

# Hurricane Ian and Water Quality: Collaborations, Initial Thoughts, and Lessons Learned

A large, stylized graphic in the background features a yellow sun with rays on the left, and several green leaves of varying shades on the right, all set against a white background.

June 22, 2023

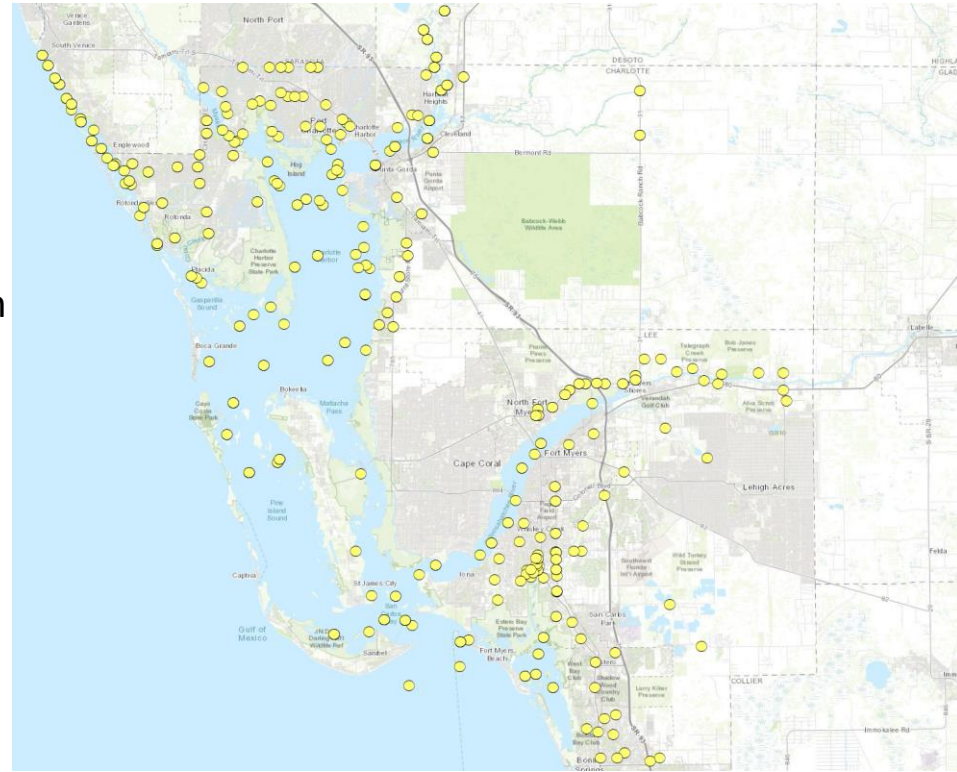


CHARLOTTE COUNTY  
FLORIDA

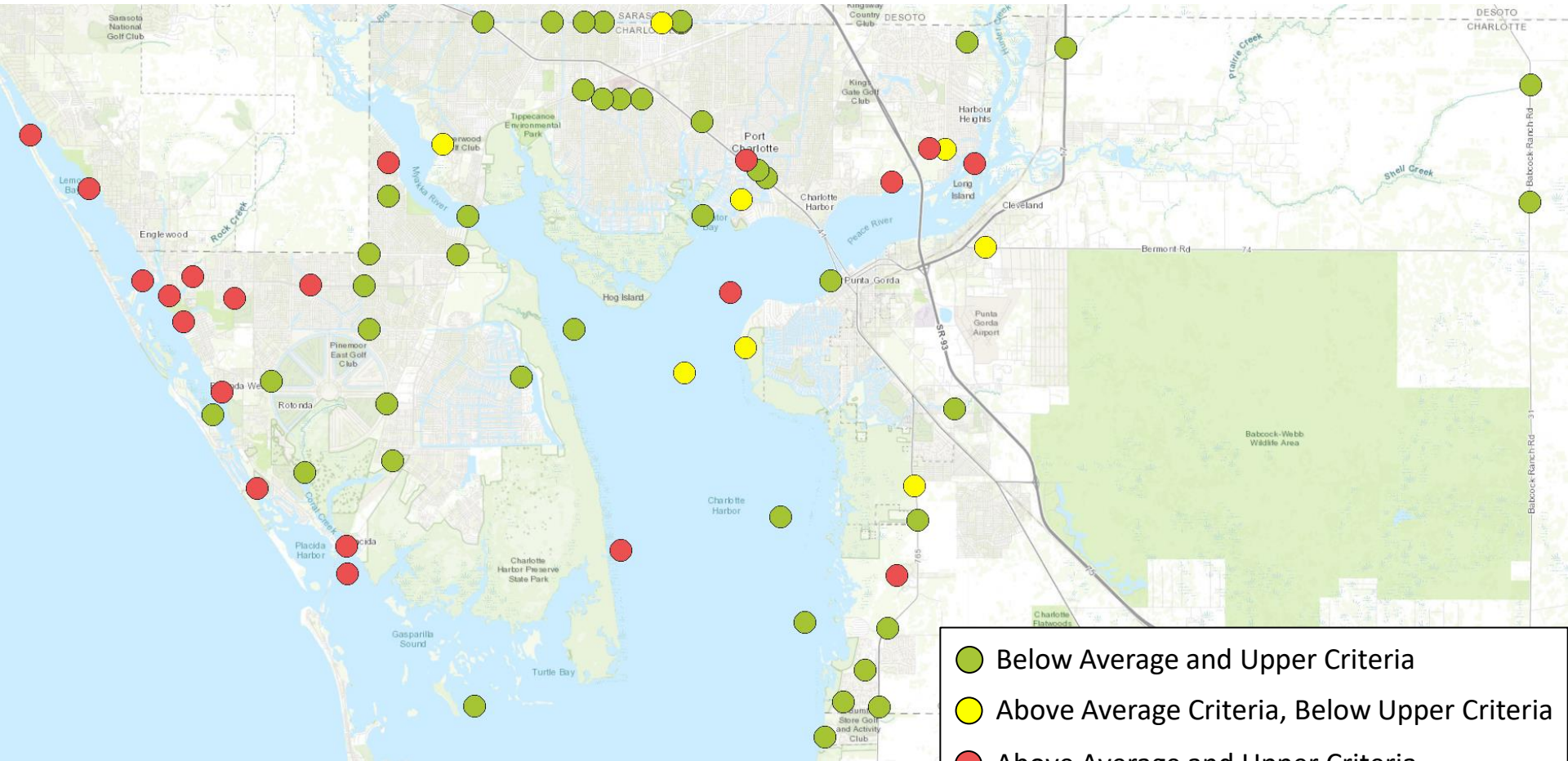
