historical pressure drop and 13 meter waves. This has been particularly hard on our in-situ assets off the coast. We are indebted to the US and Canadian Coast Guards and the Makah Tribe for their roles in helping us recover valuable assets affected by storm action. The CRITFC/CMOP Plume buoy moved a couple km in November, and then another 1 km during the bomb cyclone. The US Coast Guard volunteered to recover the buoy in order to remove it from its new potentially hazardous location close to a shipping channel. The Coast Guard Cutter Elm successfully recovered the buoy mid-December, and it is now home at the new CMOP Field Office in Astoria, Oregon.

Farther north, the UW/APL Cha'ba buoy withstood the bomb cyclone but broke loose afterwards. Fortunately it drifted into the Strait of Juan de Fuca, where the Neah Bay Coast Guard helped tow it closer to shore. The Makah Tribe's F/V Alyeska then plucked it out of the water with all of its equipment intact.

19 Dec 2024

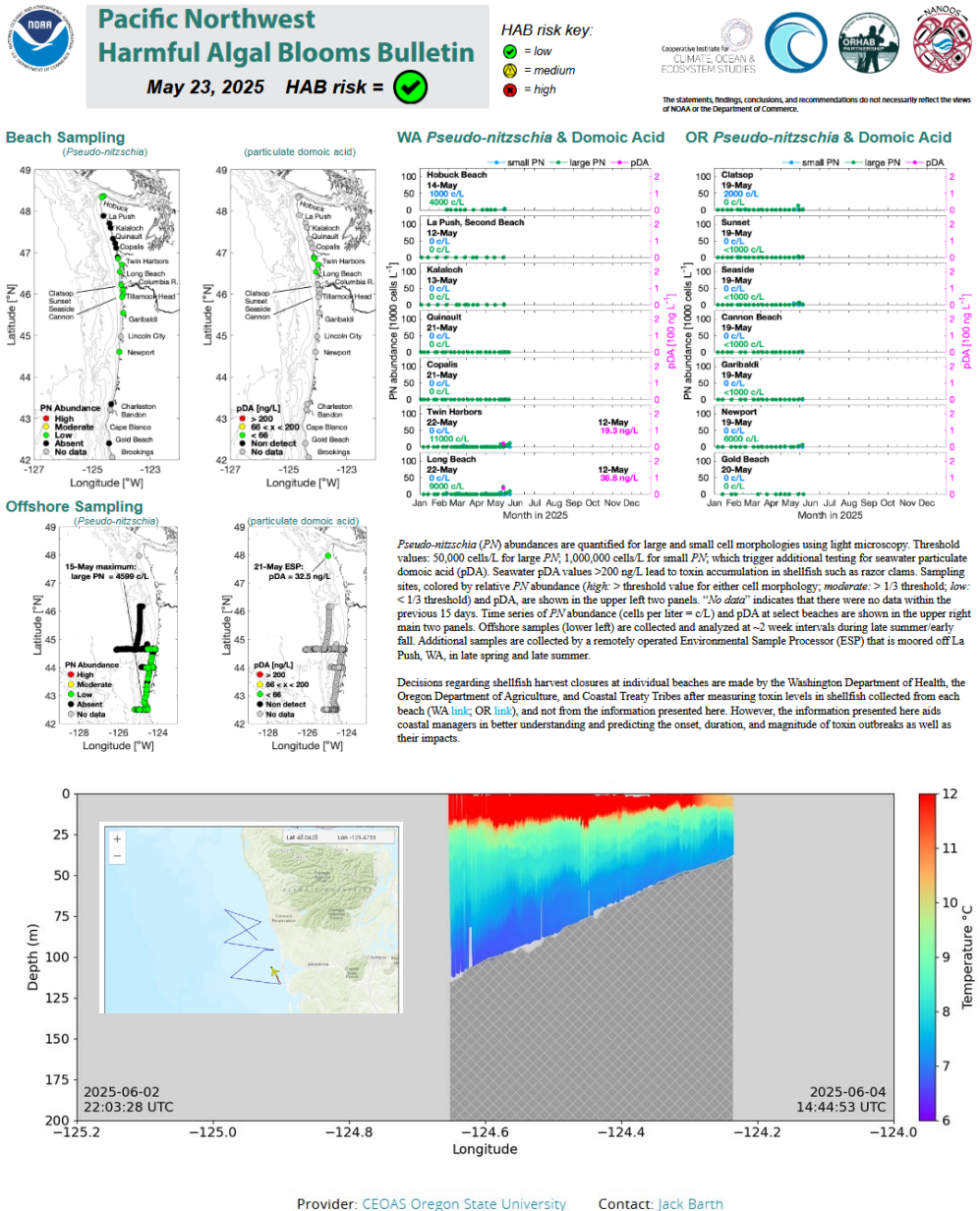
Lastly, one of the two Quileute Tribe's Backyard Buoys spotter buoys went adrift during the bomb cyclone and wandered for a while. Fortunately, the Canadian Coast Guard Cutter Sir Wilfred Grenfel was able to recover the buoy off the coast of Vancouver Island and it has been retrieved.

Photo Credit: CRITFC

Link

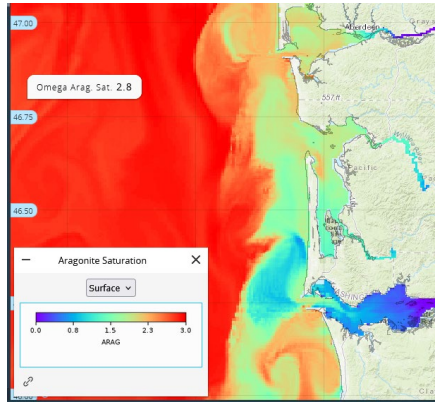
Informing decision makers: PNW HAB Bulletin production	Four PNW HAB Bulletins that provided risk assessments to support coastal shellfish managers were made publicly available on both the ORHAB and NANOOS websites. Said one manager, "The latest bulletin was timely and valuable in helping us respond to questions about HABs and biotoxins along our coasts."	Ryan McCabe, NOAA, Barbara Hickey, UW, and Vera Trainer, UW
Informing decision makers: Hypoxia Watch aided	A glider map made in late May-early June off central Washington from 6 cross-shelf sections over 270 km with about 2400 vertical profiles of water properties showed that near-bottom, low-oxygen water was being upwelled onto the shelf in early spring with some hypoxia confined to the bottom boundary layer. There was a hint of very low dissolved oxygen (DO < 1 ml/l) near the bottom on the inshore end (water depth < 50 m) just off Taholah, WA, but that feature was small in spatial extent. These data are displayed on NVS. This information guides coast tribal and state resource managers on hypoxia risk to fisheries.	Jack Barth, OSU, Joe Schumacker, Quinault Indian Nation, Charles Seaton, CRITFC

- NANOOS products are informing decision makers in real time, to protect human health, coastal economies, and resource utilization.
- These products are freely available on NVS and NANOOS web.

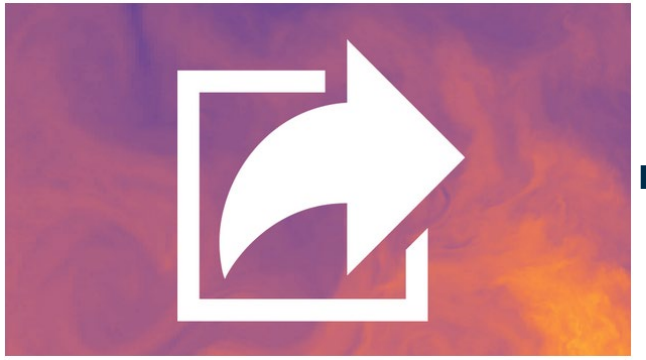


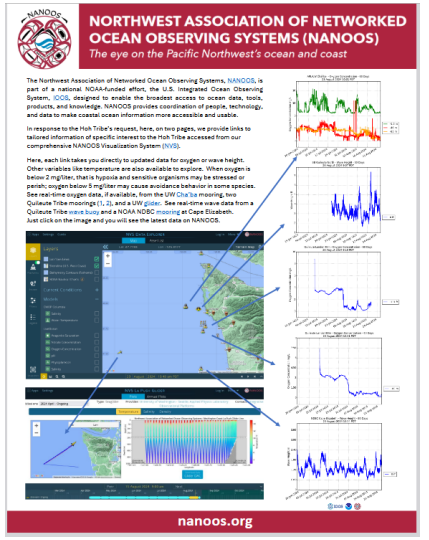
Responding to users: LiveOcean Model enhancements	The LiveOcean forecast model achieved higher reliability with new daily forecast products and a data-access portal for stakeholders: Several significant improvements were made, including improvements to the biogeochemical fields and updates for faster and more reliable forecasts with better performance. Model performance was validated against an expanded collection of observational data.	Parker MacCready, UW
	Surface gravity waves were added to the Willapa Bay-Grays Harbor nested model, a region of the LiveOcean domain which is most likely to be affected by waves. At the request of shellfish growers in Willapa Bay, we added more daily forecast movies for this nested model, now including temperature, salinity, and velocity. We created a new Data Access portal on the LiveOcean website to begin the process of making distribution of model extractions to scientists and other stakeholders.	
Responding to users: New "Share My View" capability	Focusing on allowing users to pass on a data view (or find it again for themselves, NANOOS created a "Snapshot" tool, but we found it was not being discovered as much as we intended. We renamed the "Snapshot" tool to "Share My View", relocated the button to a more visible area, and streamlined the process of creating a custom view. This updated feature in NVS allows users to "customize" the information presented within NVS. The user can set up the map view to display the region of interest, the assets (individual buoys, gages, and climate stations) and/or model overlay, etc. that they are interested in. Then select the "Share My View" tool to create a unique link that stores this information to be retrieved at any time. Users can then share or revisit the link at any time to access data with that view. Additionally, users can log in to a NANOOS user account to save their "Views" for future use.	Troy Tanner, UW

PCSGA
PACIFIC COAST SHELLFISH GROWERS ASSOCIATION



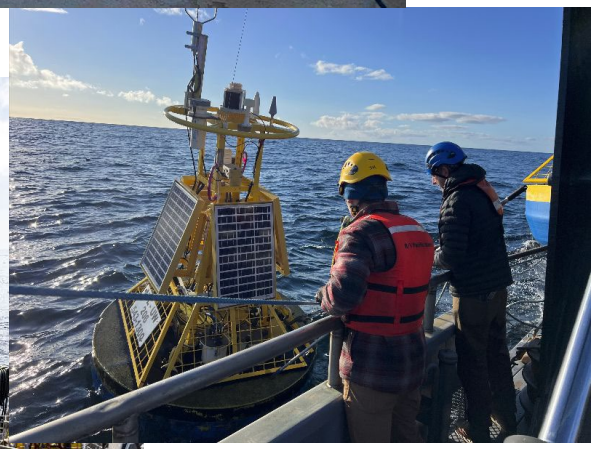
- NANOOS really listens to users and adapts.
- The "Share My View" tool is enabling customization useful in many other projects.





Assuring continuity and increasing reliability: New CRITFC staff refurbish the SATURN-02 buoy	Newly trained field staff refurbished and prepared the Columbia River SATURN-02 buoy, including significant physical upgrades and a new control board system, ensuring continued multi-depth data for the estuary and plume. Continuity of trained staff is just as critical as refurbishing infrastructure. When the CRITFC buoy lead retired, it was essential that the new staff were successfully trained and are now independent.	Charles Seaton/ Rosie Gradoville, CRITFC
Assuring continuity and increasing reliability: Puget Sound profiling buoys upgrades	Six Puget Sound profiling buoys received instrument swaps and cellular modem upgrades with GPS tracking (IIJA funded), improving data reliability. New team members were trained. The data are accessible via ERDDAP and NVS. All of these actions enhance the sustainability and utility of the data, which are used by tribes, shellfish growers, and state agencies.	Seth Travis, UW

- NANOOS invests in people and cross-training; this is critical for the continuity and dependability of data.
- And NANOOS works to foster the next generation.

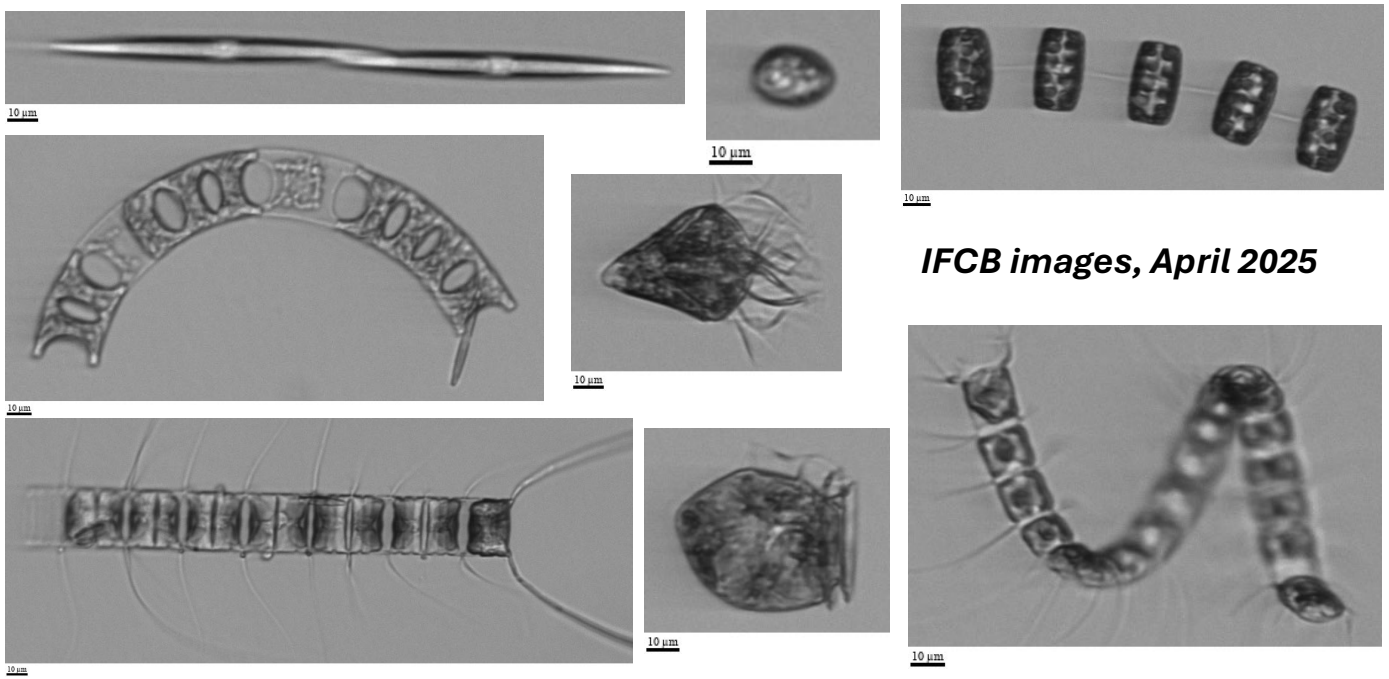


NANOOS PI Innovation and new Technology

Quantifying phytoplankton communities with imaging-in-flow cytometry

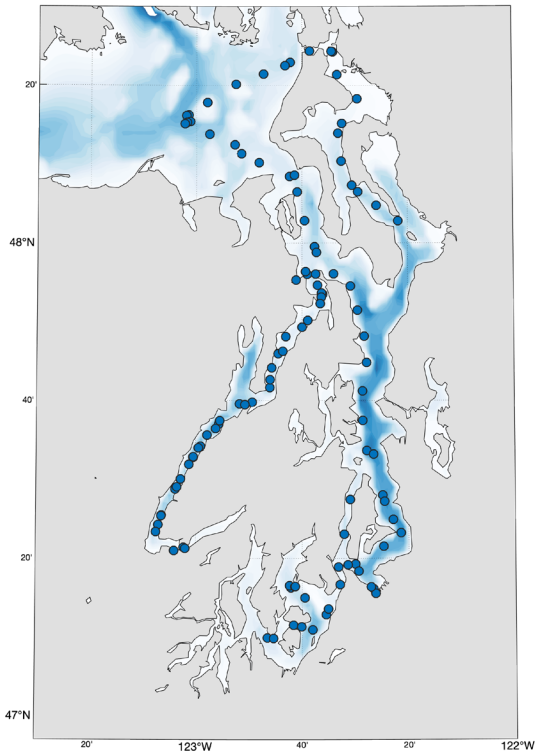
Ali Chase - APL-UW (alichase@uw.edu), Hana Busse - APL–UW

- Imaging FlowCytobot (IFCB) obtained for sampling on seasonal research cruises, April 2025 – ongoing
- Machine learning used for taxonomic classification
- Abundance and biomass concentrations calculated from images & known sample volumes
- Increased spatial and temporal resolution on phytoplankton communities will complement conventional discrete sampling and microscopy



IFCB images, April 2025

IFCB on R/V Carson



= sample locations April 14-18, 2025


seasats

NANOOS

Northwest Association of Networked Ocean Observing Systems

IOOS

BACKYARD BUOYS

View Issue TOC
Volume 38, No. 1
Pages 91 - 93

See our video at www.NANOOS.org

SPECIAL ISSUE ON A VISION FOR CAPACITY SHARING IN THE OCEAN SCIENCES

SPOTLIGHT

Backyard Buoys: Meeting Needs of Coastal, Indigenous Communities Through Co-Design and Co-Production

By Jan Newton, Sheyna Wisdom, Melissa Iwamoto, Roxanne Carini, Jordan Watson, Sebastien Boulay, Duncan Mactavish, Jennifer Hagen, Joe Schumacker, Dua Rudolph, Dolores deBrum-Kattil, Pua Tuaua, Eric Brown, Scott Burch, John Hopson Jr., and Jenny Evans

INTRODUCTION

The Backyard Buoys project (https://backyardbuoys.org/) enables Indigenous and coastal communities to gather and use wave data to enhance their blue economies and hazard protections. These communities have been historically underserved, and climate change is making weather and wave predictability even harder. Leveraging low-cost, scalable marine technology in partnership with regional ocean observing networks, Backyard Buoys offers a system for community-managed ocean buoys and data access to complement Indigenous Knowledge. These innovations include a sustainable process for community-led implementation and stewardship of affordable ocean buoys along with co-designed and co-produced mobile and web-based applications (apps) that render data easy to access and understand.

DEMOCRATIZATION OF DATA

Backyard Buoys was funded by the US National Science Foundation (NSF) Convergence Accelerator program in 2021 in the Blue Economy track. Our project brought together three regional ocean observing networks of the US Integrated Ocean Observing System (IOOS), underserved Indigenous communities in those regions, and a sensor company (Sofar Ocean) with a lower-cost commercially available wave buoy that measures significant wave height, period, and direction along with directional wave spreading, sea surface temperature, and barometric pressure. We worked collectively to democratize local wave measurements and provide a solution to the hurdles presented by observing technologies that are too expensive and cumbersome to purchase and sustain. Through co-design of an implementation and stewardship plan, as well as apps tailored to transmit data in low-bandwidth scenarios, we are revolutionizing wave observations. By using lower-cost tools and deepening human and data connections, our collective system addresses needs within the hyper-local scale—something sorely lacking in the design of existing ocean observing systems—while assuring it operates within a globally connected network.

