

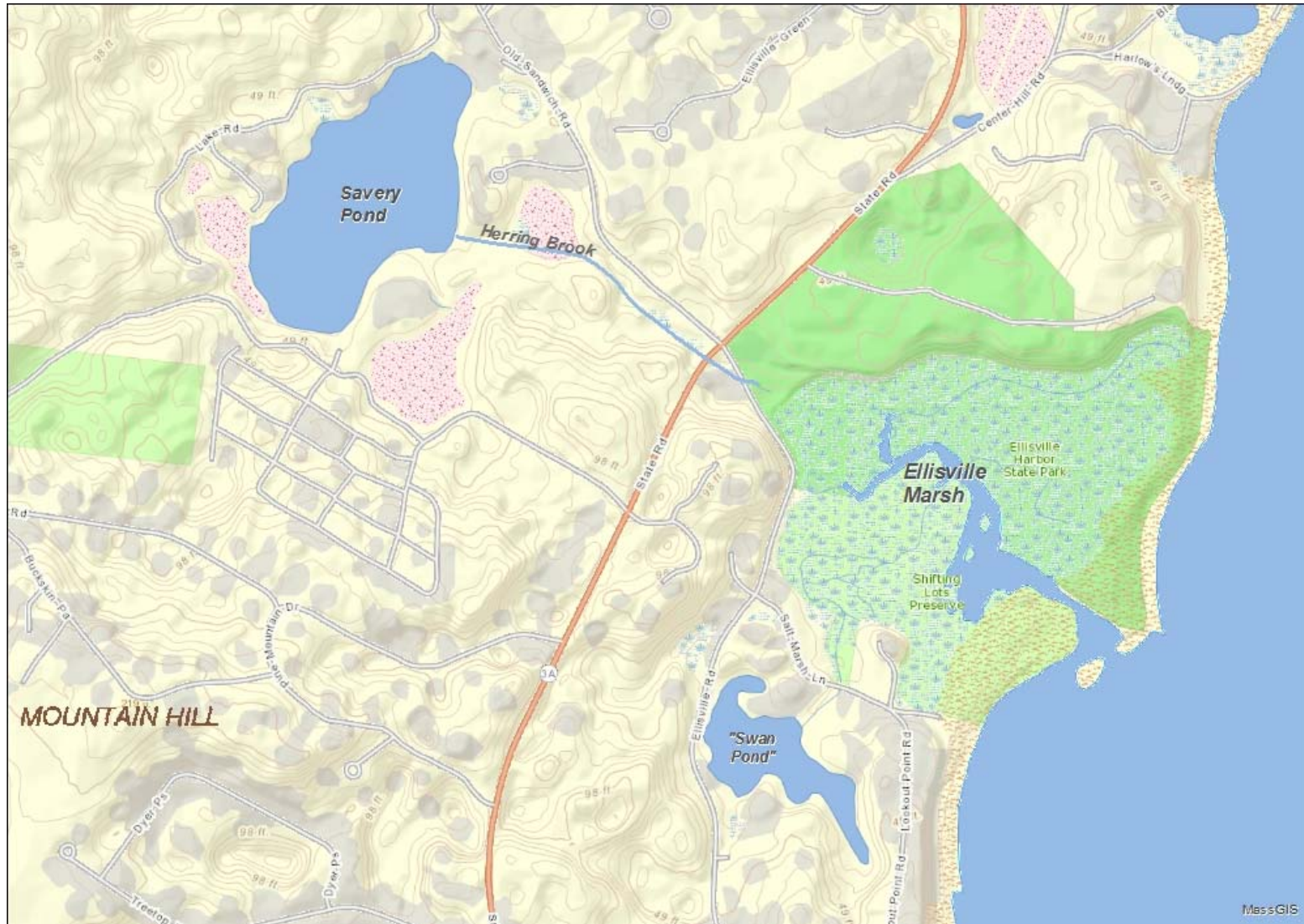
# Friends of Ellisville Marsh



Savery Pond Project



# How FoEM Got Involved w/ Savery Pond...



# Our Goals

- Control/Prevent Algal Blooms
- Manage Nutrients
- Restore & Protect Ecological Function
- Control Invasive Species
- Maintain Multiple Uses
- Maintain/Improve Natural Resource Value
- Build Community



*Phragmites*





# Algal Blooms



- Many Types of Algae
  - Aesthetic Concerns
  - Health Concerns
- Cyanobacteria – Blue Green Algae
  - Can Produce “Microcystin” Toxin
  - Affects Liver, Kidney, Nervous System
- Response to Excessive Nutrients



