

# NOAA West Watch Update 20 August 2024

*NANOOS Update*

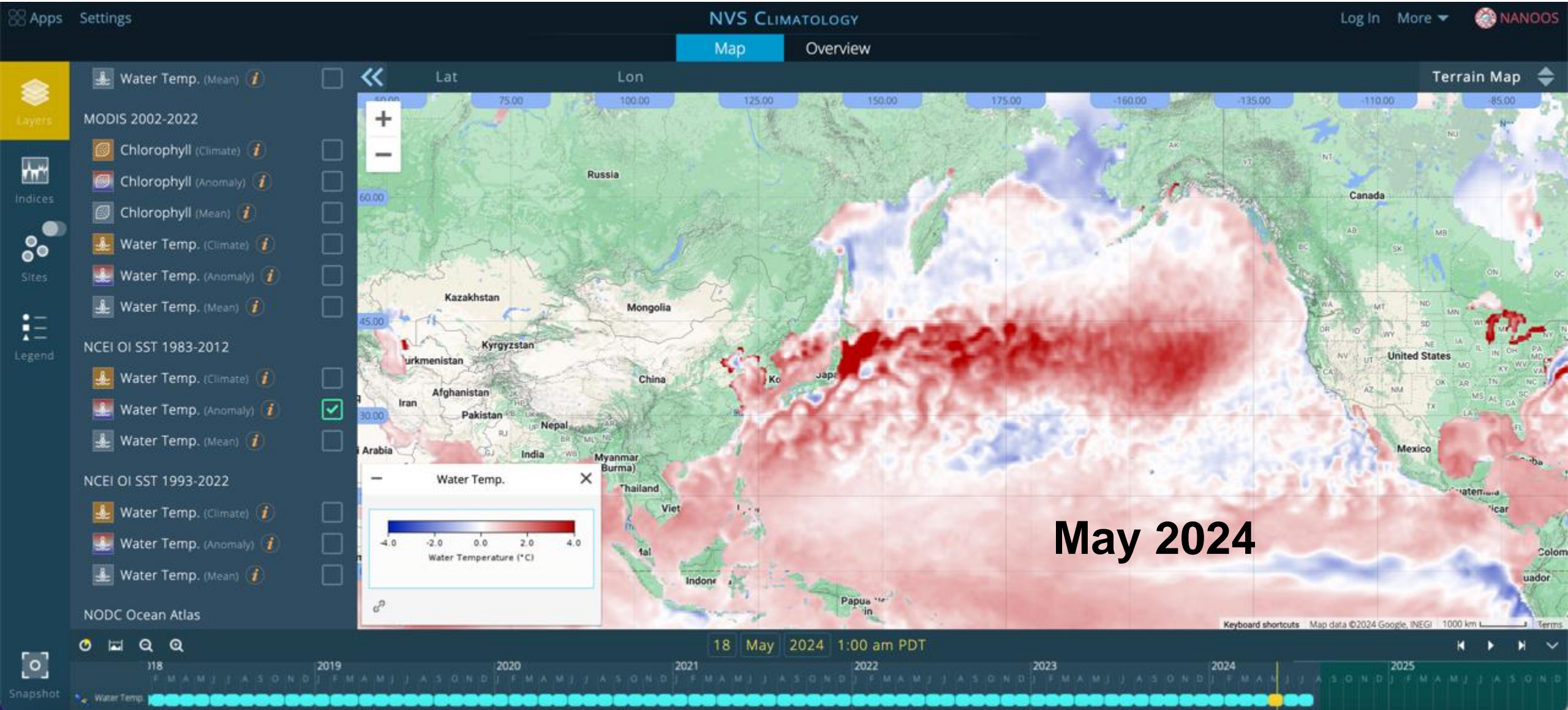
*Jan Newton on behalf of many*

[www.nanoos.org](http://www.nanoos.org)



