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# Endurance Array Status and Community Engagement

Ed Dever and OOI Endurance Array team  
2024-05-08



# Outline

- Staffing
- 2024 Turn Cruises
- Platform status
- Community Engagement





# The EA Team

- Stuart Pearce identified as EA cybersecurity contact.
- Raelynn Heintz took over as WFP lead.
- **Currently recruiting 1 platform technician (down one FTE since 1 April)**

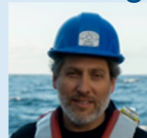
13 **12** FTE

Principal Investigator/  
Project Scientist



Ed Dever  
0.6 FTE

Project Management



Jon Fram  
0.9 FTE

Finance



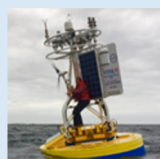
Pei Kupperman  
0.45 FTE

Field Ops And  
Mechanical Lead



Alex Wick  
1 FTE

Electronics Lead



Steve Lambert  
1 FTE

Data Lead



Chris Wingard  
1 FTE

Moorings



Kristin Politano  
1 FTE

Gliders



Stuart Pearce  
1 FTE

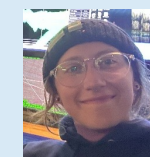
Platform Leads

CSPPs



Mari Aguirre  
1 FTE

WFP



Raelynn Heintz  
0.2 FTE

Undergraduate Student  
Research Assistants  
0.2 FTE

Surge  
Technicians  
1.65 FTE

**Platform  
Technicians  
2 FTE**



# Endurance Array Turn Cruises

## Endurance 20 Spring 2024

- R/V Sikuliaq
- 29 March – 11 April 2024
- Newport – Newport, 2 legs
- Cruise was early, some replanning needed due to weather
- 9/16” heavy lift winch line with regrooved sheave UNOLS App A Exemption process