# Nutrient Sources

- Fertilizers
  - Residential
  - Agricultural
- “Legacy” Nutrients (in Pond Sediment)
- Septic Systems
- Natural Sources
  - Decomposition of Organic Matter
  - Waterfowl, Critters



# What FoEM is Doing

- Data Collection Towards:
  - Watershed Evaluation
  - Nutrient Budget
  - Management Plan
  - Mitigation / Remediation
- Cooperative Approach
  - Plymouth PPALS, SMAST
- Procuring Funding
- Promoting Sound Practices
- Disseminating Information

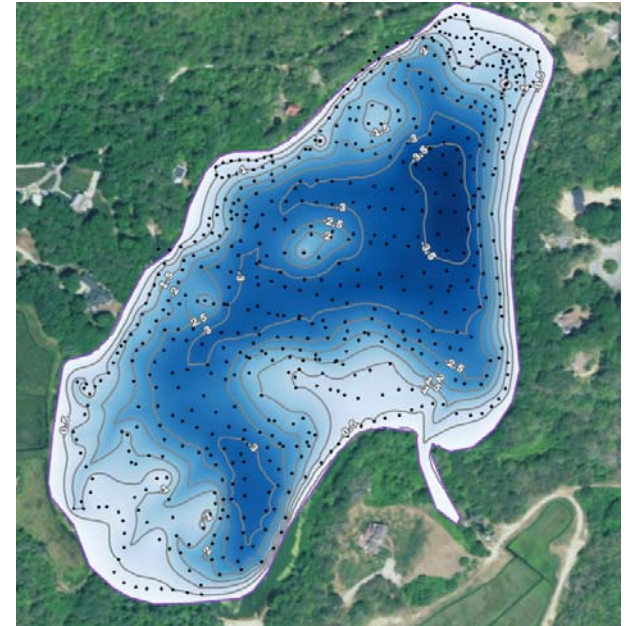


*Taking a water sample*



# What We've Accomplished To Date

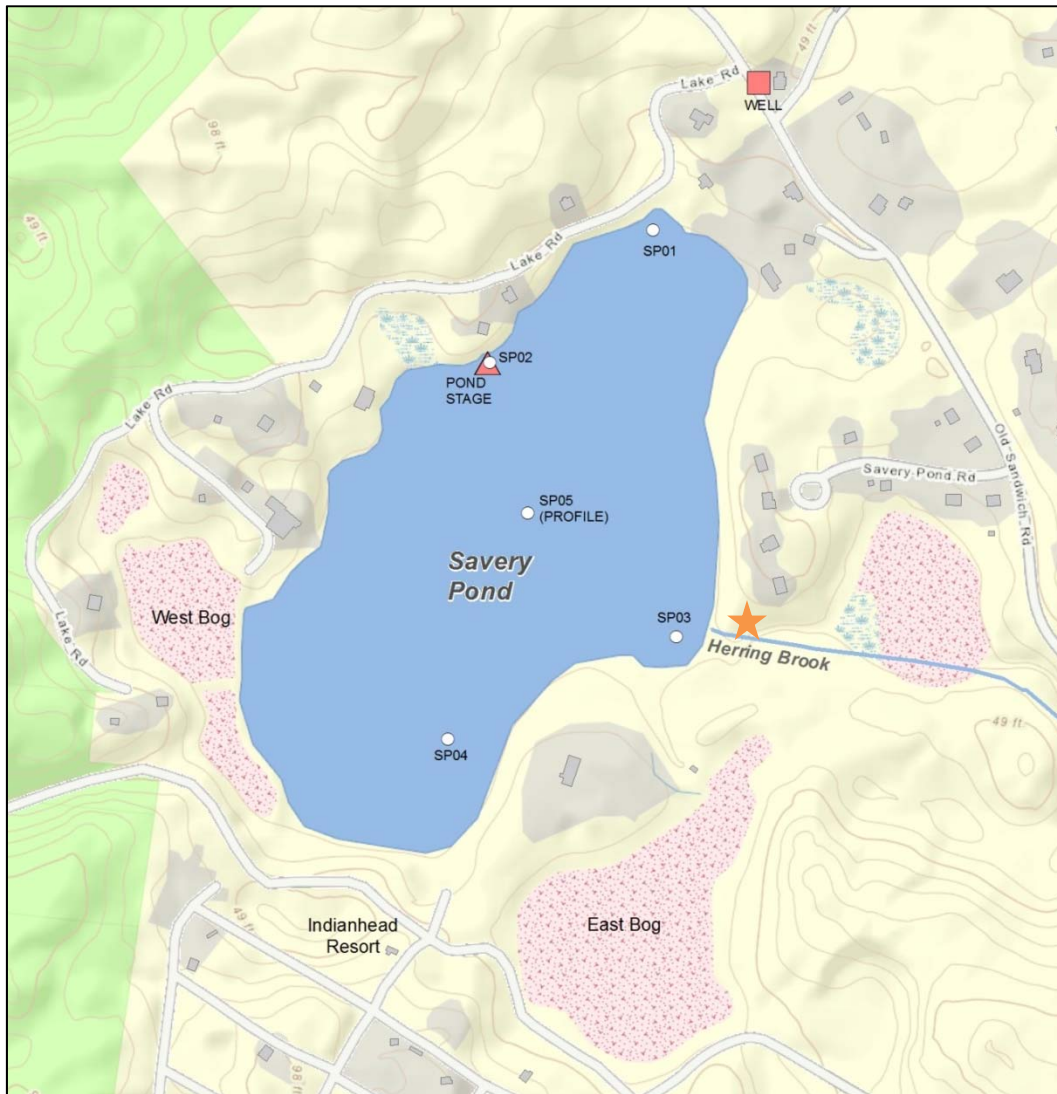
- Initial Water-Quality Study (2012)
- Cooperation w/ PPALS, SMAST
- Continued Water-Quality Sampling
- Monitoring Lake Level & GW Level
- Reporting Algal Blooms
- Bathymetric (Depth) Survey
- Assisted with Bog Acquisition
- Setting Up Streamflow Monitoring
- 2016 Data Summary Report
- Website & Communications Network



