



# LakeTech



Eli Kersh, PCA, CLM

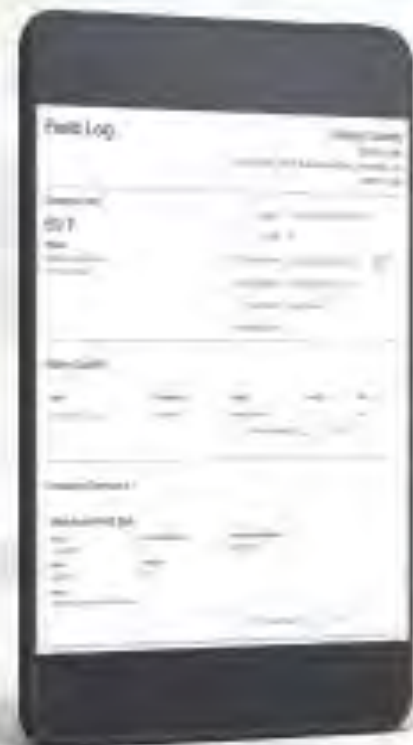
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[www.LakeTech.com](http://www.LakeTech.com)



# LAKE MANAGEMENT MORE THAN JUST MONITORING



## Key Features

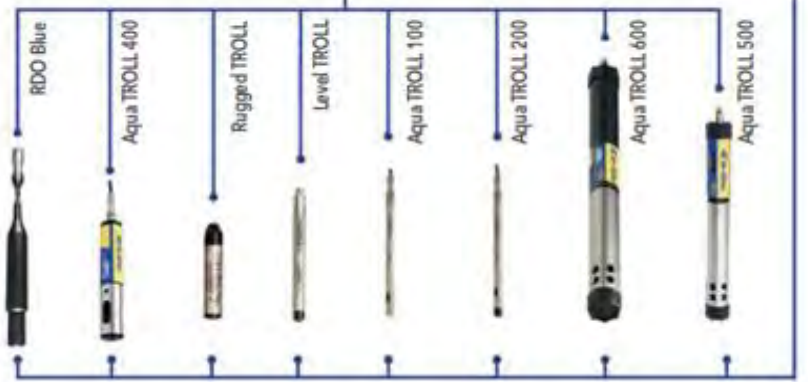
- Schedule tasks
- Tie in daily photo streams
- Centralize all photos and documents
- Easily communicate to all stakeholders for each site
- Track field activities with field logs and chemical application logs
- Manage inventory and materials by tracking them through field logs

Check us out.





