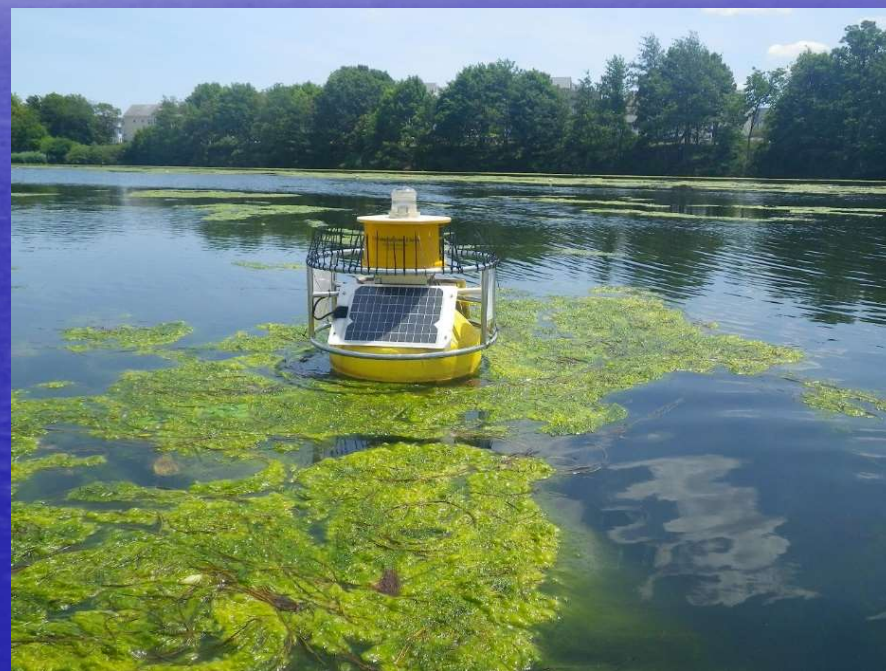


EPA's Real-Time Water Quality Monitoring Buoy



Mystic Science Forum - May 4, 2017

Tom Faber - Environmental Engineer
EPA Region 1 - New England Regional Laboratory

Phil Warren – IT specialist
EPA Region 1 - Office of Administration and Resource
Management

Data Collection

- Recorded every 15 minutes
- Measurement period June - September
- Measurements collected at 1 meter depth
- Parameters
 - Temperature
 - Conductivity
 - pH
 - Dissolved oxygen
 - Turbidity
 - Chlorophyll
 - Phycocyanin