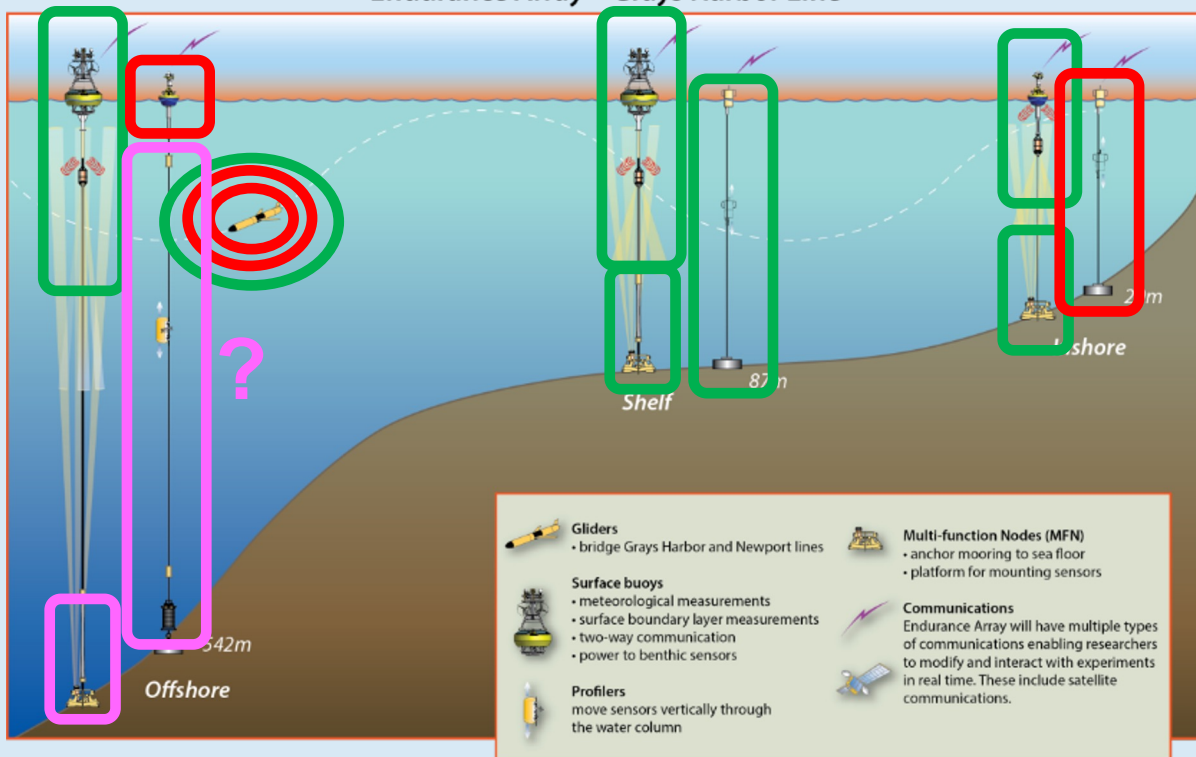
## Endurance 21 Fall 2024

- R/V Sikuliaq
- 5 – 20 October 2024
- Newport – Newport, 2 legs
- Scheduled late in the season, weather could be a challenge
- 9/16” heavy lift winch line plus new sheave UNOLS App A exemption process

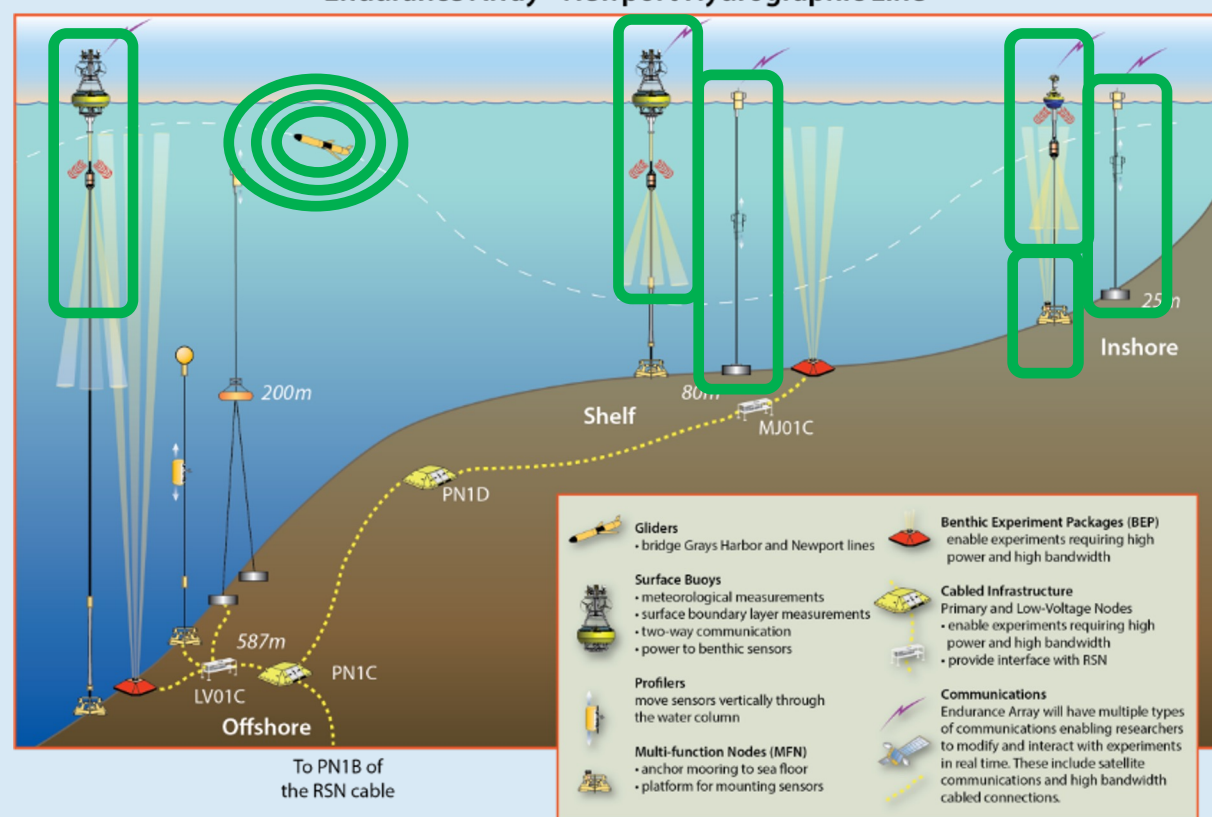


# Endurance Array platform status

Endurance Array – Grays Harbor Line



Endurance Array - Newport Hydrographic Line



[Array status updates are posted weekly to OOI Discourse](#)

Inshore Washington CSCP deployment scheduled for 2024-06-17.