VuLink



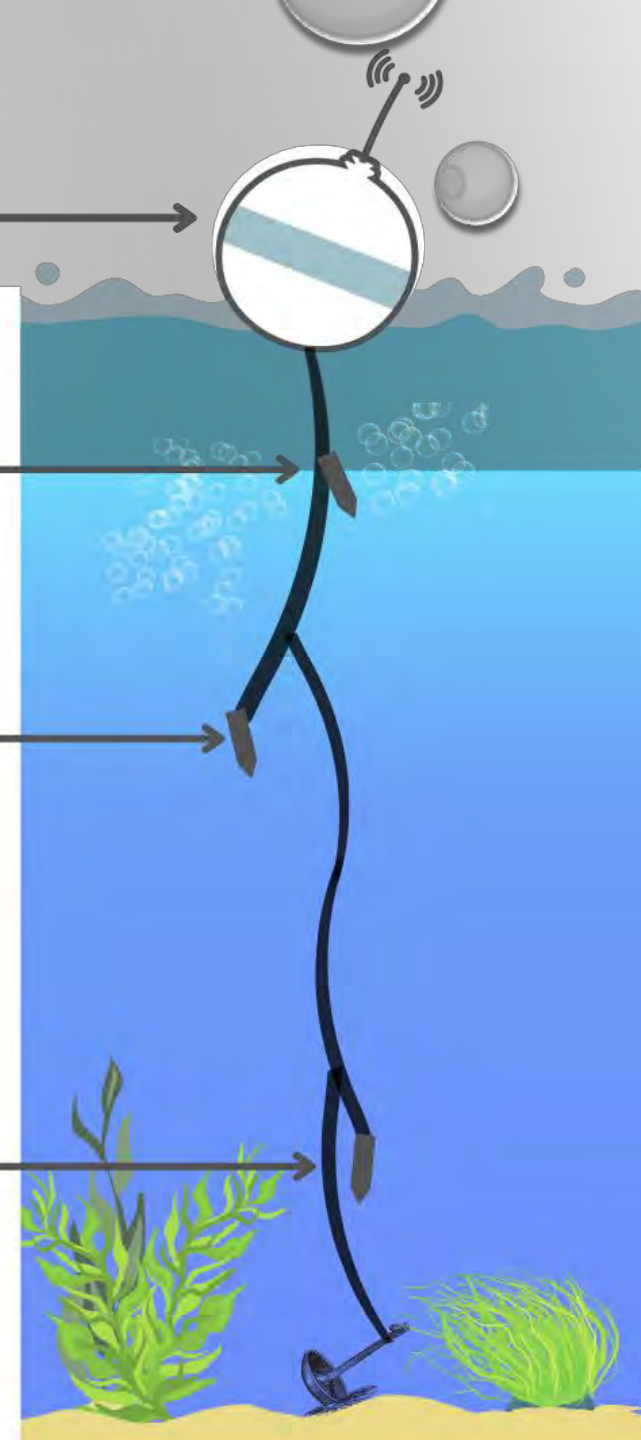
**BUOY & CELLULAR UNIT**



**EPILIMNION**  
- DISSOLVED OXYGEN  
- WATER TEMPERATURE

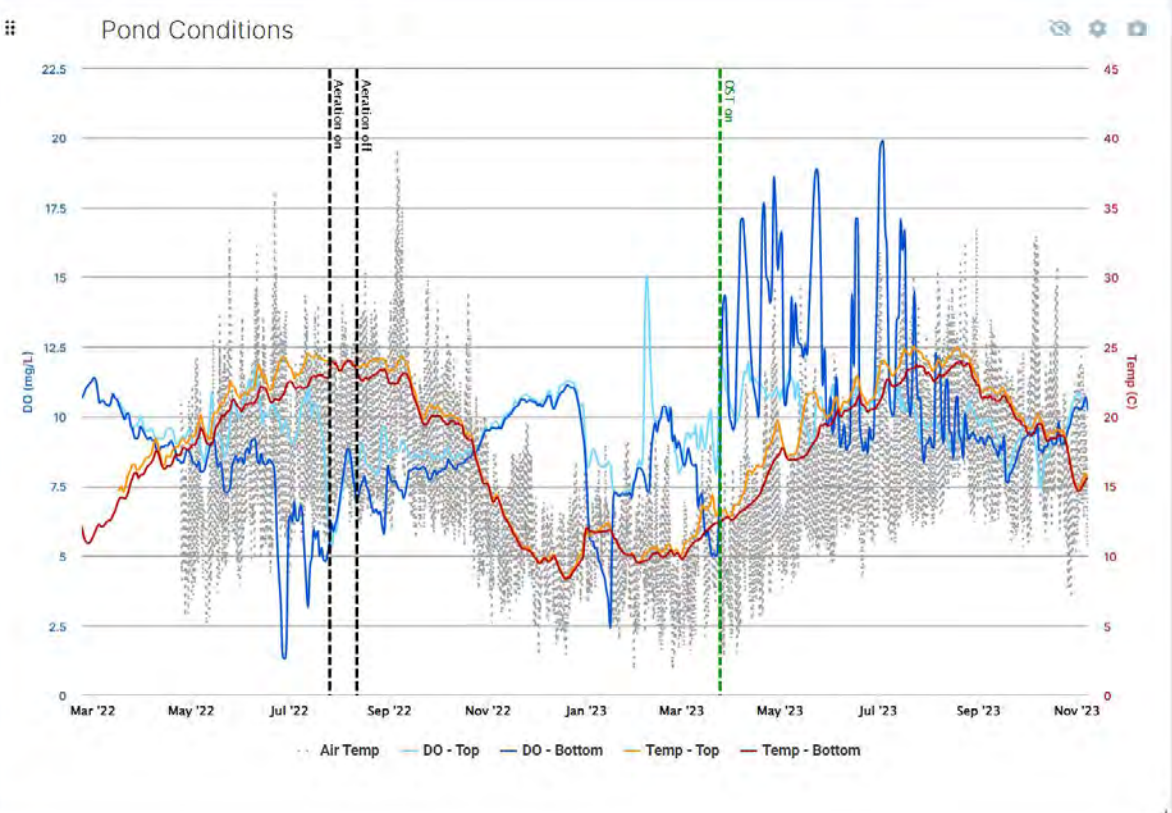