# Post-Hurricane Monitoring

## Multi-Agency Effort:

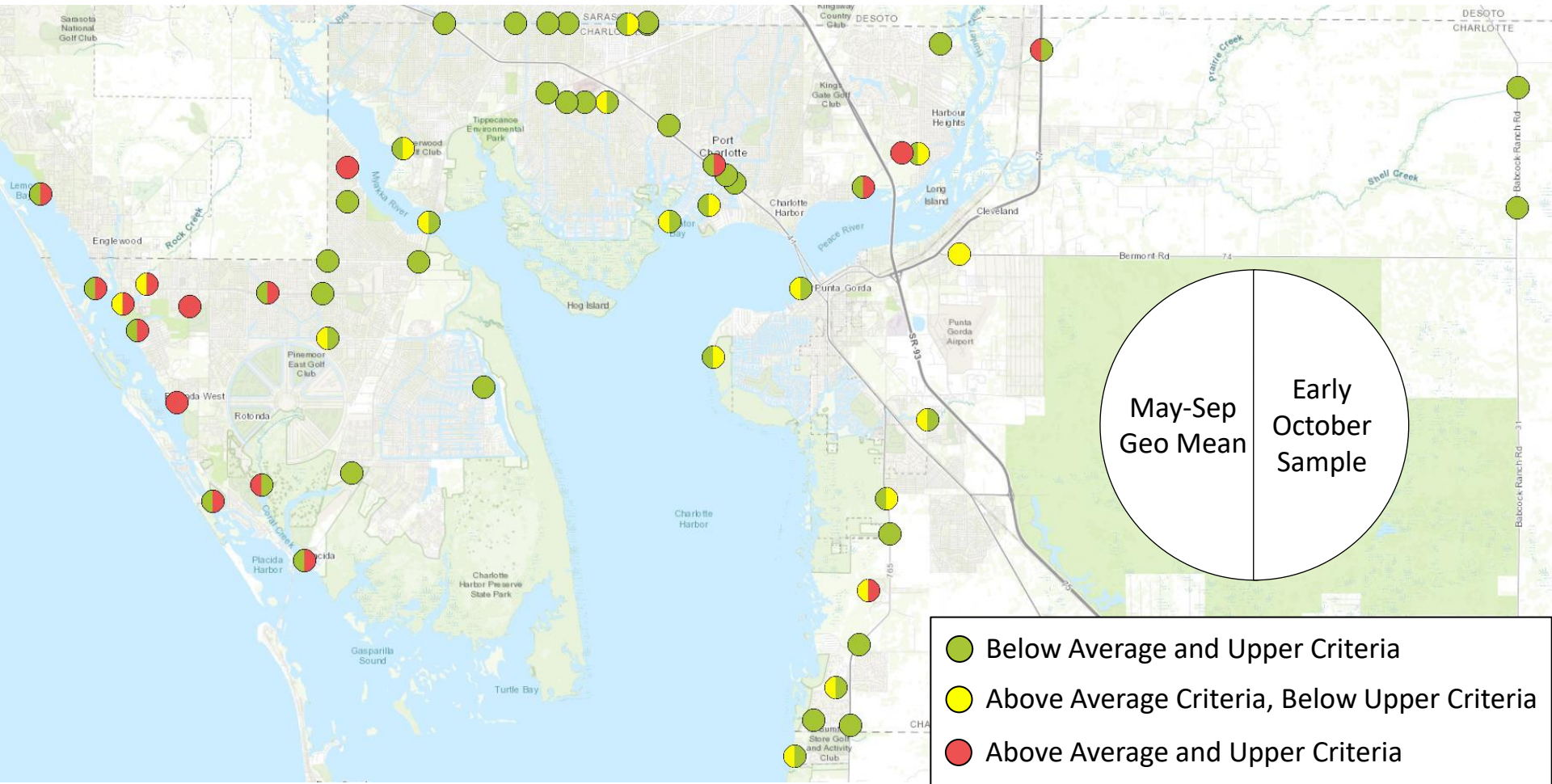
- Southwest FL Water Management District
- Sarasota Bay Estuary Program
- Charlotte County
- UF Center for Coastal Solutions
- Fish and Wildlife Conservation Commission
- Florida Gulf Coast University
- Charlotte Harbor Aquatic Preserves
- Coastal And Heartland National Estuary Partnership
- Florida Sea Grant
- Heal Our Harbor
- Sanibel-Captiva Conservation Foundation
- Lee County