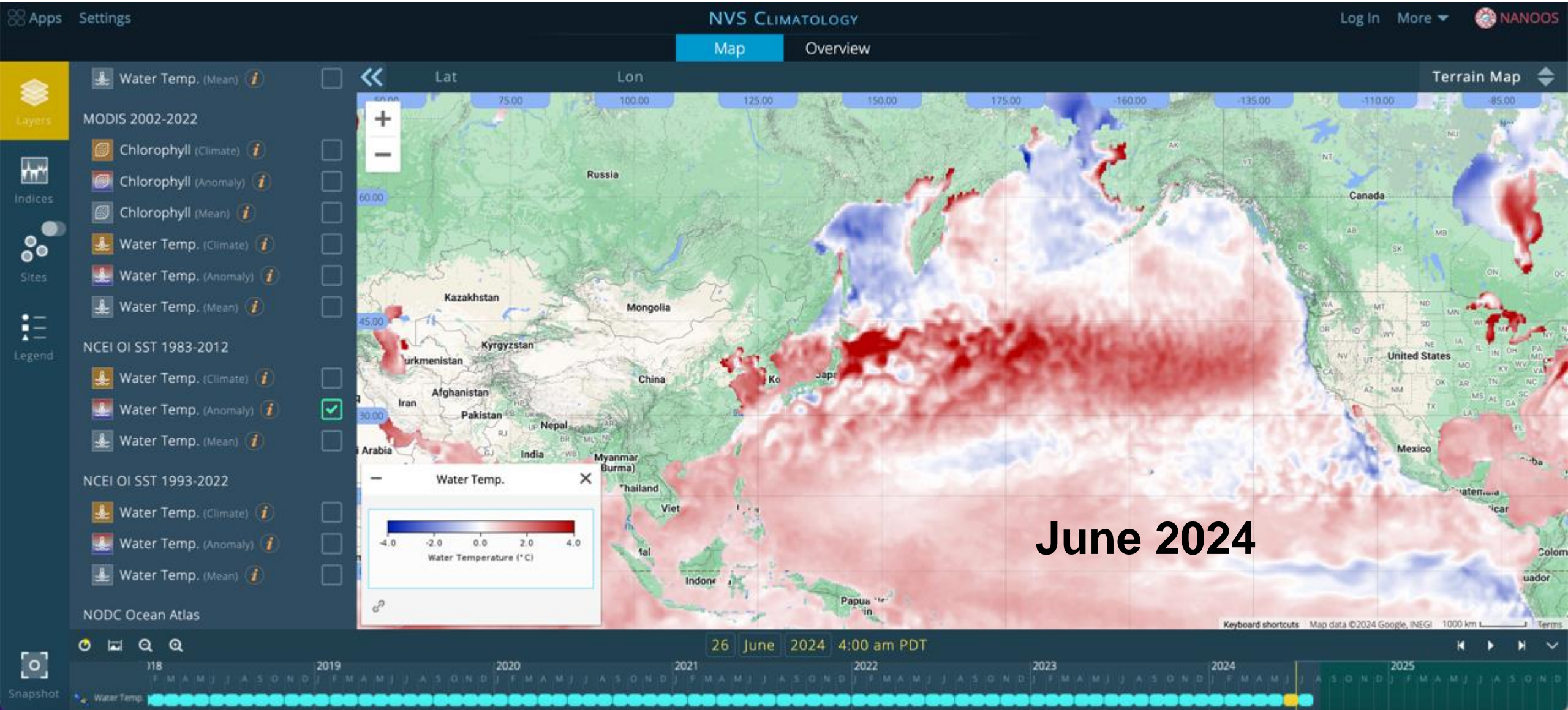


NCEI OI SST 1983-2012



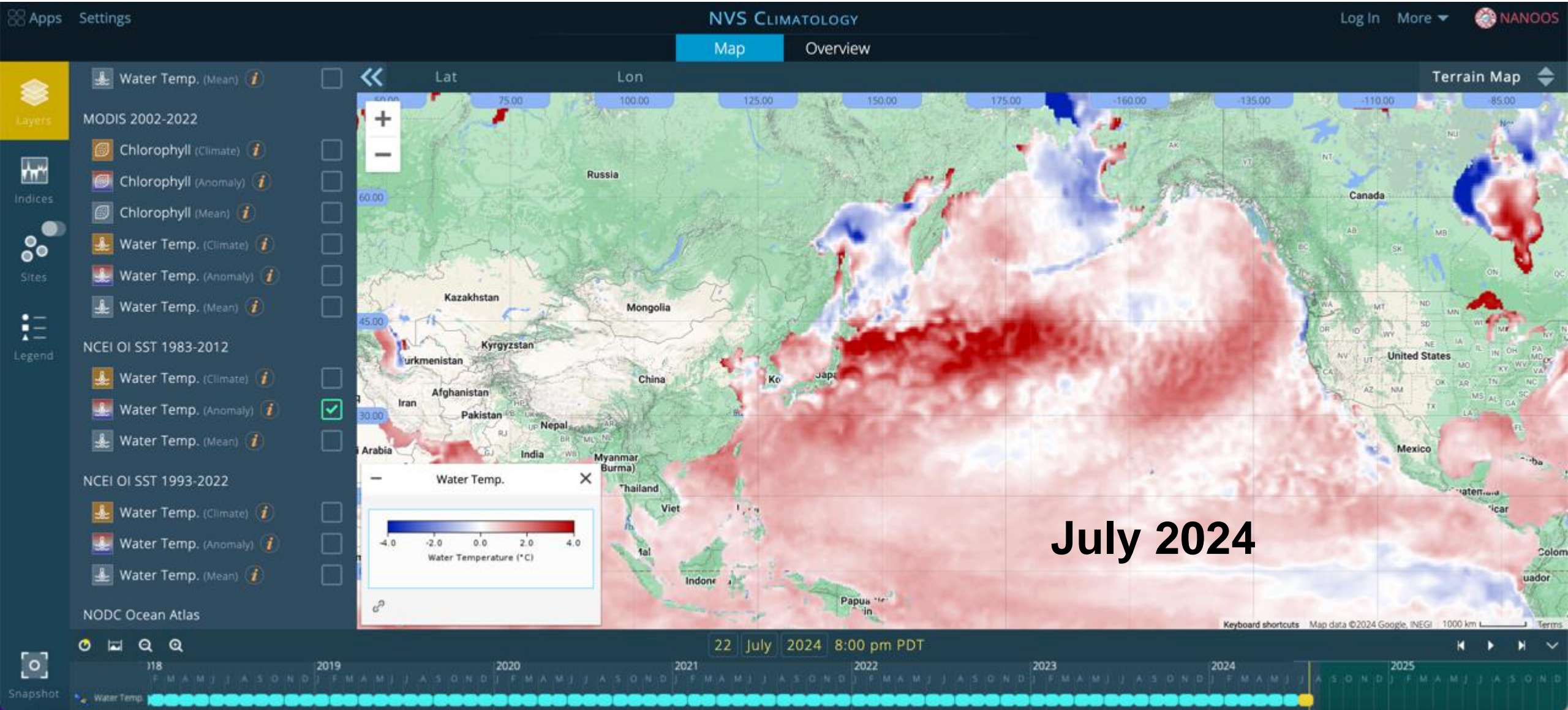


NCEI OI SST 1983-2012



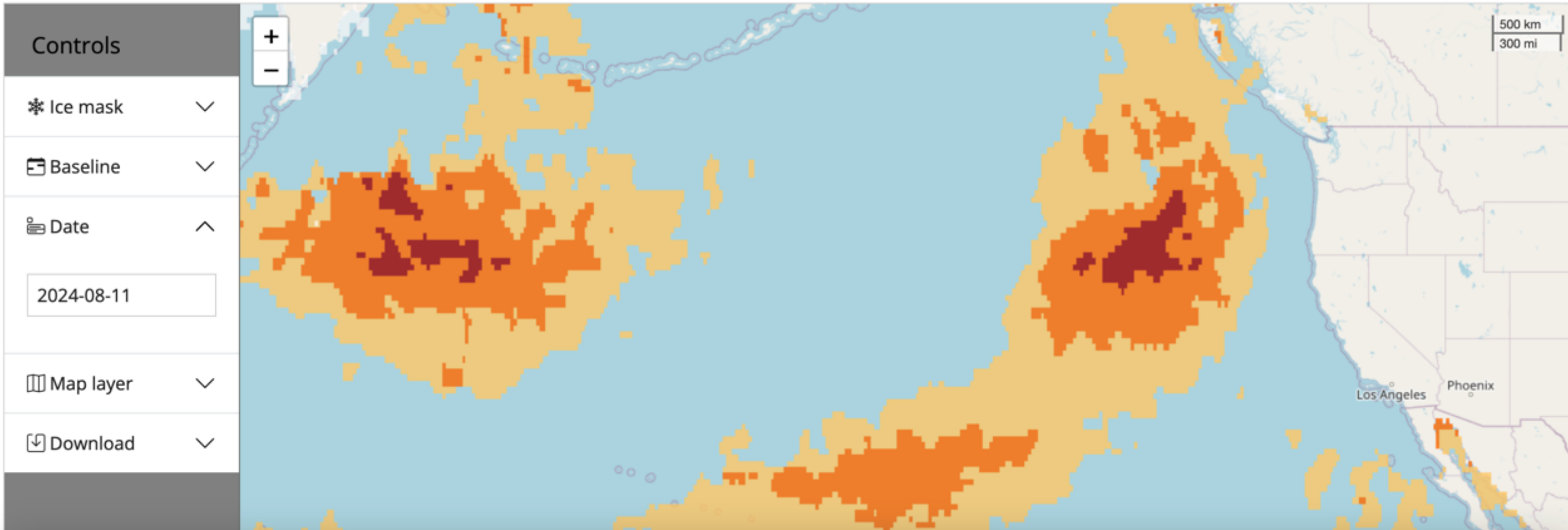


NCEI OI SST 1983-2012



# MARINE HEATWAVES International Working Group

HOME MHW OVERVIEW MHW IMPACTS TRACKER WORKSHOPS AND CONFERENCES PUBLICATIONS LEADS AND CONTACTS LINKS





## May 2024

OSU MODIS 2002-2012



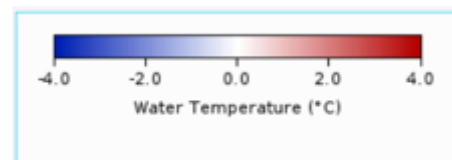
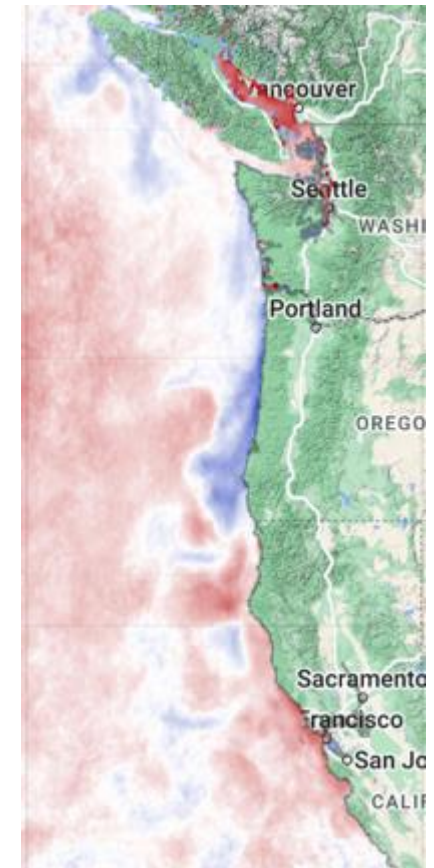
## June 2024