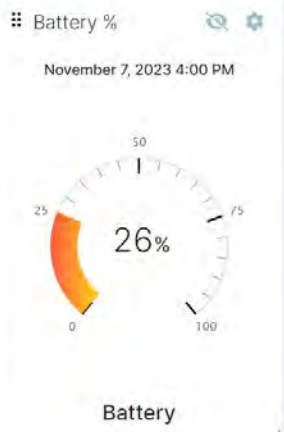
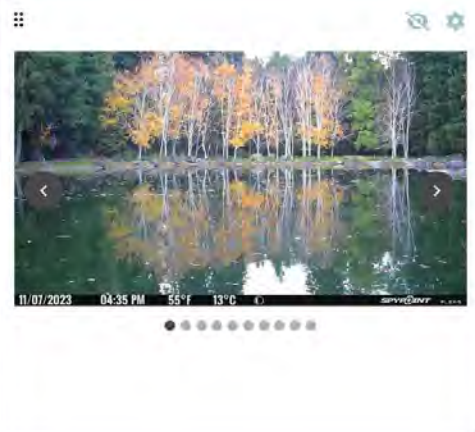
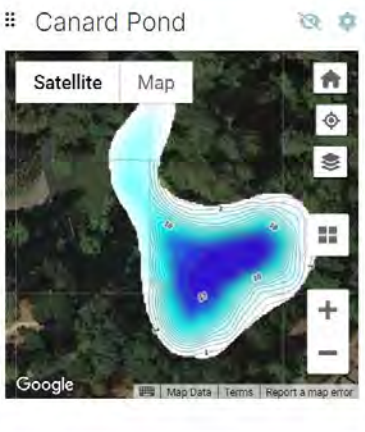
**METALIMNION**  
- DISSOLVED OXYGEN  
- WATER TEMPERATURE