*Bathymetric Survey*



# Monitoring Locations

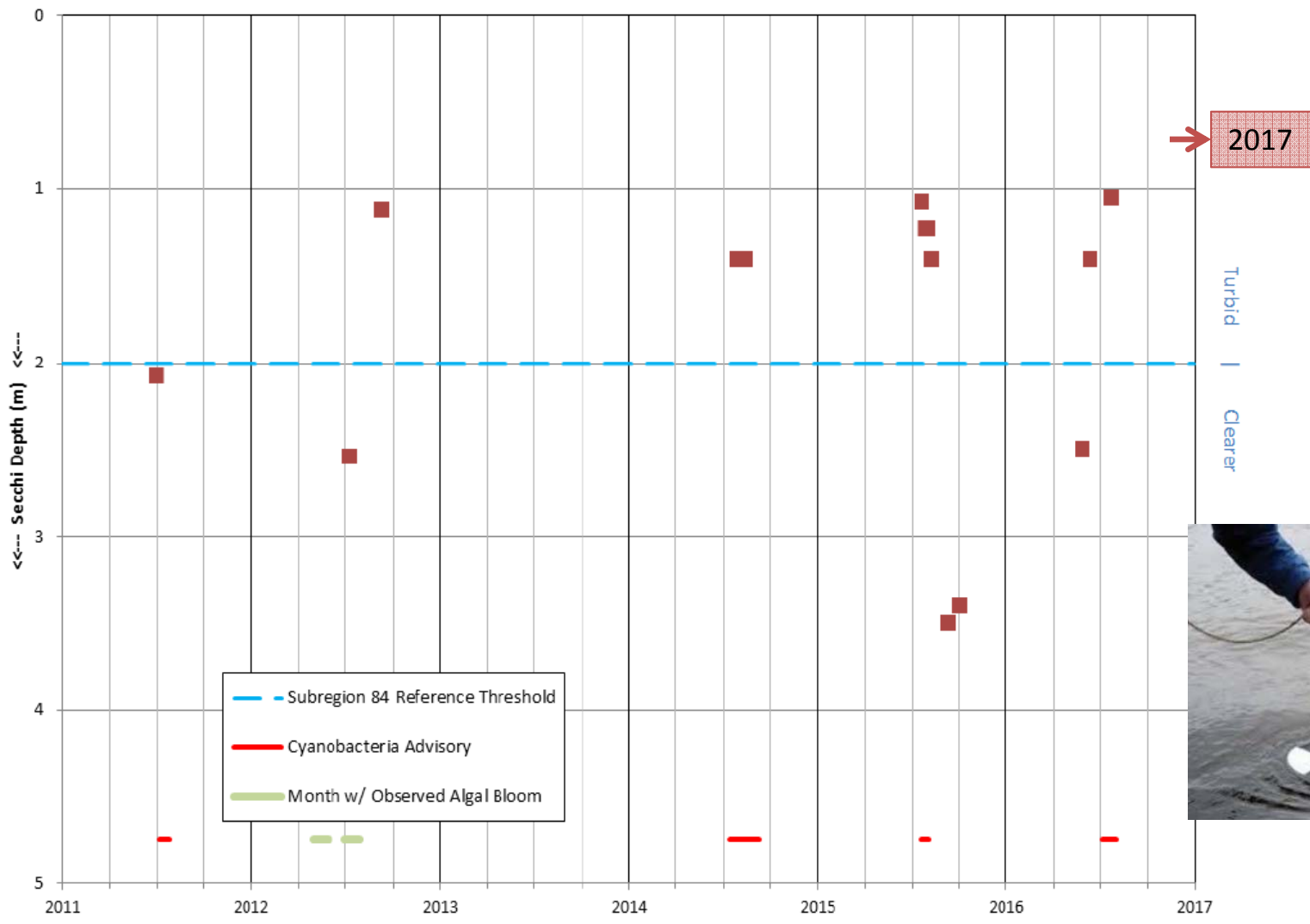


## Currently Monitoring:

- Temperature
- Dissolved Oxygen
- Clarity
- Nutrient Concentrations
- Chlorophyll
- Pond Level
- Groundwater Level
- Herring Brook Outflow (visual)