Backyard Buoys is being implemented in Alaska, the Pacific Islands, and the Pacific Northwest (Figures 1 and 2a). Each region is home to Indigenous communities who have lived off the sea and that are protected by natural wave barriers—sea ice, coral, and kelp beds, respectively—each of which is affected by climate change. While each location is unique, similarities have united the team effort. The three IOOS regional ocean observing systems, respectively named

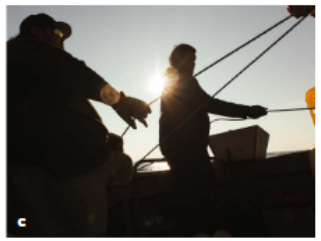


FIGURE 1. Backyard Buoys are being deployed (a) off the Washington coast, (b) in the Republic of the Marshall Islands, and (c) in the Arctic. *Photo credits: (a) Dennis Wise, University of Washington, (b) Marshall Islands Conservation Society and (c) Lloyd Pikook Jr.*

Your vision has and will guide NANOOS

- We have consistently heard that our NANOOS GC wants us to stay the course on NANOOS investments. → ***Next 5 y proposal***
- Meetings in Astoria kicked off how we chose to sustainably grow NANOOS for opportunities from new funding from the Inflation Reduction Act. → ***IRA Topic 1 and 2 investments***
- Sustaining our data streams and products continue to be our highest priority. → ***IIJA (BIL) investments***
- Our level of innovation and improvement is strong. → ***OTT, etc.***

NANOOS | Northwest Association of Networked Ocean Observing Systems

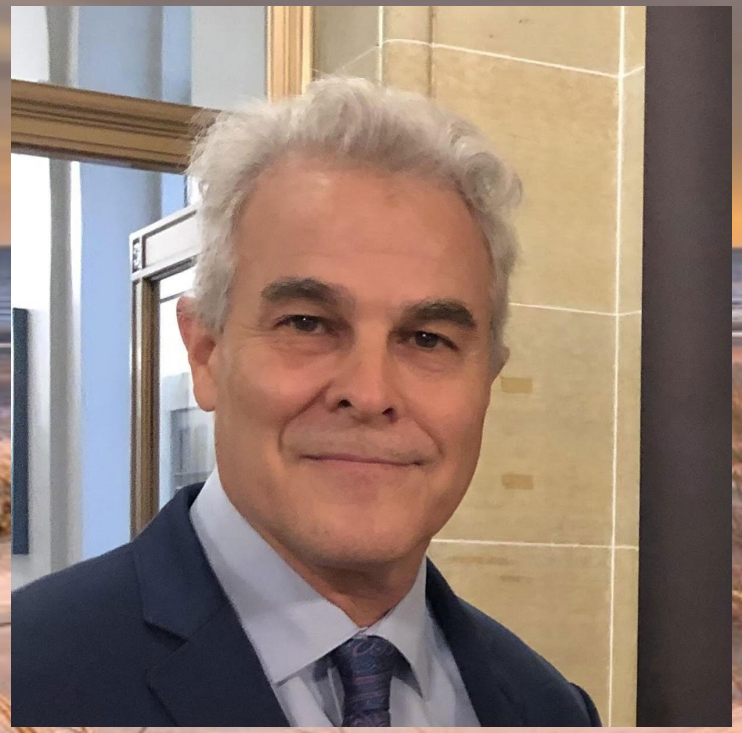
U.S. Integrated Ocean Observing System (IOOS) Office Updates

Krisa Arzayus, Ph.D.
Deputy Director, U.S. IOOS Office
August 11, 2025

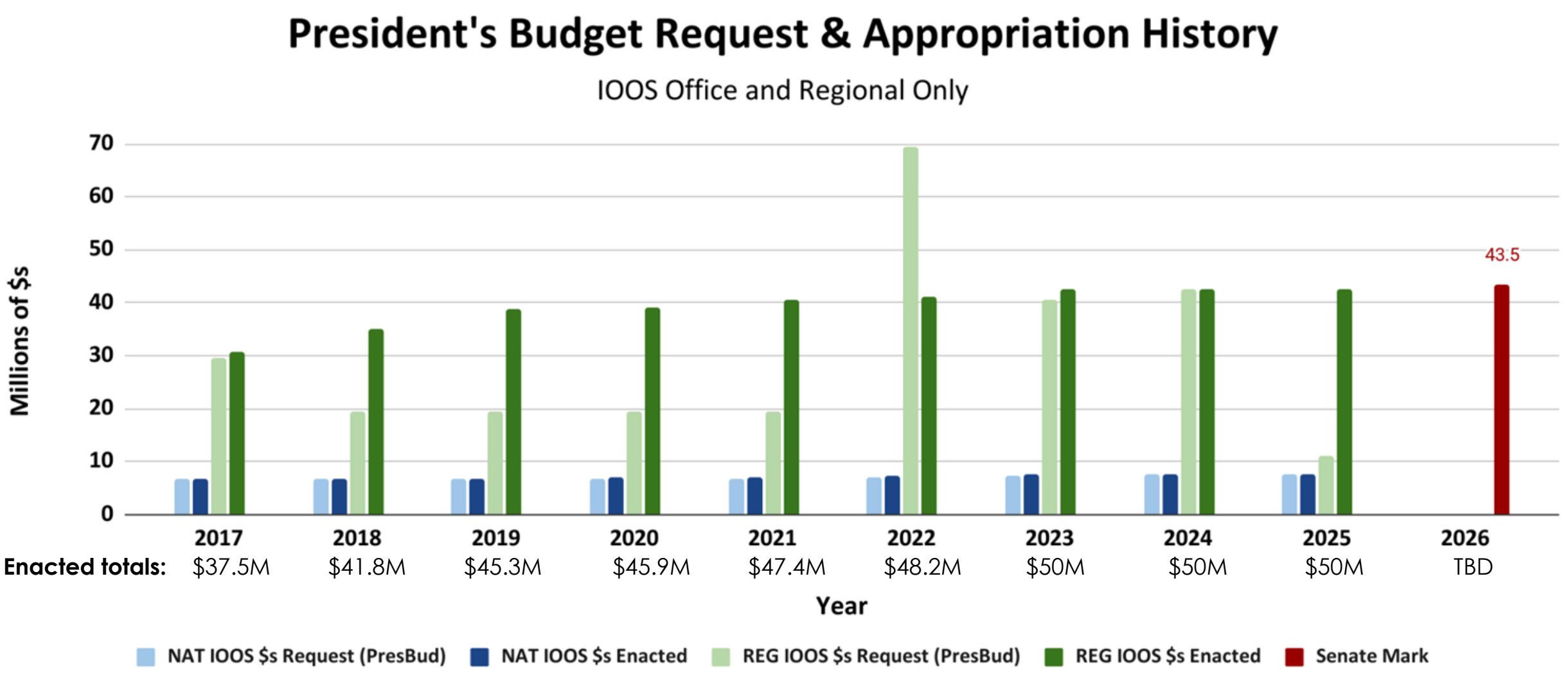
IOOS | EYES ON THE OCEAN™

Staffing Updates

Meet Jeff Payne



U.S. IOOS Enacted and President's Budgets FY17–26



IOOS | EYES ON THE OCEAN

FY26 President's Budget

Highlights from the Congressional Justification (differences relative to FY24 enacted):

- NOAA: $4.515B (-$2.3B)
- NOS: $434M (-$250M)
  - Includes transfers in from OAR
- Proposed termination IOOS Regional Observation budget line
- Current status: House and Senate CJS committee hearings

FY26 House and Senate Marks

- House Mark (CJS Subcommittee)
  - $5.795B for NOAA ($387M or 6% less than FY25)
  - $697.5M for NOS ($19.1M above FY24 and $453.4M above FY26 PresBud)
  - Restore all funding proposed for termination, including IOOS Regional Line
  - **$56M for IOOS Regional Observations** (+$13.5M from FY24)
  - Full committee markup - on hold
- Senate Mark
  - $6.14B for NOAA
  - $685.7M for NOS ($7.3M above FY24 and $251.5M above FY26 PresBud)
  - Restore all funding proposed for termination, including IOOS Regional line
  - **$43.5M for IOOS Regional Observations** (+$1M from FY24)

Communications

- New Google Form for Success Stories

- BENEFITS OF OCEAN OBSERVING CATALOG (BOOC)
  - Users will be able to search by attributes such as:
    - Geographic location
    - Type of data used
    - Beneficial outcomes, and others.

Issues/Questions with BOOC: lizz.whitney@noaa.gov

Programmatic Updates

- HFRNet is up and running
- Google Summer of Code
- IOOS Marine Life Data Network
  - https://ioos.github.io/marine_life_data_network/

IOOS | EYES ON THE OCEAN

Congrats to NANOOS

Kudos for:

- Tsunami Evacuation notifications on NVS
- HAB bulletins
- Improvements to user access
- Sea Grant partnership

Questions?

Krisa.Arzayus@noaa.gov

IOOS Association Update

NANOOS Annual Meeting
August 11, 2025

Kristen Yarincik
Executive Director

Evolving landscape & challenges…

Situation with new administration evolves quickly

Many Executive Orders created challenges

- Grant freezes, probationary termination and other RIFs, agency reorganizations (still pending)

But some EOs support the need for IOOS / ocean observations

- Restoring America's Maritime Dominance (Apr 9)
- Restoring American Seafood Competitiveness (Apr 17)
- Unleashing America's Offshore Critical Minerals and Resources (Apr 24)

NOAA politicals not yet in place

- Nominations process is moving forward for Neil Jacobs (NOAA Administrator) and Taylor Jordan (Assistant Administrator for Environmental Obs & Prediction)

IOOS Association position to date

- Stay neutral: advocate for our program, stay out of broader politicized issues, including NOAA organization

FY25 (current year) funding landscape & challenges…

Congress passed Continuing Resolution on March 14

- Funds the government at the FY24 levels (minus earmarks; some flexibility built in)

Administration challenges

- Commerce Secretary reviews any contract/grant action over $100K (department-wide)
  - Significant new/additional burden on IOOS Office staff
  - Award approval significantly delayed but all were approved for full funding: core funds, IIJA Y3-4, MBON, OTT

- NOAA FY25 Spend Plan
  - Delays in OMB has approving Program, Project, or Activity (PPA)-level spend plan meant NOAA's ability to obligate even approved award funds was limited → required to get full apportionment to IOOS "account"
  - July 18: all funds available and awards moving through processing

- Pocket recisions package?

Appropriations at a glance

IOOS Regional Observations line; Amounts in millions of dollars.	FY21	FY22	FY23	FY24	FY25	FY26
Authorization Level	48	50	52	54	56	56 (pending)
President's Budget	19.4	69.5	40.5	42.5	10	0
House Approps	40.5	50	44	41	56	56
Senate Approps	40	47	46	42.5	43.5	43.5
Enacted	40.5	41	42.5	42.5	42.5	?
IA request	45.25	56.5	75.3	80.5	56	56

- **Table zooms in on IOOS Regional Observations funding line** (in $millions)
- **President's Budget Request up and down over time, but not great recently**
  - Biden's FY25 proposed $10M (or -76%); Trump's FY26 proposed full defunding
- **Until recently, Congress has appropriated modest annual increases to IOOS**
  - NHABON directed funding encompassed in these increases
- **FY26 House & Senate Markups in progress**
  - Serve as signals for scenario planning - both positive marks!

ESP advisors IOOS Association

FY26 Appropriations Advocacy Strategy

IOOS Association Request – same as FY25

- $56M for FY26 request: $50M “core” + $6M grants & innovation
- Talking points = economic benefits, public safety, national security

Partner Advocacy against Pres Bud – Individual letters of support

Congressional Outreach

- Dear Colleague Letters
- Programmatic Requests
- Lots of meetings and outreach

ESP advisors IOOS Association

IOOS still has bipartisan Congressional support

"Dear Colleague" Appropriations letters

- **House letter**
  - Led by Pingree, Ezell, Weber, **Bonamici**, Radewagen, Carbajal
  - 97 signers (18 Rs) → most signers and most Republicans ever

- **Senate letter**
  - Led by Wicker, **Cantwell**
  - 28 signers (3 Rs) → similar to past years

The U.S. IOOS Program Office within NOAA's National Ocean Service (NOS) supports IOOS through grants management and by facilitating collaboration across the regional network and with the 17 federal agencies whose missions IOOS supports. Therefore, robust funding for the NOS Navigation, Observations, and Positioning budget line is also needed to ensure sufficient capacity within the NOS line office to maintain efficient and effective IOOS program operations. We encourage the Committee to consider this as it appropriates funds for IOOS.

We are grateful for the Committee's support of IOOS in the fiscal year 2025 appropriations bill and underscore the critical role of this network in delivering crucial information about our waterways and weather to millions of Americans. Continued investment in the nation's sustained observations is key to furthering understanding of our oceans, coasts, and Great Lakes. IOOS is essential for safeguarding and enhancing their economic contributions to the nation while helping communities prepare for the risks associated with flood damage, extreme weather events, harmful algal blooms and hypoxia, oil spills, and other hazards. Therefore, we respectfully request that the Committee provide $56 million to the Regional IOOS program.

Thank you for your consideration of this request.

Sincerely,

Chellie Pingree
Member of Congress

Salud Carbajal
Member of Congress

Mike Ezell
Member of Congress

Randy K. Weber, Sr.
Member of Congress

Suzanne Bonamici
Member of Congress

Aumua Amata Coleman Radewagen
Member of Congress

FY26 Funding Outlook

Presidents FY26 Budget: NOAA/Commerce

- NOAA President's Budget Justification released June 30 → DEFUNDS IOOS Regional Observations (along with other NOS grant programs, OAR line office, etc.)

FY26 Congressional Appropriations: Commerce, Justice, Science (CJS)

- **House**
  - Provides $56M for IOOS!
  - July 15: CJS subcommittee reported bill favorably to full committee (clear from deliberations it is not a bipartisan bill)
  - Full committee markup TBD → postponed until Sep due to early recess
- **Senate**
  - Provides $43.5M for IOOS
  - July 17: CJS bill reported favorably out of full Appropriations committee

Next steps: to be voted on by each chamber and then conferenced; short-term Continuing Resolution likely

FY26 Funding Outlook

Uncertainty on future award → FY26 funds and beyond

- FY25 = last year of current regional core funding 5-year awards
- Solicitation would normally be out by this time of year to allow the proposal development process time for stakeholder engagement, etc.
- Solicitation status & timing unclear at this point → requires DOC approval and is moving through that process

Additional uncertainties

- Will the Administration adhere to Congressional appropriations?
- Expect recision packages?

IOOS Reauthorization

Staying authorized in this climate is critical!

- **House** → Rep. Ezell (R-MS) → introduced bipartisan bill (with **Bonamici**, D-OR) on March 24 (H.R. 2294)
  - 4 other original co-sponsors: Weber (R-TX), Dingell (D-MI), Radewagen (R-AS), Davis (D-IL)
  - Currently at **23 bipartisan sponsors (7 Rs)**
  - House bill = keeps authorization at $56M; no substantive changes
  - House Natural Resources WWF subcommittee hearing May 20 → Dr. Howden (USM) testified for IOOS
  - July 30 → passed House Natural Resources by Unanimous Consent

- **Senate** → Sen. Wicker (R-MS) & **Cantwell** (D-WA) introduced bill S.2126 on June 18
  - Senate bill = keeps authorization at $56M but does have some additional revisions that will need to be reconciled between House bill

Strategic Communications

Increasing strategic communications and IOOS visibility through social media

- **Fall 2024:** Ad Hoc Strategic Communications Committee formed to make recommendations
  - Jan & Rachel participated
  - Main recommendations: implement a structure to be more nimble and proactive across the network and get outside help
  - Discussed and agreed upon at Spring 2025 IOOS meeting
- **Spring 2025:** New Working Group formed for Strategic Communications
  - Comprised of RA staff members with primary role of communications (social media, media outreach, etc.)
  - Strategies:
    - Demonstrate the power of the network to amplify on another
    - Share our own stories and build on outside opportunities to highlight IOOS
  - Outside help engaged:
    - Wesglen Strategies → social media strategy and implementation
    - StormCenter Communications → build on existing YouTube audiences in emergency preparedness/response and broadcast meteorologists

Strategic Communications: LinkedIn

Established "Ocean Data Day"

- June 25 (World Ocean Month)
- 1,500+ impressions across 5 posts
- 50+ reposts and nearly 20 comments
- Engagement from all corners — tech, research, and government
- 50+ new followers on LinkedIn
- Above does not reflect the amplified impact across all RAs

Upcoming "mini campaigns"

- National Emergency Management Awareness Month (August 11-21)
- IOOS in Your State (August - TBC)
- Seafood Competitiveness (September 8-12)

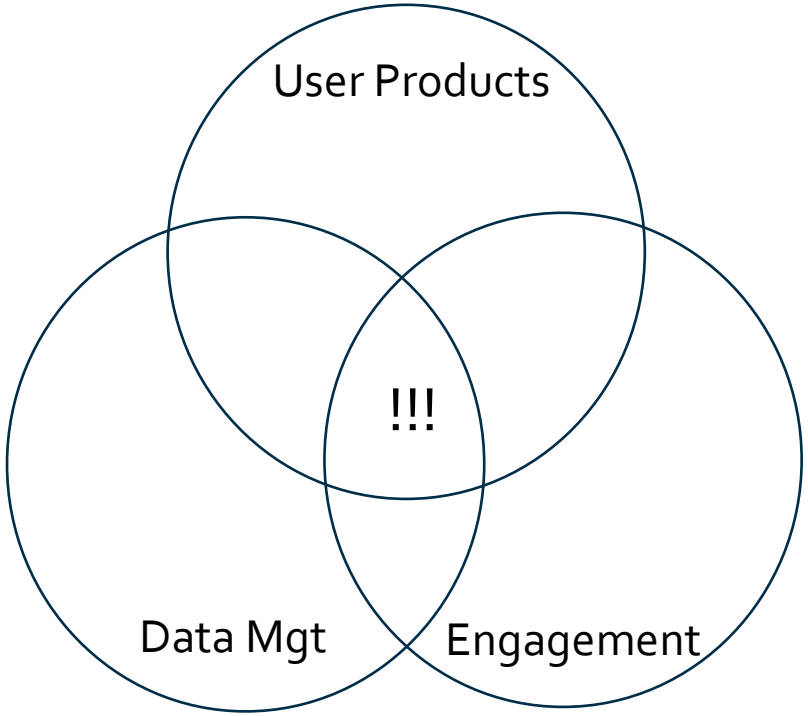
Growing reach

- +426 followers since May 1; steadily growing (725+) → ~20% from DC area
- Way to connect with potential partner sectors/associations