**HYPOLIMNION**  
- DISSOLVED OXYGEN  
- WATER TEMPERATURE



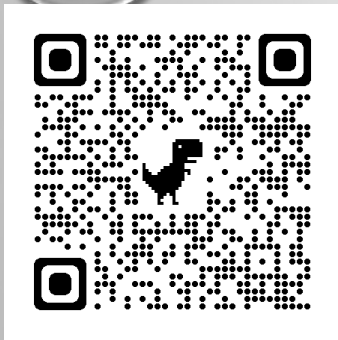
Current Account  
Kings Mountain Road

- Current Site  
Kings Mountain Road
- Dashboard
- Sites
- Tasks
- Field Logs
- Photos
- Chemicals
- Account Tools
- Lake Tools
- Water Quality
- Profile



[www.my.LakeTech.com/public-portal/Woodside/](http://www.my.LakeTech.com/public-portal/Woodside/)

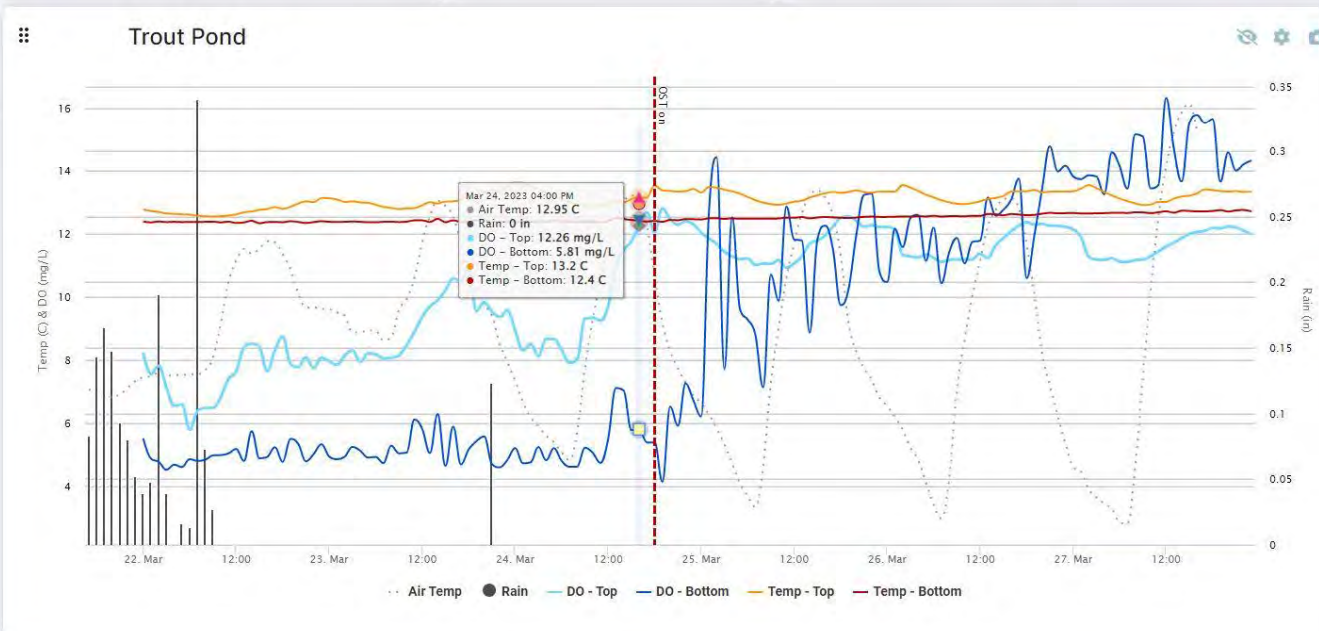
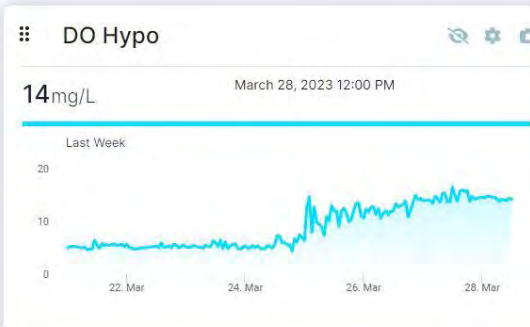
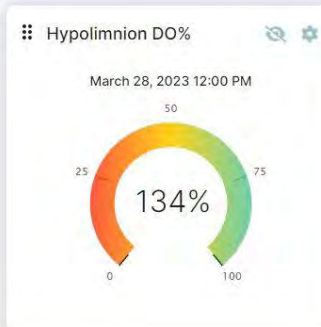
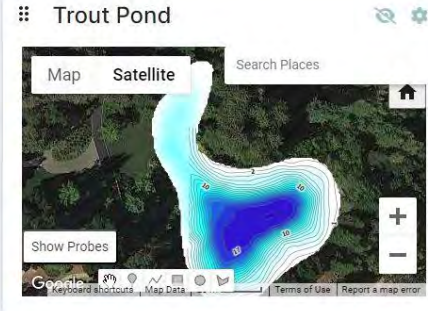
Password: Partnership



Current Account  
Kings Mountain Road

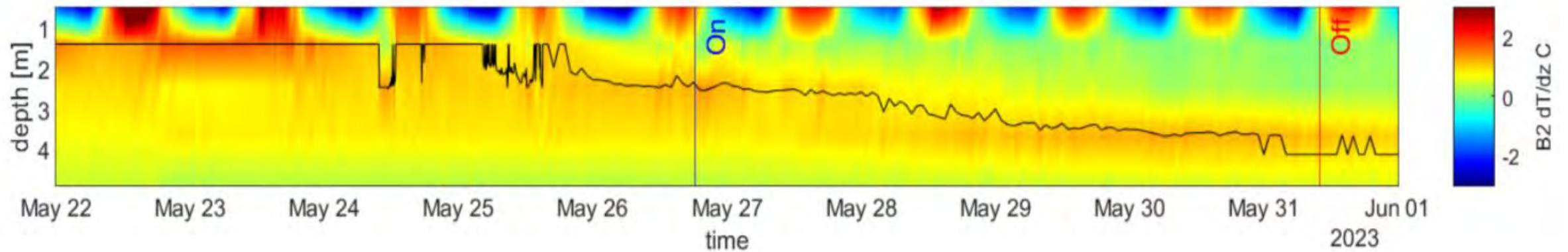
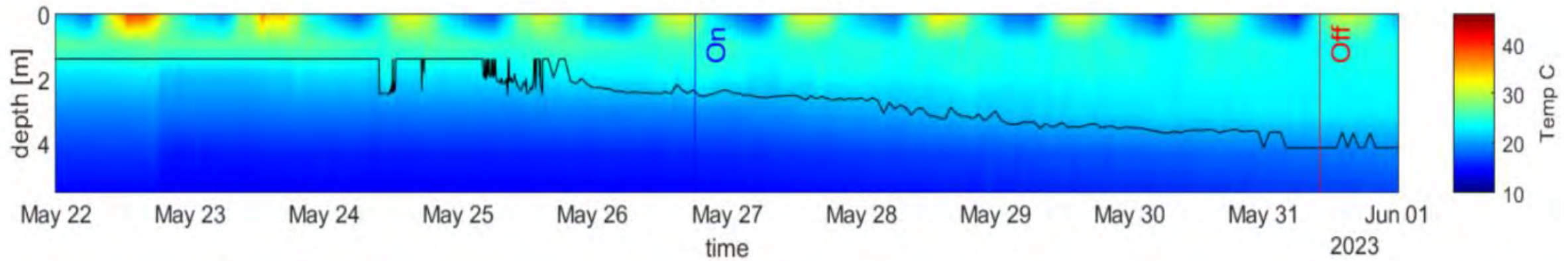
Current Site  
Kings Mountain Road

