



# Update on NOAA's Hypoxia Monitoring

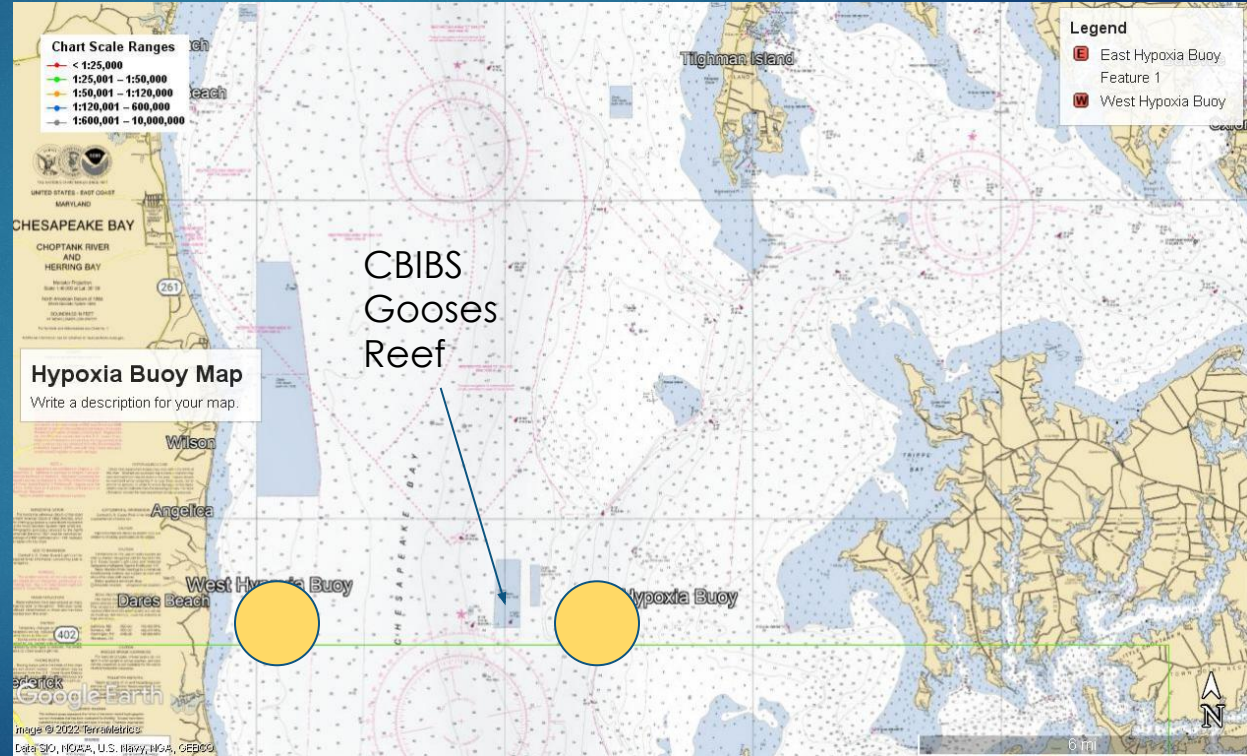
Hypoxia Collaborative Meeting

Friday the 13th, May 2022

# Fall 2021 Deployment

## Locations & Duration

- ▶ CB 4.3W & CB 4.3E
- ▶ Dec 1- Dec 15, 2021



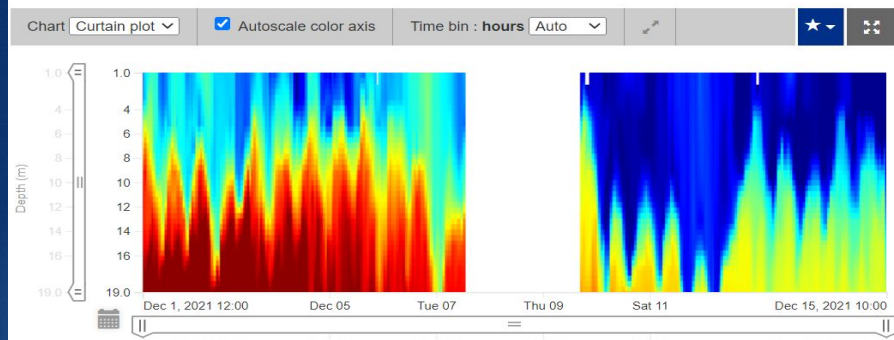


# Array Build Out- Warehouse to Water

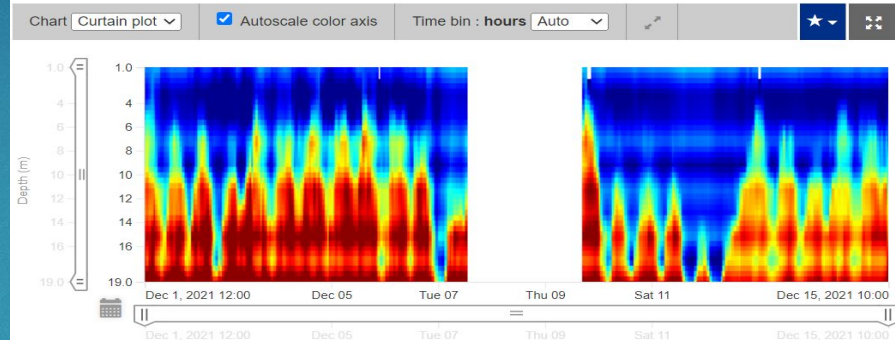


# Data Visualization & Access Tool- Plots & Demo

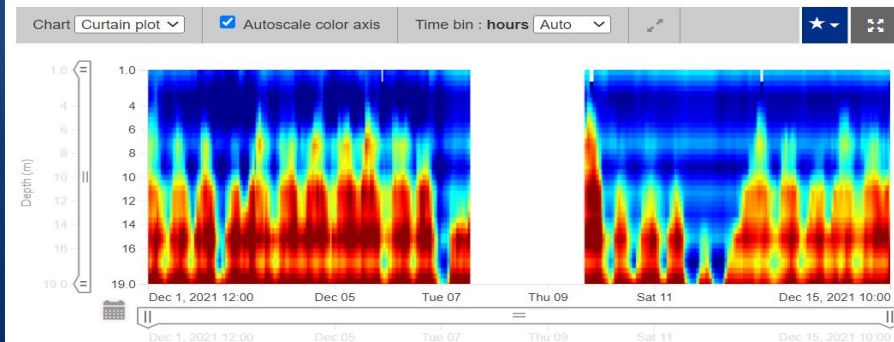
Temperature: Water Temperature



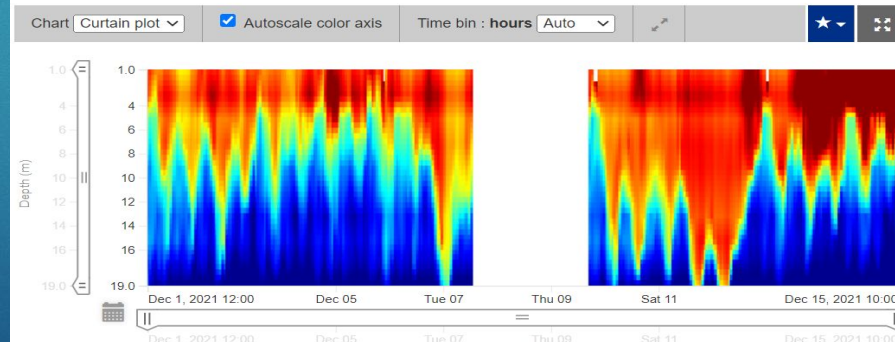
Conductivity



Salinity



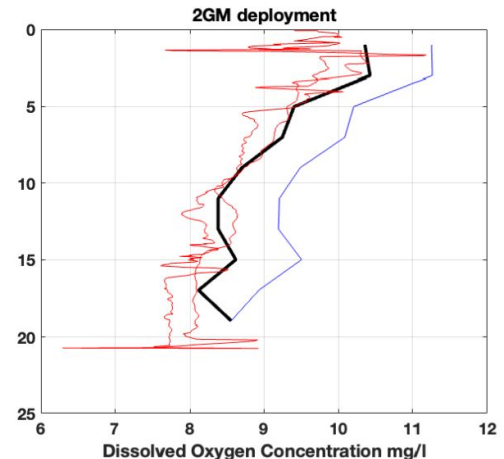
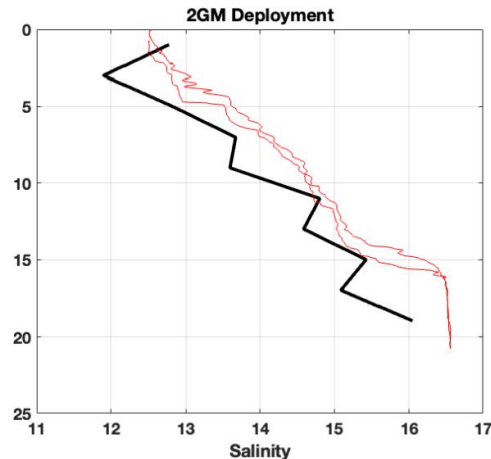
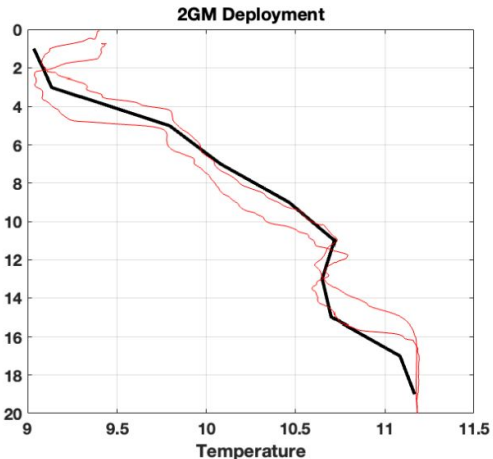
Oxygen: Dissolved Oxygen Concentration





# Validation Results

- ▶ These are first msrmts (3 readings, 20 min avg from 1710 to 1730) from mooring vs. CTD (@~1715) for 2GM deployment on 12/1/21.