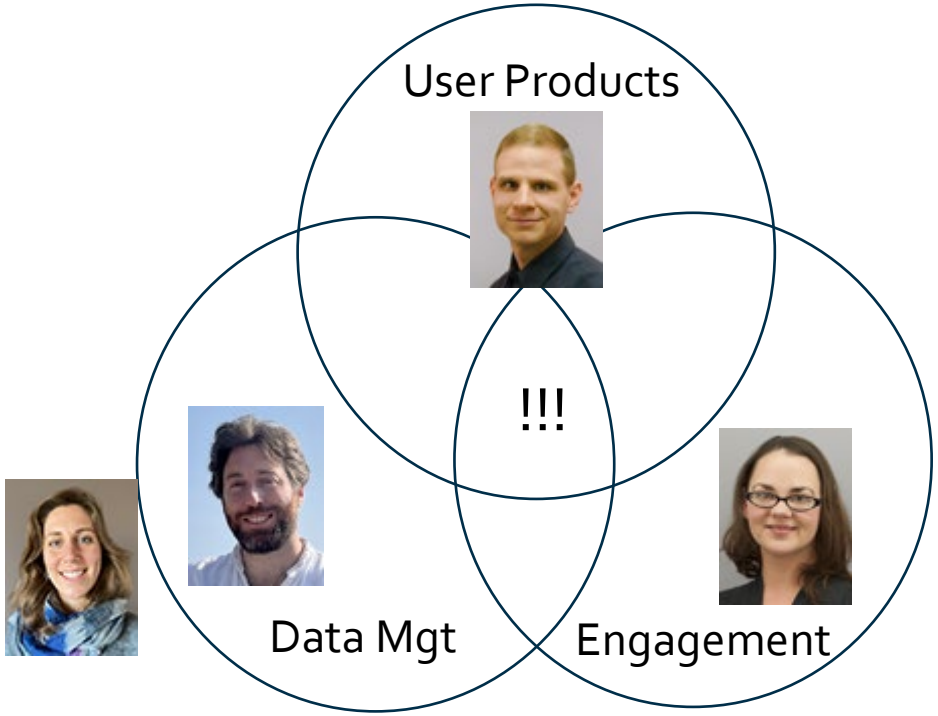
Thank You

IQOS Association

NANOOS Tri-Committee



NANOOS Tri-Committee



NANOOS Tri-Com Updates

- Panel of Standing Committee Chairs
  - Education, Engagement & Outreach: Rachel Wold
  - DMAC: Seth Travis
  - User Products: Troy Tanner

Outreach, Education, and Engagement Updates

Rachel Wold, OEE Lead

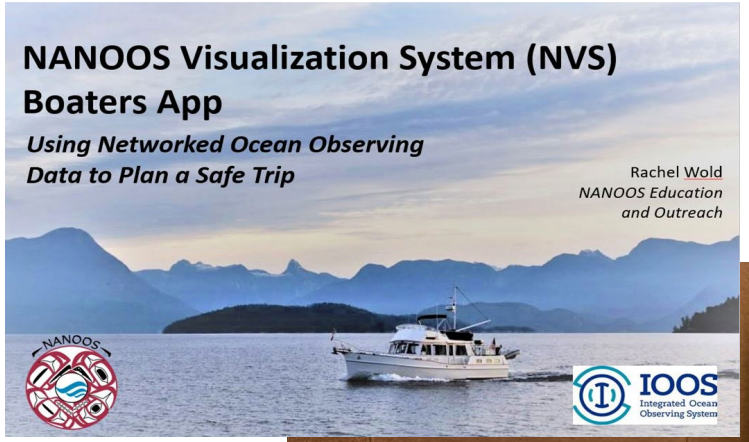
Outreach and Engagement:
Increasing awareness and connecting with users

Engagement with general public, scientists, and targeted user groups

- Sound Waters University
- Science Conferences (PCSGA, CREC, etc.)
- Recreational and commercial fishers, boaters, surfers in PNW
  - Collect and utilize user feedback

Active participation with external groups

- IOOS Outreach Committee
- IOOS Strategic Comms WG
- Internship programs



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Education: Increasing ocean literacy

Lesson plans online

- OA lesson plans developed and updated to adhere to NGSS by EarthLab Ocean Literacy Interns

Activities to Connect with Students

- Middle school, High school and Undergraduate

Whidbey School District

- Student buoy program
- Teacher training

NEXT GENERATION SCIENCE STANDARDS
For States, By States

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Education: Connecting with Students

Middle school
- TAF Stem Expo
- TAF@Saghalie OA lessons

High school
- MHS Career Expo
- MHS Mentorship Program
  - With Sea Potential

Undergraduate
- Interns (EarthLab, DINOSIP, NOAA, etc.)
- Glider internship for Tribal students (with CRITFC and OSU)

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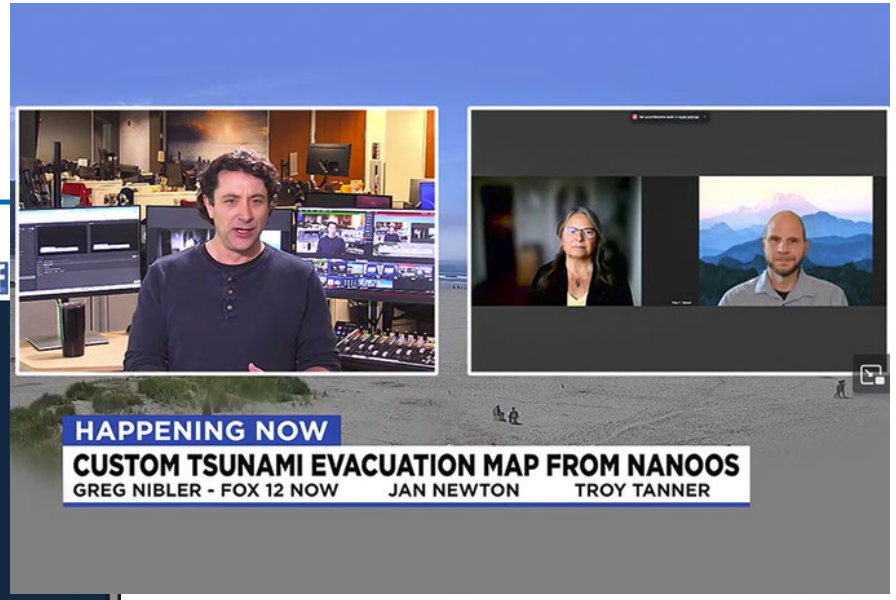
Online Presence



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Sign up for our Newsletter

NANOOS

Welcome to NANOOS, the Northwest Association of Networked Ocean Observing Systems.

NANOOS Visualization System

NVS provides easy access to observations, forecasts, data, and visualizations.

Help

Home
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News
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Disclaimer
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Products
Mobile Apps
Workshops
Education
Log In
New Account

CERTIFIED U.S. Integrated Ocean Observing System Regional Association

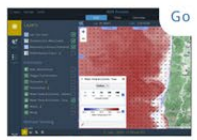
NANOOS Lightfish Completes First Offshore

NANOOS and partners have started using a combination
improve the frequency and coverage of offshore HAB ob
Northwest and better inform public health officials and
managers of HAB risk. We are pleased to announce the fi
operational mission of the SeaSats Lightfish, a solar-char
surface vehicle, augmented with a water sampling systen
APL-UW. In late July, the Lightfish covered a 60-mile track
OR, collecting 15 water samples near Heceta Head and ra
a shore-side lab. Samples were analyzed at the OSU Hatf
abundance, species composition and levels of domoic ac
causes amnesic shellfish poisoning. This work is possible
the IOOS Ocean Technology Transition Program and NAN

Read the Article

View the Dat


NANOOS Lightfish Completes First Offshore HABs Mission


Video Tutorial for Tuna Fishers


Imperiled by OA: How US Pacific Shellfish Farms Are Coping


Sharing Buoy Technical Expertise


Wave Data Supports Subsistence Hunters

Latest news and updates from NANOOS!

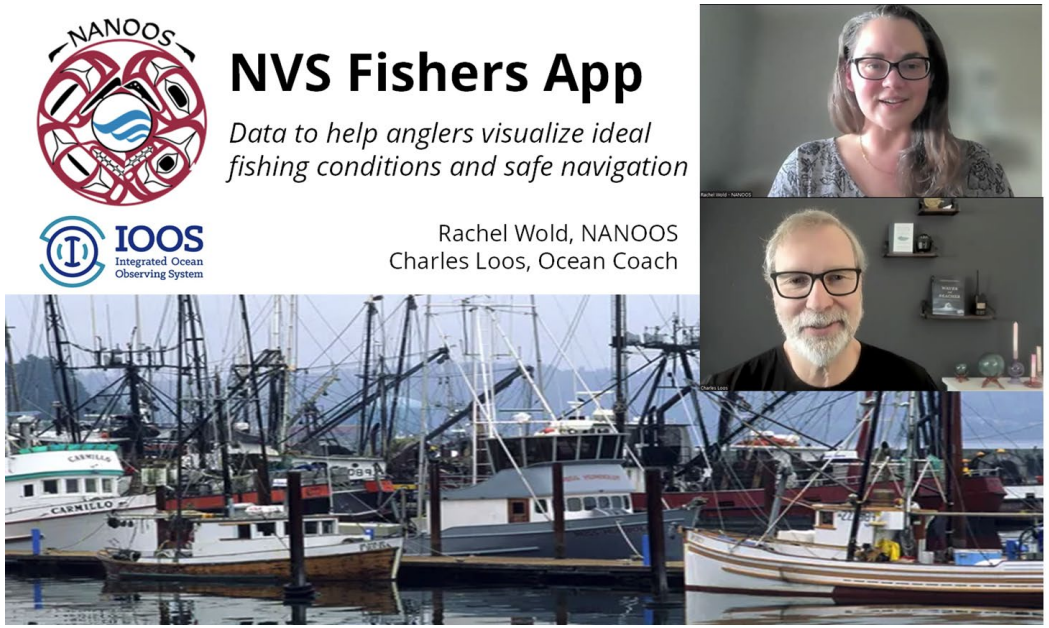
View this email in your browser

NANOOS Observer Spring 2025

NANOOS

Northwest Association of Networked Ocean Observing Systems

Webinars



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Plans for the upcoming year

Increase our presence in Oregon working with Oregon Sea Grant

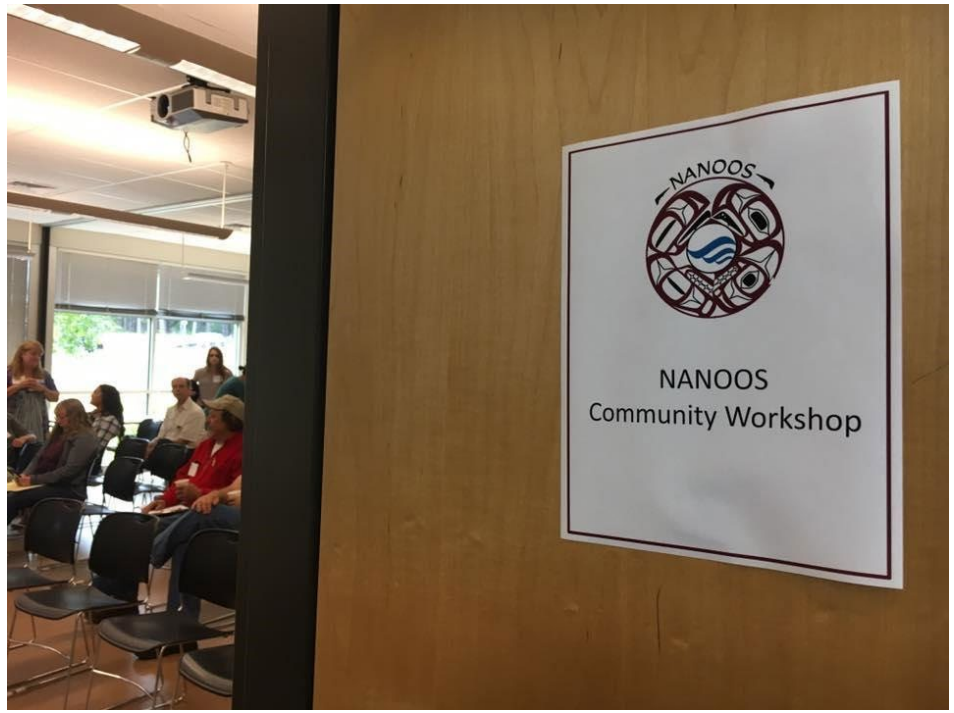
- Both outreach and education

Increase awareness and use within our member organizations

- Workshops, webinars, briefings, demos – let us know if you want one!

Continue our webinar program

- Next up: Boaters, Tsunami
- Other ideas/requests?



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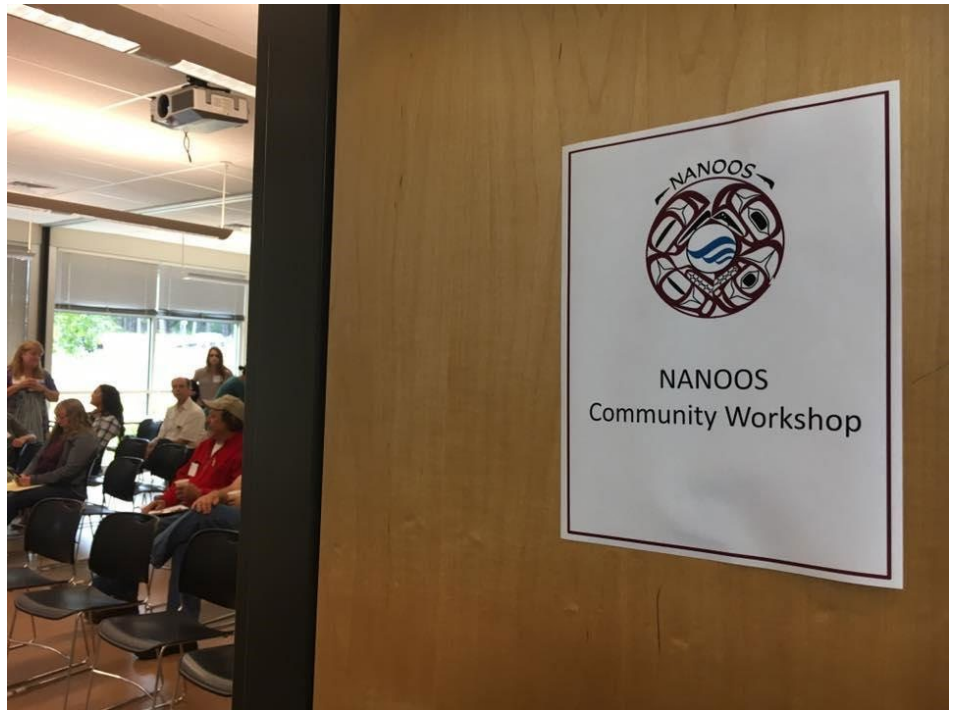
Plans for the upcoming year

Question for the GC and PIs:

What communities are we not engaging with that we should?

Please let us know and relay your ideas



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DMAC Updates

Seth Travis, DMAC
11 August 2025

NANOOS ERDDAP

- NANOOS ERDDAP server has been set up to provide an access point for NANOOS-supported data and to serve as a repository for historical data
- ERDDAP server provides a pathway for transmitting NANOOS data to NDBC, NCEI, as well as
- For more information, refer to the NANOOS webinar on ERDDAP

https://youtu.be/Ou7HEl0D1Og?feature=shared

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NANOOS ERDDAP Updates

- ERDDAP services set up for a number of platforms, including:
  - All Platforms with an NDBC WMO Code:
    - Puget Sound ORCA moorings and Sel'haem - Bellingham Bay mooring
    - Cha'ba Coastal Mooring
    - OSU CB-06
  - Quileute Landers - CTD & ADCP
  - Mirrored NANOOS-supported datasets:
    - Backyard Buoys – mirrored from Backyard Buoys ERDDAP
    - Gliders – mirrored from IOOS GliderDac ERDDAP
    - Puget Sound Zooplankton Monitoring Program – mirrored from OBIS Data archive
- Happy to add more

https://erddap.nanoos.org/erddap/

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NANOOS ERDDAP Updates

- Where appropriate, platforms are available to send data to NOAA NDBC for GTS ingestion
  - All platforms with a WMO code are available on NANOOS ERDDAP
    - ORCA Moorings: Meteorological stations and ocean profile data available
    - Sel'haem – Bellingham Bay buoy
    - Cha'ba coastal mooring
    - OSU CB-06

Backyard Buoy ERDDAP

- An ERDDAP server has been set up to serve as a historical data repository for all Backyard Buoys data
- Serves all Backyard Buoys data, including other IOOS Regional Associations
- Automated workflow adds datasets after buoy site information is added by users
  - New datasets should show up within 24 hours of adding location

https://erddap.backyardbuoys.org/erddap/

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NANOOS Persistent Identifiers

- Persistent Identifiers (PIDs) are digital references unique to a person/entity/object
  - Identifiers are enduring and registered digital references
  - PIDs can be linked together
  - Common PIDs include DOIs and ORCIDs

- Established NANOOS PIDs:
  - OceanExpert https://oceanexpert.org/institution/24943
  - ROR (Research Organization Registry) https://ror.org/01a258x16

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NANOOS ROR

- ROR (Research Organization Registry)
  - https://ror.org/01a258x16
  - A ROR is similar to an ORCID or DOI, but for an organization

- Interest from IOOS Program Office in having each RA obtain a ROR

- These can be useful for tracking/identifying research output by organization
  - i.e., what research products have come out of NANOOS funding

NANOOS ROR

- IOOS Program Office is still working on best practices
  - For more information, refer to:
    https://youtu.be/P1WzR0twg_U?feature=shared

- How can you help?
  - For a NANOOS-funded project, include the ROR in the metadata fields for published data
  - In any acknowledgements of NANOOS funding, please include reference to the ROR; similar to including DOI in citation:
    - Ex.: “This work was supported by NANOOS… (https://ror.org/01a258x16)”