OSU MODIS 2002-2012

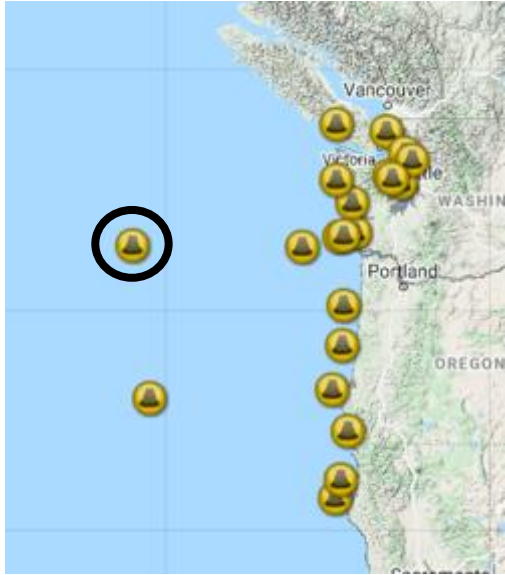


## July 2024

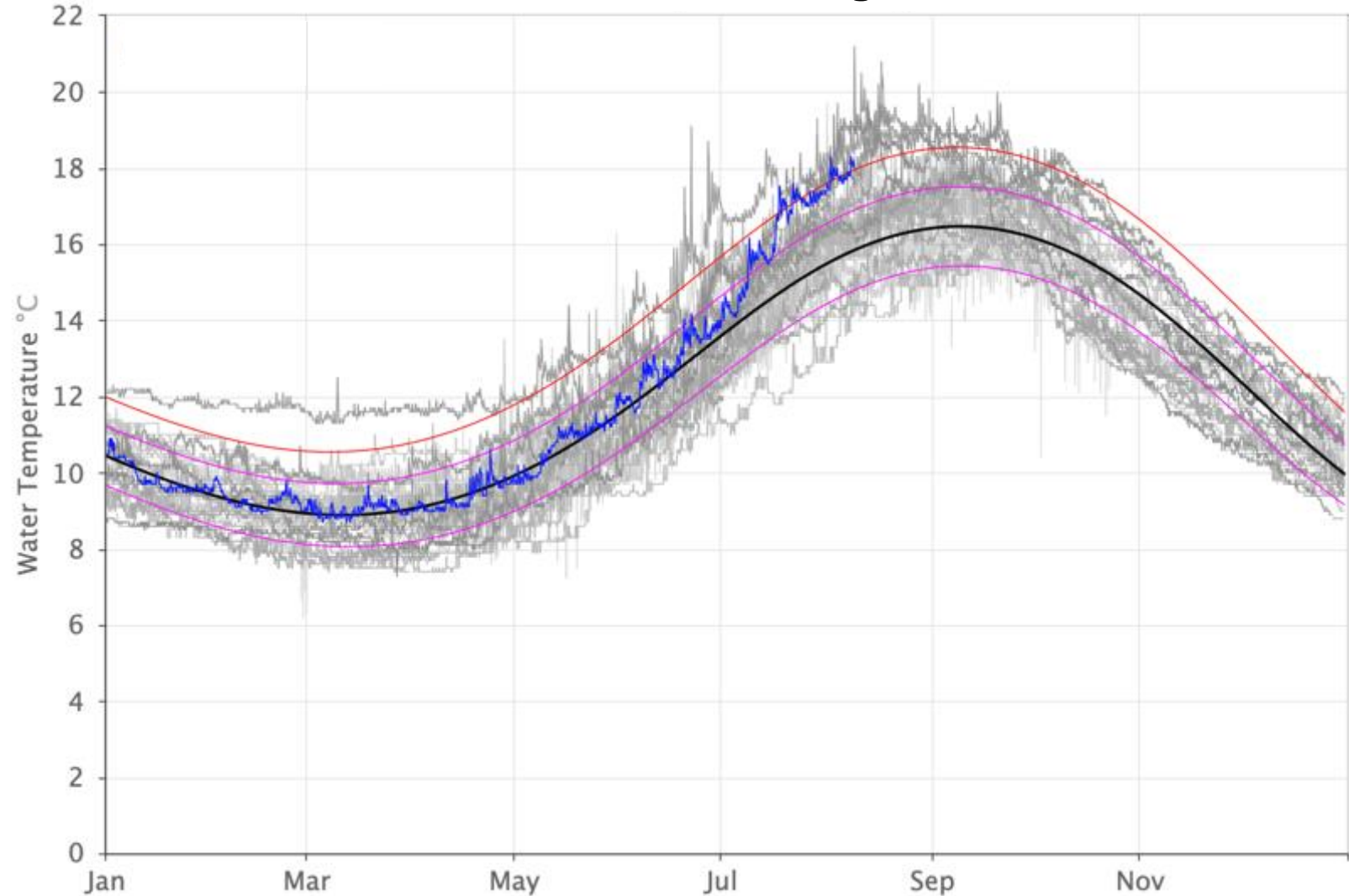
OSU MODIS 2002-2012



~300 nautical miles

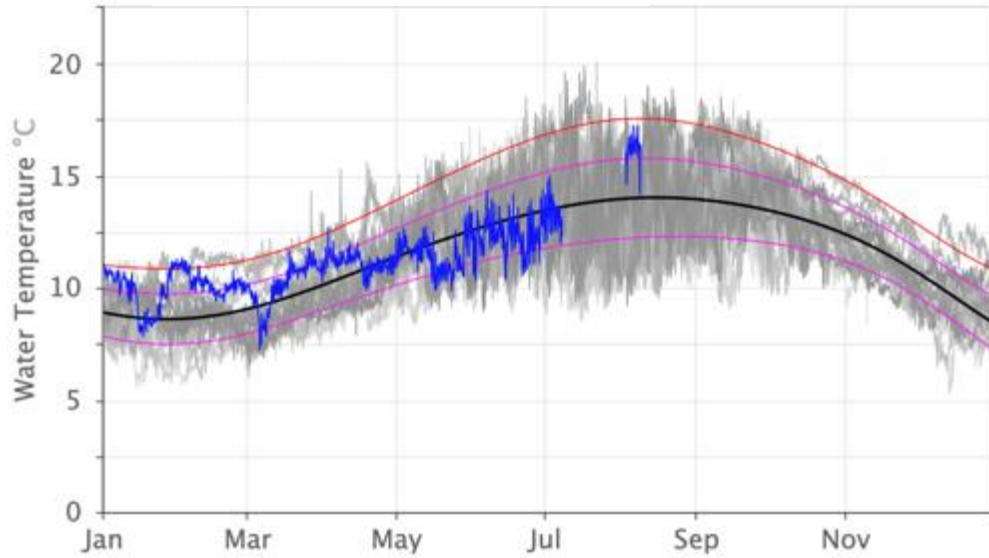


### NDBC Washington

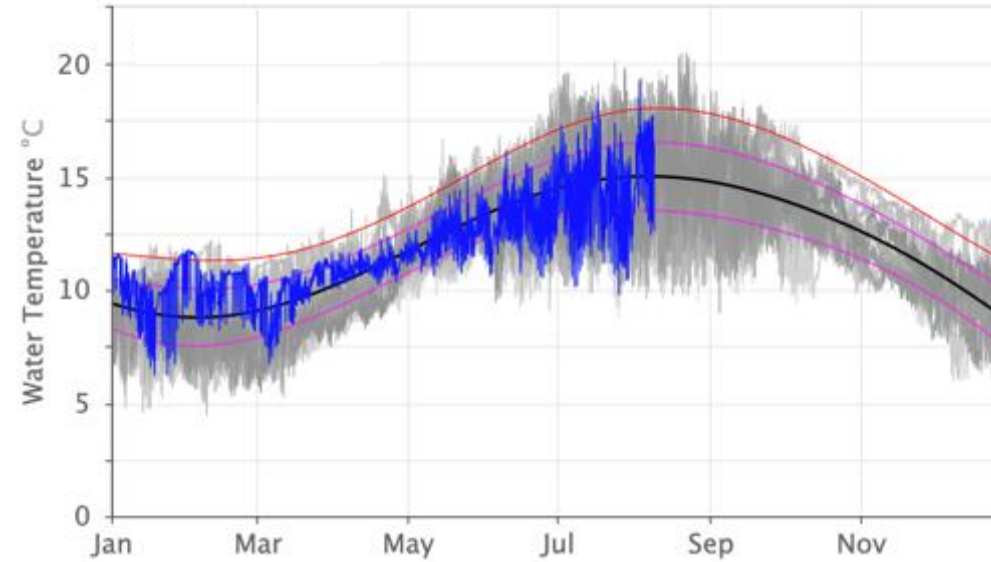


- Seasonal Cycle n=45 Yrs
- -1 STD
- +1 STD
- +2 STD
- 2024

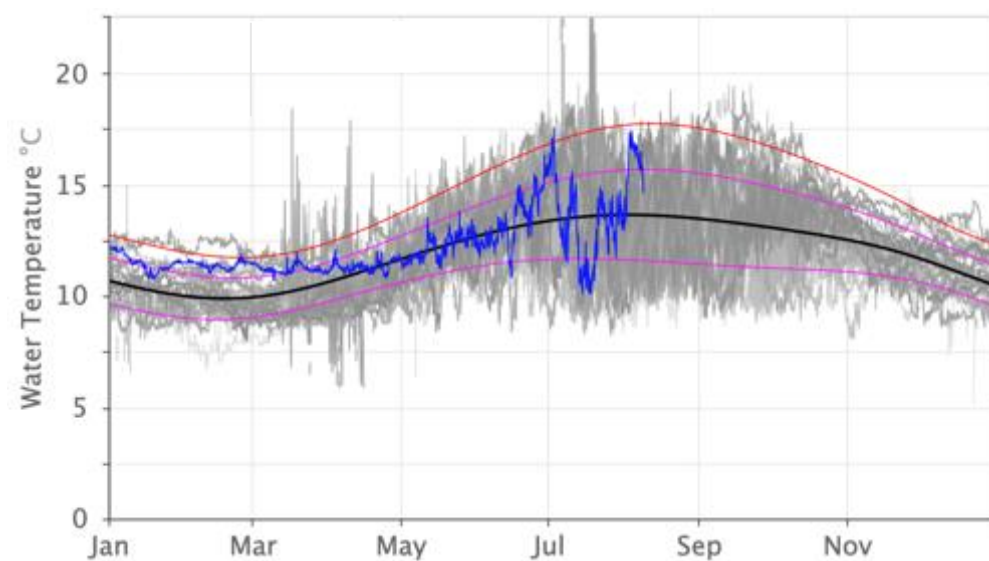
CDIP Grays Harbor ● 17 yrs



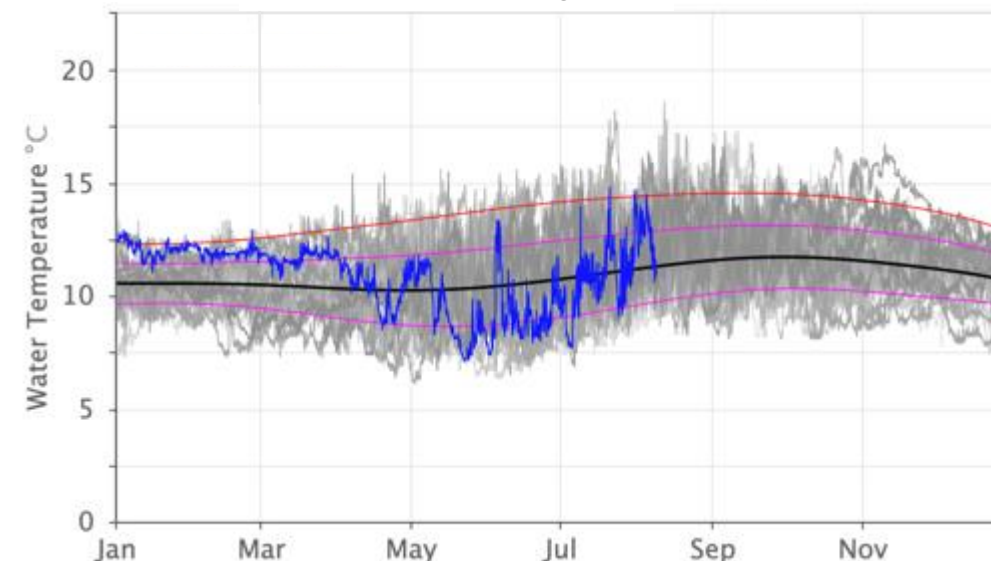
CDIP Clatsop Spit ● 12 yrs



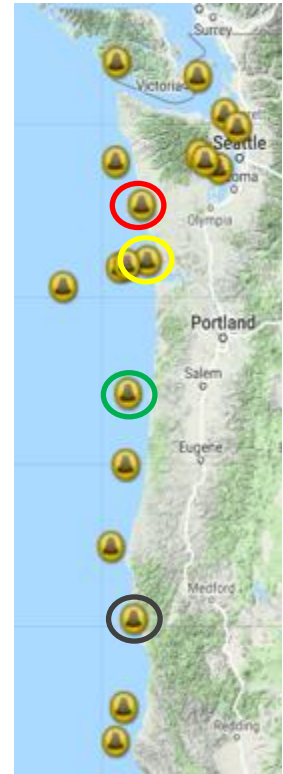
NDBC Stonewall Bank ● 34 yrs



NDBC St. Georges ● 38 yrs



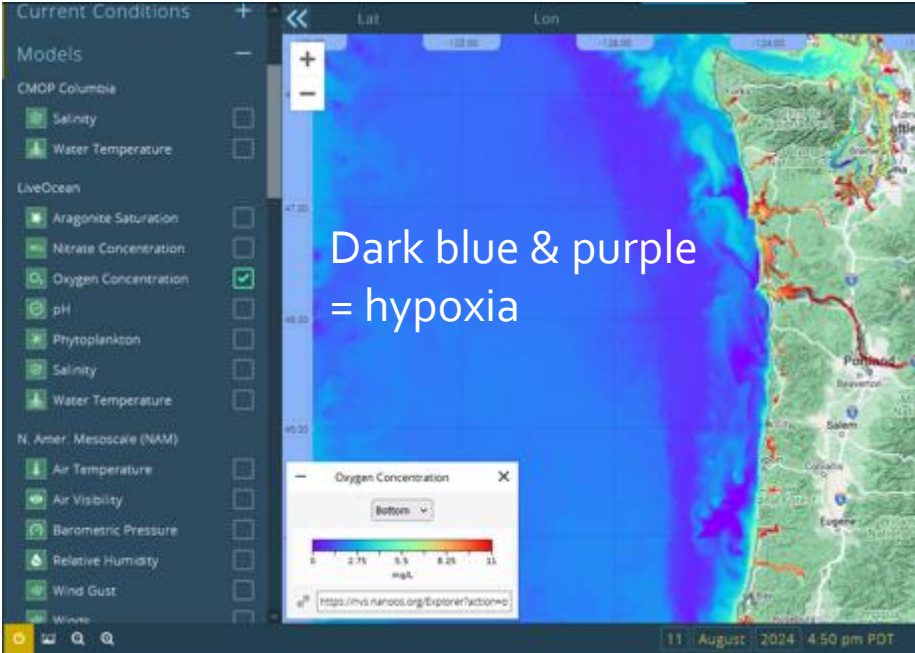
- Seasonal Cycle
- -1 STD
- +1 STD
- +2 STD
- 2023