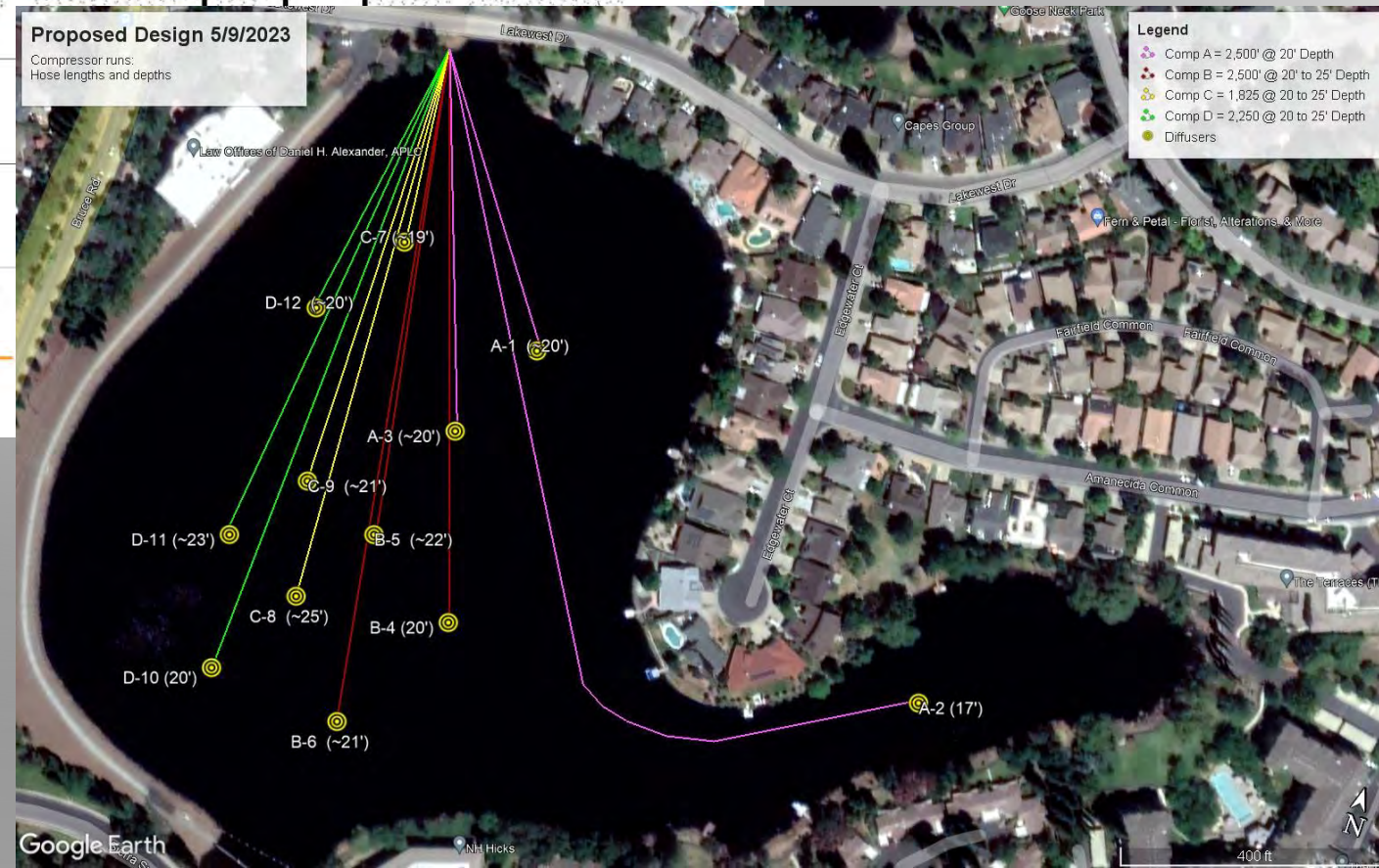
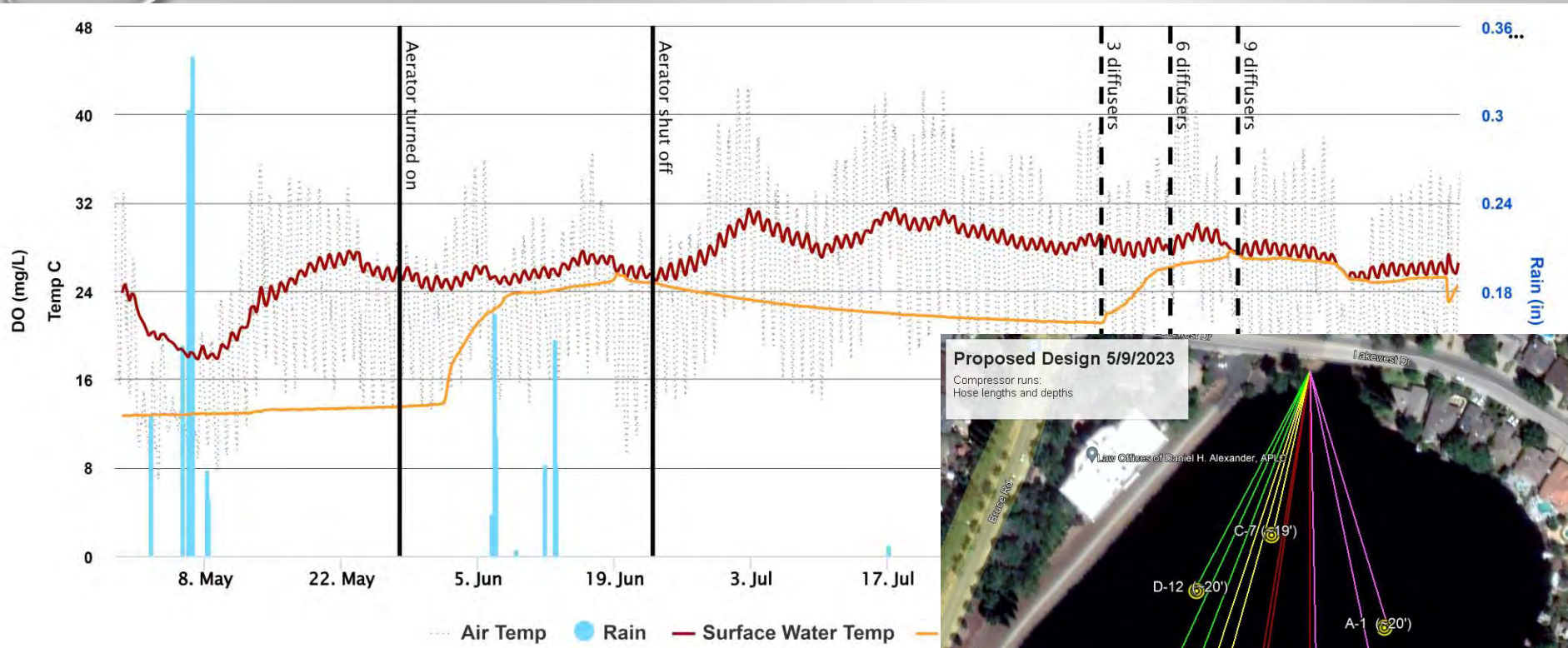
- Dashboard
- Sites
- Tasks
- Field Logs
- Photos
- Chemicals
- Admin Tools
- Lake Tools
- Dashboard
- Personal Dashboard
- Directory
- Site Info
- Core Tools
- Water Quality