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NANOOS

Governing Council & Principal Investigators Annual Meeting

11 August 2025

User Products

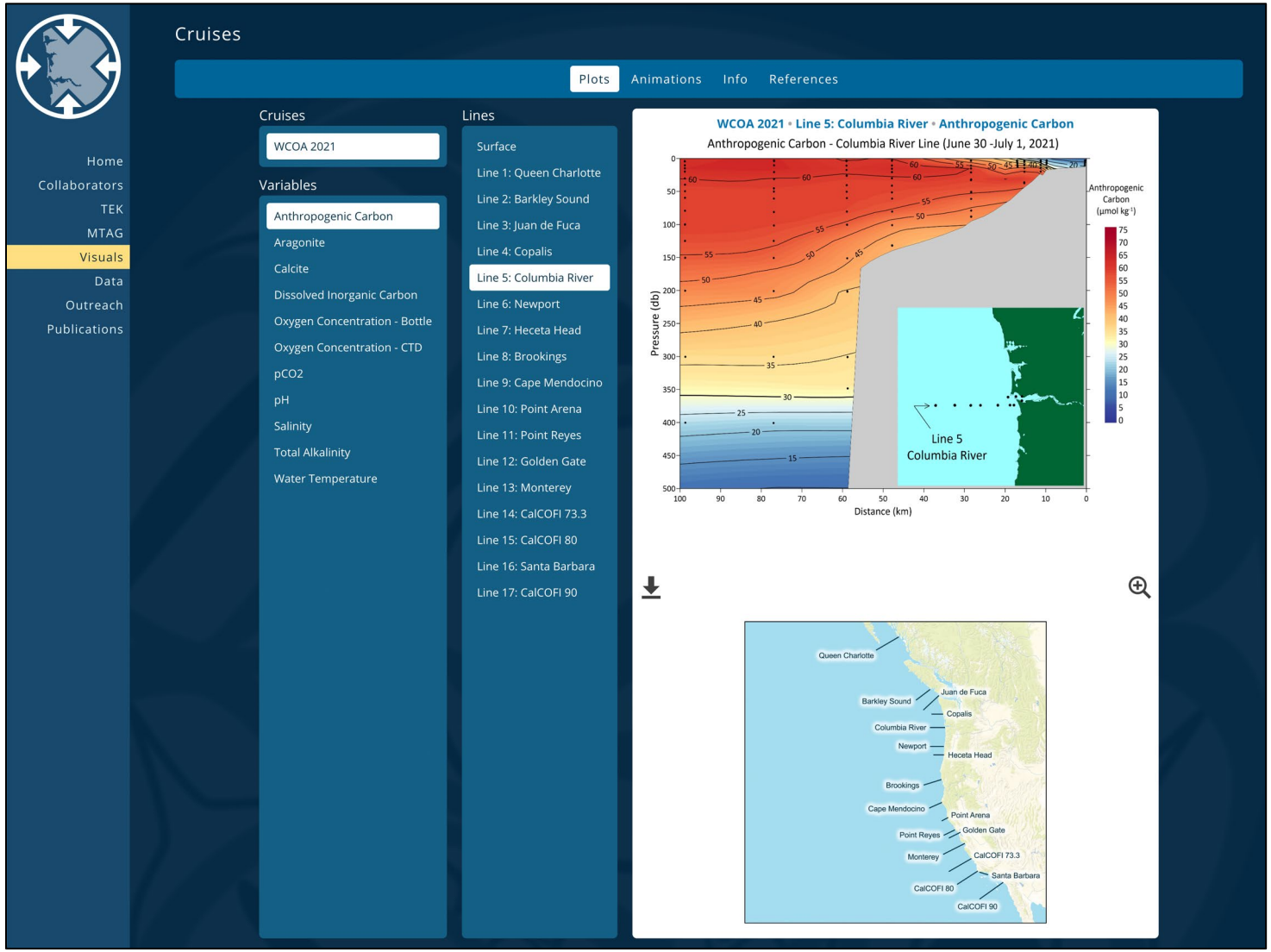
Troy Tanner

IOOS

NANOOS Website

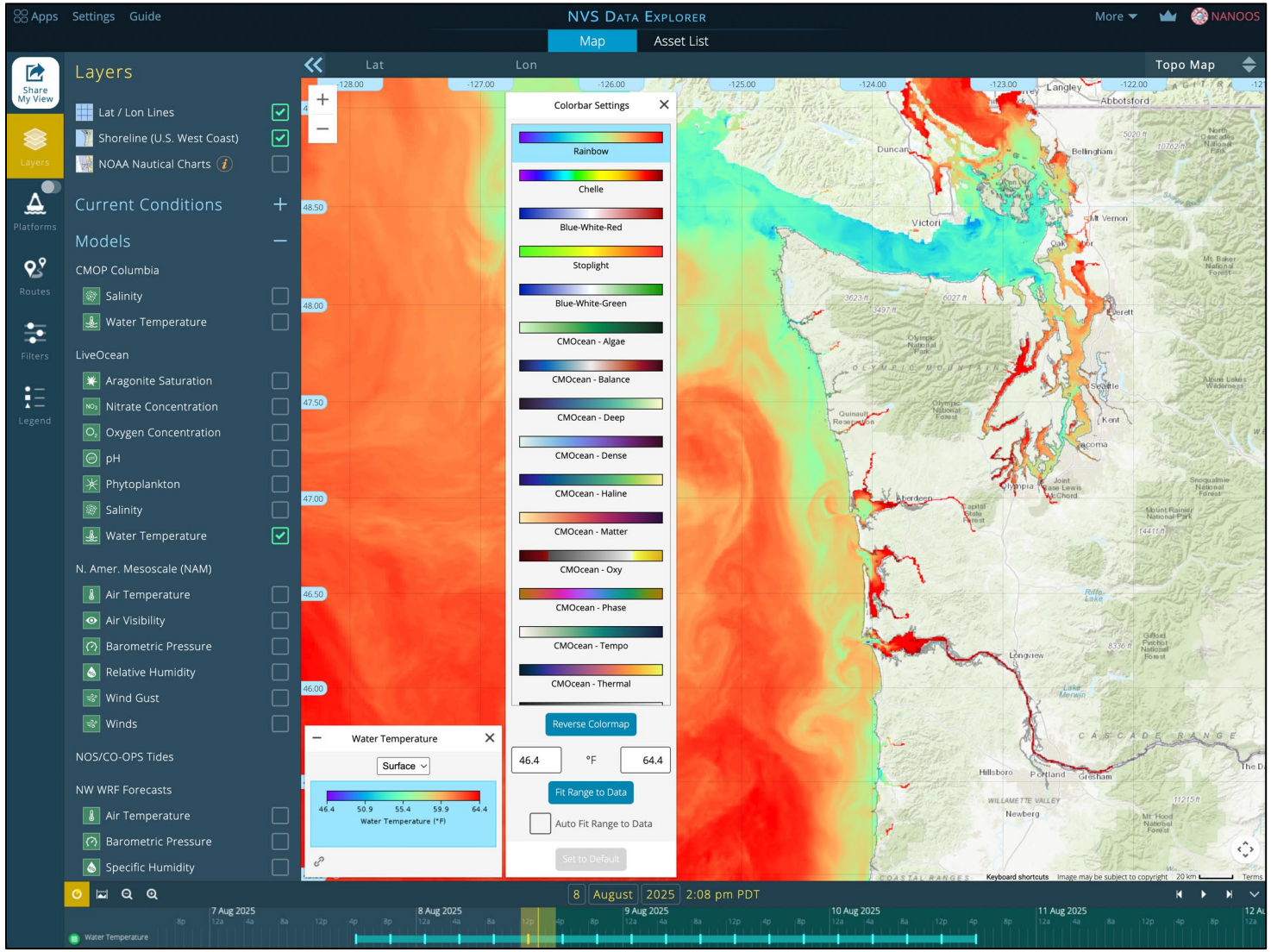
- Updated content on website
  - Slideshow
  - Videos
  - Documents
  - Etc.
- Updated content on product sites
  - J-SCOPE Product Site
  - HABs Product Site
  - Multi-stressors Product Site
- Updated core server and services
- Migration of HCDOP website

NANOOS Website: Multi-stressors Product



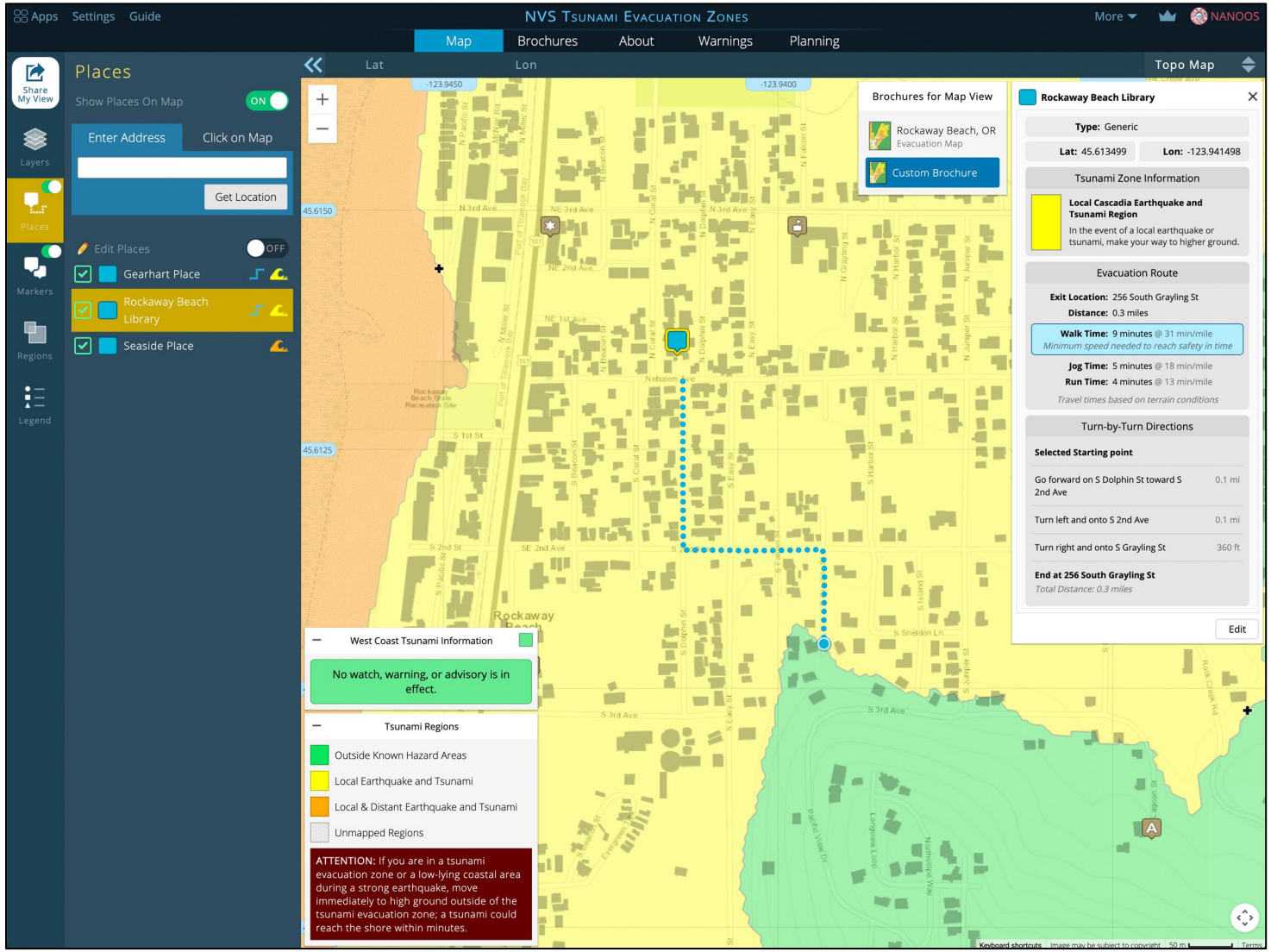
- Added new visuals to Multi-stressors product page
  - Cruise Plots
  - Upwelling Season Integrated Plots
- For cruises, animations are also available
- Users can click on plots to view in full-screen mode
- Users can download images (plots) and videos (animations)

NVS



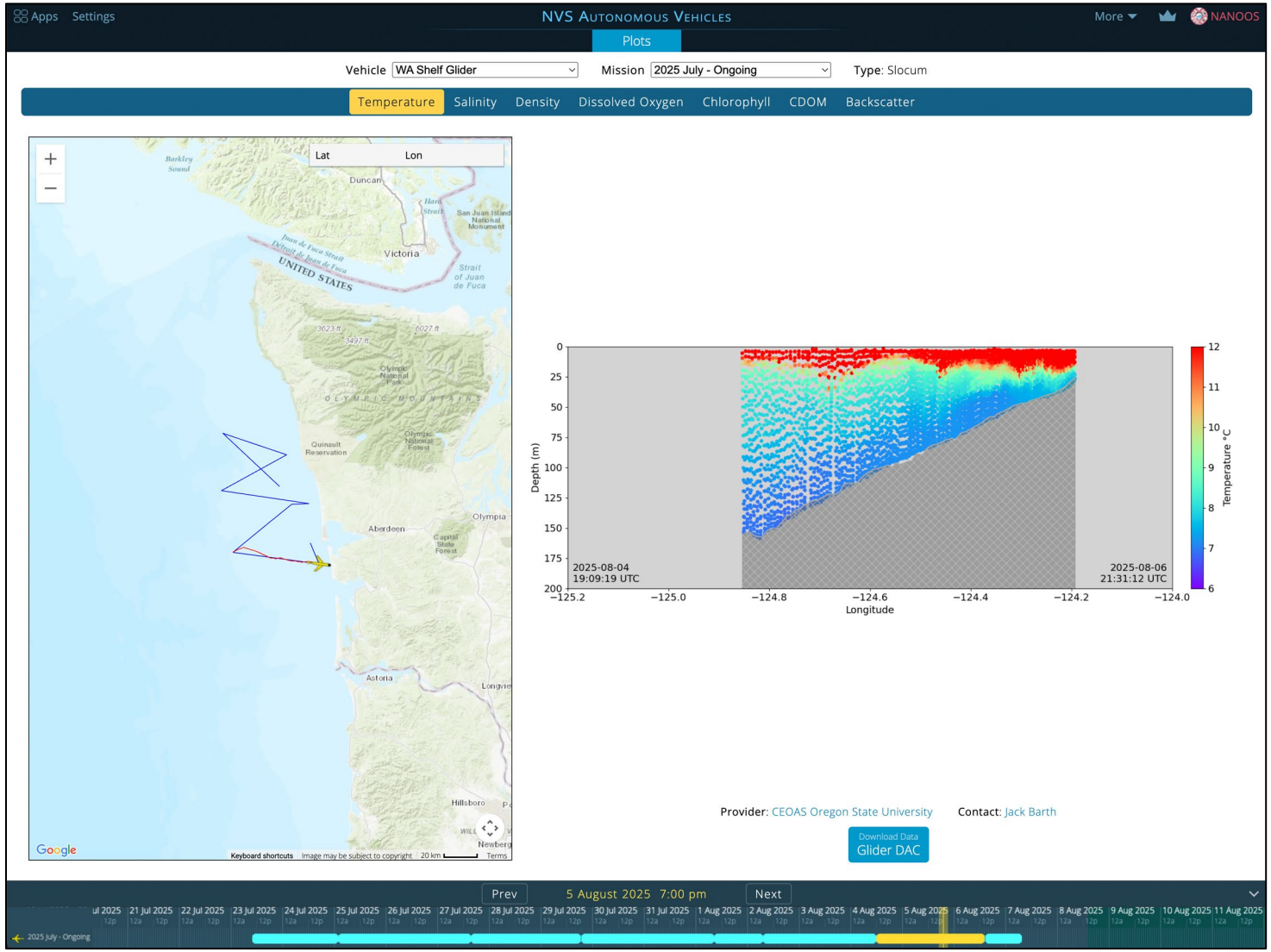
- Changed LiveOcean overlay to dynamic overlay
  - Users can select color bar from list
  - Users can set custom min and max values
  - Data range can be set to automatically fit overlay values
- Added WA-MOCI Index to Averages & Anomalies app
- Changed name of snapshot tool to ”Share My View” and moved to top of dock
- Changed name of climatology app to “Averages & Anomalies”

NVS: Tsunami Evacuation Products



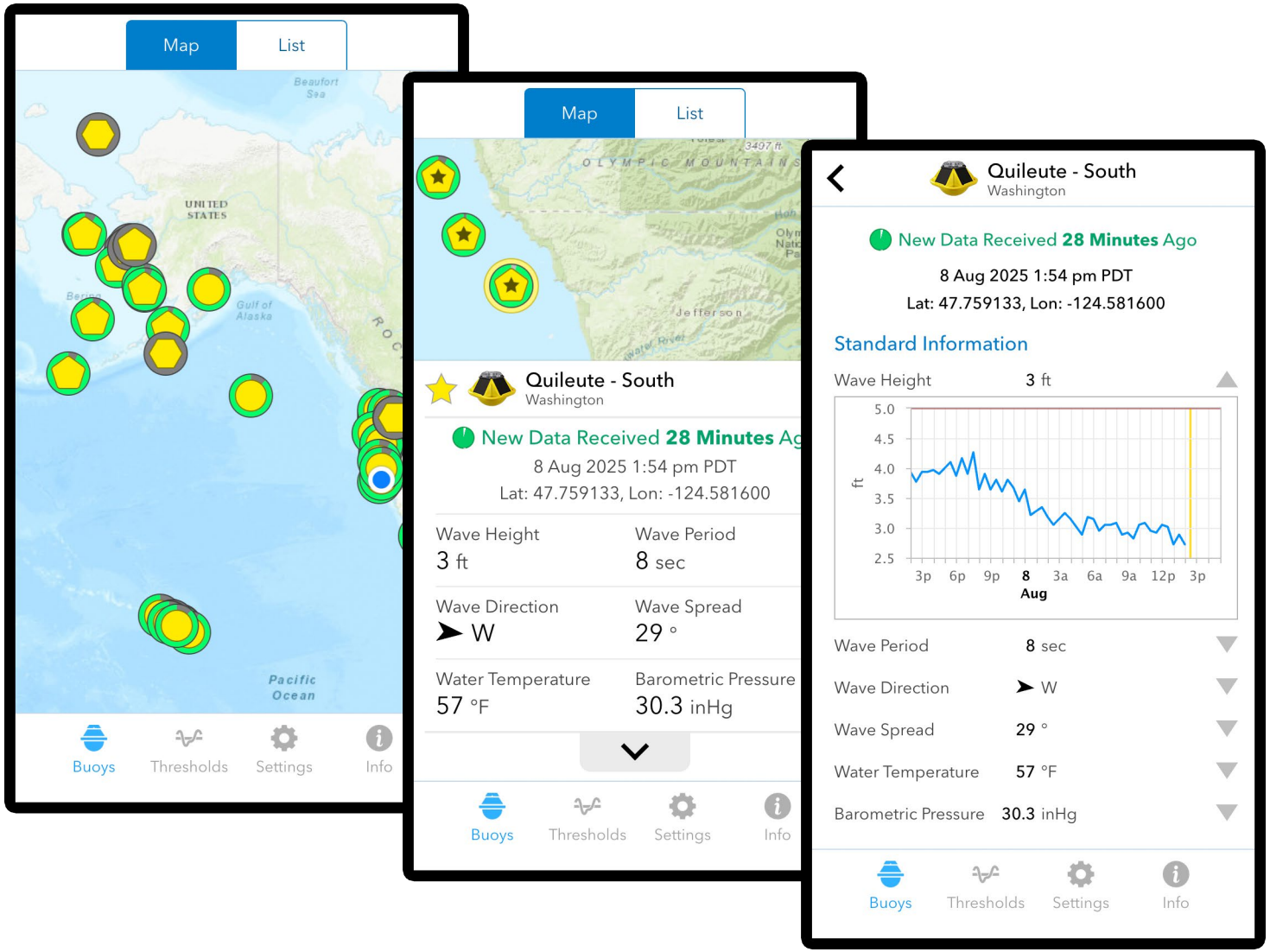
- Added routes with turn-by-turn directions to custom brochure and mobile apps
  - Detailed directions
  - Estimated distance and travel times for walk, jog, and run paces
  - User places and routes are automatically synced between mobile apps and NVS
- Updated regions, markers, and brochures as needed
- 23,000 visitors to app on 29 July 2025 after M8.8 Russian Kamchatka Peninsula Earthquake. Typical count is 350 visitors per day.