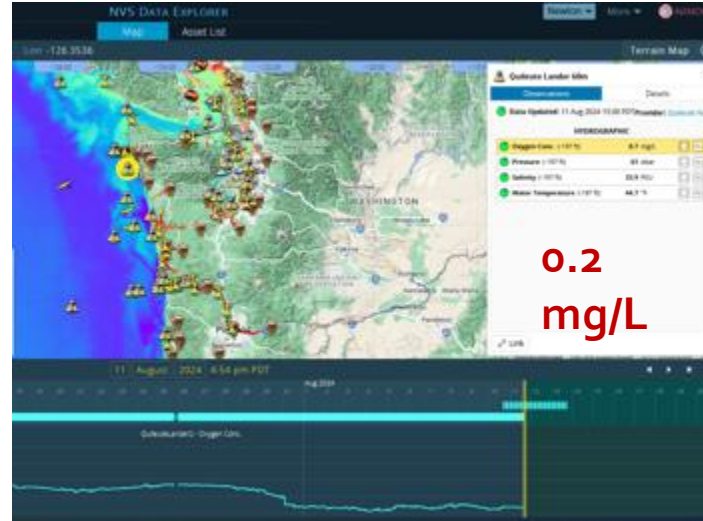


# Hypoxia Watch: widespread hypoxia along coast and in estuaries

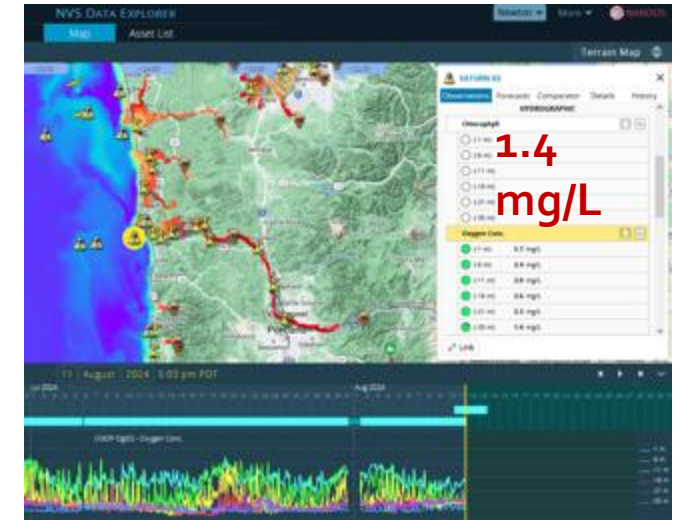
UW Ocean "LiveOcean" model



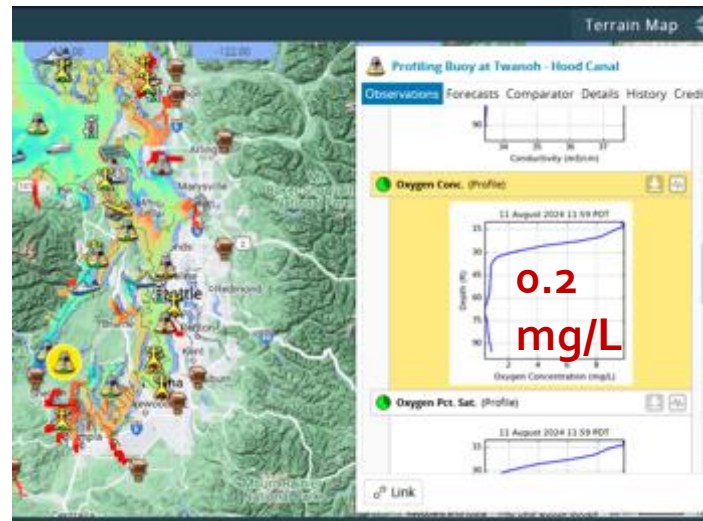
Quileute Tribe mooring\*



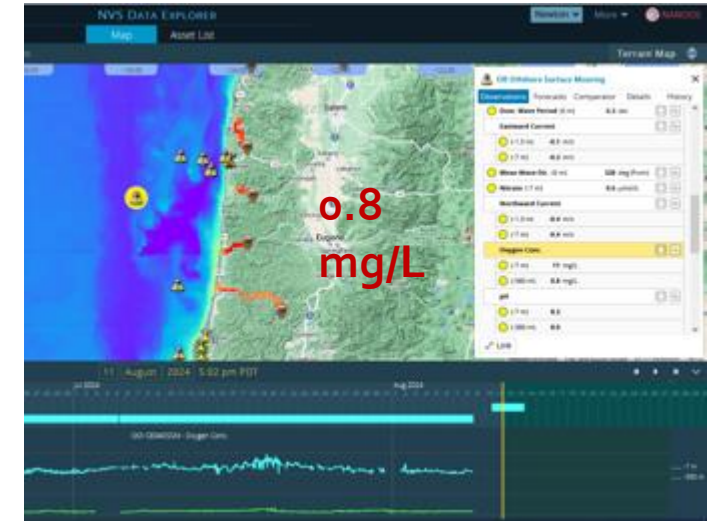
CRITFC SATURN mooring



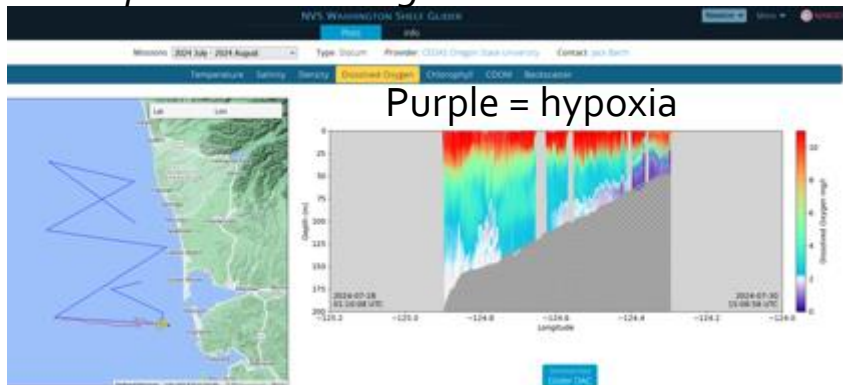