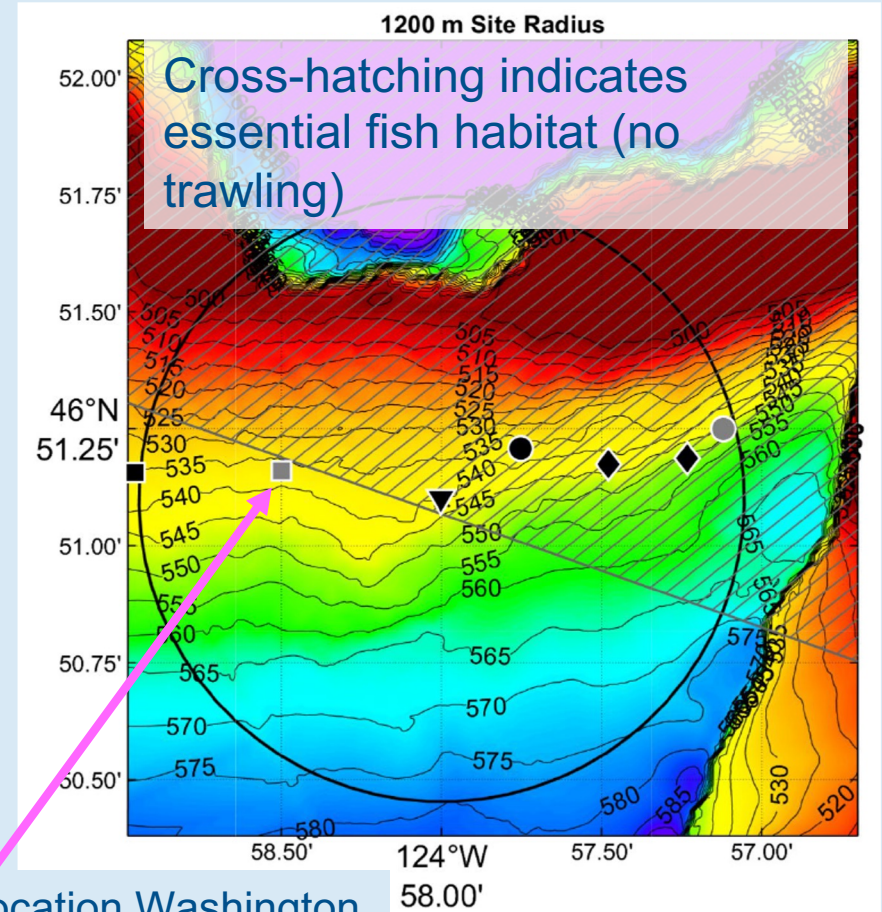
Washington Offshore MFN communications lost within 24 hours of deployment.

Washington Offshore Profiling Mooring struck by ship on 2024-04-19. More on next slide.



# Wire Following Profiler Buoy Parting

- No data from WFP after 2024-04-19.
- Received report of buoy on beach in Warrenton, OR 2024-04-27.
- Buoy recovered 2024-04-27.
- Damage strongly suggests ship strike
- Quite possible that WFP is still operating (this happened once before).
- Incident report in preparation.



Deployment location Washington  
Offshore Profiler Mooring –  
constrained by design depth of  
533 m