NVS: Unified Autonomous Vehicles App



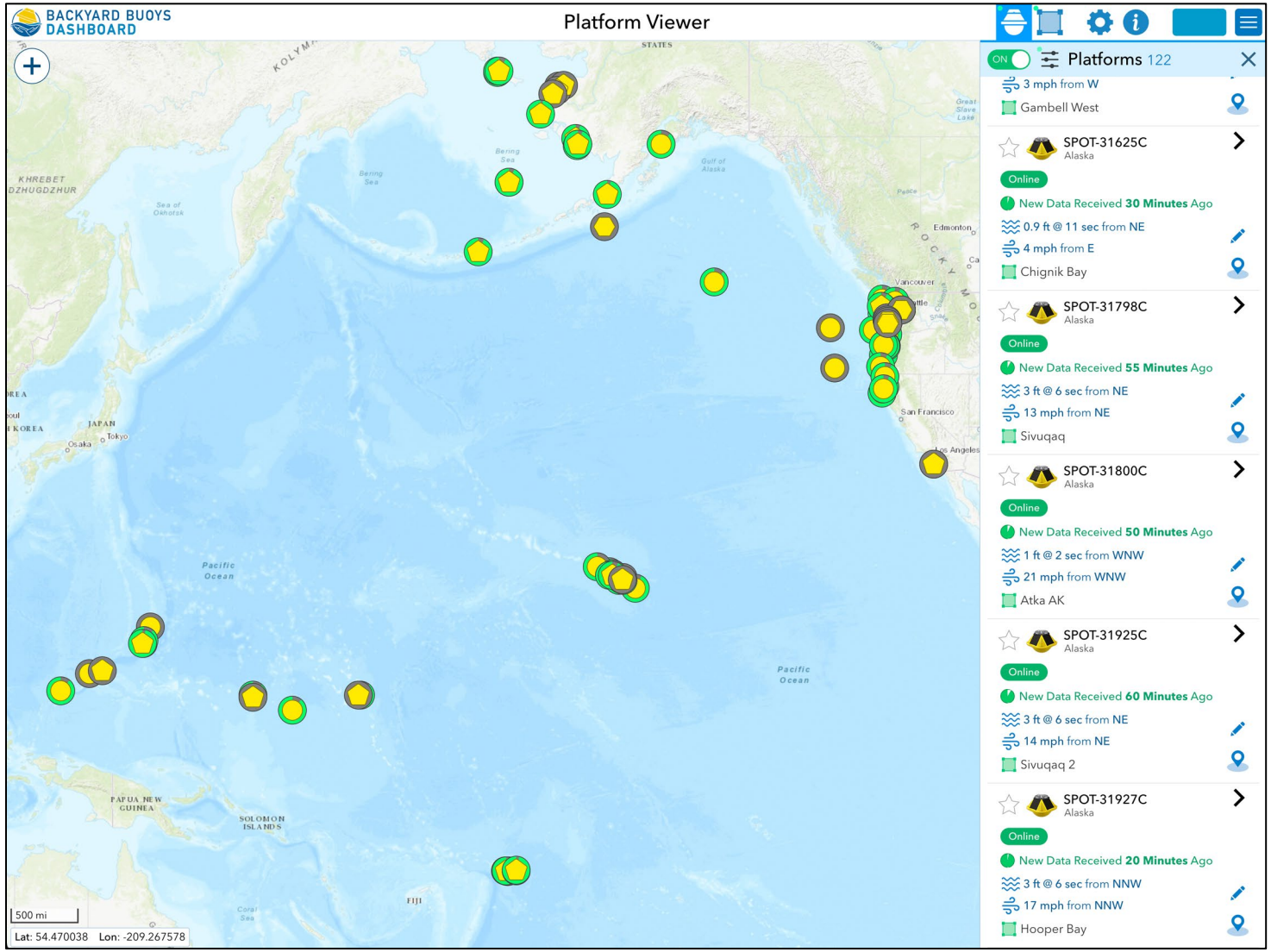
- Created new Autonomous Vehicles NVS App
- Combines previous Washington Shelf, Trinidad Head, La Push, and OOI glider apps into a single unified app
- Vehicles are selected from pulldown menu at top of app
- Supports multiple platform types
  - Seaglider, Slocum, Lightfish, etc.
- Normalizes presentation of vehicles on map, variables, timeline, and plots
- Link for each vehicle to data provider, such as the Glider DAC

Backyard Buoys: Mobile Apps



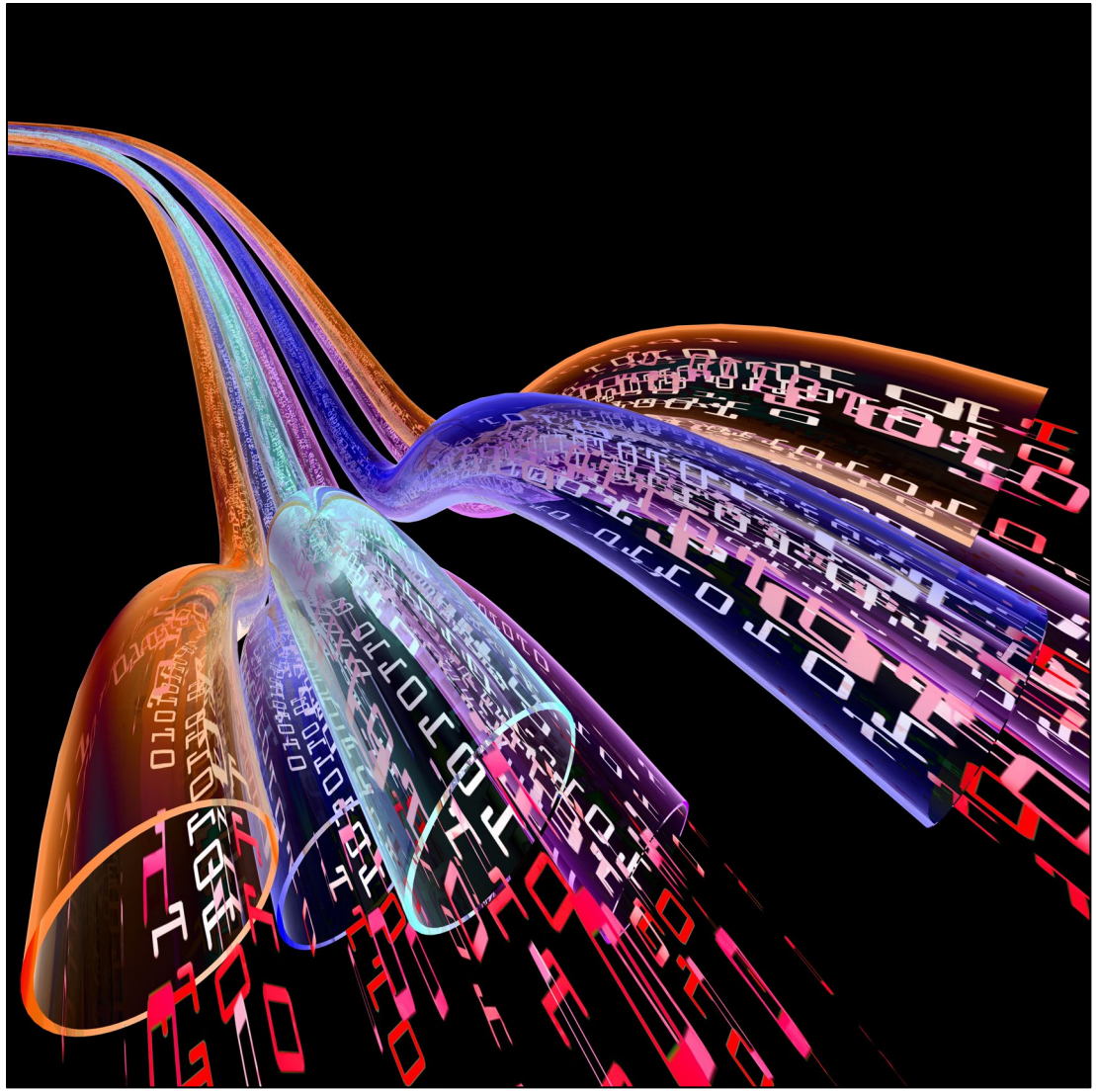
- iOS & Android
- Only platforms that have data within the past 30 days are shown in the app
- Users can favorite platforms to make them easier to find
- Time-series plots of recent data
- Users can choose between common and scientific units
- Multi-language support

Backyard Buoys: Management Dashboard



- Provides platform for planning and managing buoy deployments
- Only accessible to authorized users
- Users can add and edit platform information
- Filters for viewing various conditions
- Alerts to aid troubleshooting
- Specialized plots for visualizing known problems, such as tether entanglement
- Privileges organized by groups
  - Multiple people can manage platforms for a given group

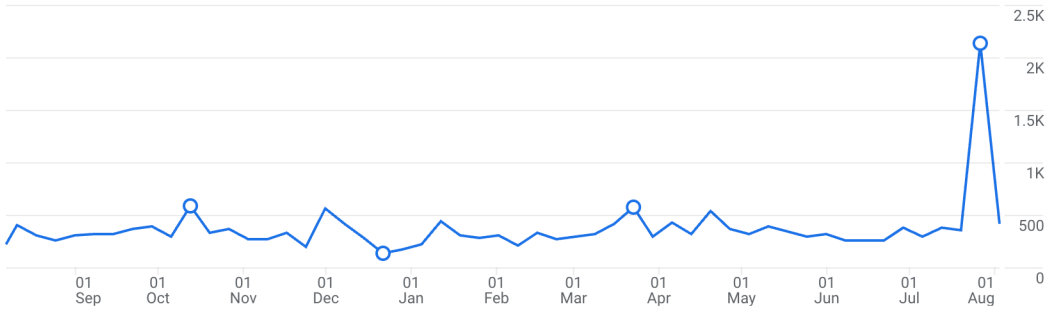
Data Harvesting



- Updated Ćhá?ba· harvester
- Updated ORCA harvester
  - Download and process profile data from ERDDAP
- Developed new harvester for Taylor Shellfish, Dabob Bay
  - Custom workflow for group without ability to share data via their own server
- Updated Backyard Buoys data services
  - Used by mobile apps and BB website
  - Data ingested by ERDDAP servers

Analytics: NANOOS Website: Overview

Active users	New users	Average engagement time per active user	Total revenue
17K	17K	1m 24s	$0.00

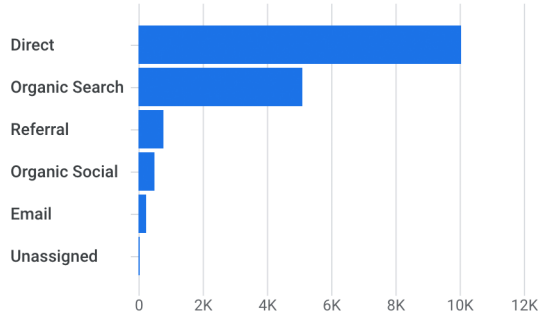


Views by Page title and screen class

PAGE TITLE AND SCREEN ...	VIEWS
NANOOS	18K
NANOOS : Mobile Apps	3.8K
HABs : Forecasts	2.2K
NANOOS : Products	2.1K
HABs : Real-Time	2K
NANOOS : About NANOOS - ...	1.8K
NANOOS : Cumulative Wind ...	1.3K

View pages and screens →

New users by
First user primary channel group (Default Channel Gr...

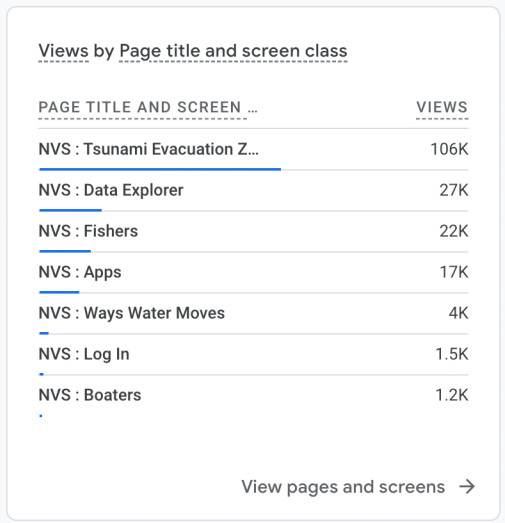


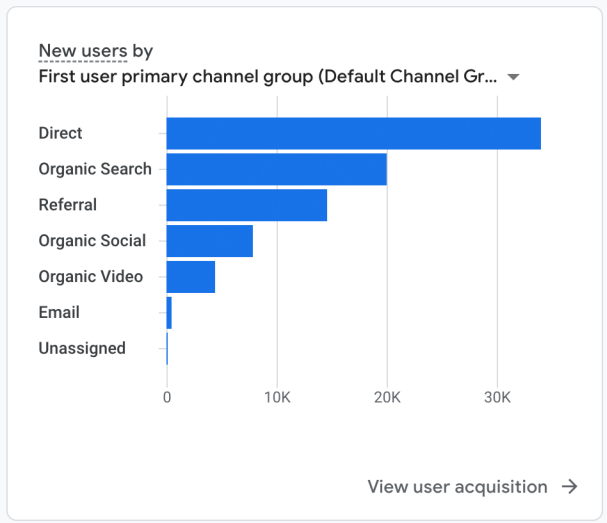
View user acquisition →

Analytics: NANOOS Website: 2024 - 2025 Comparison

	↓ Views	Active users	Views per active user	Average engagement time per active user	Event count All events	Key events All events	Total revenue
Total	74,213 vs. 66,829 ↑ 11.05%	14,058 vs. 13,015 ↑ 8.01%	5.28 vs. 5.13 ↑ 2.81%	1m 30s vs. 1m 32s ↓ -2.8%	166,318 vs. 152,460 ↑ 9.09%	0.00 vs. 0.00	$0.00 vs. $0.00
(not set)							
Aug 1, 2024 - Jul 15, 2025	28,681 (38.65%)	758 (5.39%)	37.84	11m 06s	30,596 (18.4%)	0.00 (–)	$0.00 (–)
Aug 1, 2023 - Jul 15, 2024	25,980 (38.88%)	695 (5.34%)	37.38	10m 46s	27,712 (18.18%)	0.00 (–)	$0.00 (–)
% change	10.4%	9.06%	1.22%	3.21%	10.41%	0%	0%
NANOOS							
Aug 1, 2024 - Jul 15, 2025	15,382 (20.73%)	7,646 (54.39%)	2.01	27s	48,432 (29.12%)	0.00 (–)	$0.00 (–)
Aug 1, 2023 - Jul 15, 2024	13,899 (20.8%)	6,822 (52.42%)	2.04	30s	45,179 (29.63%)	0.00 (–)	$0.00 (–)
% change	10.67%	12.08%	-1.26%	-9.49%	7.2%	0%	0%
NANOOS : Mobile Apps							
Aug 1, 2024 - Jul 15, 2025	2,278 (3.07%)	1,418 (10.09%)	1.61	20s	8,247 (4.96%)	0.00 (–)	$0.00 (–)
Aug 1, 2023 - Jul 15, 2024	1,673 (2.5%)	1,043 (8.01%)	1.60	25s	6,003 (3.94%)	0.00 (–)	$0.00 (–)
% change	36.16%	35.95%	0.15%	-20.15%	37.38%	0%	0%
HABs : Forecasts							
Aug 1, 2024 - Jul 15, 2025	2,032 (2.74%)	687 (4.89%)	2.96	35s	6,003 (3.61%)	0.00 (–)	$0.00 (–)
Aug 1, 2023 - Jul 15, 2024	1,815 (2.72%)	634 (4.87%)	2.86	41s	5,600 (3.67%)	0.00 (–)	$0.00 (–)
% change	11.96%	8.36%	3.32%	-12.72%	7.2%	0%	0%
NANOOS : Products							
Aug 1, 2024 - Jul 15, 2025	1,990 (2.68%)	780 (5.55%)	2.55	44s	5,056 (3.04%)	0.00 (–)	$0.00 (–)
Aug 1, 2023 - Jul 15, 2024	1,771 (2.65%)	763 (5.86%)	2.32	46s	4,707 (3.09%)	0.00 (–)	$0.00 (–)

Analytics: NVS: Overview





Analytics: NVS: 2024 - 2025 Comparison

	↓ Views	Active users	Views per active user	Average engagement time per active user	Event count All events	Key events All events	Total revenue
Total	170,345 vs. 142,458 ↑ 19.58%	54,530 vs. 43,299 ↑ 25.94%	3.12 vs. 3.29 ↓ -5.05%	2m 24s vs. 2m 27s ↓ -2.15%	562,105 vs. 463,745 ↑ 21.21%	0.00 vs. 0.00	$0.00 vs. $0.00
NVS : Tsunami Evacuation Zones							
Aug 1, 2024 - Jul 15, 2025	63,679 (37.38%)	35,838 (65.72%)	1.78	1m 38s	250,964 (44.65%)	0.00 (–)	$0.00 (–)
Aug 1, 2023 - Jul 15, 2024	42,428 (29.78%)	25,425 (58.72%)	1.67	1m 31s	171,104 (36.9%)	0.00 (–)	$0.00 (–)
% change	50.09%	40.96%	6.48%	7.35%	46.67%	0%	0%
NVS : Data Explorer							
Aug 1, 2024 - Jul 15, 2025	26,142 (15.35%)	7,837 (14.37%)	3.34	3m 54s	85,719 (15.25%)	0.00 (–)	$0.00 (–)
Aug 1, 2023 - Jul 15, 2024	17,428 (12.23%)	6,401 (14.78%)	2.72	3m 20s	62,610 (13.5%)	0.00 (–)	$0.00 (–)
% change	50%	22.43%	22.51%	16.8%	36.91%	0%	0%
NVS : Fishers							
Aug 1, 2024 - Jul 15, 2025	25,771 (15.13%)	5,989 (10.98%)	4.30	3m 37s	88,349 (15.72%)	0.00 (–)	$0.00 (–)
Aug 1, 2023 - Jul 15, 2024	3,588 (2.52%)	1,032 (2.38%)	3.48	3m 31s	12,226 (2.64%)	0.00 (–)	$0.00 (–)
% change	618.26%	480.33%	23.77%	2.93%	622.63%	0%	0%
NVS : Ways Water Moves							
Aug 1, 2024 - Jul 15, 2025	3,813 (2.24%)	1,389 (2.55%)	2.75	1m 49s	13,269 (2.36%)	0.00 (–)	$0.00 (–)
Aug 1, 2023 - Jul 15, 2024	1,270 (0.89%)	677 (1.56%)	1.88	1m 21s	4,592 (0.99%)	0.00 (–)	$0.00 (–)
% change	200.24%	105.17%	46.34%	33.69%	188.96%	0%	0%
NVS : Boaters							
Aug 1, 2024 - Jul 15, 2025	1,203 (0.71%)	548 (1%)	2.20	2m 14s	3,958 (0.7%)	0.00 (–)	$0.00 (–)
Aug 1, 2023 - Jul 15, 2024	1,272 (0.89%)	537 (1.24%)	2.37	2m 18s	4,267 (0.92%)	0.00 (–)	$0.00 (–)


End

Member updates

IIJA & IRA updates

IIJA:

Infrastructure Investment and Jobs Act

(formerly known as Bipartisan Infrastructure Law (BIL))