UW-APL ORCA mooring



NSF OOI mooring – OSU operated\*

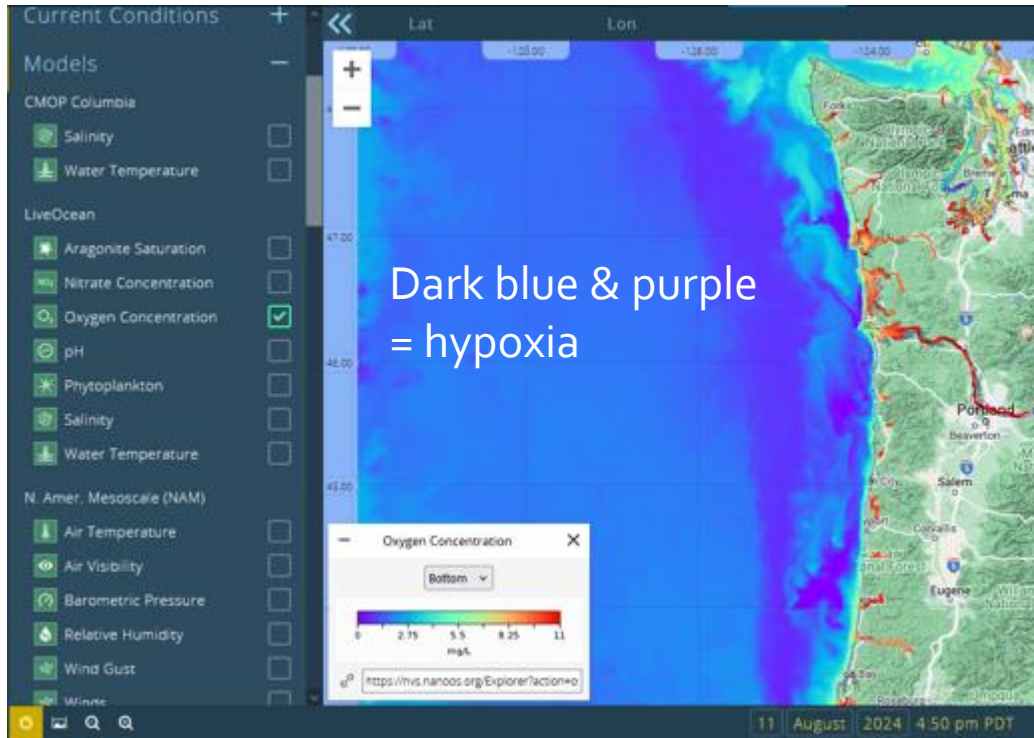


OSU operated CRITFC glider

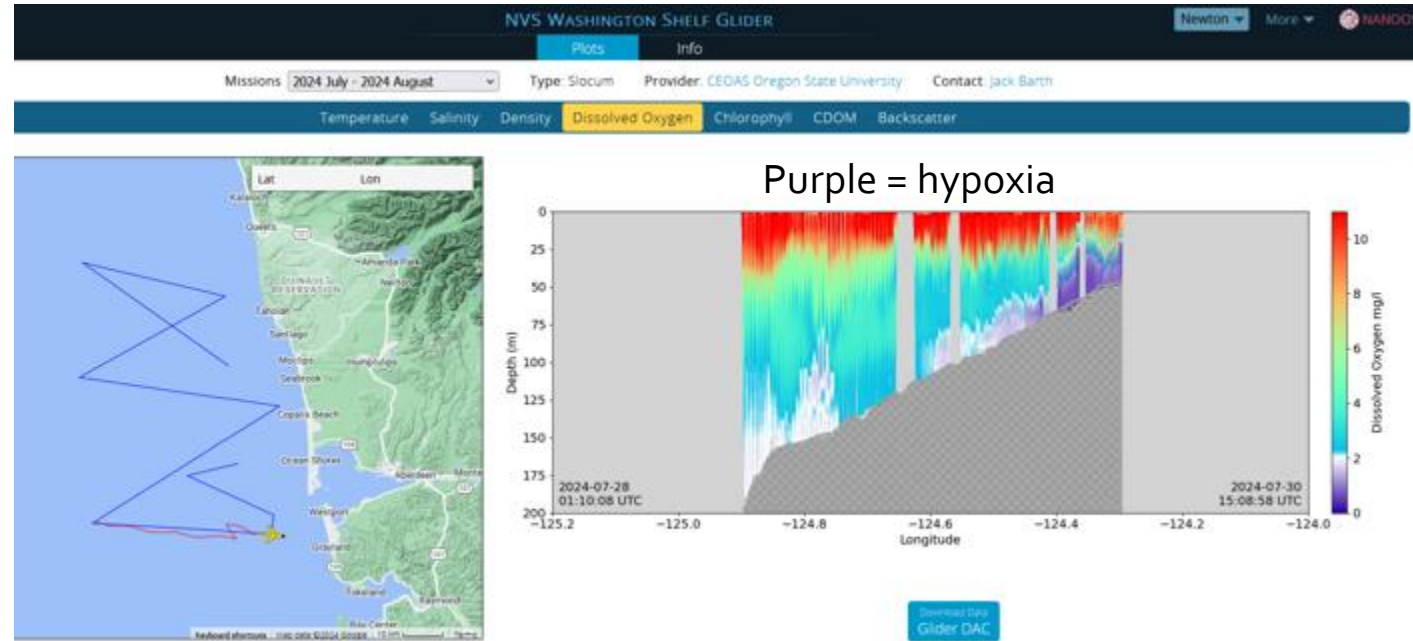


# Hypoxia Watch: LiveOcean model and glider

UW Ocean "LiveOcean" model

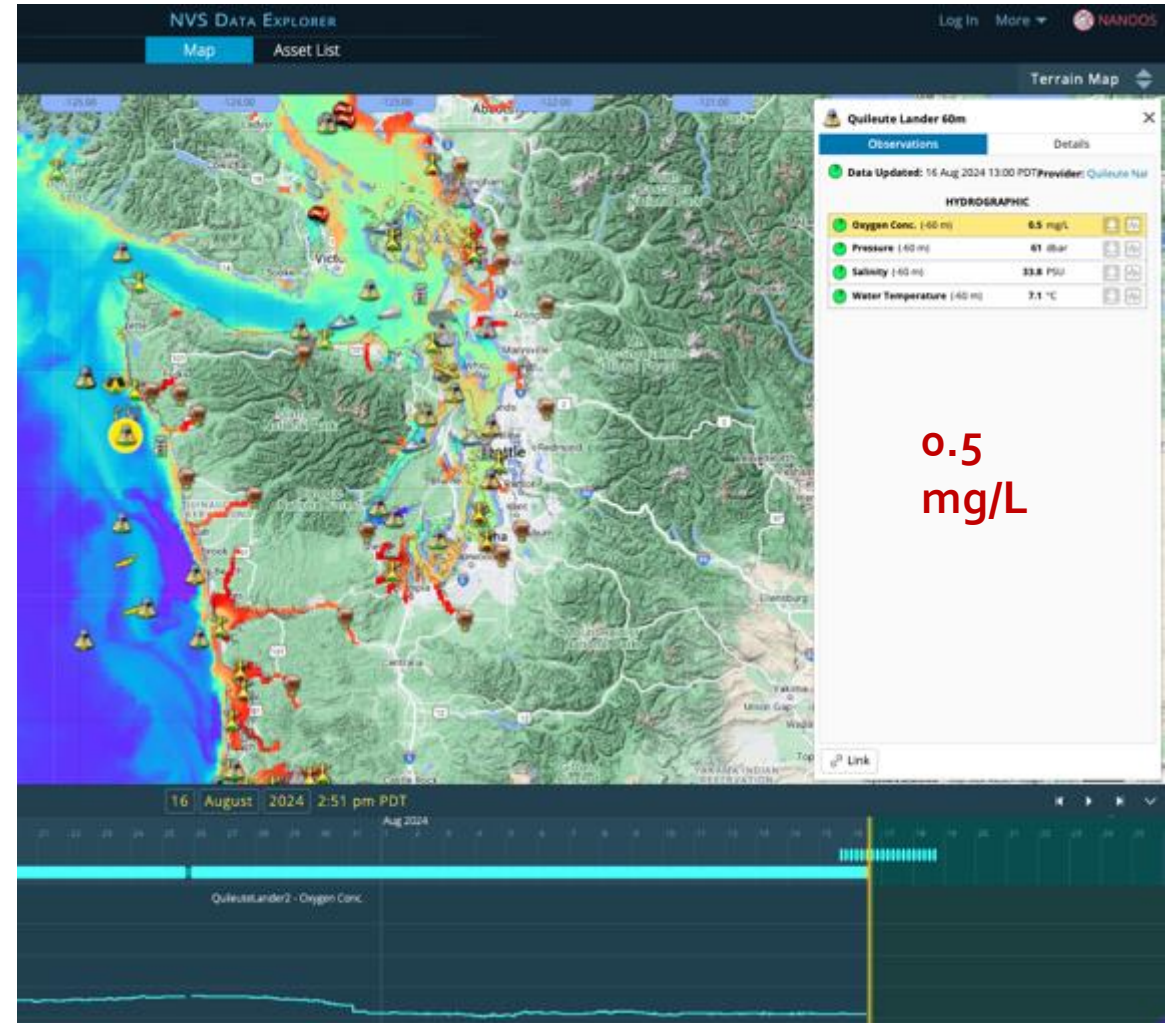
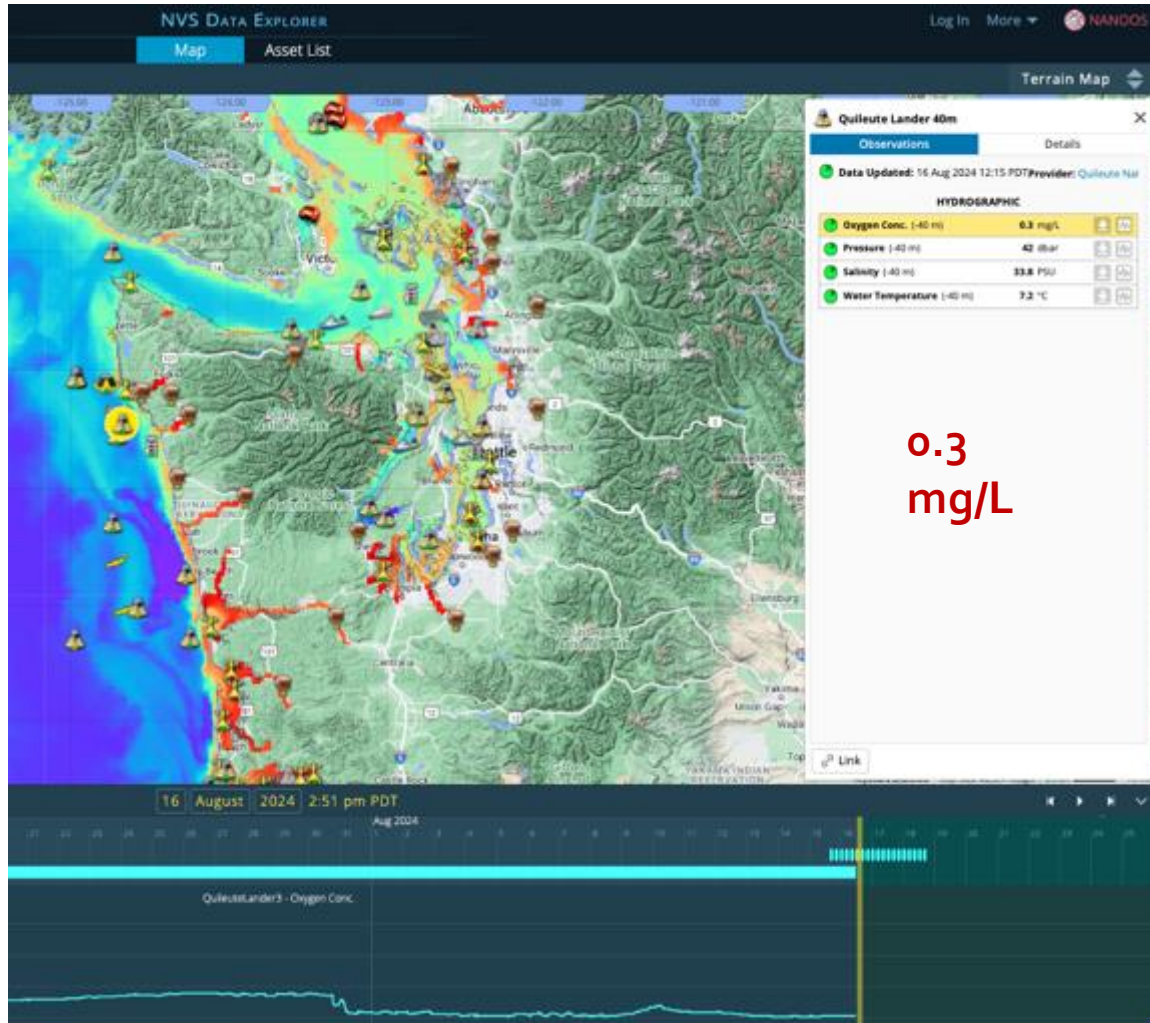