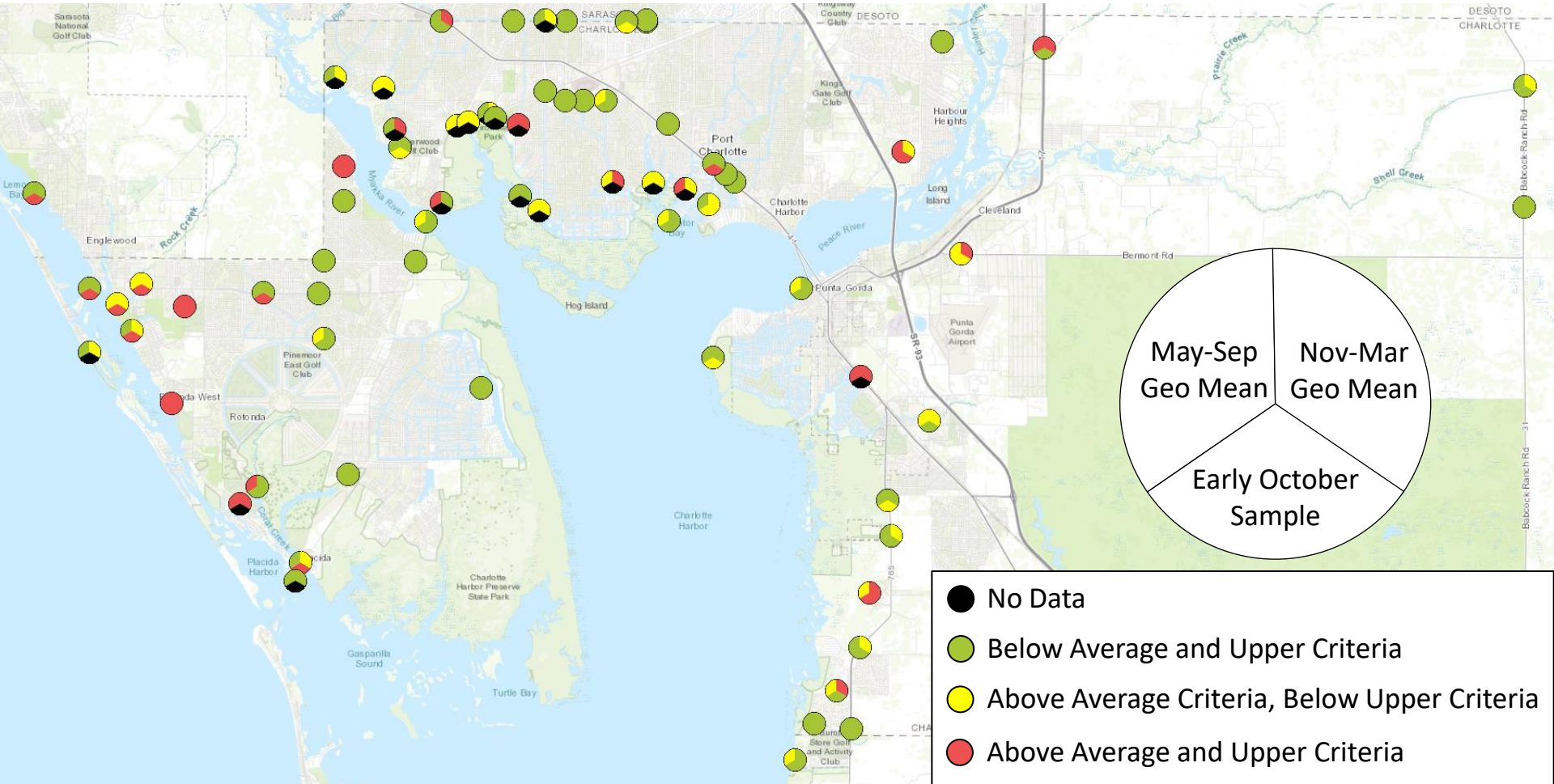
# Bacteria Counts, Weeks of 10/4 and 10/10



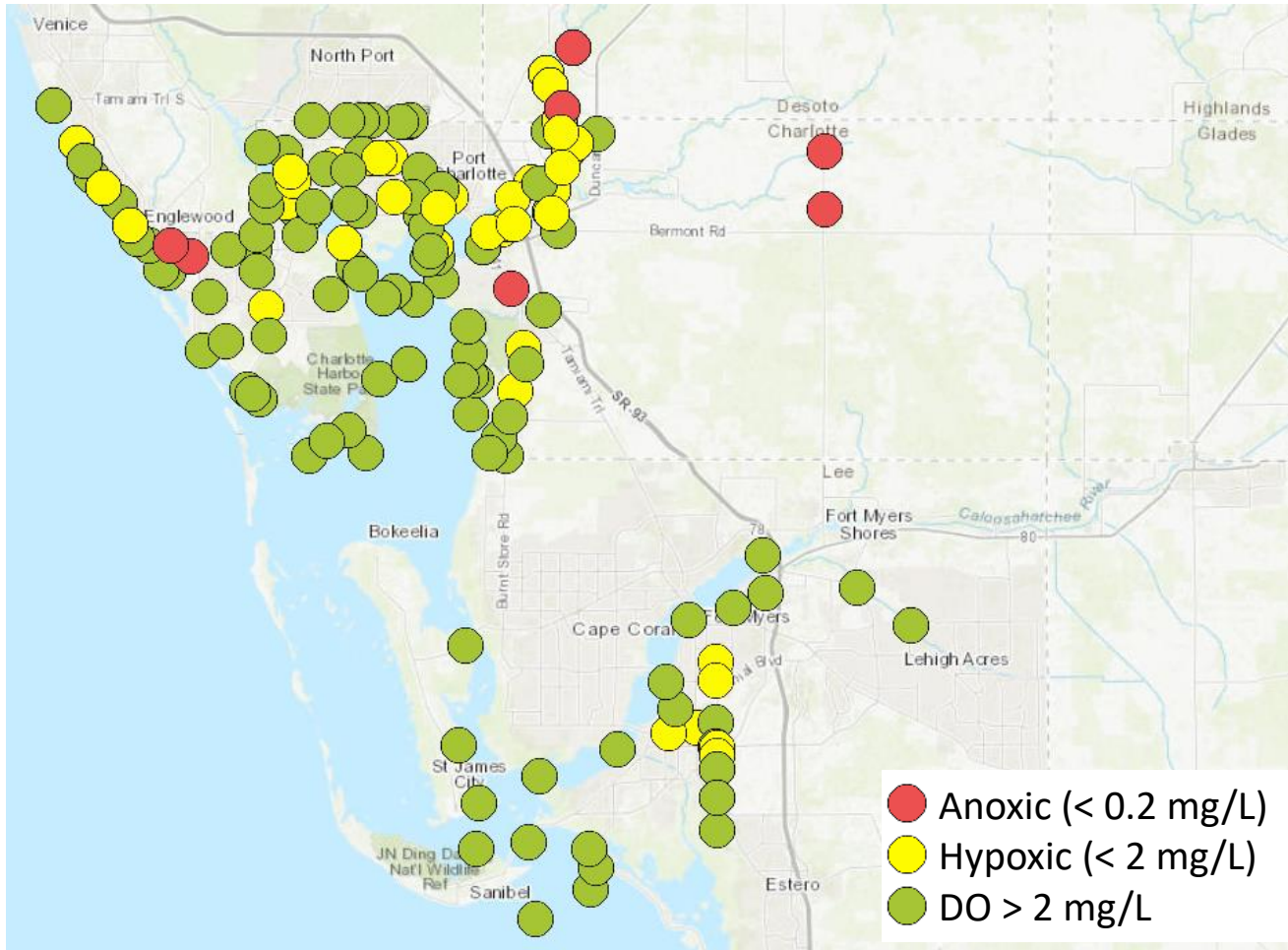
# Bacteria Counts, Pre-Ian vs. Early October