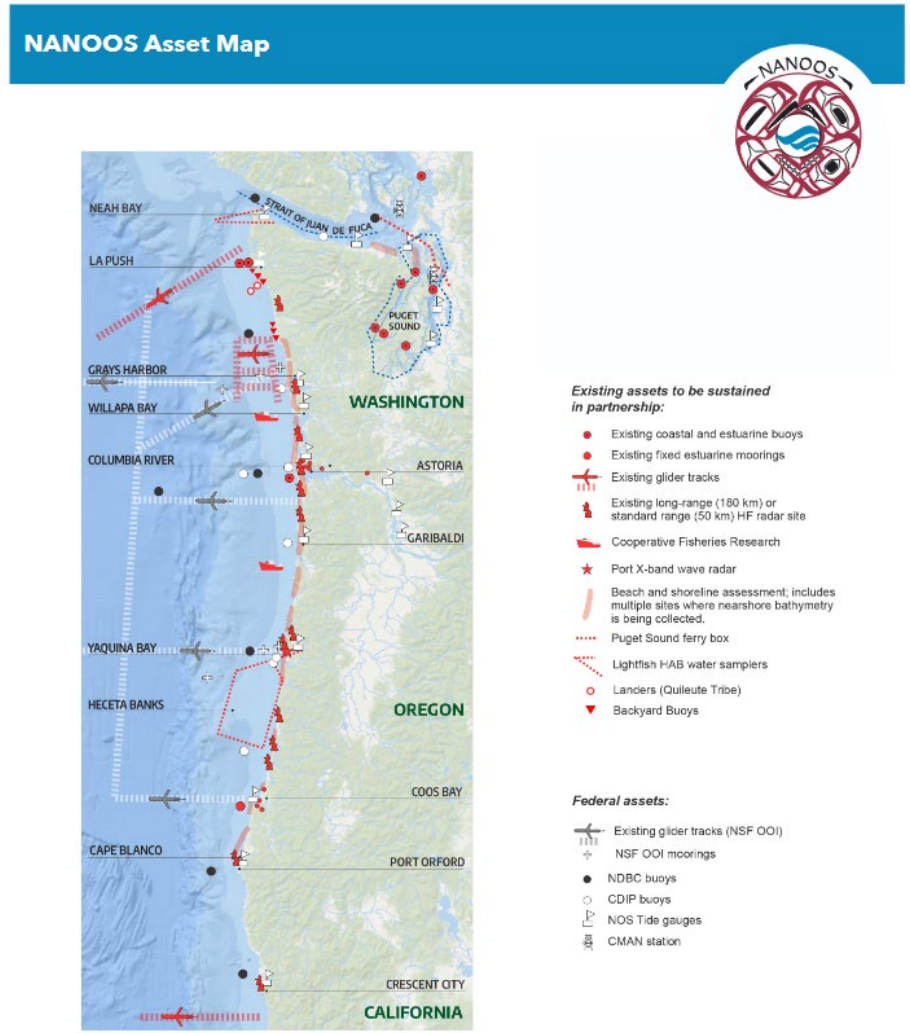
IIJA Y1 & 2 awarded and nearly complete

Y1

1. Upgrade Washington shelf coastal buoy
2. Replace the Central Washington Coast glider
3. Replace the Trinidad Head glider

Y2

4. Upgrade the Oregon shelf coastal buoy
5. Upgrade Puget Sound buoys
6. Upgrade Columbia River buoys
7. Replace La Push glider
8. Replace sensors on Oregon shelf coastal buoy



IIJA Y3 & 4 awarded

1. Upgrade shoreline monitoring equipment for Washington (WA) shorelines (Y3)
2. Upgrade shoreline monitoring equipment for Oregon (OR) shorelines (Y3)
3. Upgrade bathymetry mapping equipment for WA and OR beaches (Y3)
4. Upgrade Columbia River (CMOP) buoys (Y3)
5. Upgrade X-band radar at Port of Newport, OR (Y3, Y4)
6. Upgrade and modernize operations and capabilities of WA coastal moorings (Y3, Y4)
7. Upgrade and modernize CB-06 buoy off Coos Bay, OR (Y4)
8. Upgrade and modernize Puget Sound moorings (Y4, Y5)
9. Replace one WA Shelf glider (Y4)
10. Add PAM to WA Shelf and Trinidad Head glider lines (Y4, Y5)
11. Replace two HFRs (Y5)
12. Upgrade server hardware for DMAC and User Products development (Y4)
13. Host NANOOS-wide sensor intercalibration workshops (Y5)
14. Create and administer a Professional Development Support Program (Y4)
15. Create and administer an Equipment Support Program (Y5)

IRA:
Inflation Reduction Act

Topic 1 (NANOOS) &
Topic 2 (w/ National Coordination)

NANOOS IRA Topic 1 Activities

- Ecosystem Obs
- Waves, Water levels, Webcams
- People
- Infrastructure
- Products

Oceanography: Pink
HABs: Green
Coastal: Blue
Models: Yellow
NANOOS ops: Clear

System	Project	Institution	PI	Total	Theme
WA shelf buoy	Recap NEMO sensors, float, controller	UW	Mickett	**$250,000**	Infra, EcoObs
WA shelf buoy	Upgrade Winter Cha'ba to NRT and redesign for easier recovery	UW	Mickett	**$120,000**	Infra, EcoObs
OR shelf buoy	Replace lost equipment	OSU	Kosro, Hales	**$76,500**	In, EcoObs, WWW
South Slough NERR moorings	Replace piles and equipment	SSNERR	Helms	**$75,000**	Infra, EcoObs
PNW HABs	Sound Toxins	WSG	Litle	**$100,000**	EcoObs
PNW HABs	IFCB	UW	Chase	**$155,000**	EcoObs
PNW HABs	-80ºC lab freezer	UW	Trainer	**$20,000**	EcoObs
WA Shoreline	New drone, datum updates, product development	WA Ecology	Kaminsky	**$180,000**	Infra, WWW
OR Shoreline	datum updates, revisit old sites, product development	DOGAMI	Allan	**$180,000**	Infra, WWW
OSU ROMS	Postdoc for model product development	OSU	Zaron	**$350,000**	People, Products
Columbia River Model	Model improvements and hardware	CRITFC	Seaton	**$125,000**	Infra, People, Products
LiveOcean	hardware and storage	UW	MacCready	**$120,000**	Infra
Operational wave and currents forecast	model development	OSU	Haller	**$500,000**	WWW
NANOOS DMAC	hardware and storage	UW	Tanner	**$23,400**	Infra
NANOOS DMAC	DMAC staff	UW	Travis	**$384,000**	People
NANOOS OEE	Additional staff member	TBD		**$250,000**	People
NANOOS UPC	Bring Tanner, Dioso, and Stromecki to full time NANOOS for all 5 years	UW	Tanner	**$1,000,000**	People, Products
NANOOS Mgmt	Fiscal Admin	UW	Sawanobori	**$700,000**	People
NANOOS Mgmt	Mgmt & Coordination	UW	Newton	**$250,000**	People
Totals				**$4,858,900**	

NANOOS IRA Topic 2 Activities

System	Project	Institution	PI	Total	Theme
La Push glider line	ph + Nitrate	UW	Lee	**$351,000**	EcoObs
WA Shelf glider line	acoustic tag receivers	OSU	Barth	**$85,000**	EcoObs
WA Shelf glider line	pH + Nitrate	OSU	Barth	**$349,000**	EcoObs
Trinidad Head glider line	pH + Nitrate	OSU	Barth	**$245,500**	EcoObs
HAB Observations	Lightfish for offshore HAB monitoring	UW	Mickett	**$200,000**	EcoObs
PNW HABs	Cooperative Fisheries Research in WA (pilot)	OSU	Kavanaugh	**$240,000**	EcoObs
OTN	West Coast Node Data Wrangler	TBD		**$300,000**	EcoObs
Backyard Buoys	Sustain and grow BB	UW	Carini	**$600,000**	WWW
NANOOS DMAC	DMAC staff	UW	Carini	**$250,000**	Both
NANOOS OEE	Additional staff member	TBD	Newton	**$250,000**	Both
NANOOS Management	Fiscal Admin	UW	Newton	**$100,000**	Both
NANOOS Management	Mgmt & Coordination	UW	Newton	**$250,000**	Both
Totals				**$3,220,500**	

NANOOS activities exist within context of the national effort.

- Ecosystem Obs
- Waves, Water levels, Webcams

Biogeochemistry: Purple
HABs and Ocean Tracking Network: Green
Waves: Blue
NANOOS ops: Clear

NANOOS
Northwest Association of Networked Ocean Observing Systems

NANOOS Governance

NANOOS Governing Council business

- Executive Committee
- NANOOS Congressional Outreach
- NANOOS non-federal support

NANOOS Executive Committee

- Representational, elected, attend bi-monthly zoom meetings
- Welcoming two new reps, Rachel (NGO) and Rob (Industry)
- No terms up this year
- We have had several transitions

NANOOS GC Board 2025-2026

Academia:

- Parker MacCready, UW, Governing Council Board Member for UW
- Mike Kosro, OSU, Governing Council Board Member for OSU **(VICE CHAIR)**
- Misty Peacock, Northwest Indian College, Governing Council Member for Academia

State:

- Casey Dennehy, Ecology, Governing Council Board Member for Washington State Agencies
- Jon Allan, DOGAMI, Governing Council Board Member for Oregon State Agencies

Tribes:

- Khadijah Homolka, Port Gamble S'Klallam Tribe, Governing Council Board Member for Tribes
- Joe Schumacker, Quinault Indian Nation, Governing Council Board Member for Tribes

Tribal Support Organization:

- Elaine Harvey, Columbia River Inter-Tribal Fish Commission, Governing Council Board Member for Tribal Support Org.
- Osa Odum, Northwest Indian Fisheries Commission, Governing Council Board Member for Tribal Support Org.

Federal:

- Stephanie Moore, NOAA NWFSC, Governing Council Board Member for Washington Federal Offices
- Andy Lanier, Governing Council Board Member for Oregon Federal Offices

Industry:

- Margaret Pilaro, PCSGA, Governing Council Board Member for Industry
- Rob Ellison, Sea-Bird Scientific, Governing Council Board Member for Industry

NGO:

- Rachel Aronson, Maritime Blue, Governing Council Board Member for Non-Governmental Organizations
- Peter Steelquist, Surfrider, Governing Council Board Member for Non-Governmental Organizations

At Large:

- Kate Litle, WA Sea Grant, Governing Council Board Member At-Large
- Andrew Barnard, OSU, Governing Council Board Member At-Large **(CHAIR)**

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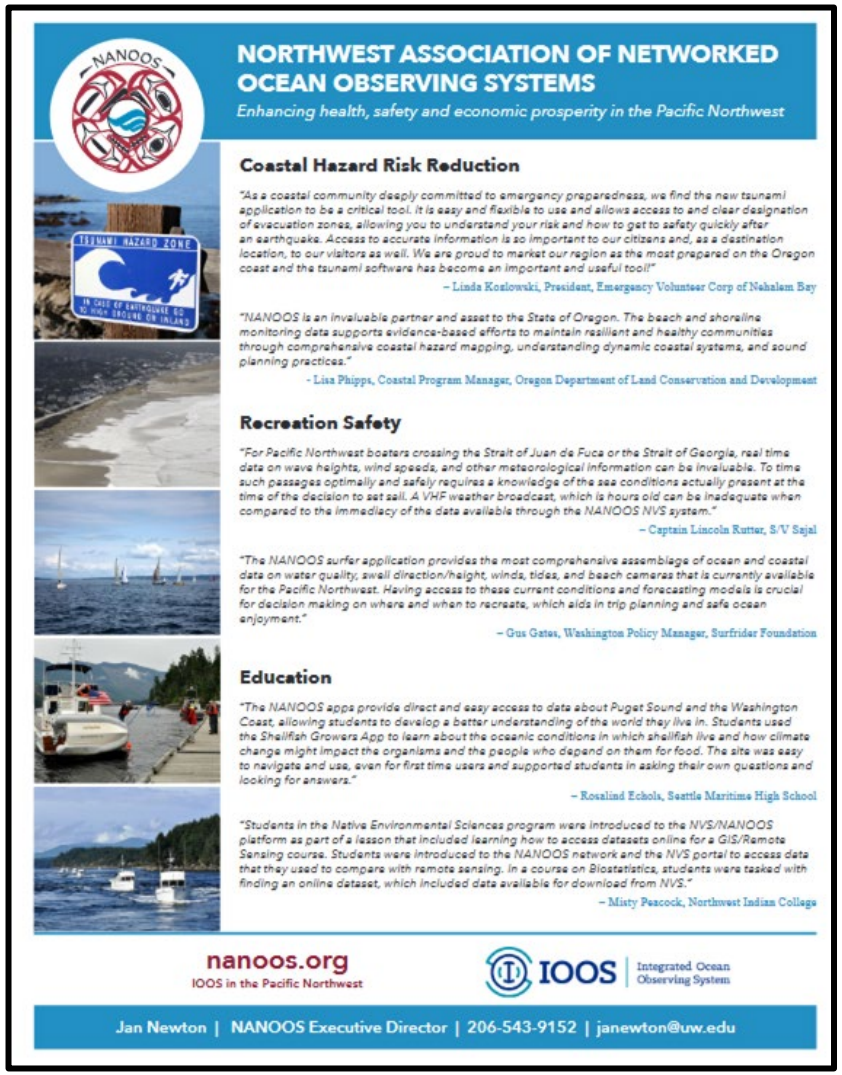
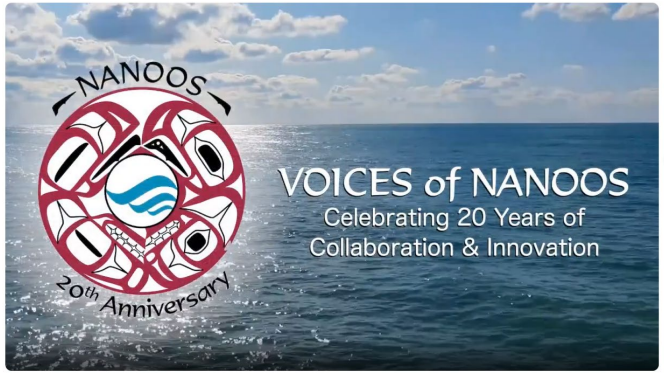
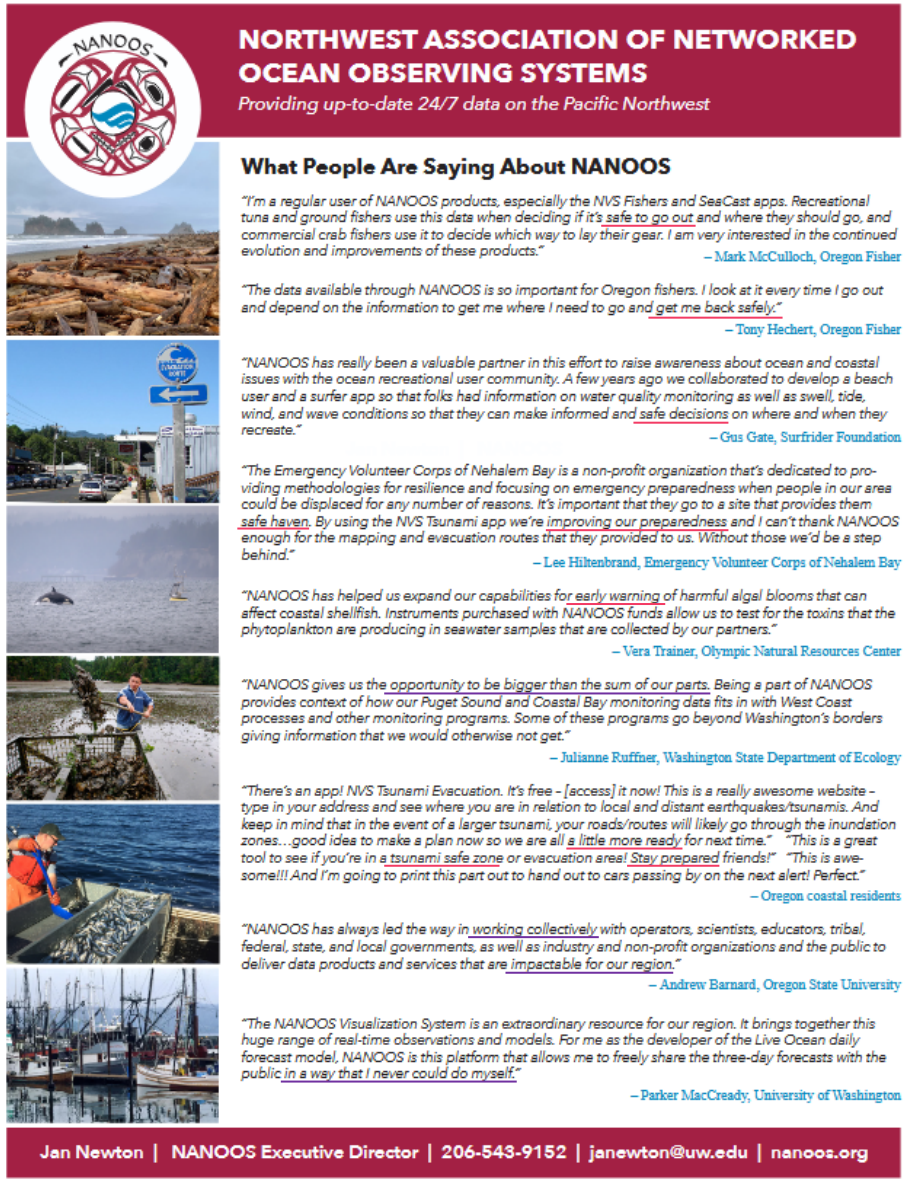
- Andrew Barnard, OSU, Governing Council Board Member At-Large **(CHAIR)**

Congressional Outreach



Congressional Outreach





NANOOS

NORTHWEST ASSOCIATION OF NETWORKED OCEAN OBSERVING SYSTEMS

Providing up-to-date 24/7 data on the Pacific Northwest

What People Are Saying About NANOOS

"I'm a regular user of NANOOS products, especially the NVS Fishers and SeaCast apps. Recreational tuna and ground fishers use this data when deciding if it's safe to go out and where they should go, and commercial crab fishers use it to decide which way to lay their gear. I am very interested in the continued evolution and improvements of these products."
– Mark McCulloch, Oregon Fisher

"The data available through NANOOS is so important for Oregon fishers. I look at it every time I go out and depend on the information to get me where I need to go and get me back safely."
– Tony Hechert, Oregon Fisher

"NANOOS has really been a valuable partner in this effort to raise awareness about ocean and coastal issues with the ocean recreational user community. A few years ago we collaborated to develop a beach user and a surfer app so that folks had information on water quality monitoring as well as swell, tide, wind, and wave conditions so that they can make informed and safe decisions on where and when they recreate."
– Gus Gate, Surfrider Foundation

"The Emergency Volunteer Corps of Nehalem Bay is a non-profit organization that's dedicated to providing methodologies for resilience and focusing on emergency preparedness when people in our area could be displaced for any number of reasons. It's important that they go to a site that provides them safe haven. By using the NVS Tsunami app we're improving our preparedness and I can't thank NANOOS enough for the mapping and evacuation routes that they provided to us. Without those we'd be a step behind."
– Lee Hiltenbrand, Emergency Volunteer Corps of Nehalem Bay

"NANOOS has helped us expand our capabilities for early warning of harmful algal blooms that can affect coastal shellfish. Instruments purchased with NANOOS funds allow us to test for the toxins that the phytoplankton are producing in seawater samples that are collected by our partners."
– Vera Trainer, Olympic Natural Resources Center

"NANOOS gives us the opportunity to be bigger than the sum of our parts. Being a part of NANOOS provides context of how our Puget Sound and Coastal Bay monitoring data fits in with West Coast processes and other monitoring programs. Some of these programs go beyond Washington's borders giving information that we would otherwise not get."
– Julianne Ruffner, Washington State Department of Ecology

"There's an app! NVS Tsunami Evacuation. It's free - [access] it now! This is a really awesome website - type in your address and see where you are in relation to local and distant earthquakes/tsunamis. And keep in mind that in the event of a larger tsunami, your roads/routes will likely go through the inundation zones…good idea to make a plan now so we are all a little more ready for next time." "This is a great tool to see if you're in a tsunami safe zone or evacuation area! Stay prepared friends!" "This is awesome!!! And I'm going to print this part out to hand out to cars passing by on the next alert! Perfect."
– Oregon coastal residents

"NANOOS has always led the way in working collectively with operators, scientists, educators, tribal, federal, state, and local governments, as well as industry and non-profit organizations and the public to deliver data products and services that are impactable for our region."
– Andrew Barnard, Oregon State University

"The NANOOS Visualization System is an extraordinary resource for our region. It brings together this huge range of real-time observations and models. For me as the developer of the Live Ocean daily forecast model, NANOOS is this platform that allows me to freely share the three-day forecasts with the public in a way that I never could do myself."
– Parker MacCready, University of Washington

Jan Newton | NANOOS Executive Director | 206-543-9152 | janewton@uw.edu | nanoos.org

"Safe, prepared, warning…"

Increase impact, collective

NANOOS takes DC !