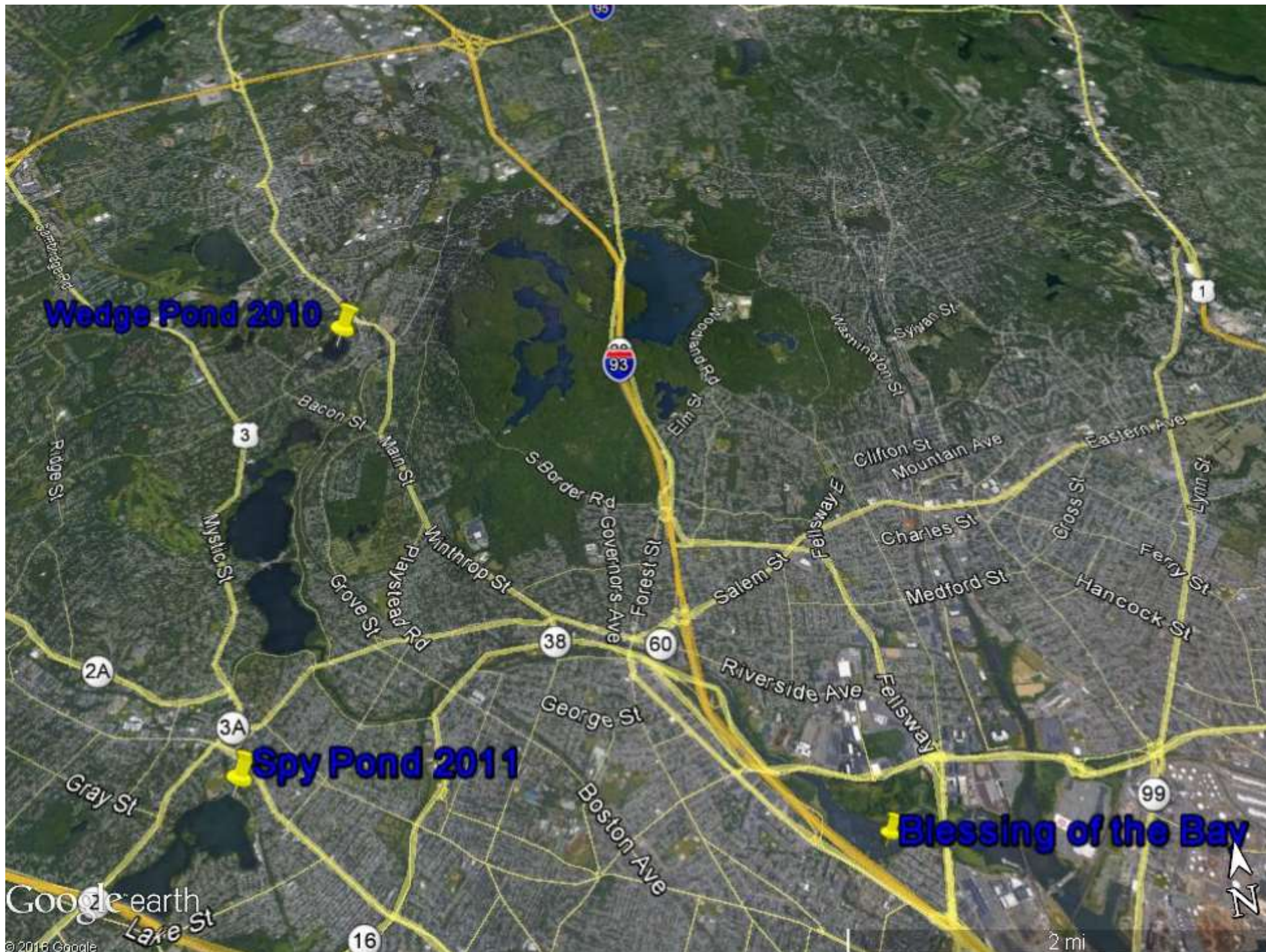
Site selection

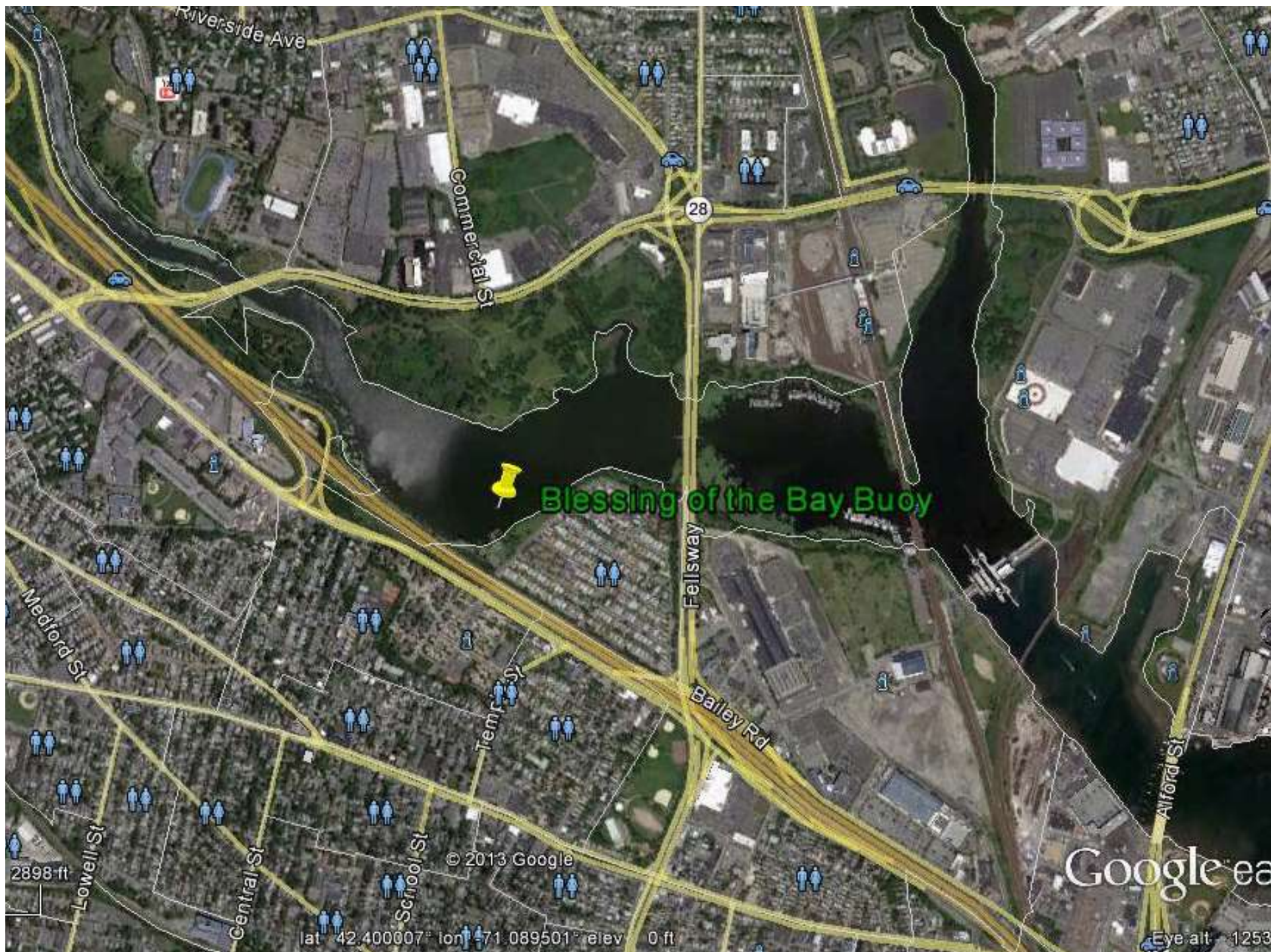
- Monitoring locations were selected for
 - High recreational use
 - Historic algal blooms
- Coincide with other monitoring
- Monitoring began in 2010

Partners:

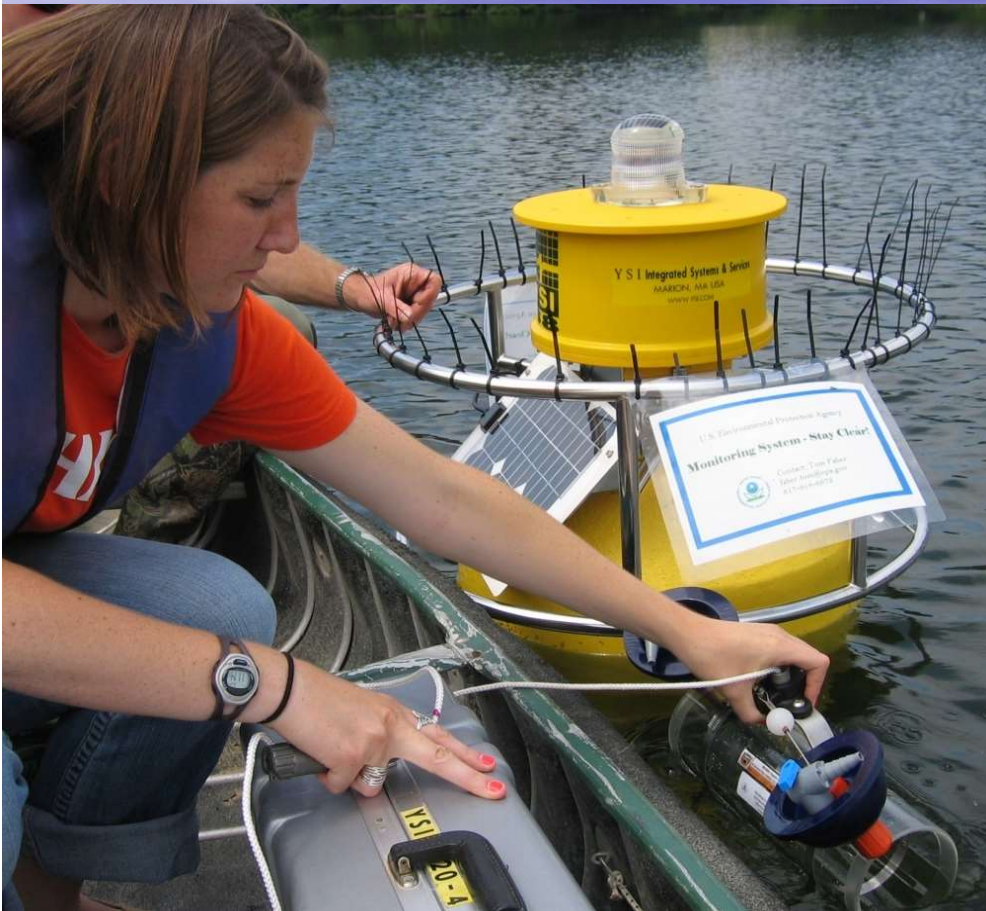
Town of Somerville

MyRWA





Buoy chlorophyll and phycocyanin correlated with Lab data



Phycocyanin, chlorophyll and Turbidity

2016 Mystic River Buoy Readings