OSU operated CRITFC glider

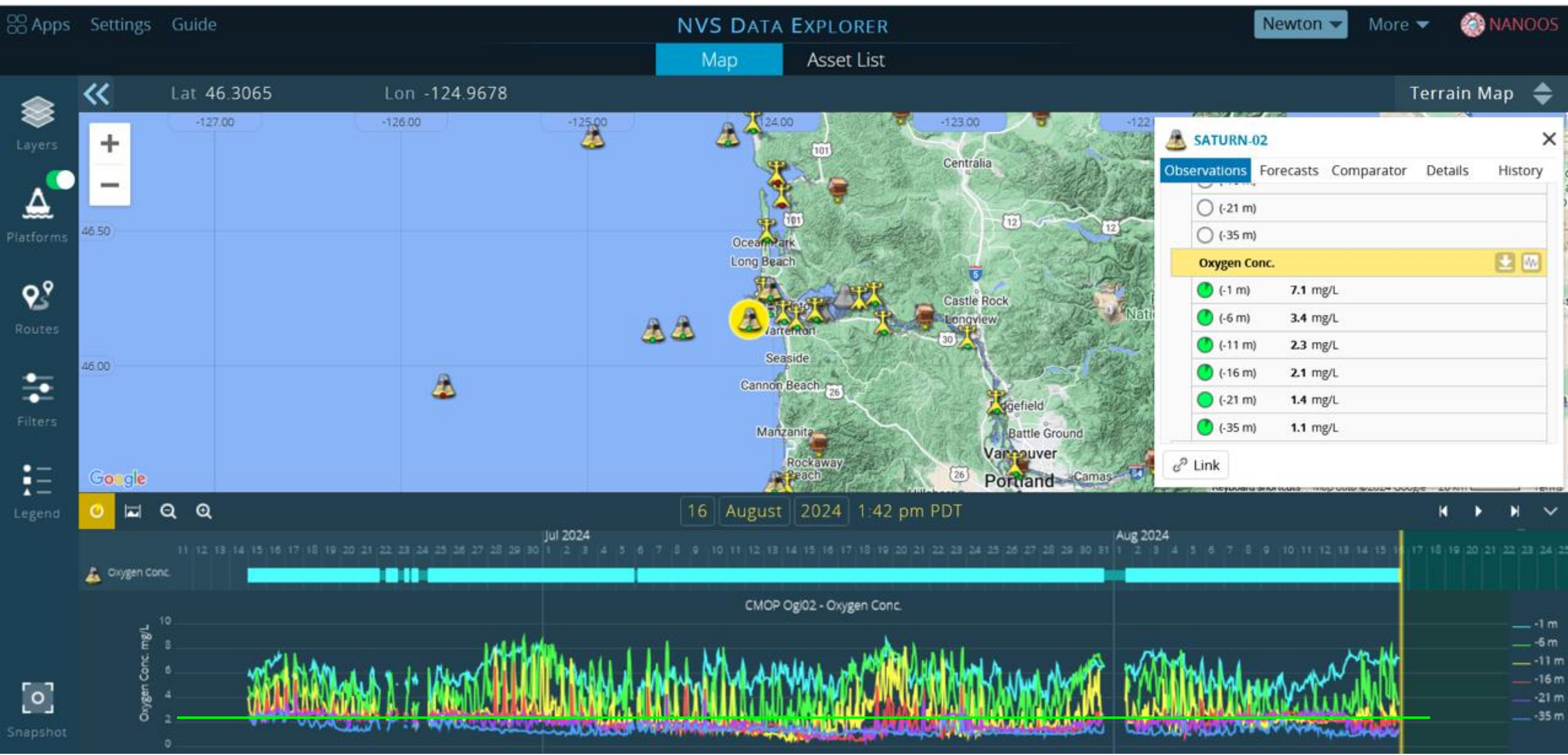




# Hypoxia Watch: Quileute Tribe's moorings



# Hypoxia Watch: CMOP Columbia R plume mooring

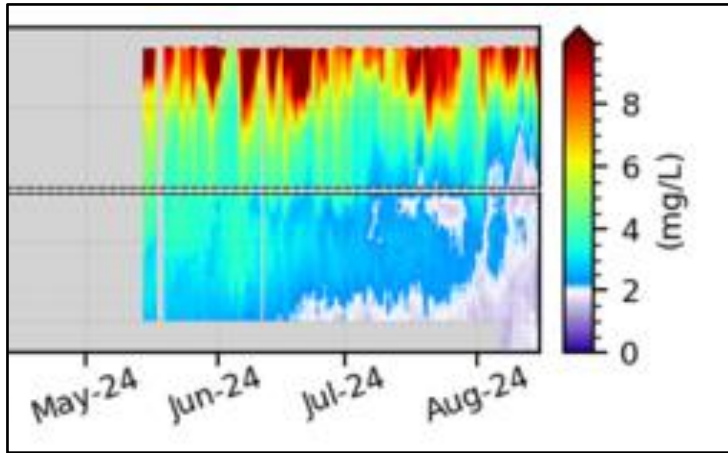




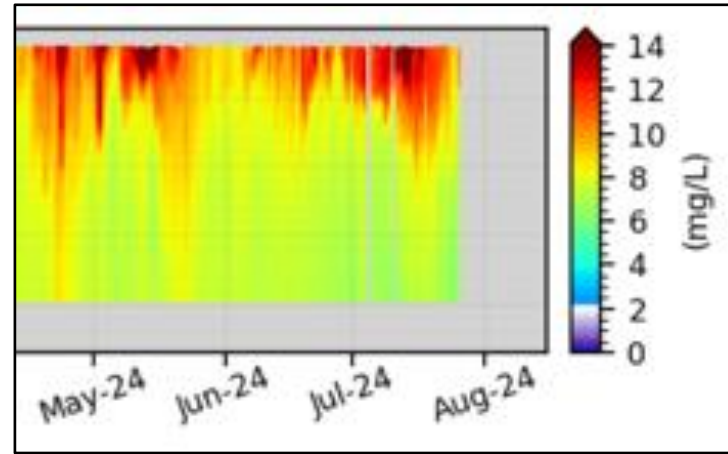
# Hypoxia Watch: Puget Sound

## Puget Sound Profiling Buoys

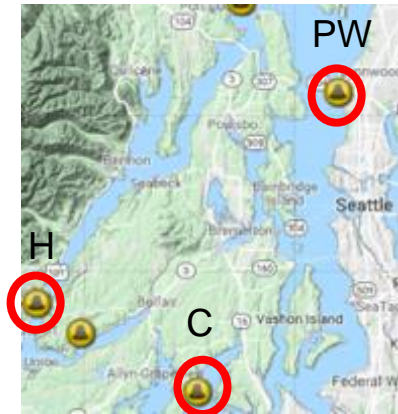
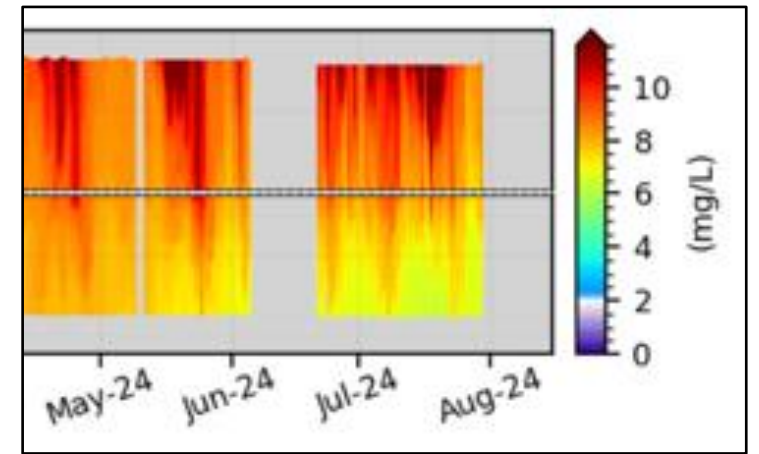
Hoodsport Oxygen, 2024