Honoring Sen Cantwell and Rep Bonamici

NANOOS FUNDING AT RISK

Here's how it could affect you

The Northwest Association of Networked Ocean Observing Systems (NANOOS) provides critical coastal forecast and data that support national security, mariner and public safety, economic stability, international competitiveness, and public health. Eliminating or reducing funding would have far-reaching consequences to our community and economy.

WHAT IS AT STAKE?

SAVING LIVES & TAXPAYER DOLLARS

SAFETY AT SEA

NANOOS funds coastal radars tracking surface currents that can increase the efficiency and accuracy of search and rescue operations as well as identify and guide safe routes for navigation. *"I look at it every time I go out and depend on the information to get me where I need to go and get me back safely."*

TSUNAMI EVACUATION

NANOOS works with state agencies in Oregon and Washington to provide our publicly available tsunami evacuation route web and smartphone apps, a life-saving planning tool. *"By using the app we're improving our preparedness for evacuation routes and without it, we'd be a step behind."*

NAVIGATION + PORTS

NANOOS funds models and real-time wave data at ports and off our dangerous coasts, aiding bar pilots and all mariners for safe and informed passage, reducing risk. *"We rely on forecasts, real time buoy data, and wave and current models. NANOOS provides an excellent location for us to see and compare all the available data."*

PROTECTING JOBS & ECONOMIC GROWTH

SEAFOOD COMPETITIVENESS

NANOOS' network of real-time sensors and forecast models informs shellfish growers when most favorable growing conditions occur, working with the industry to get them the data they need. This protects jobs and hardens U.S. seafood markets from international competition. *"This current generation of shellfish farmer is reliant upon data and services from NANOOS."*

FISHING COMMERCE SUPPORT

NANOOS funded models and real-time buoy data are combined into an app that easily shows information for both vessel safety and favorable fish conditions. *"This excellent product benefits sport and commercial anglers directly, letting us be more effective and safe at the same time. This is what good government looks like and we need to protect these services."*

TECHNOLOGICAL INNOVATION

NANOOS partners with industries to enhance the effectiveness of technologies, thus increasing their marketability. We worked to adapt an autonomous device to remotely sample water for analysis to warn against shellfish harvest in the presence of toxins, and we are creating an expanded market for lower cost sensors to warn fishermen of low oxygen that could kill crab.

PROTECTING HEALTH & COASTAL COMMUNITIES

PUBLIC HEALTH SAFEGUARDING

NANOOS partners with and funds networks to sample, analyze for algal toxins, and post a bulletin to warn managers and public health officials who are responsible for issuing shellfish harvesting closures. Accuracy is vital: a non-closure can cost lives; a closure costs economic vitality. *"Early warning of risk allows us to adjust sampling and better protect the health of coastal residents."*

RECREATIONAL SAFETY ON THE WATER

NANOOS funds forecast models and real-time buoys, and aggregates data from federal and other partners, combining these in user friendly apps for boaters, surfers, and beachgoers. *"NANOOS addresses a critical gap in recreational boater safety. I'm confident that it will save lives."*

SHORELINE PROTECTION

NANOOS data are used by state agencies in Oregon and Washington for coastal flood hazard maps, monitoring coastal erosion, and preparedness. *"Coastal erosion is a major threat in our county. The monitoring supported by NANOOS has helped us solve many of our immediate erosion and flooding threats, adding greater resilience."*

NANOOS is 1 of the 11 Regional Associations of IOOS serving the USA

The quotes above are excerpted from online document https://www.nanoos.org/documents/key/nanoos_legislative_fact_sheet_2025.pdf, including attributions.

nanoos.org
IOOS in the Pacific Northwest

IOOS | Integrated Ocean Observing System

https://ioosassociation.org/

IOOS: Supporting the Restoration of America's Maritime Dominance

Strategic Ocean Intelligence for a Stronger Maritime Nation

The United States is reclaiming its leadership or seas by strengthening maritime security, revital maritime commerce, and investing in resilient o infrastructure.

The U.S. Integrated Ocean Observing System (I is a key national asset advancing these priorit delivering critical, real-time data that enha maritime domain awareness, supports safe efficient port operations, and ensures U.S. readi in Great Lakes, coastal, and offshore waters. A pu private partnership, IOOS operates through federally certified regional associations nationwic

Economic Power through Maritime Commerce

By supporting safe navigation and reducing delays, IOOS helps protect over $1.5 trillio annual maritime trade, and 2.4 million jobs, fue America's economic growth and gl competitiveness. By providing real-time, reli ocean data to port and bar pilots, IOOS h ensure the safe, efficient movement of ves through America's ports, reinforcing U.S. leader in maritime commerce and operational excelle The IOOS network supports national objective regions with limited resources, such as the Arctic, where the Alaska regional IOOS syste instrumental in building out capabilities services that promote a safer, secure, and effic maritime transportation system.

Restoring America's maritime dominance requires p U.S. maritime forces, industry, and communities with t

IOOS Association

Mor
https://ioos

IOOS: Supporting the Restoration of America's Seafood Competitiveness

A Smart Investment for a Competitive Seafood Future

The United States is revitalizing its seafood economy by strengthening domestic fisheries, expanding aquaculture, and investing in sustainable resource management for the ocean and the Great Lakes.

U.S. fisheries and aquaculture contribute more than $200 billion annually to the economy and support over 1.7 million jobs. The U.S. Integrated Ocean Observing System (IOOS) is America's vital ocean intelligence network, leveraging innovation and advancing emerging, cost-effective technologies to deliver real-time data on regional scales. A public-private partnership, IOOS operates through 11 federally certified regional associations nationwide. This information feeds directly into fisheries assessments and decision-support tools, strengthening our nation's waterfronts, fueling seafood industries coast to coast, and driving economic growth nationwide.

Strengthening Aquaculture Growth

Aquaculture is the fastest-growing food sector in America. IOOS supports this growth by delivering the environmental data essential for site selection and continuous monitoring of water quality, harmful algal blooms, and other ocean conditions. Aquaculture operators depend on this information to ensure the health and productivity of shellfish and finfish stocks.

Supporting Coastal Economies

Fisheries underpin the economic vitality and nutritional security of America's coastal communities. By supplying real-time data on water quality, currents, and ecosystem health, IOOS equips local managers and small businesses with the insights needed to optimize harvests and maintain safe supply chains for marine and freshwater fisheries. This data-driven support sustains millions of jobs and billions in economic output nationwide.

Future-Ready Fisheries & Harvests

IOOS delivers real-time ocean and Great Lakes data, helping commercial and recreational fishers make informed decisions. By monitoring when and where fish are most likely to occur, IOOS helps maximize the economic potential of U.S. fisheries today and in the future.

Restoring America's seafood competitiveness requires precision and innovation. IOOS data provides U.S. seafood producers, coastal managers, and communities with the ocean intelligence they need to lead the way into the future of seafood.

IOOS Association

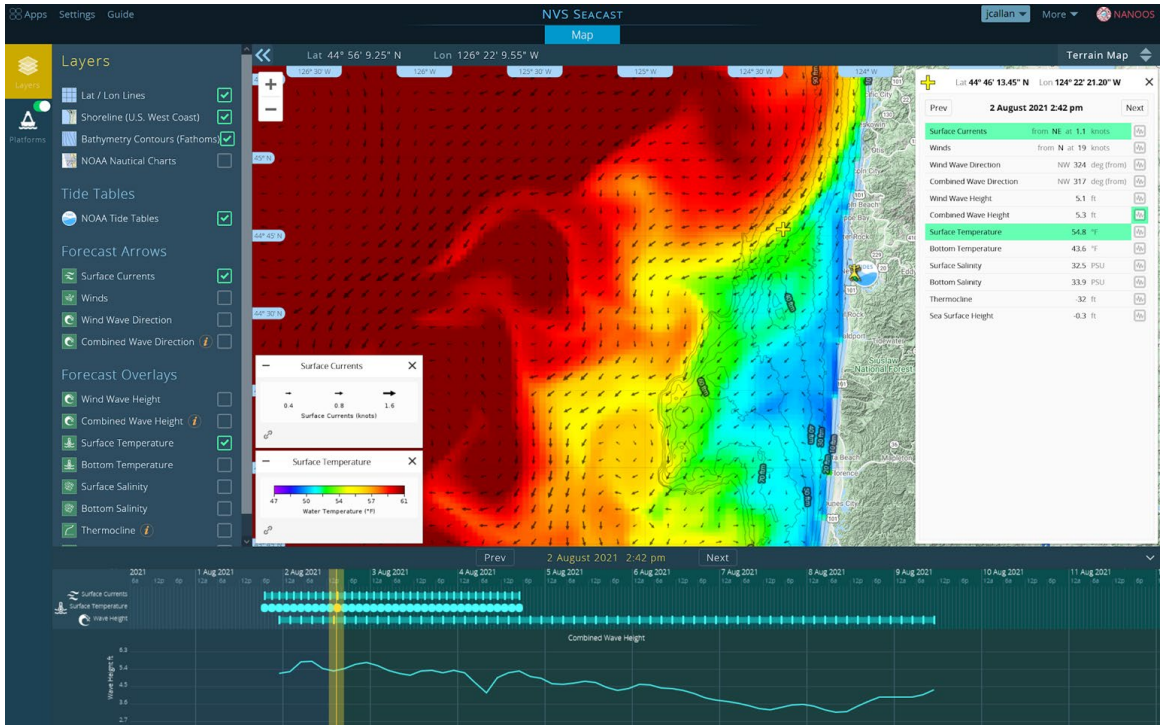
More info at
https://ioosassociation.org/

IOOS Integrated Ocean Observing System

FIND US ON LINKEDIN

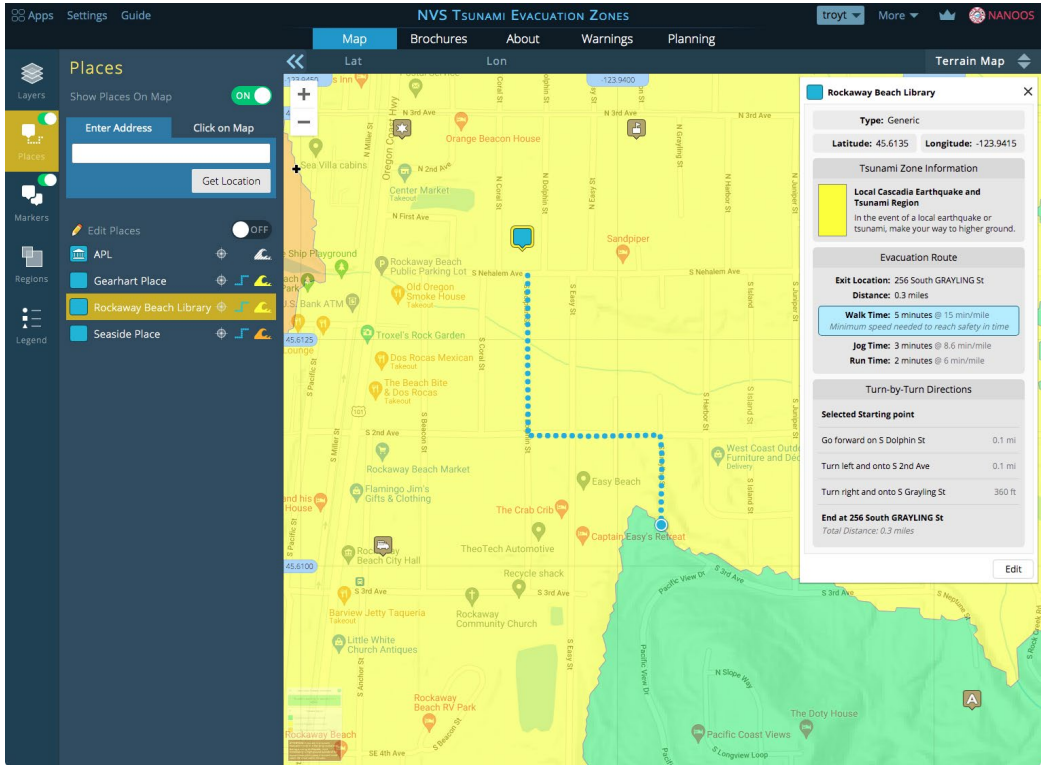
Safety at Sea

NANOOS funds coastal radars tracking surface currents that can increase the efficiency and accuracy of search and rescue operations as well as identify and guide safe routes for navigation. ***“I look at it every time I go out and depend on the information to get me where I need to go and get me back safely.”***



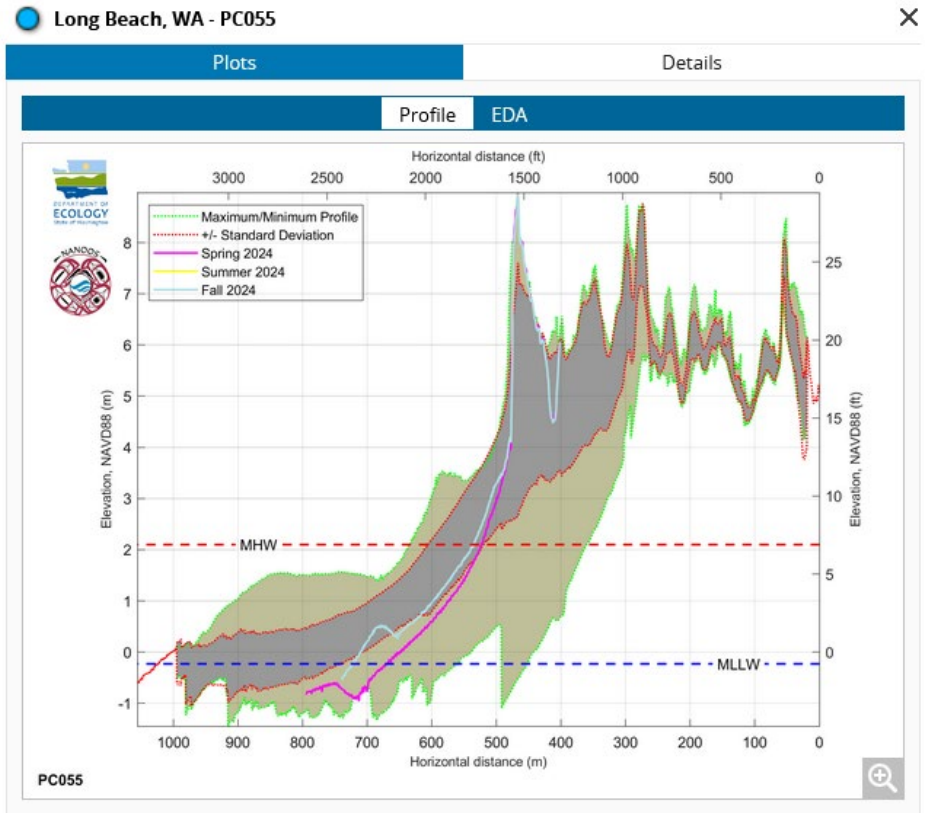
Tsunami Evacuation

NANOOS works with state agencies in Oregon and Washington to provide our publicly available tsunami evacuation route web and smartphone apps, a life-saving planning tool. ***"By using the app we're improving our preparedness for evacuation routes and without it, we'd be a step behind."***



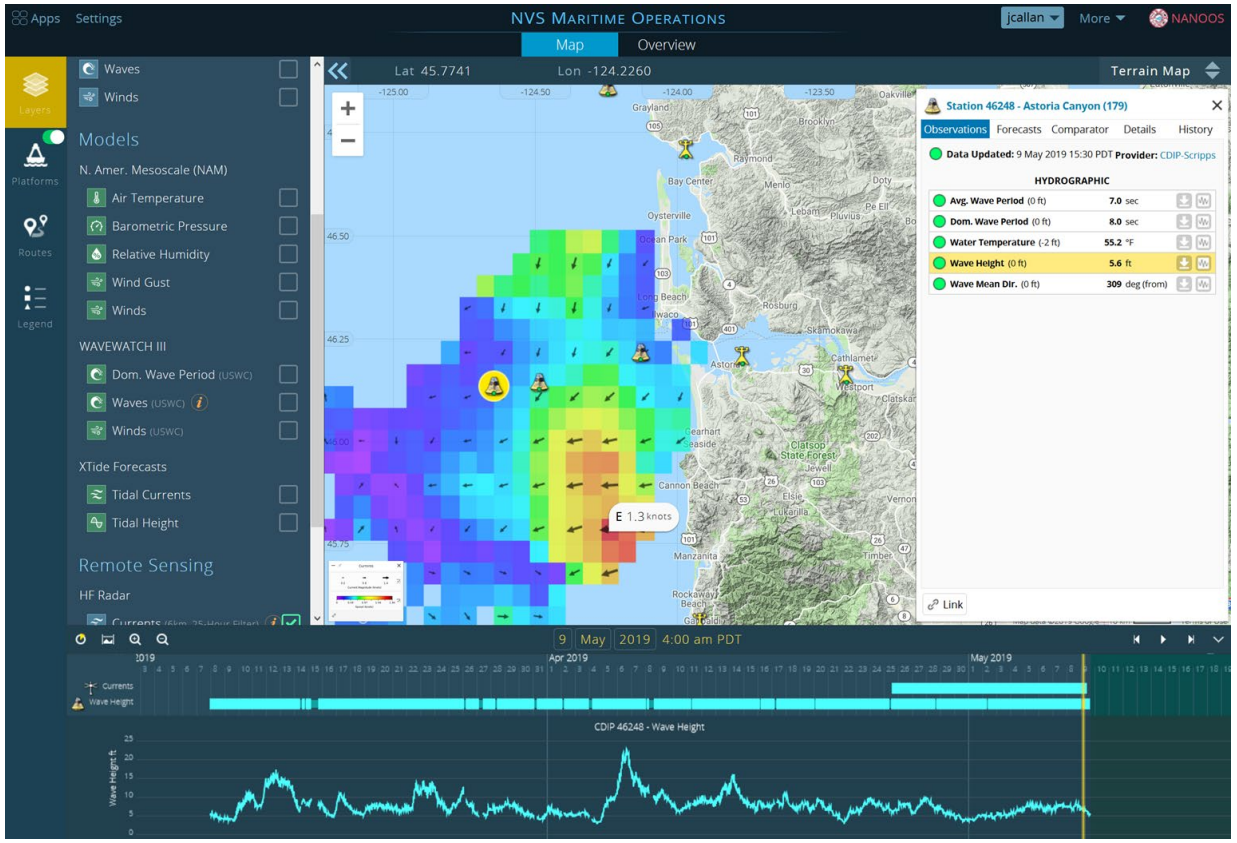
Shoreline Protection

NANOOS data are used by state agencies in Oregon and Washington for coastal flood hazard maps, monitoring coastal erosion, and preparedness. ***"Coastal erosion is a major threat in our county. The monitoring supported by NANOOS has helped us solve many of our immediate erosion and flooding threats, adding greater resilience."***