Use the zoom button presets, the range selector/date picker, navigator or click and drag timeline to view desired timeframe.

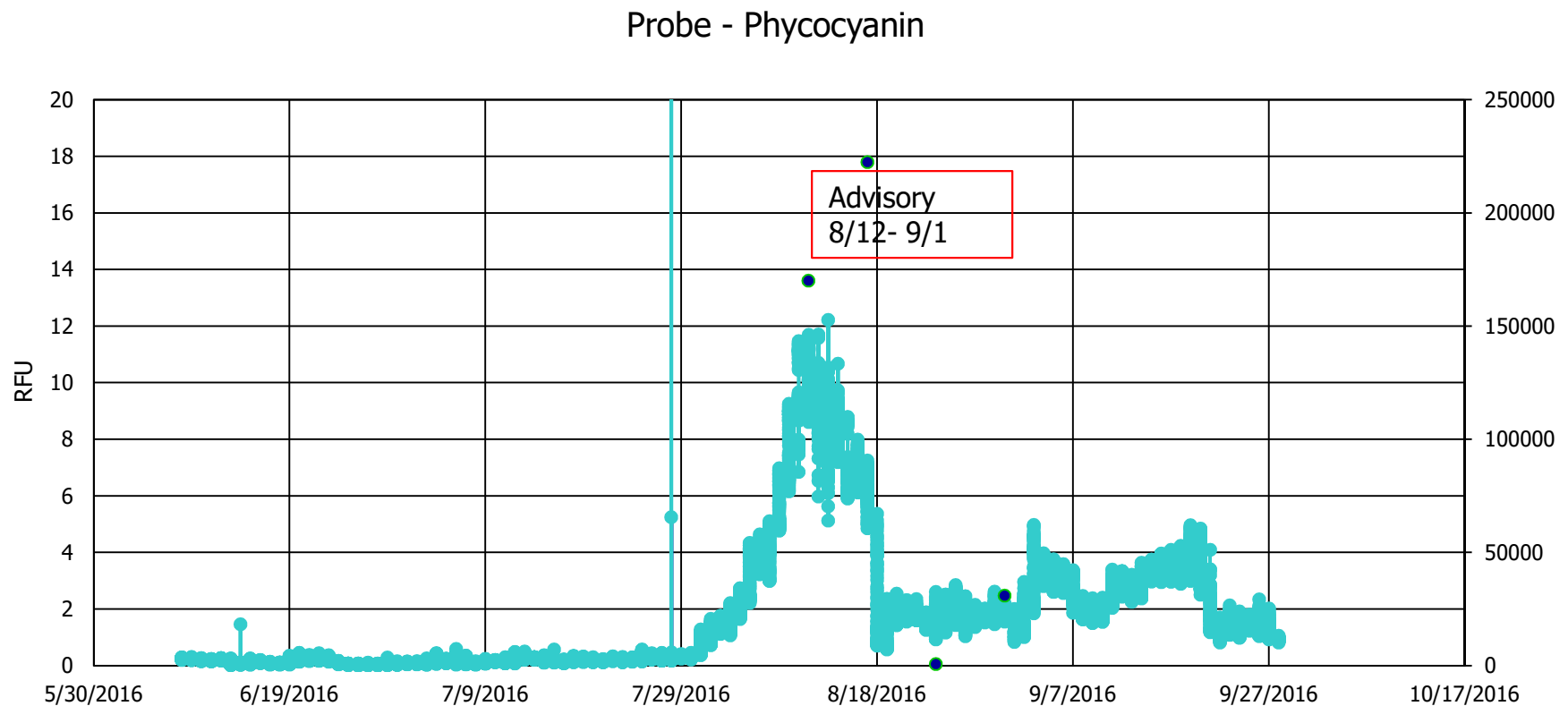
Zoom 2 Hours 1 Day 1 Week 1 Month **All Data**