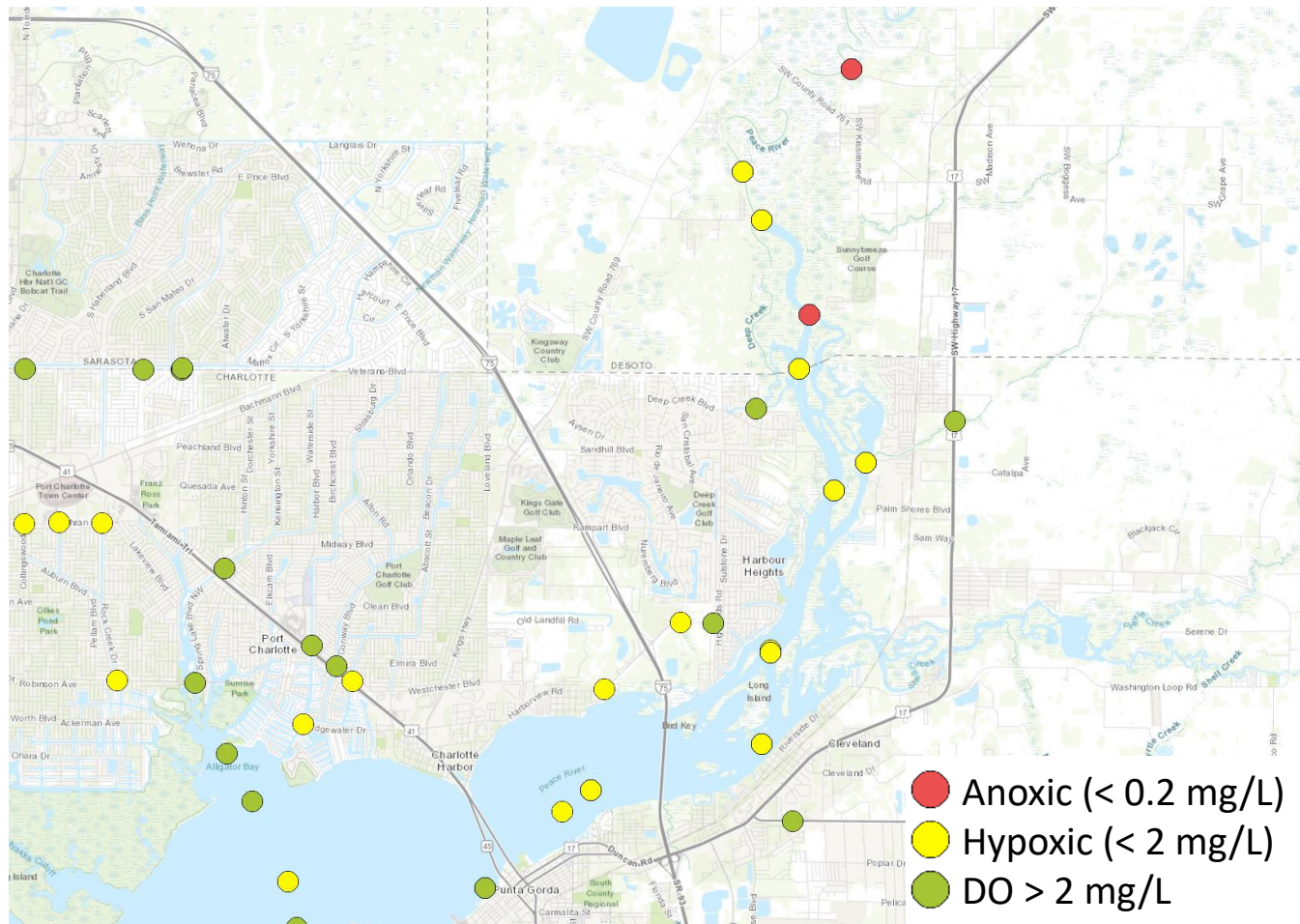
# Bacteria Counts: Pre-lan, Early October, and Post-lan