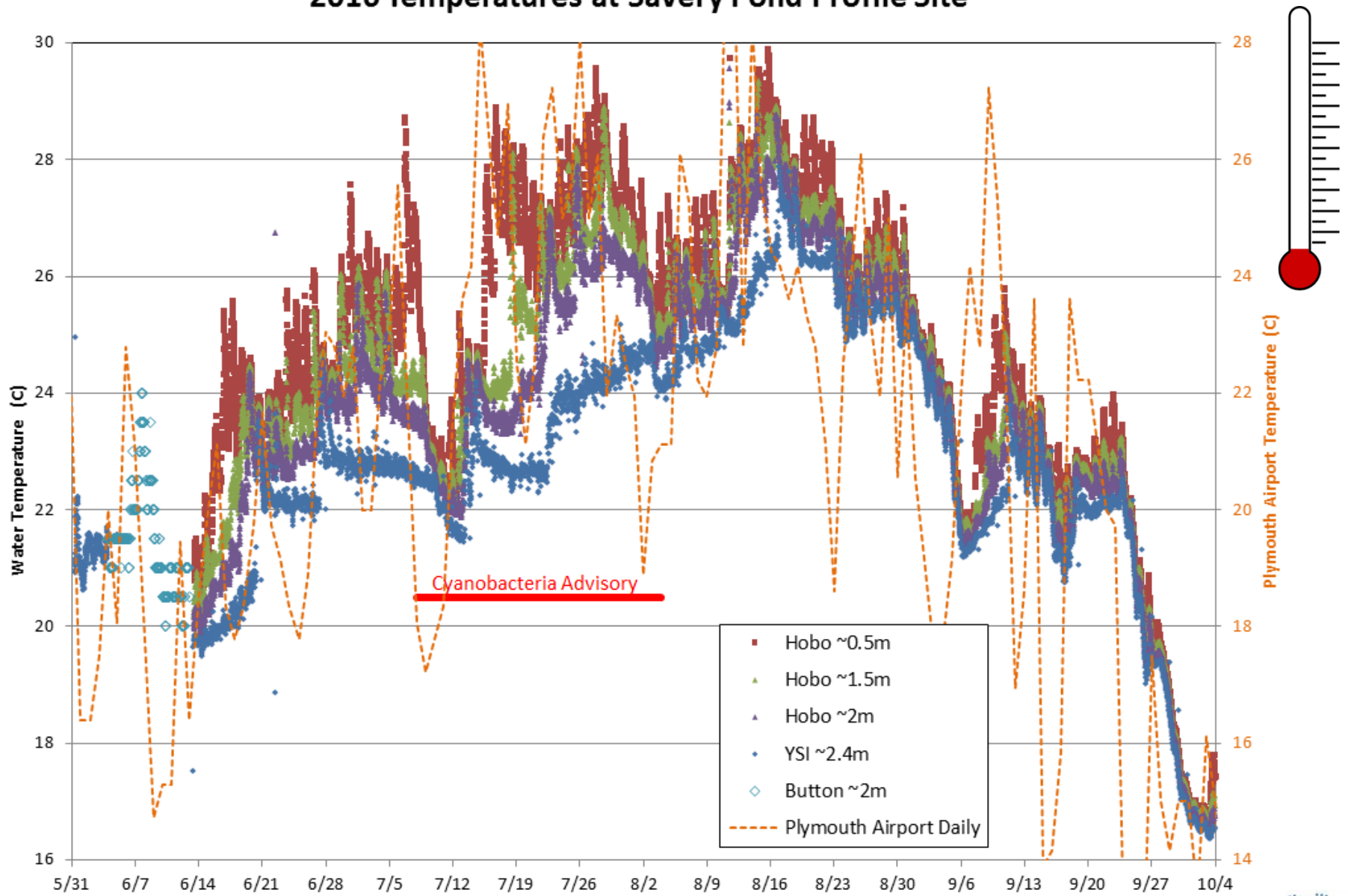


**Figure 3**  
**Secchi Disk Measurements**

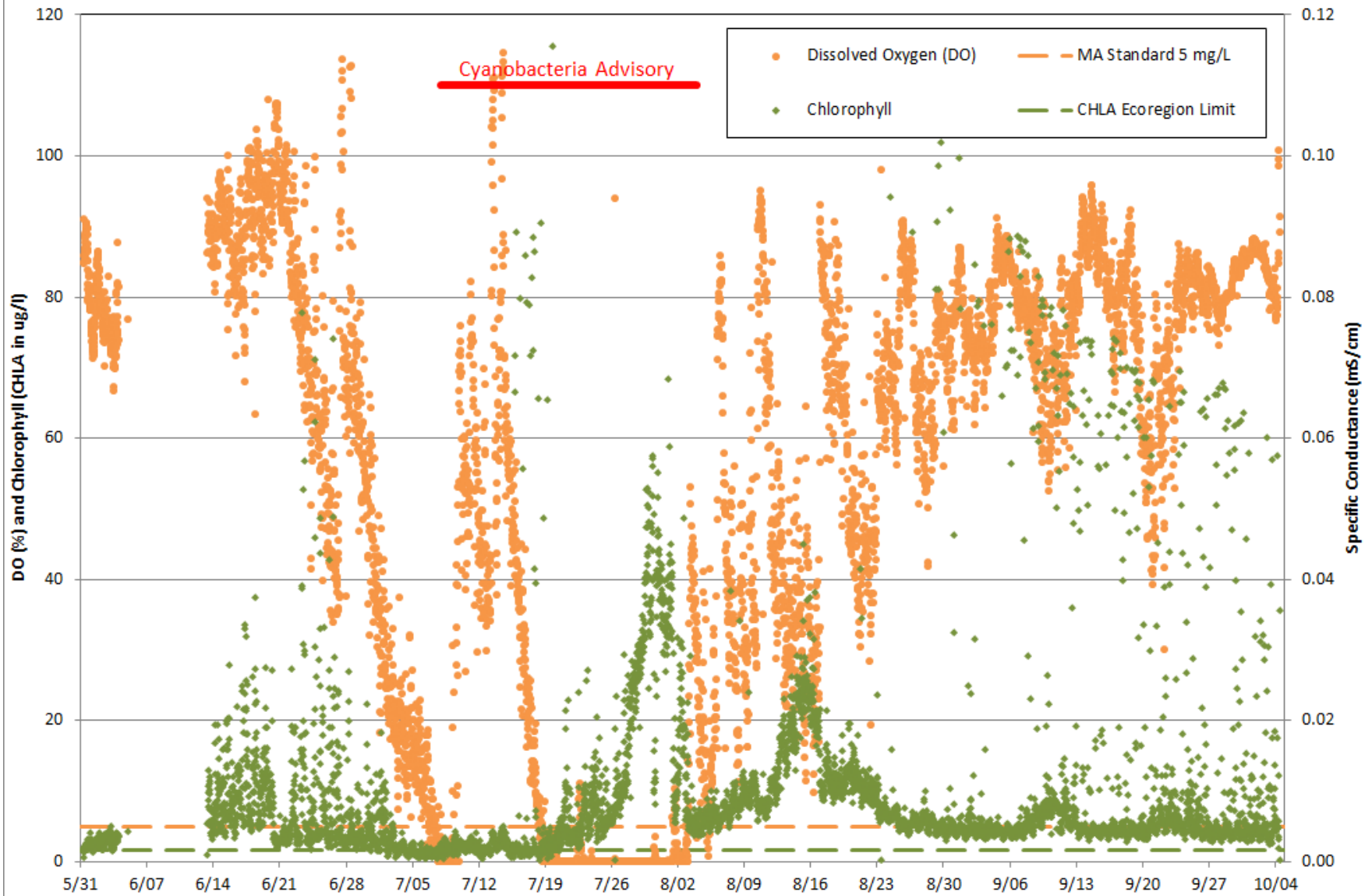
**Savery Pond**  
**2016 Data Summary**

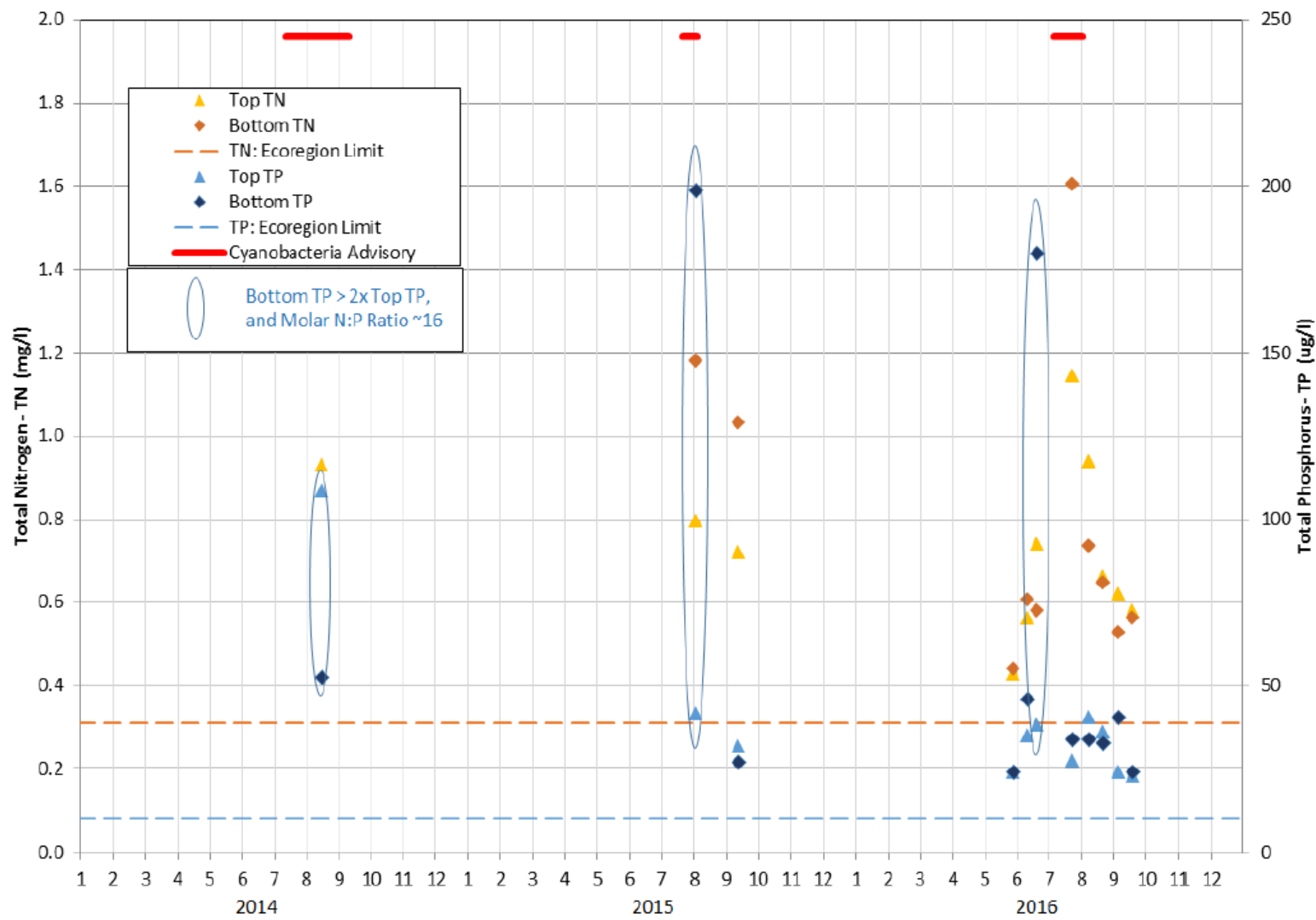