# Endurance 20 Mooring Status

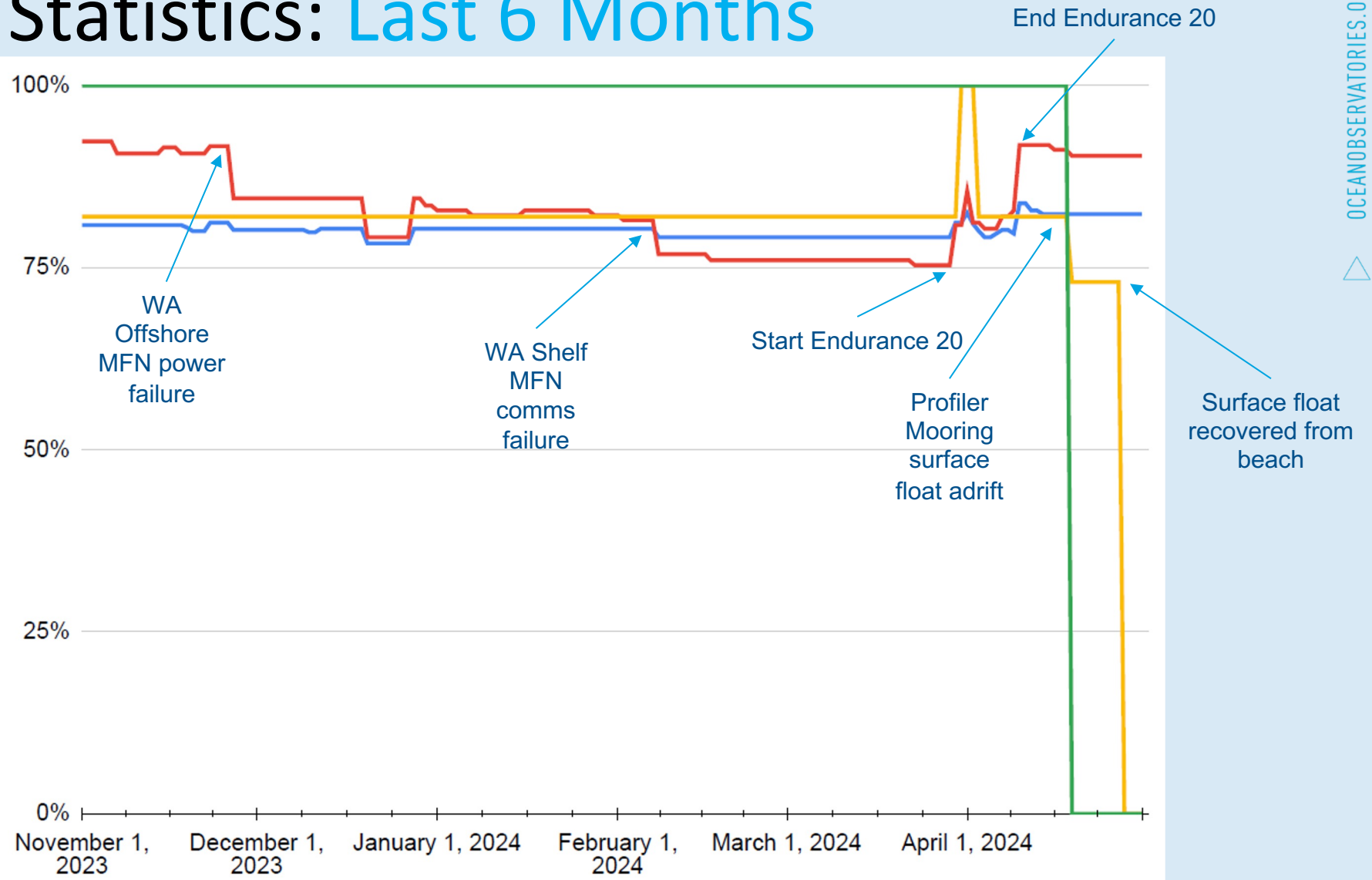
Platform	Infrastructure %	Instruments Deployed %	Near Real Time Delivered %	Data Collected %
Oregon inshore	94%	100%	95%	95%
Oregon shelf	79%	100%	100%	100%
Oregon offshore	76%	100%	100%	100%
Washington inshore	88%	95%	95%	95%
Washington shelf	86%	100%	86%	89%
Washington offshore	71%	100%	66%	97%
Washington offshore profiler	0%	100%	0%	100%

% takes into account electronics intentionally turned off (e.g., acoustic modems, FreeWave etc.)