From Jun 8, 2016 To Sep 28, 2016

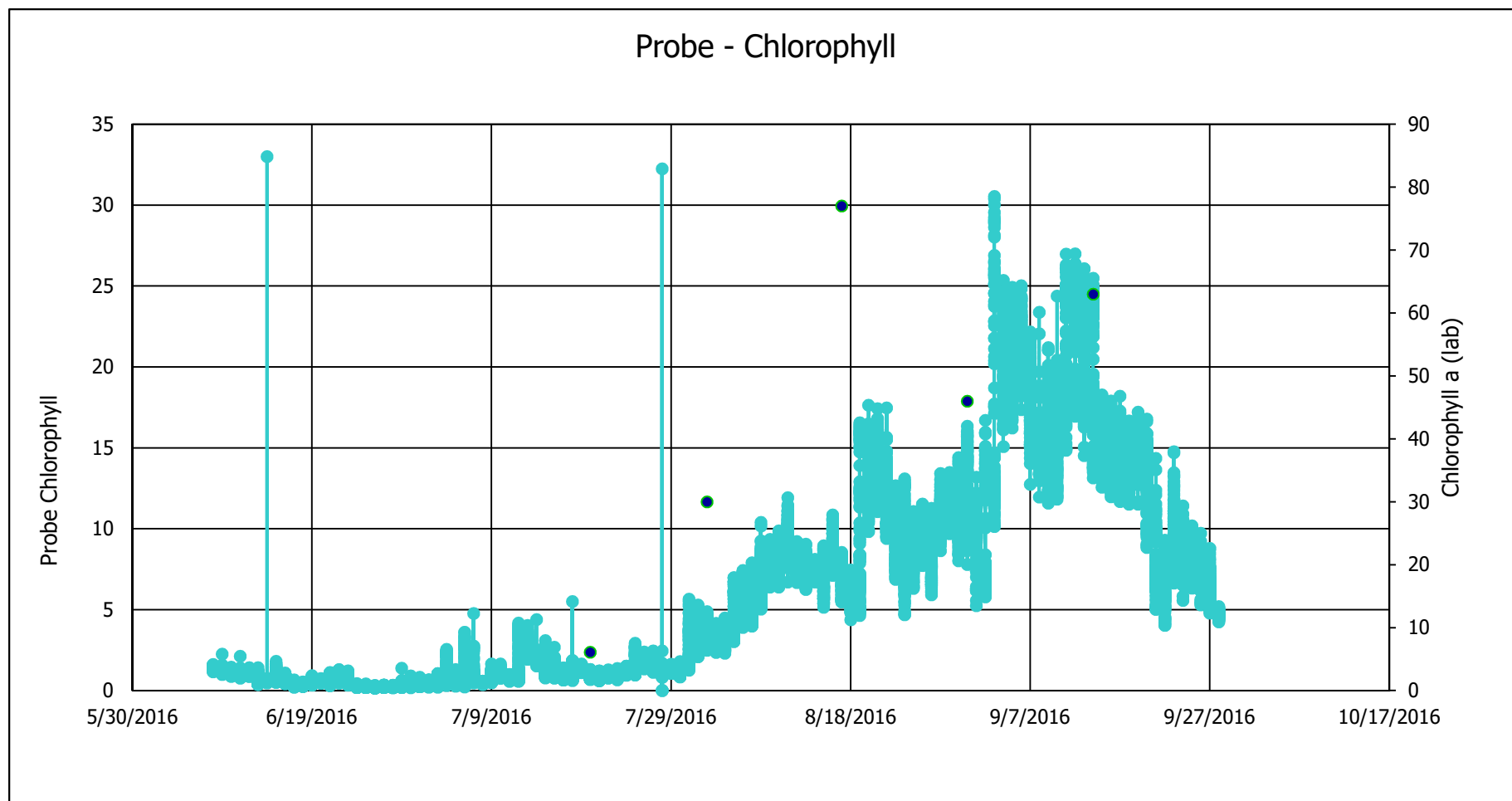


Temperature (°C) Specific Conductance (mS/cm) pH Dissolved Oxygen (mg/L) Dissolved Oxygen (%) Turbidity (FNU) Chlorophyll (RFU) Phycocyanin (RFU)

Buoy phycocyanin & DPH cyanobacteria



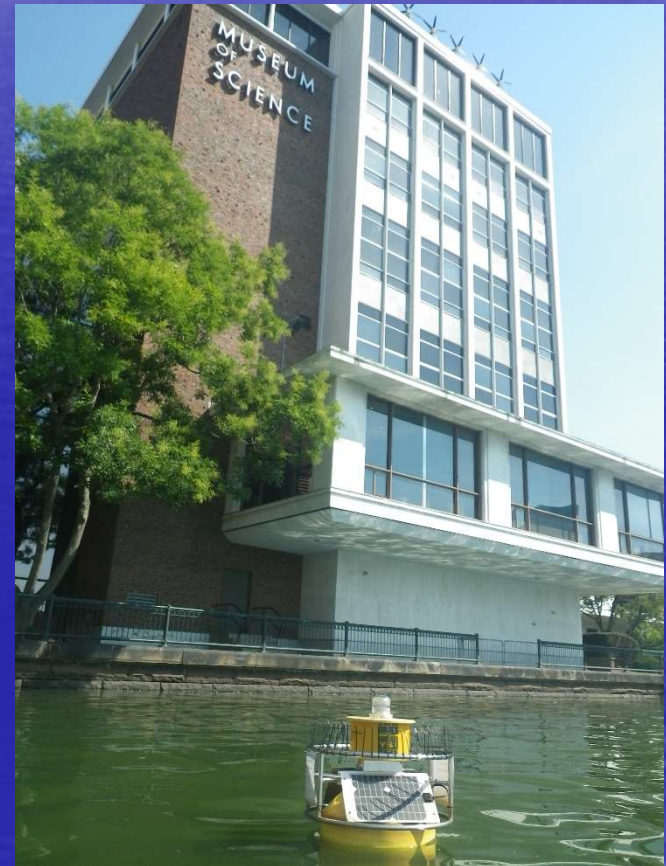
Buoy Chlorophyll and Lab chlorophyll a



EPA Website

- <http://www.epa.gov/mysticriver>

Charles River Buoy – Boston Museum of Science



New Monitoring Sites in the Merrimack River



Questions