# Dissolved Oxygen, 10/4/22-10/13/22

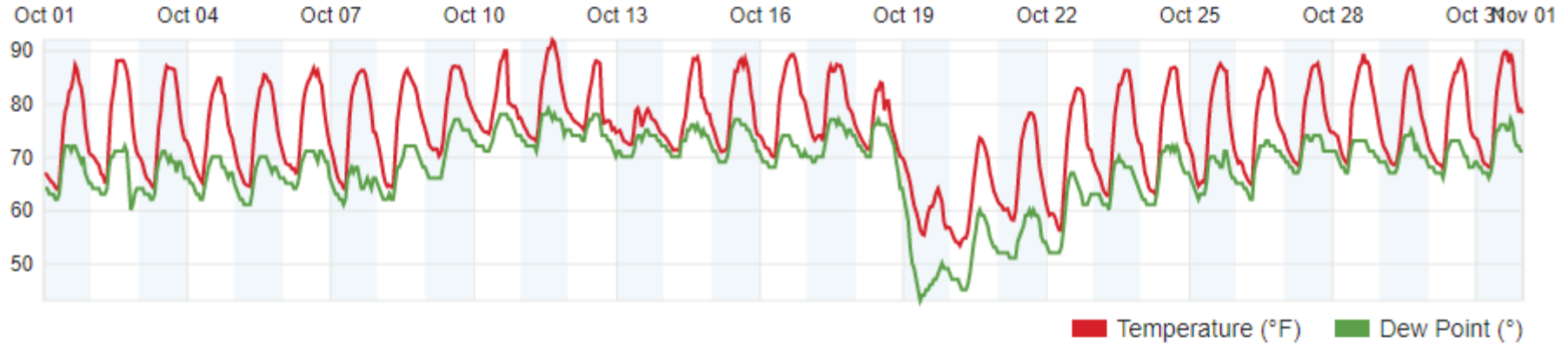


# Dissolved Oxygen, 10/4/22-10/13/22



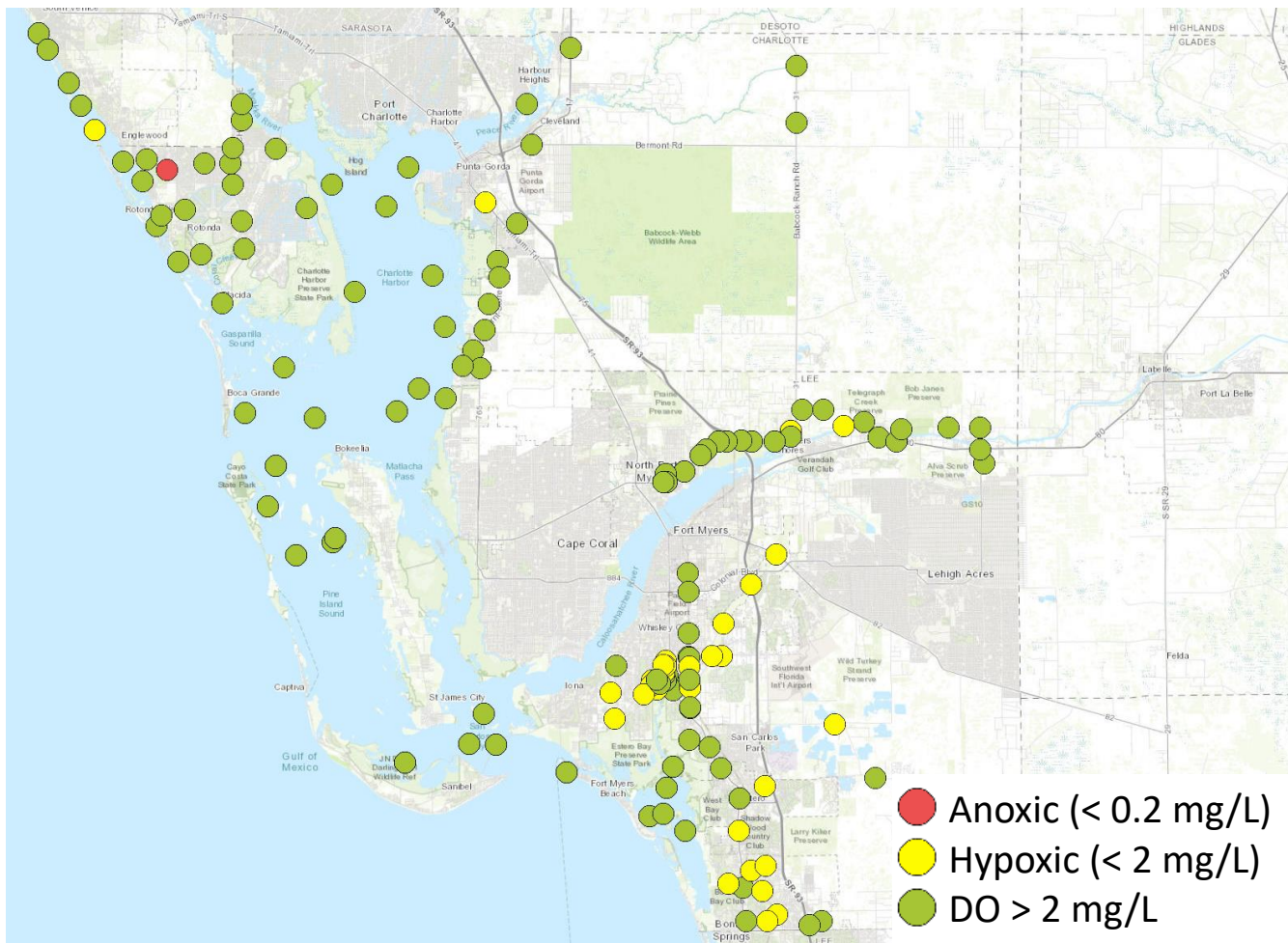
# October 2022 Temperature Trend- Port Charlotte