# Operational Statistics: Last 6 Months

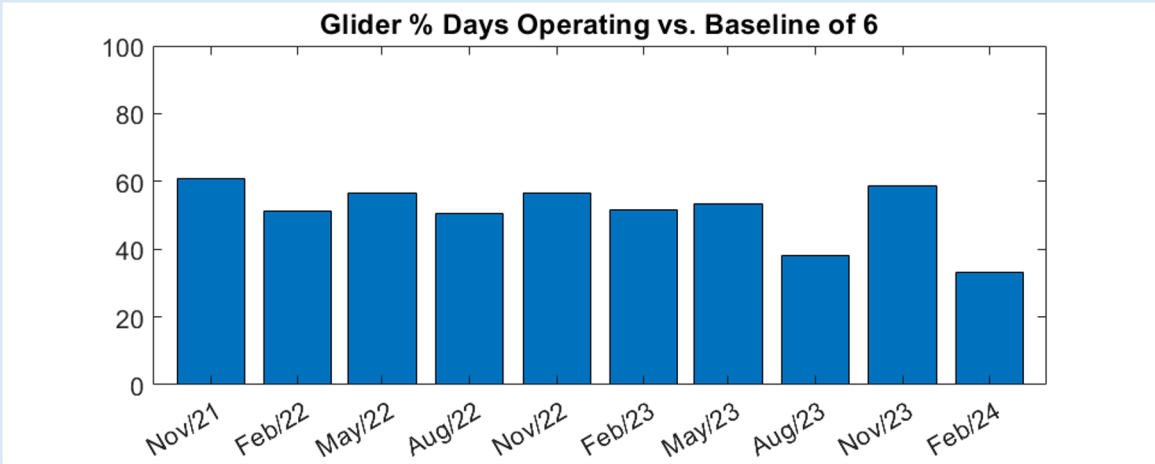
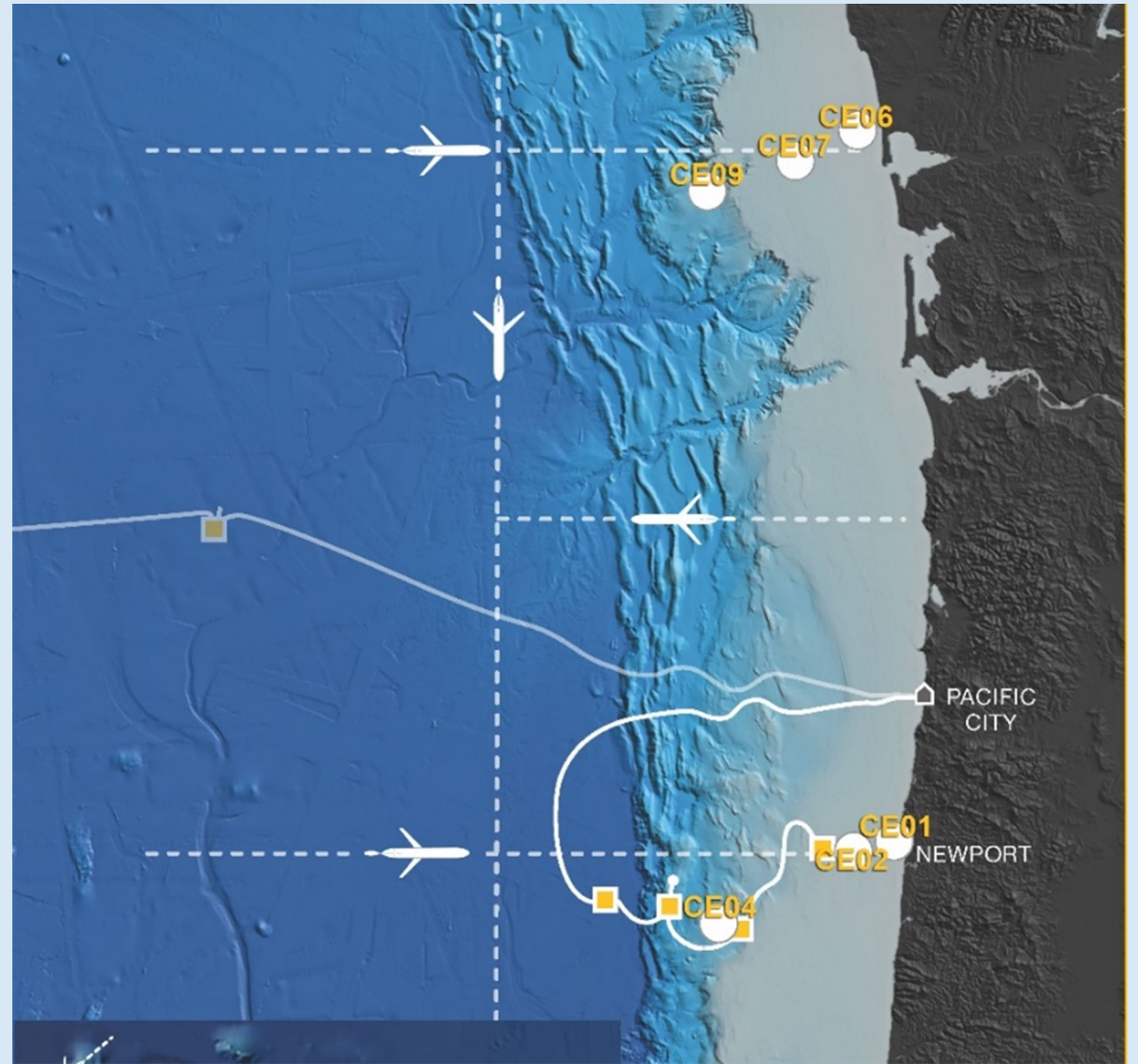
- Infrastructure Data (SM)
- Instrument Data (SM)
- Infrastructure Data (PM)
- Instrument Data (PM)