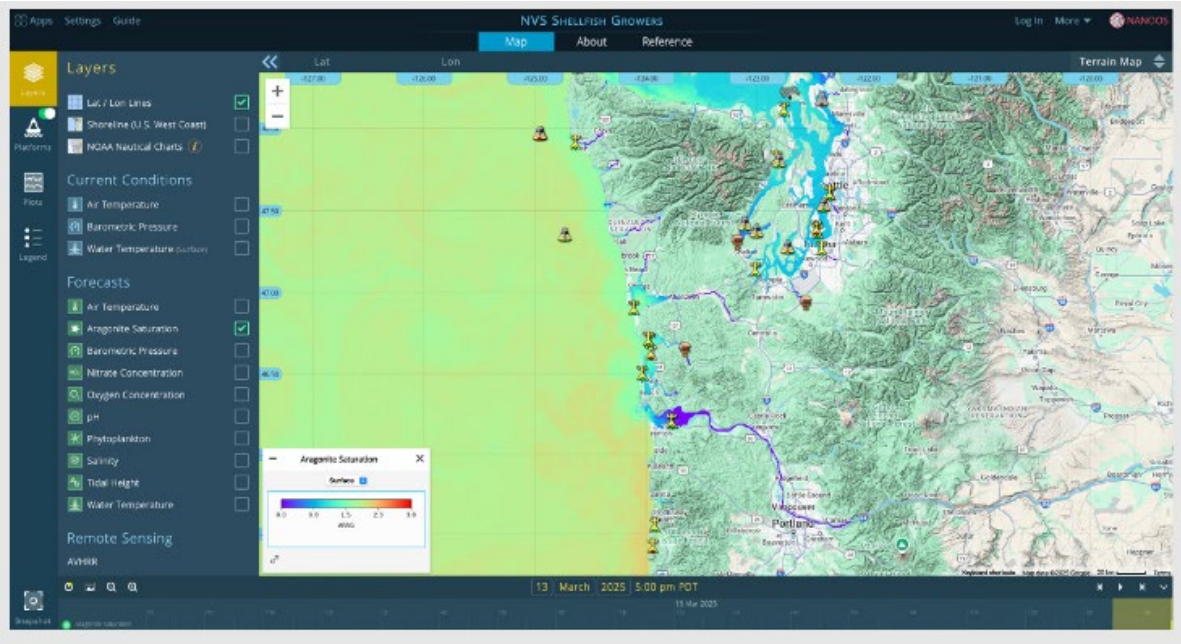
Navigation & Ports

NANOOS funds models and real-time wave data at ports and off our dangerous coasts, aiding bar pilots and all mariners for safe and informed passage, reducing risk. ***"We rely on forecasts, real time buoy data, and wave and current models. NANOOS provides an excellent location for us to see and compare all the available data."***



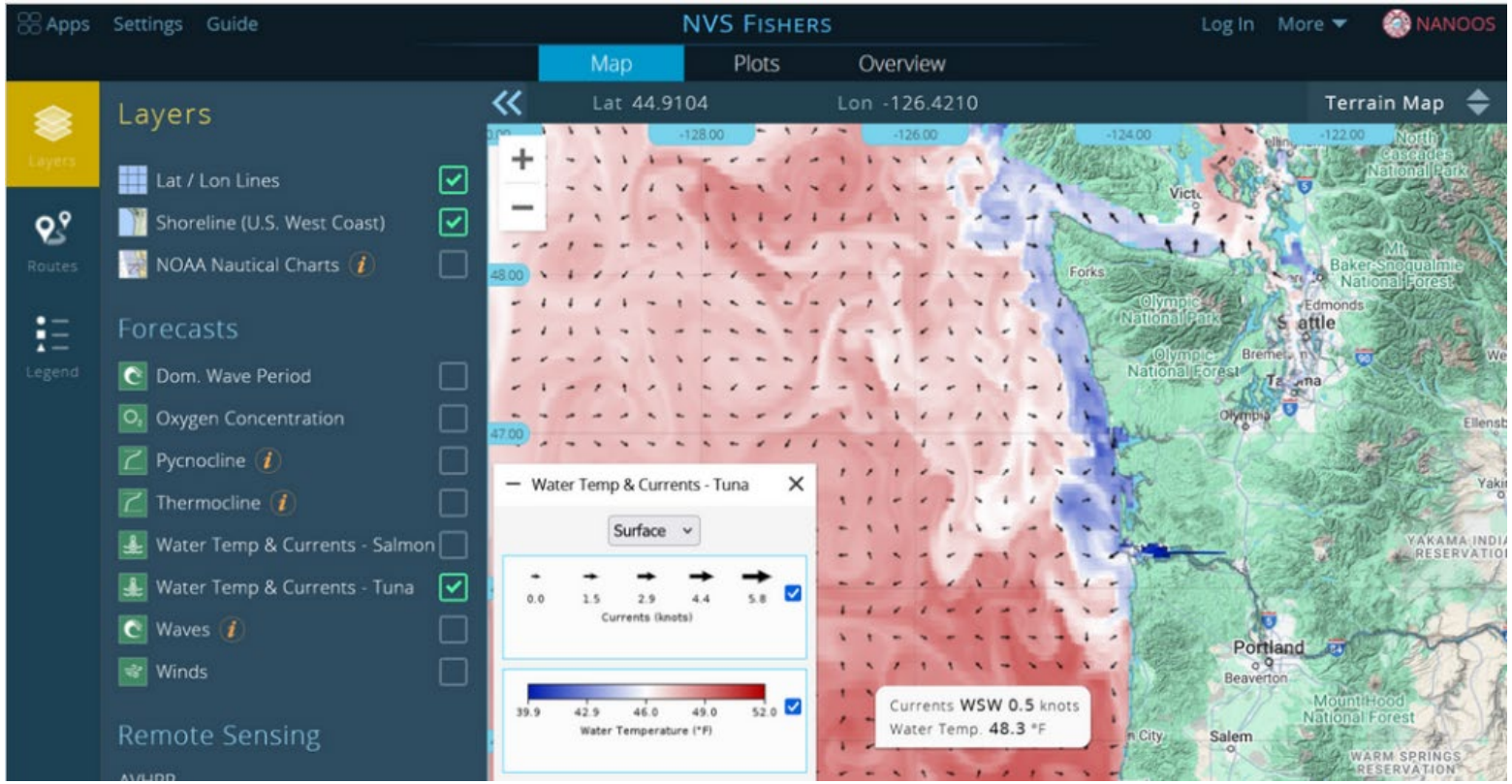
Seafood Competitiveness

NANOOS' network of real-time sensors and forecast models informs shellfish growers when most favorable growing conditions occur, working with the industry to get them the data they need. This protects jobs and hardens U.S. seafood markets from international competition. ***"This current generation of shellfish farmer is reliant upon data and services from NANOOS."***



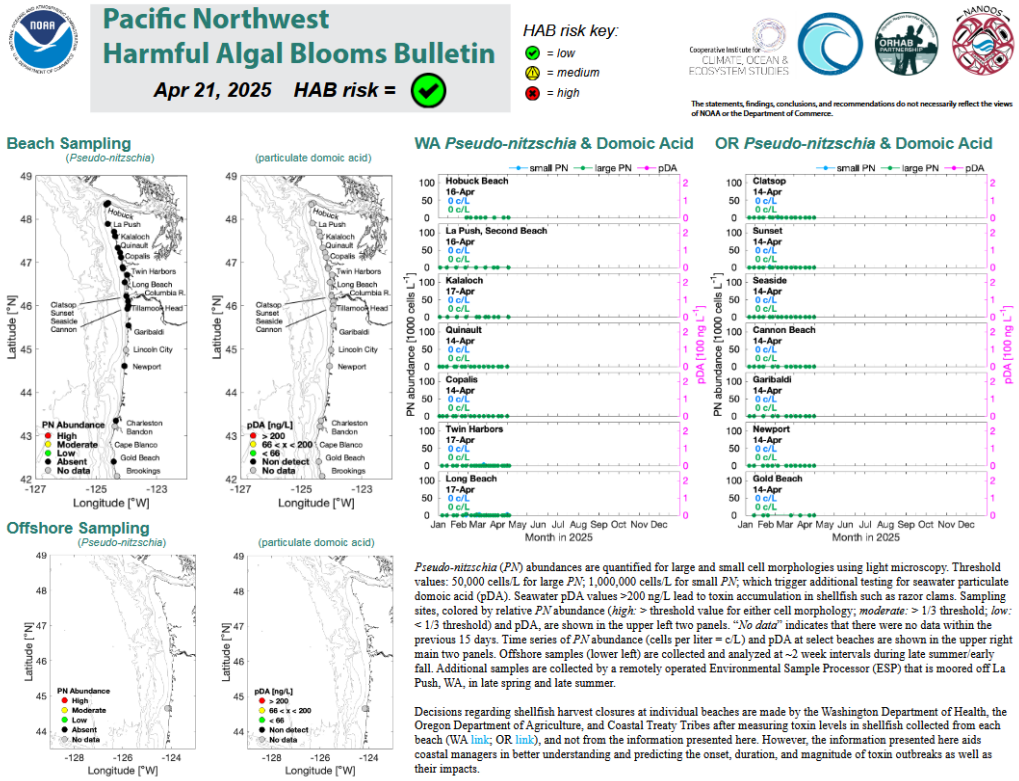
Fishing Commerce Support

NANOOS funded models and real-time buoy data are combined into an app that easily shows information for both vessel safety and favorable fish conditions. ***"This excellent product benefits sport and commercial anglers directly, letting us be more effective and safe at the same time. This is what good government looks like and we need to protect these services."***



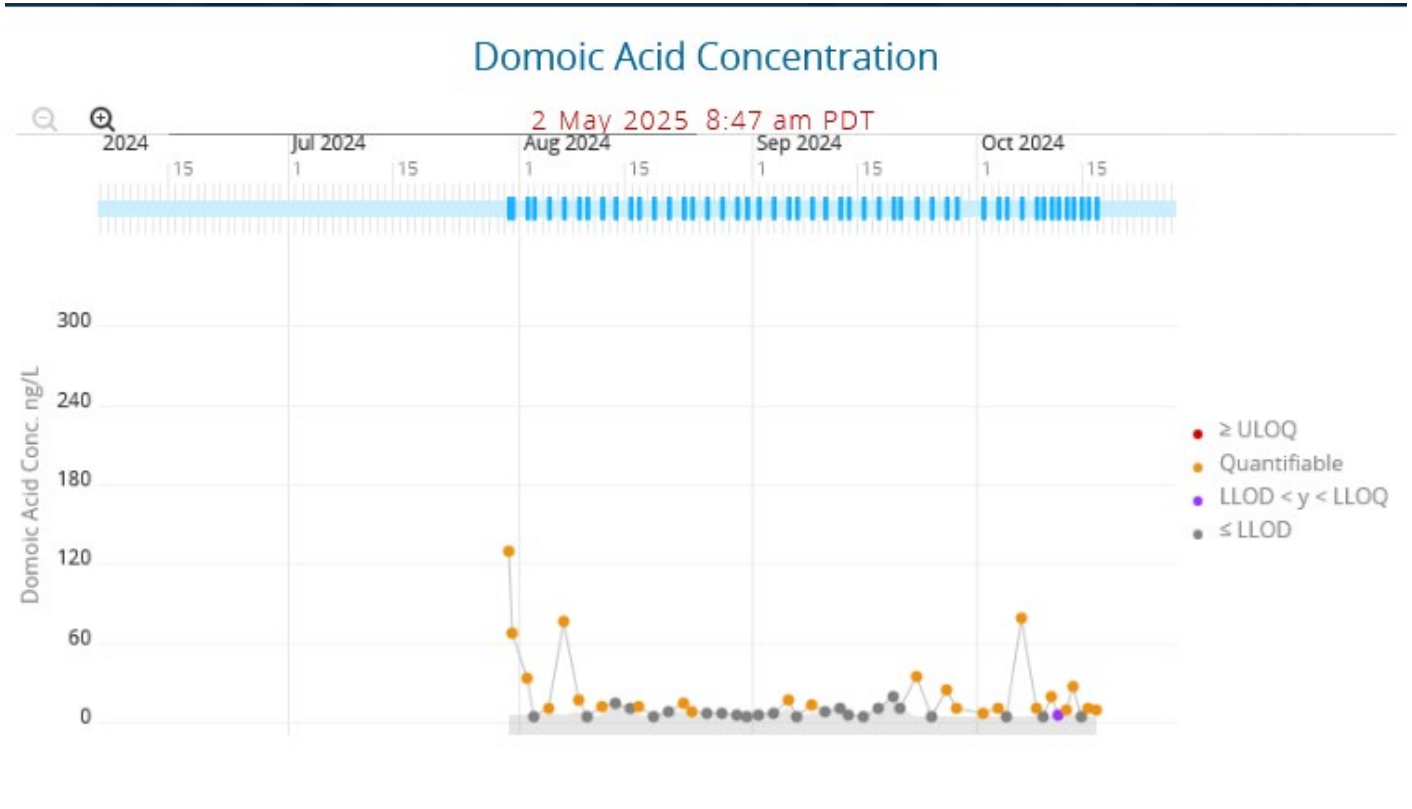
Public Health Safeguarding

NANOOS partners with and funds networks to sample, analyze for algal toxins, and post a bulletin to warn managers and public health officials who are responsible for issuing shellfish harvesting closures. Accuracy is vital: a non-closure can cost lives; a closure costs economic vitality. ***"Early warning of risk allows us to adjust sampling and better protect the health of coastal residents."***



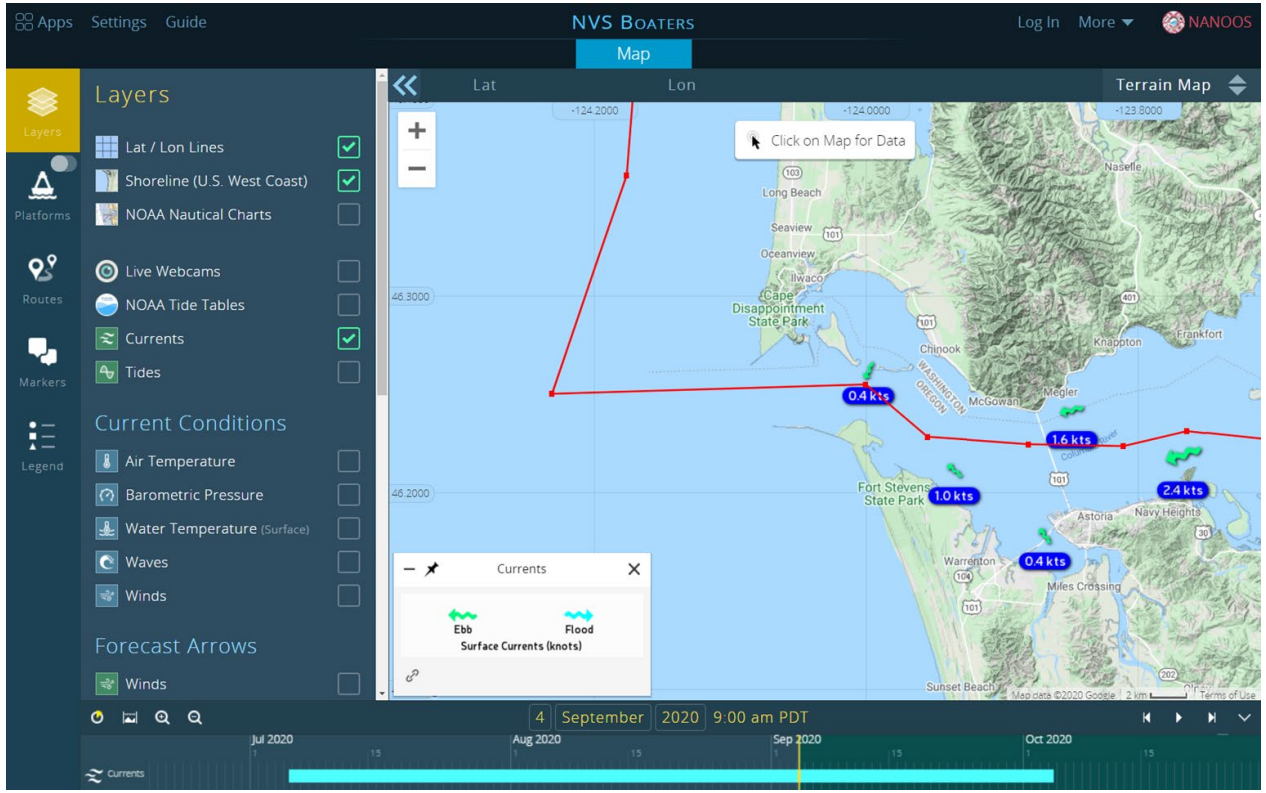
Technological Innovation

NANOOS partners with industries to enhance the effectiveness of technologies, thus increasing their marketability. We worked to adapt an autonomous device to remotely sample water for analysis to warn against shellfish harvest in the presence of toxins, and we are creating an expanded market for lower cost sensors to warn fishermen of low oxygen that could kill crab.



Recreational Safety on the Water

NANOOS funds forecast models and real-time buoys, and aggregates data from federal and other partners, combining these in user friendly apps for boaters, surfers, and beachgoers. ***"NANOOS addresses a critical gap in recreational boater safety. I'm confident that it will save lives."***



IOOS Association Dues

NANOOS pays annual $1000 non-federal dues to the IOOS Association

For last year, this was paid by:

– PCSGA

THANK YOU!!!

Next 5-y NOFO

Next 5-y proposal opportunity

- Information to date
  - ???
- Strategy
  - Stay the course

Diversifying NANOOS funding

Action Items and AOB

Adjourn and Thank you!!!