October 1, 2022 - October 31, 2022



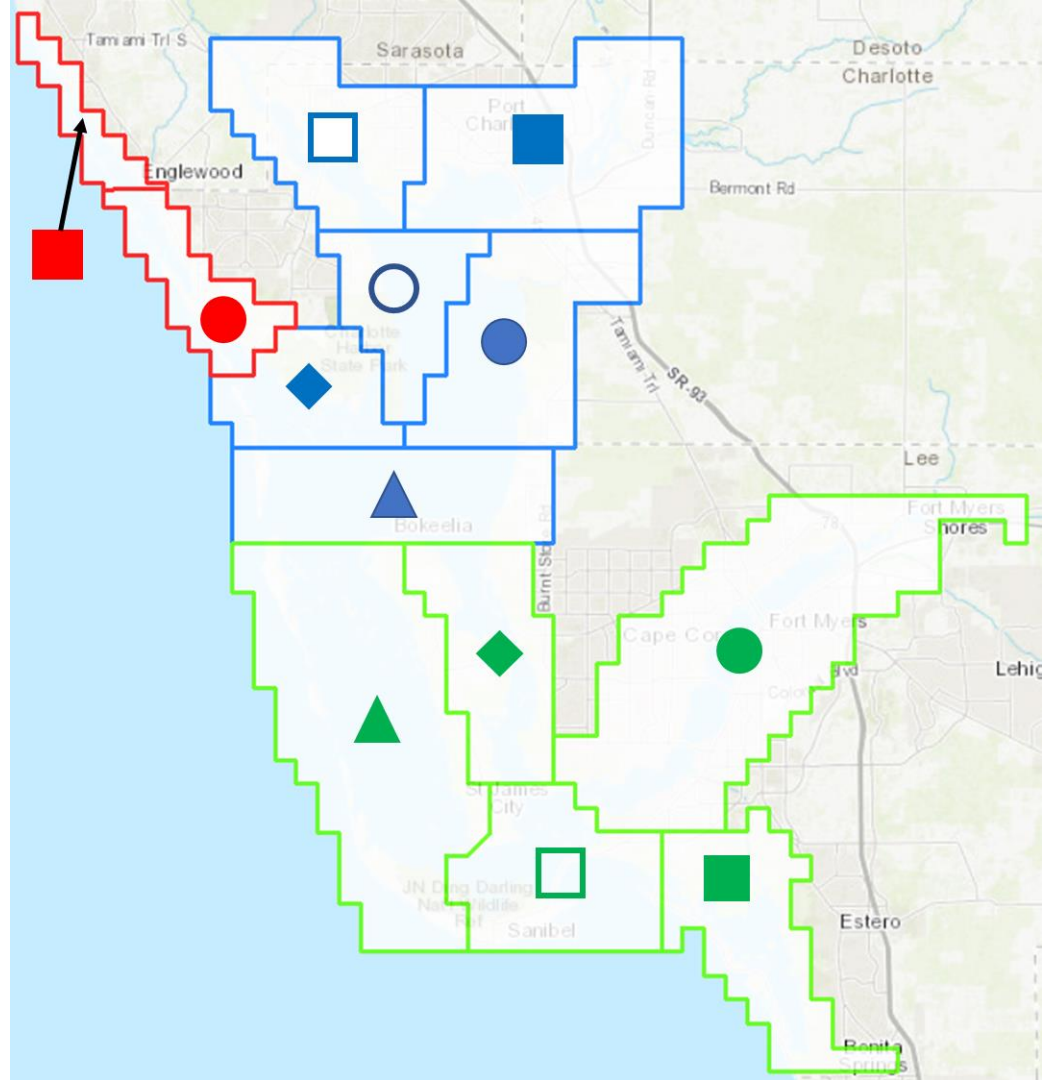


# Dissolved Oxygen, Late October

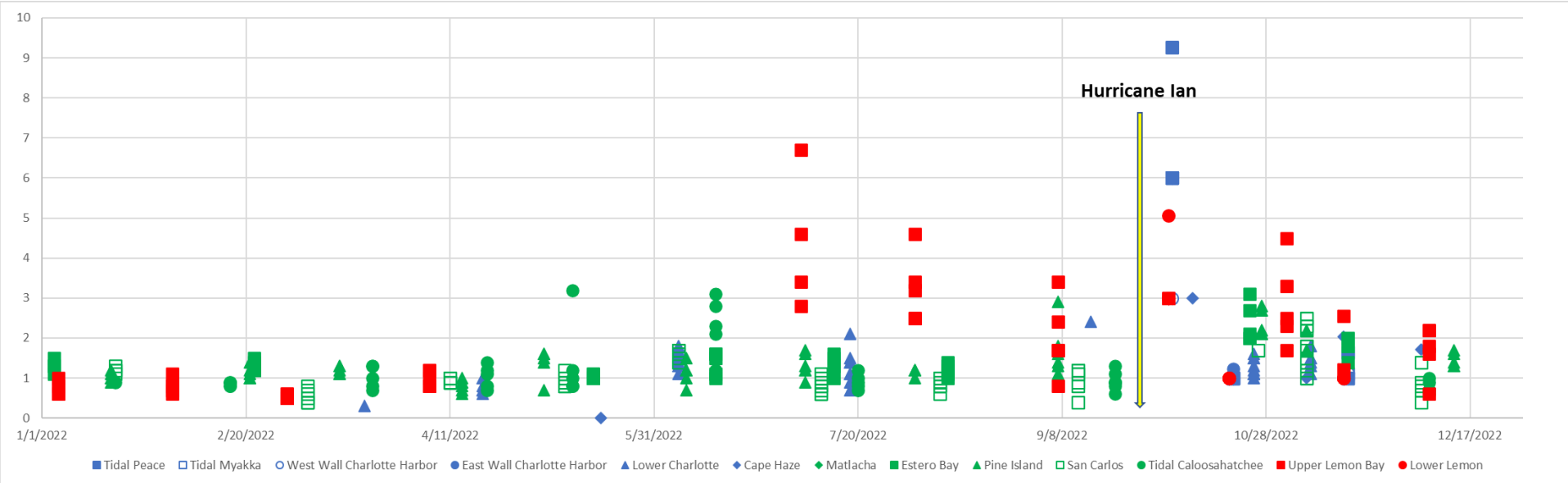


# 2022 WQ Trends: Pre/Post Ian

- Tidal Peace River
- Tidal Myakka River
- Charlotte Harbor West Wall
- Charlotte Harbor East Wall
- ▲ Lower Charlotte Harbor
- ◆ Cape Haze
- Upper Lemon Bay
- Lower Lemon Bay
- ◆ Matlacha Pass
- ▲ Pine Island Sound
- Tidal Caloosahatchee River
- San Carlos Bay
- Estero Bay