# Endurance Array Glider Coverage

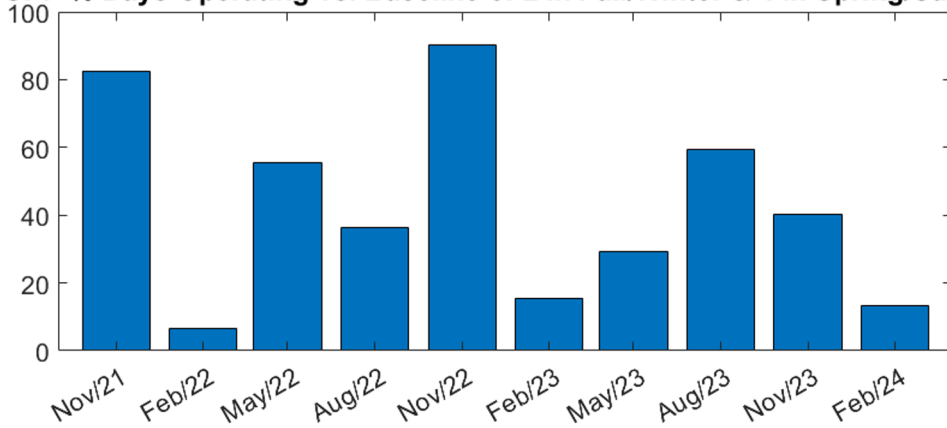
- Have been cycling G2 gliders through trade in to G3 gliders (sensors reused, otherwise new vehicle)
- Several G3 glider issues being worked through (build quality and firmware)
- Drop in Feb 2024 due to G3 glider issues being addressed under warranty and weather



# Endurance Array CSPP Deployment Summary

- No Grays Harbor deployment over winter 2023-2024 due to weather.
- Replaced all battery plate adaptors over winter 2023-2034 (i.e. main failure source)
- New CSPP technician since fall 2023 (Mari Aguirre)

CSPP % Days Operating vs. Baseline of 2 in Fall/Winter & 4 in Spring/Summer



# Community Engagement Highlights (see quarterly reports)

- Coordination with external PI (Prof. J. Fehrenbacher, CEOAS, OSU) on sediment trap turn in spring 2024.
- Julie Fouquet (3newable LLC) wave energy conversion test and prototype UV antifouling device deployed fall 2023 and recovered spring 2024. Next test spring 2025.
- Added external PI (Prof. T. Chapple, AgSci, OSU) VEMCO fish tag receiver with telemetry to Washington Shelf mooring. Plan to add 3 more in fall 2024.
- Four UNOLS cruise volunteers in spring 2024 (3 OSU, 1 UW)
- Contributed talks to February 2024 Ocean Sciences Meeting and staffed OOI Booth.
- Science session at February 2024 Ocean Sciences meeting – one of the talks contributed by a former UNOLS cruise volunteer now a post-doc modeler at NRL working off the Grays Harbor region of the Endurance Array.
- Ocean Sciences Town Hall meetings





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# Questions?