# Characterizing Flow Fields Imposed by a Dual Loop Diffusor in a Small and Strongly Stratified Lake

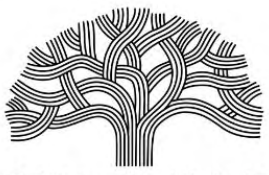
*Jade Hinson, A.L. Forrest, E. Kersh, A.C. Cortes, A. Friedrichs, O. Sepulveda Steiner,  
D. Petroski.*





<https://www.my.laketech.com/public-portal/kasco/>

Password: Partnership



CITY OF OAKLAND

Welcome back  
**Dashboard**

Current Account  
City of Oakland

Current Site  
Lake Merritt

Dashboard

Sites

Tasks

Field Logs

Photos

Chemicals

Account Tools

Account Info

Account Staff

### Lake Merritt Water Quality Monitoring Locations



#### Station 1 - Chl-a

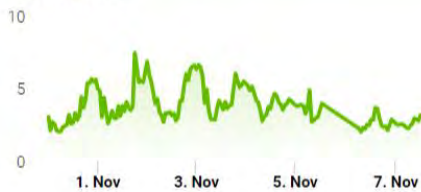
**3.15** RFU

↑ 20.40%

12:00 PM Nov 7, 2023

Weekly Data | Avg: 2.62 RFU Max: 3.68 RFU Min: 2.01 RFU

Last Week



#### Station 1 - Turbidity

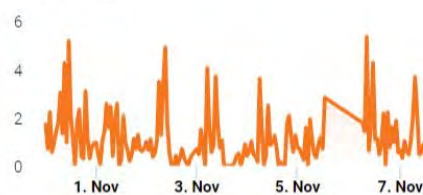
**0.96** NTU

↓ 31.77%

12:00 PM  
Nov 7, 2023

Weekly Data | Avg: 1.41 NTU Max: 5.34 NTU Min: 0 NTU

Last Week



#### Station 1 - Depth

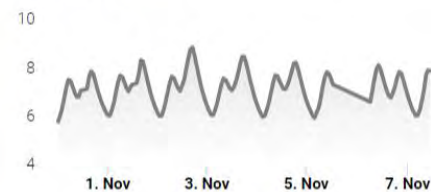
**7.8** ft

↑ 10.27%

11:00 AM Nov 7, 2023

Weekly Data | Avg: 7.1 ft Max: 8 ft Min: 5.9 ft

Last Week



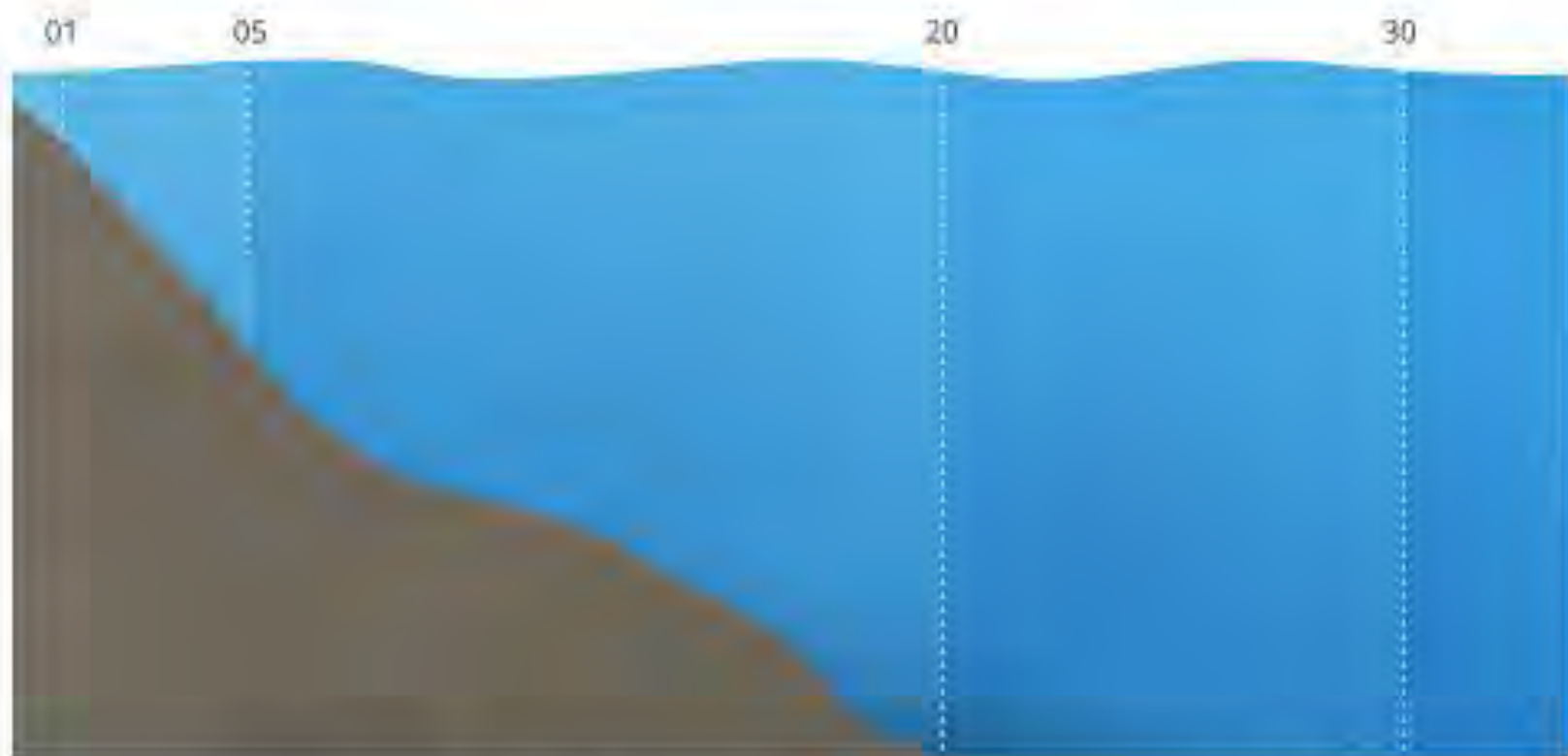
<https://www.laketechnology.com/public-portal/LakeMerritt/>