Carr Inlet Oxygen, 2024

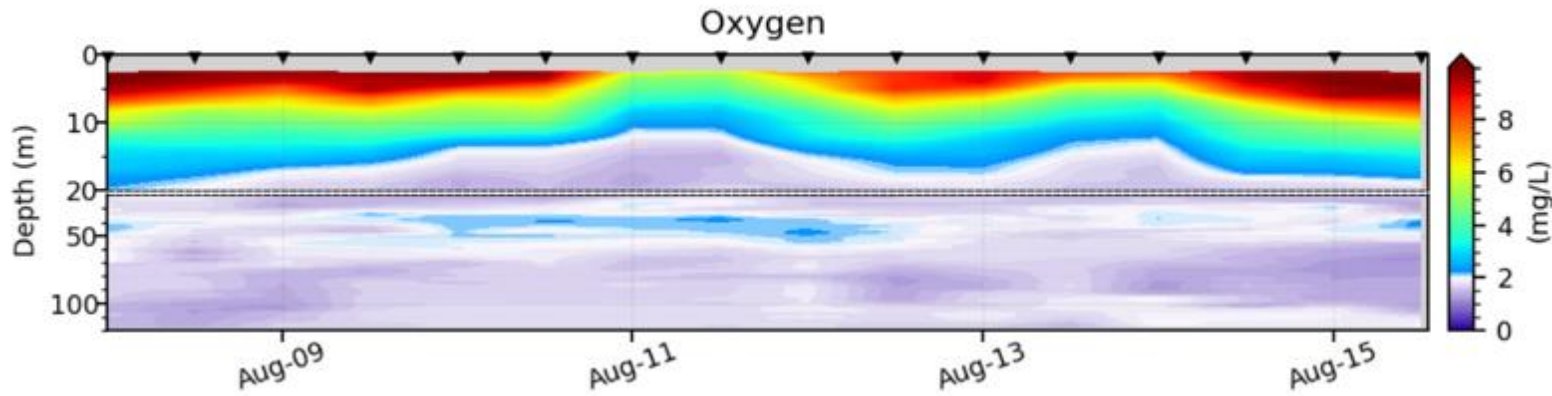


Point Wells Oxygen, 2024

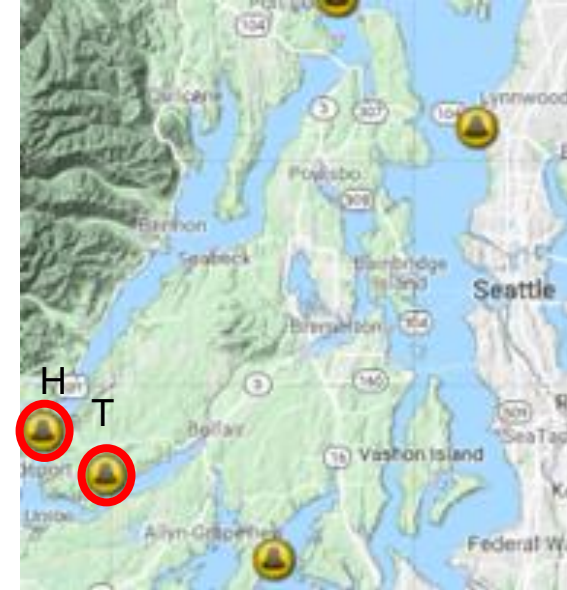
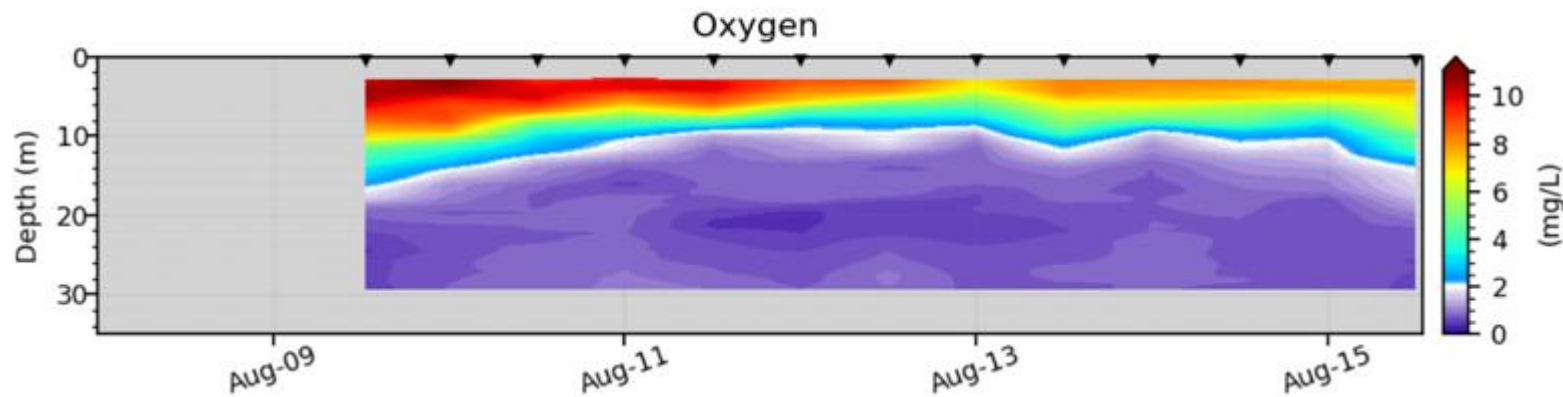


# Hypoxia Watch: Hood Canal

Hoodsport: Last 7 days



Twanoh: Last 7 days

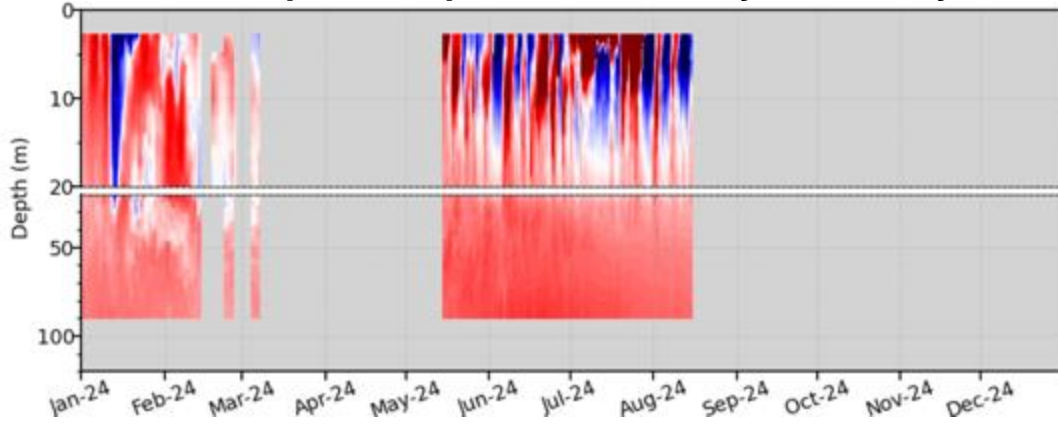




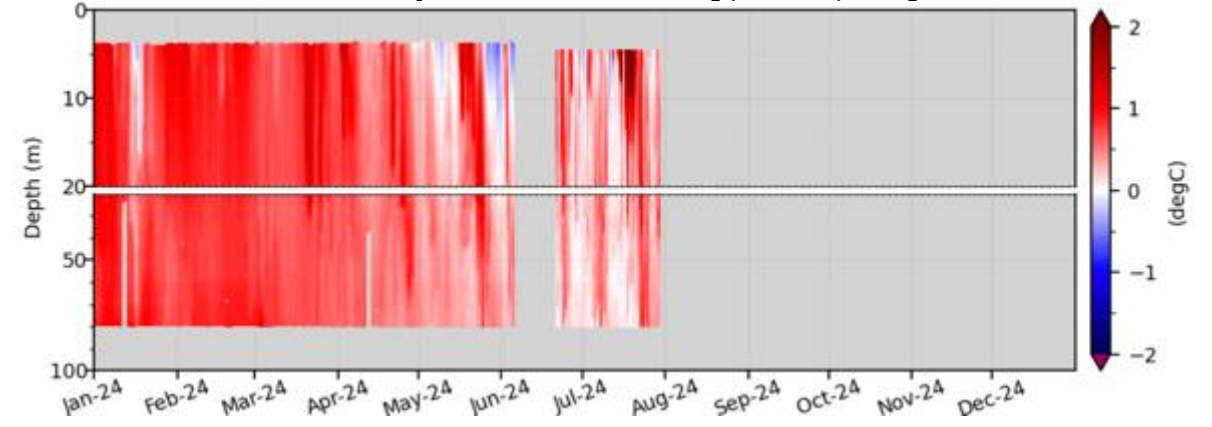
# Temperature Anomalies

# Puget Sound Profiling Buoys

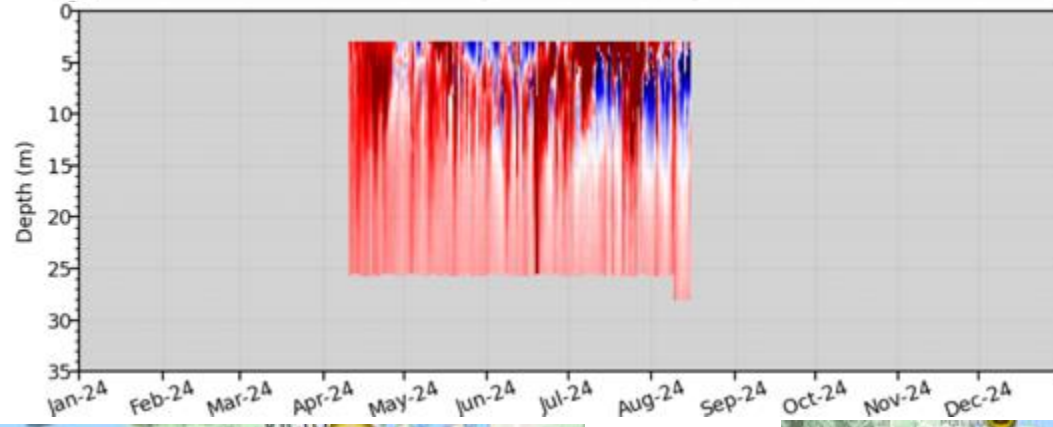
### Hoodsport Temperature Anomaly, 2024, 14 years