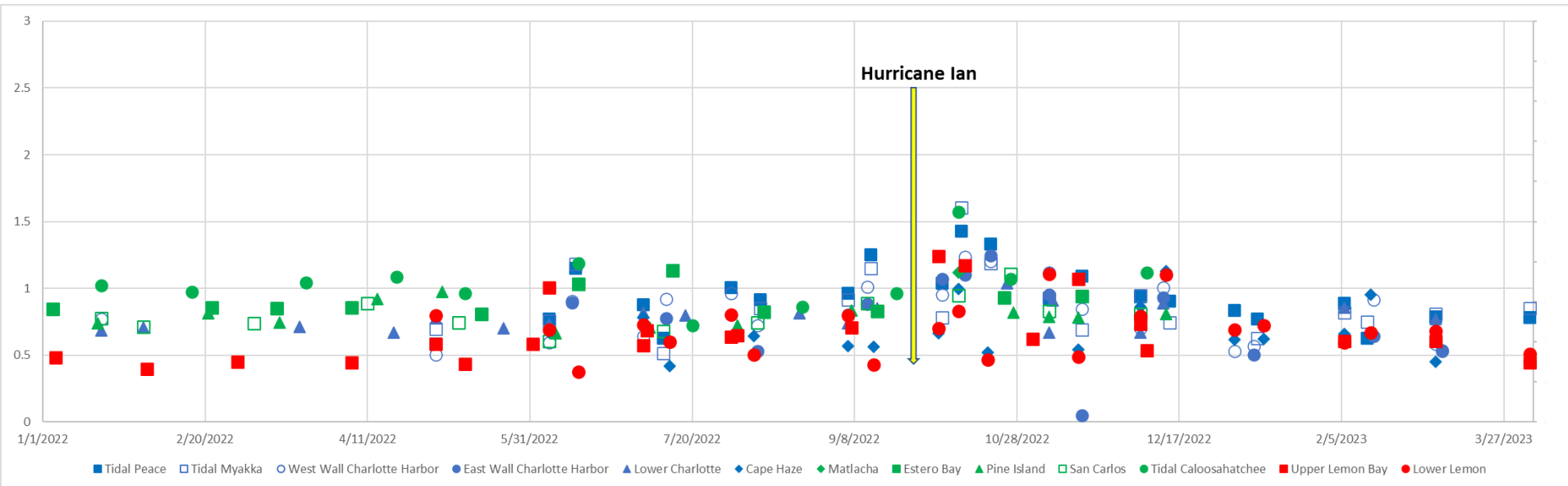


# Biochemical Oxygen Demand (mg/L)



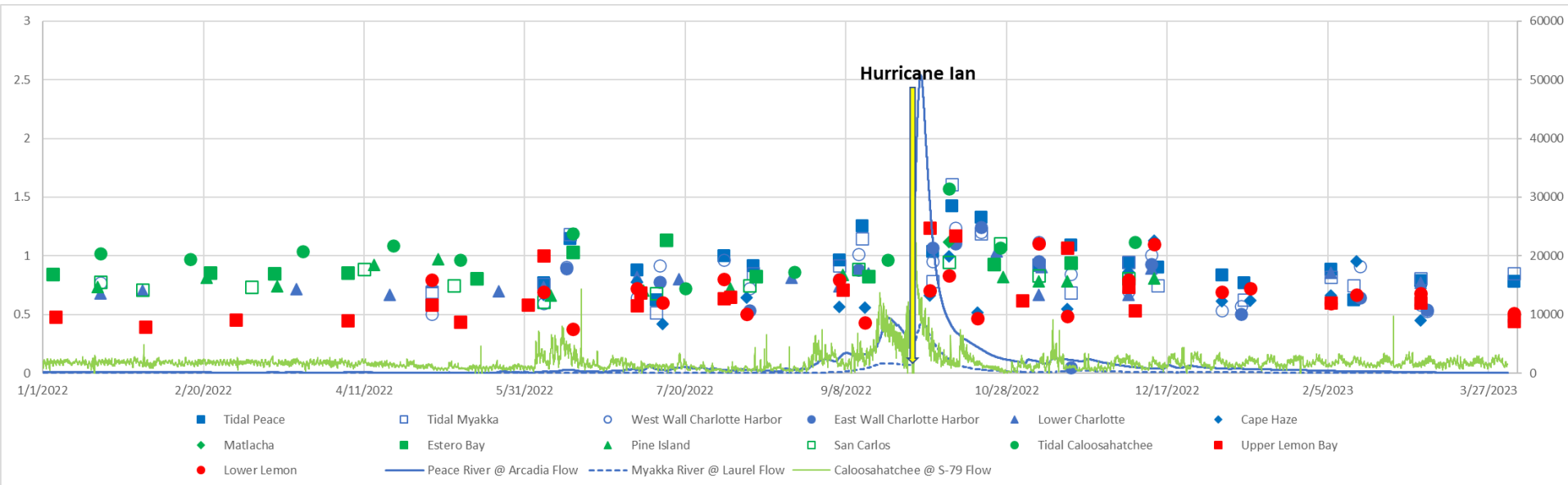
\*NOTE: Some data presented may not meet all FDEP/FDOH QC requirements