# 2016 Temperatures at Savery Pond Profile Site



# DO and Chlorophyll Near Savery Pond Bottom (2016)



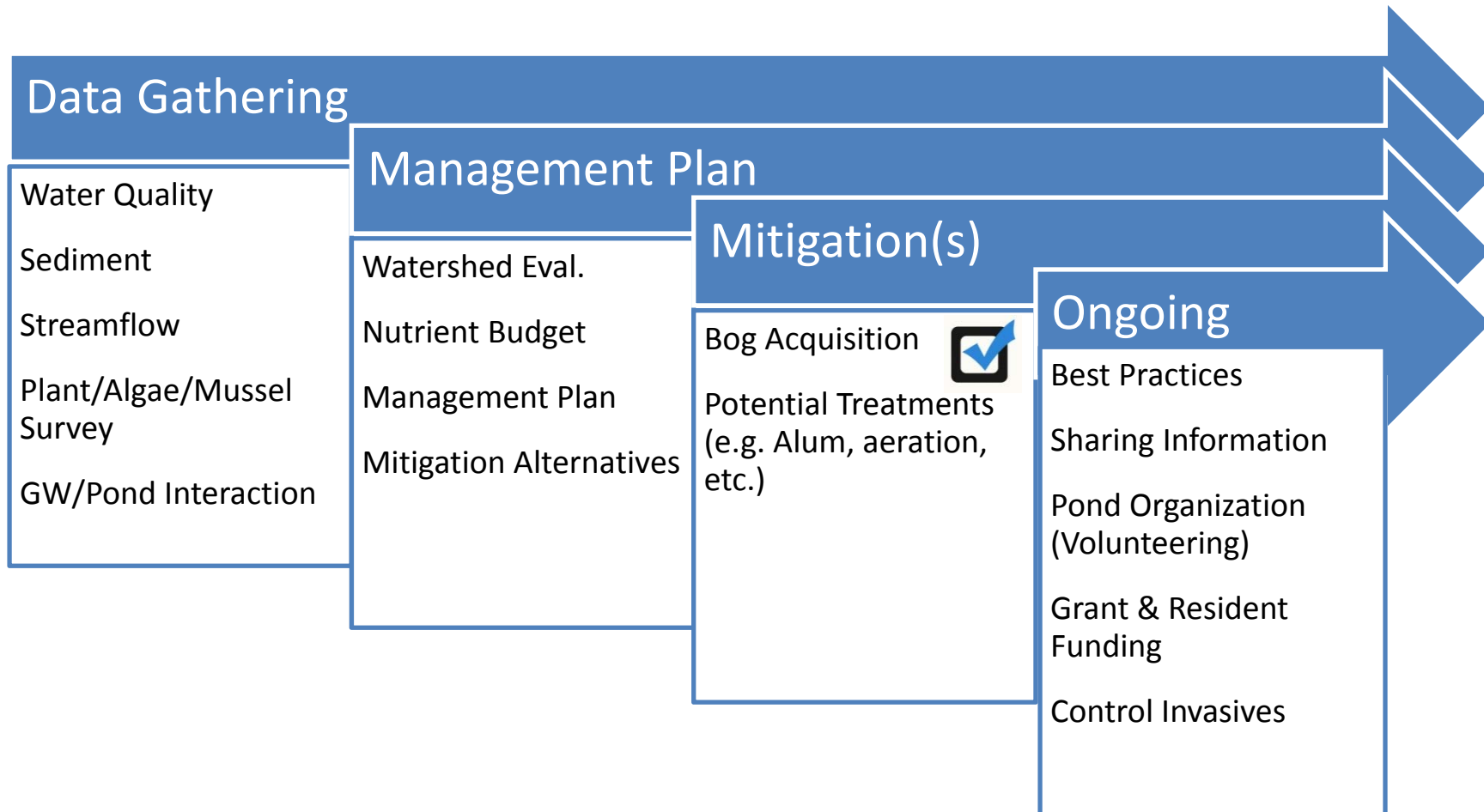


**Figure 8**  
**Nutrient Concentrations in Savery Pond (at Profile Location)**

Savery Pond  
 2016 Data Summary



# “Big Picture” Strategy



# MET Grant Opportunity

1. Pond Sediment Assessment\* (\$10k)
2. Aquatic Plant\*, Mussel, Depth\*, Plankton Surveys + Water-Quality Sampling\* (\$12k)
3. Herring Brook Flow Monitoring and WQ Sampling\* (\$6k)
4. Nutrient Budget & Management Plan (\$16k)