- ▶ Not bad, we expect a little better agreement after the mooring has been in a little longer.
- ▶ Mooring Temp is good; Sal is generally a little low on the SBE at the bottom and there's a Conductivity coefficient issue; but DO is still quite good.
- ▶ On DO, the light blue is the DO concentration from the instrument; the black line is the Salinity Adjusted DO, which is what we use, since the PME Instruments do not know salinity and this correction is added at the database.



# QAPP Update

## Progress to date

- ▶ Development of Procedures and Timelines for Calibration and Validation of sensors Pre, During and Post Deployment

## Next steps

- ▶ 2022 deployment scheduled to go out next week with a target of Monday
- ▶ Submit a Draft QAPP to partners for comment and review by mid June

U.S. Department of Commerce (DOC)  
National Oceanic and Atmospheric  
Administration (NOAA)  
**Draft** Quality Assurance Project Plan  
(QAPP)



**Hypoxia Water Column Monitoring  
Chesapeake Bay**

February, 2022  
Version 2.0

## 3rd Site Selection



The goal of the first three Phase 1 arrays?

- ▶ We assume Hypoxic Volume model validation, which is a direct link to living resources, do we look south as suggested by Aaron's paper?
  - ▶ What monitoring sites are our options?
  - ▶ Does this require any movement in the existing two?
- ▶ But if segment attainment/delisting, which also links to living resources but more geographically specific to where deficits occur, is it somewhere else?



## Other items

- ▶ A Reference Array has been recommended/suggested
  - ▶ Where do we anticipate this location
  - ▶ Are we targeting 1m resolution?
- ▶ What else should we be thinking about?