# Total Nitrogen – Daily Average By Region



\*NOTE: Some data presented may not meet all FDEP/FDOH QC requirements

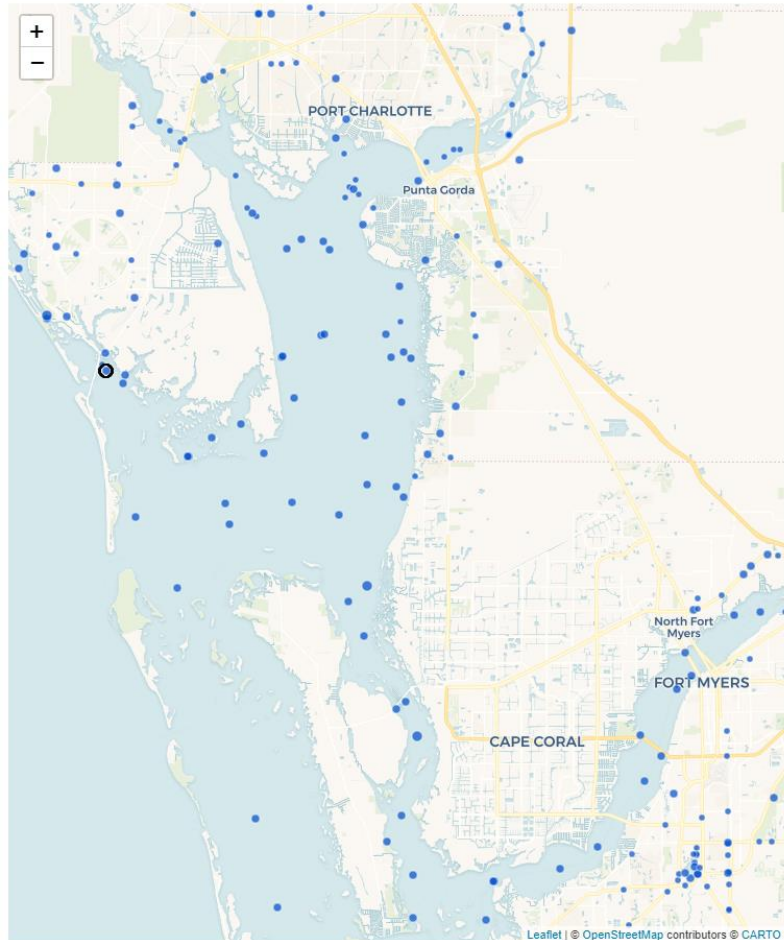
# Daily Average Nitrogen VS Flow



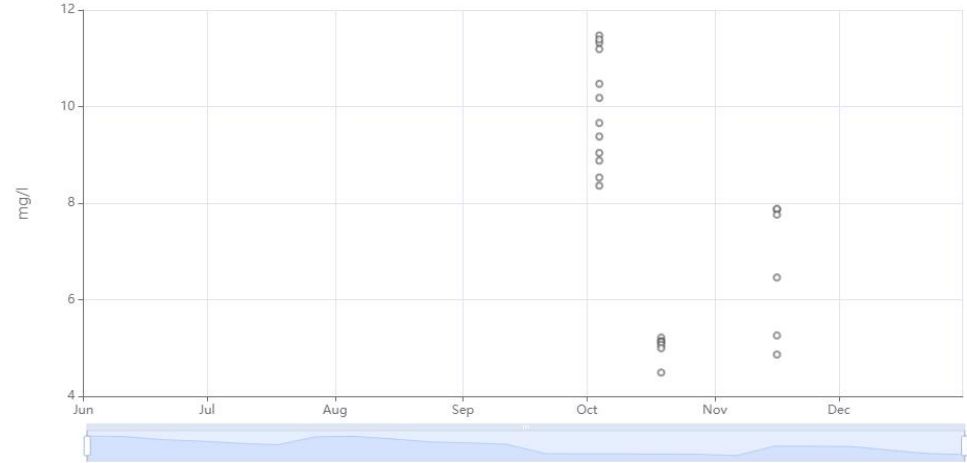
\*NOTE: Some data presented may not meet all FDEP/FDOH QC requirements



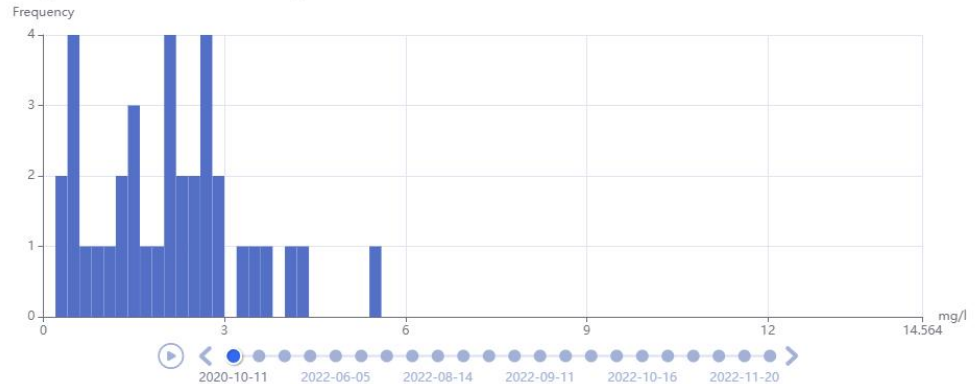
# Communication and Coordination



Data from selected station: DO Concentration at GSV003 (Charlotte County)



Histogram: DO Concentration by week across all locations



# Lessons Learned

- Event highlighted need for rapid deployment of analytical services independent of local laboratories
- Formal mechanisms needed to reserve and deploy sampling resources (at regional or local level)
- Coordination needed to:
  - Maintain resources for compiling and sharing data;
  - Establish common/comparable methods for collection and analysis