*Total Cost \$45k, Submitted by Town & SMAST, Requires FoEM Contribution*

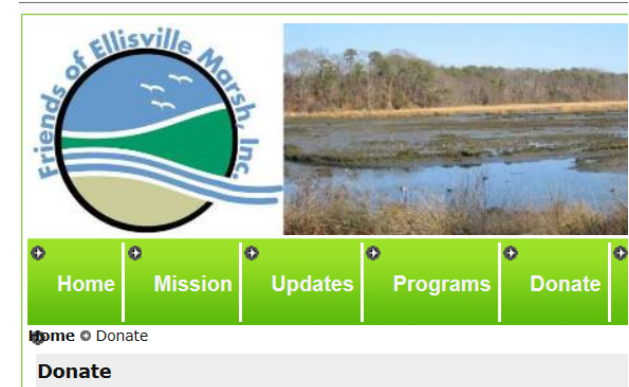
*\* Items Which FoEM Could Assist*

*\*FoEM "Plan B"*



# Fund Raising

- Friends of Ellisville Marsh
- Savery Pond Initiative Fund
  - Operating Costs (e.g. sampling)
  - Discrete Expenditures
    - MET Grant Contribution
    - (or) FoEM Oversees Pond Study
    - Mitigations
- Fundraising Goals
  - Annual Operating Budget
  - Discrete Expenditures (Upcoming \$10k)
- *Volunteering!!!*



*All contributions and membership fees to the Friends are fully tax deductible.*

#### **Four Membership Options (single year)**

One membership covers all family members living at the same address. All members vote in matters brought to vote by FEM's Board of Directors. Members may choose to remain anonymous.

**Basic Member - \$15**  
**Sustaining Member - \$100**

**Supporting Member - \$50**  
**Patron Member - \$250**

*Sustaining and Patron Members will receive a gift (e.g. a Friends cap) automatically*

#### **Endowment Fund Donation**

Endowment fund donations are utilized for reaching long-term, goals and missions of the Friends. Donations can be made in any denomination of your choosing.

**Savery Pond Initiative Donations**





# Vision

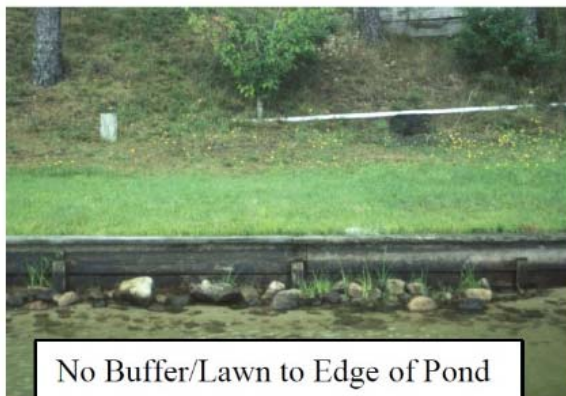
- Clear Water
- No Toxic Algae Blooms
- Healthy Ecosystem
- Multiple Uses
- Sustainable Outcome
- Organized Pond Association



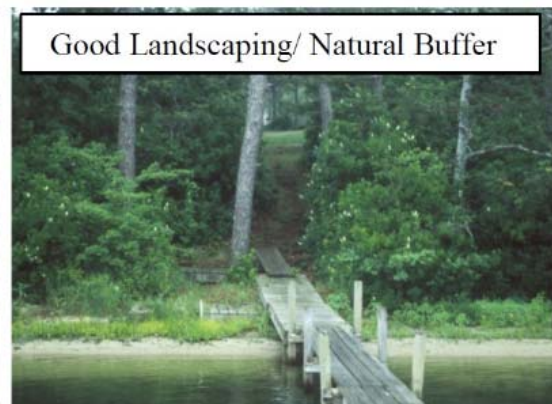


# Best Practices

- Pond-Friendly Lawn Care
- Grow a Native Plant Buffer
- Use Phosphate-Free Soaps & Detergents
- Pump Out Septic Tank Regularly
- Don't Encourage Waterfowl by Feeding



No Buffer/Lawn to Edge of Pond



Good Landscaping/ Natural Buffer



# Questions?