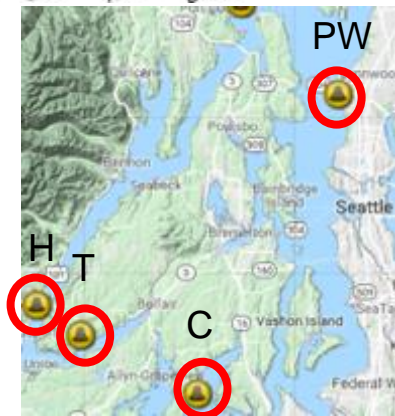
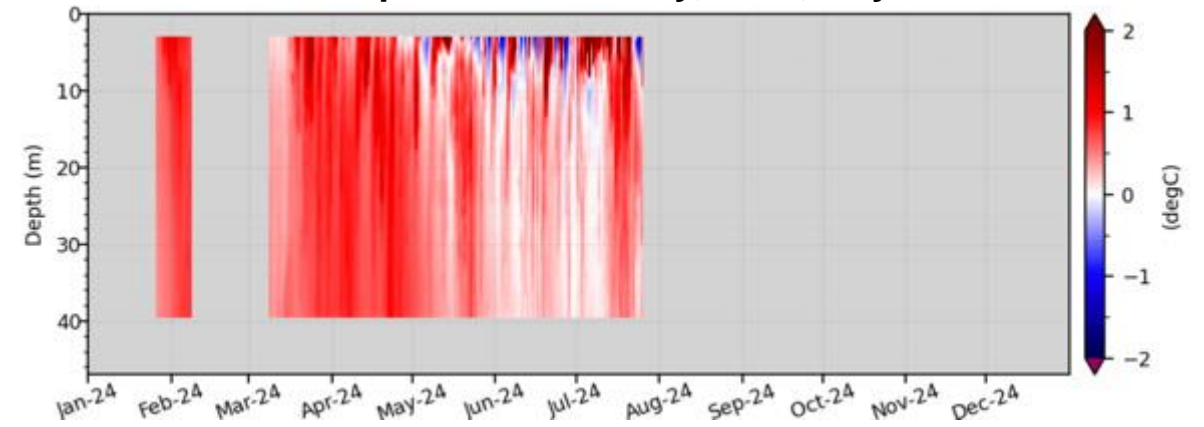
### Point Wells Temperature Anomaly, 2024, 14 years



### Twanoh Temperature Anomaly, 2024, 14 years



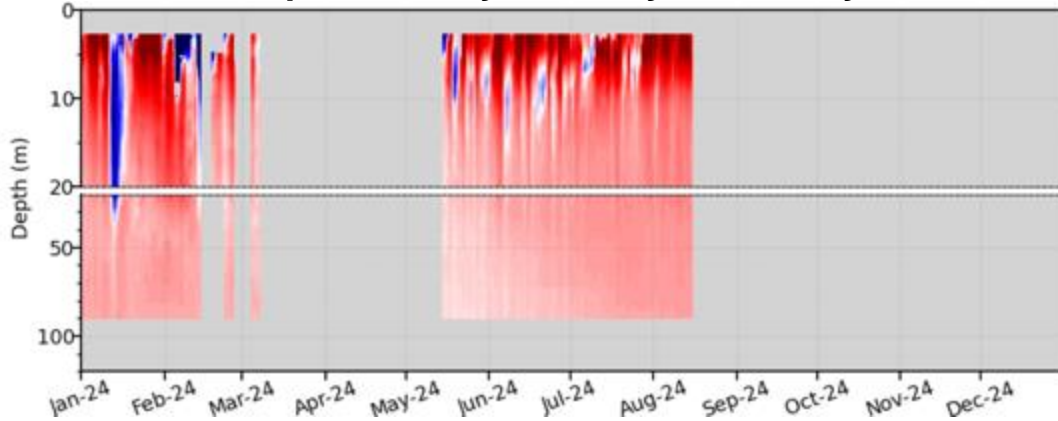
### Carr Inlet Temperature Anomaly, 2024, 14 years



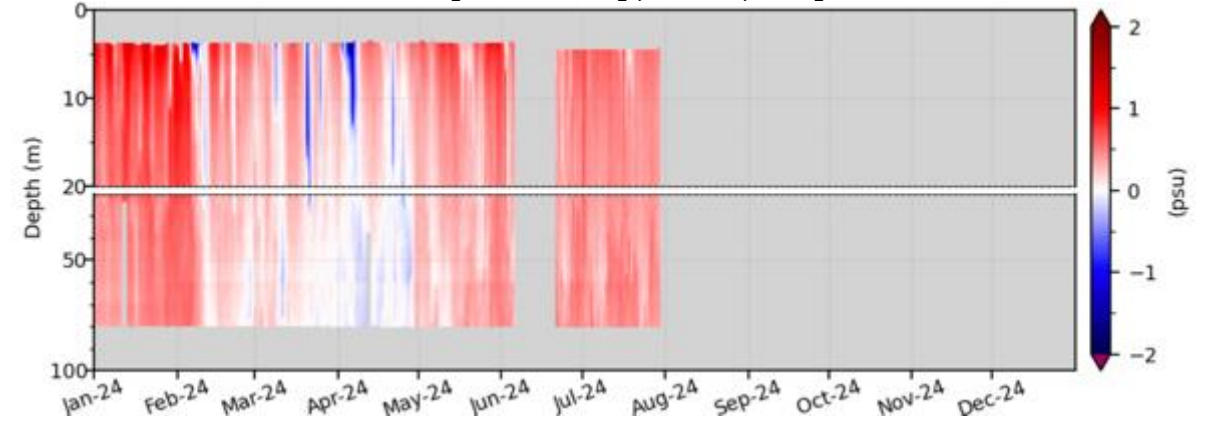
# Salinity Anomalies

# Puget Sound Profiling Buoys

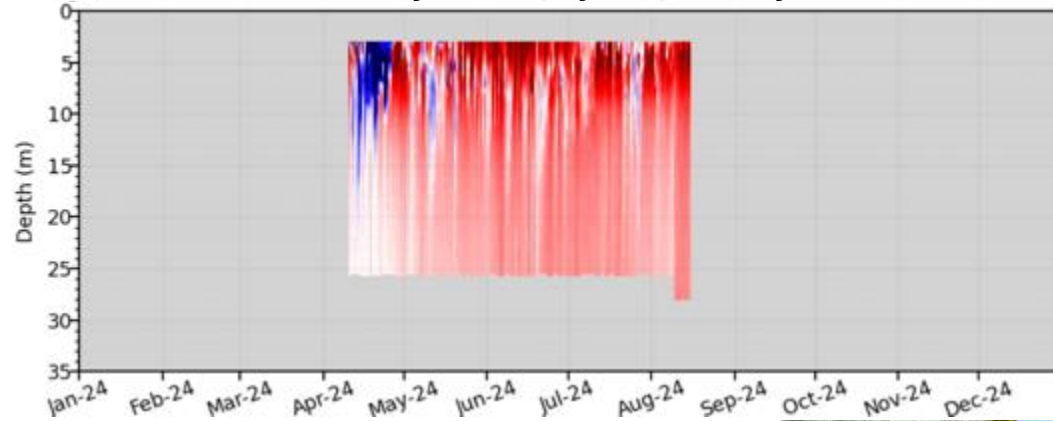
### Hoodsport Salinity Anomaly, 2024, 14 years



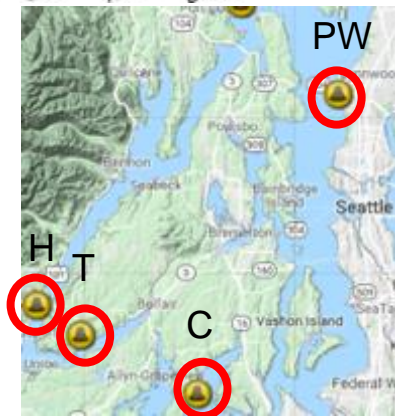
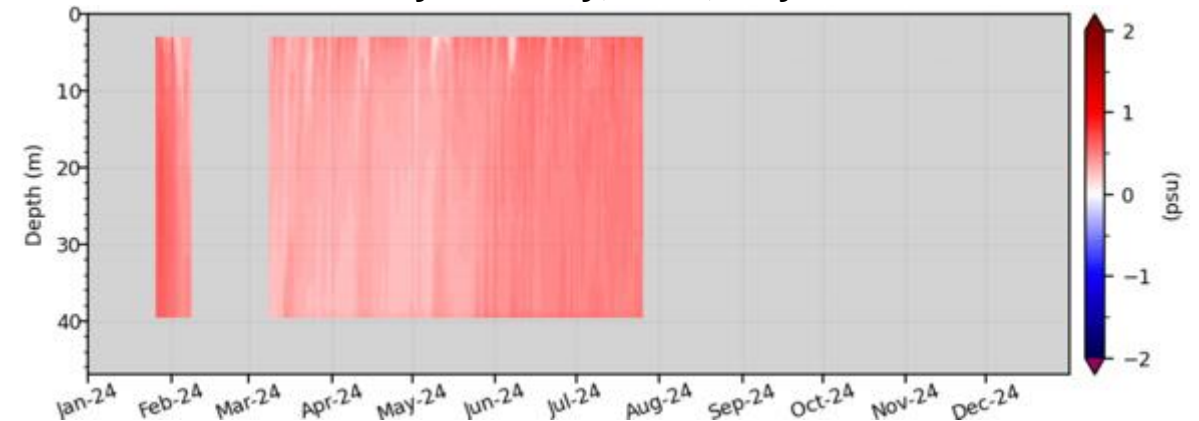
### Point Wells Salinity Anomaly, 2024, 14 years



### Twanoh Salinity Anomaly, 2024, 14 years



### Carr Inlet Salinity Anomaly, 2024, 14 years





## May 2024

OSU MODIS 2002-2012



## June 2024

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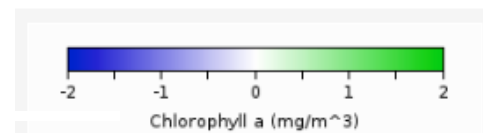


## July 2024

OSU MODIS 2002-2012



Chlorophyll





## *To summarize:*

### **Coastal conditions**

- ENSO neutral; heat builds in N. Pacific with a MHW ~500 km (300 mi) offshore.
- Offshore WA coastal buoy shows 2 S.D. above average warming T in July and August; inshore OR-WA buoys variable, but more warmer than average than cooler than average.

### **Hypoxia**

- Coast-wide hypoxia in coastal ocean and estuaries (Hood Canal, Columbia plume).

### **Puget Sound**

- Temperature and salinity anomalies continue warm and salty.

### **Chlorophyll & HABs**

- Satellite shows mostly lower than average monthly ocean color values May June and July, some blooms.
- *Pseudo-nitzschia* blooms through the summer on Oregon and Washington coasts



The background features a light gray, stylized pattern of overlapping leaves and a bird, possibly a penguin, rendered in a simple, graphic style. The pattern is circular and repeats across the page.

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