Password: LMI



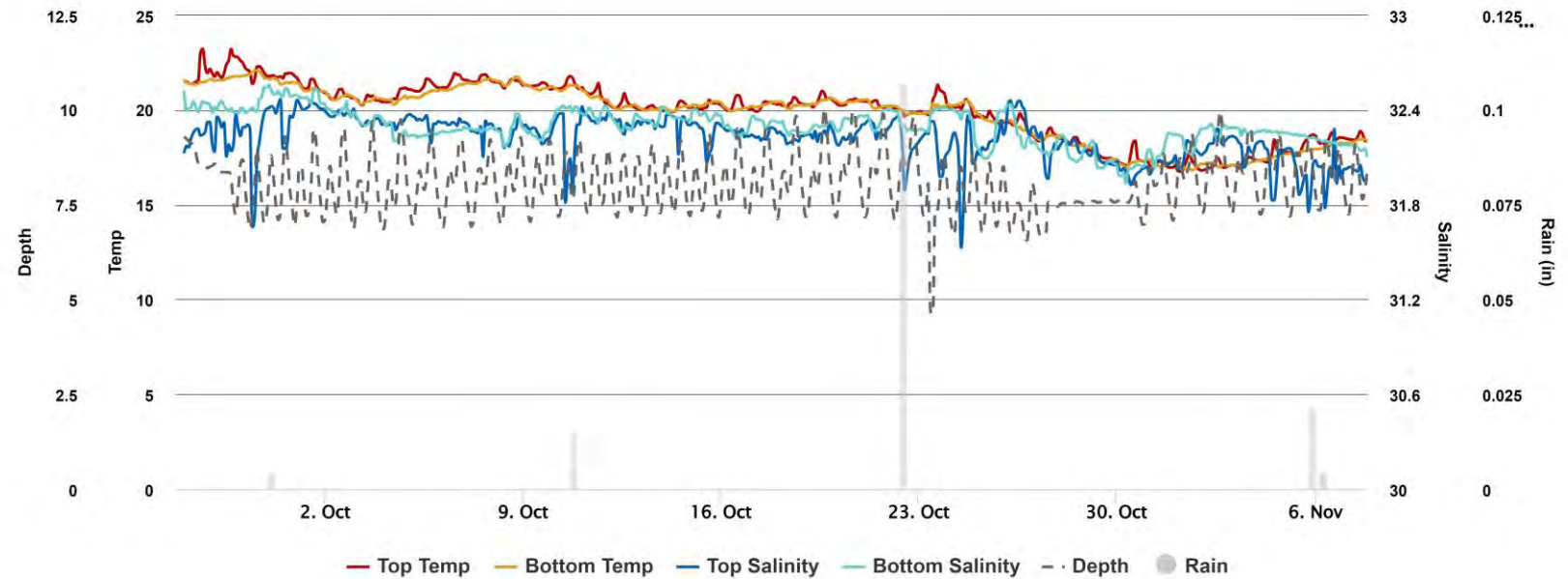
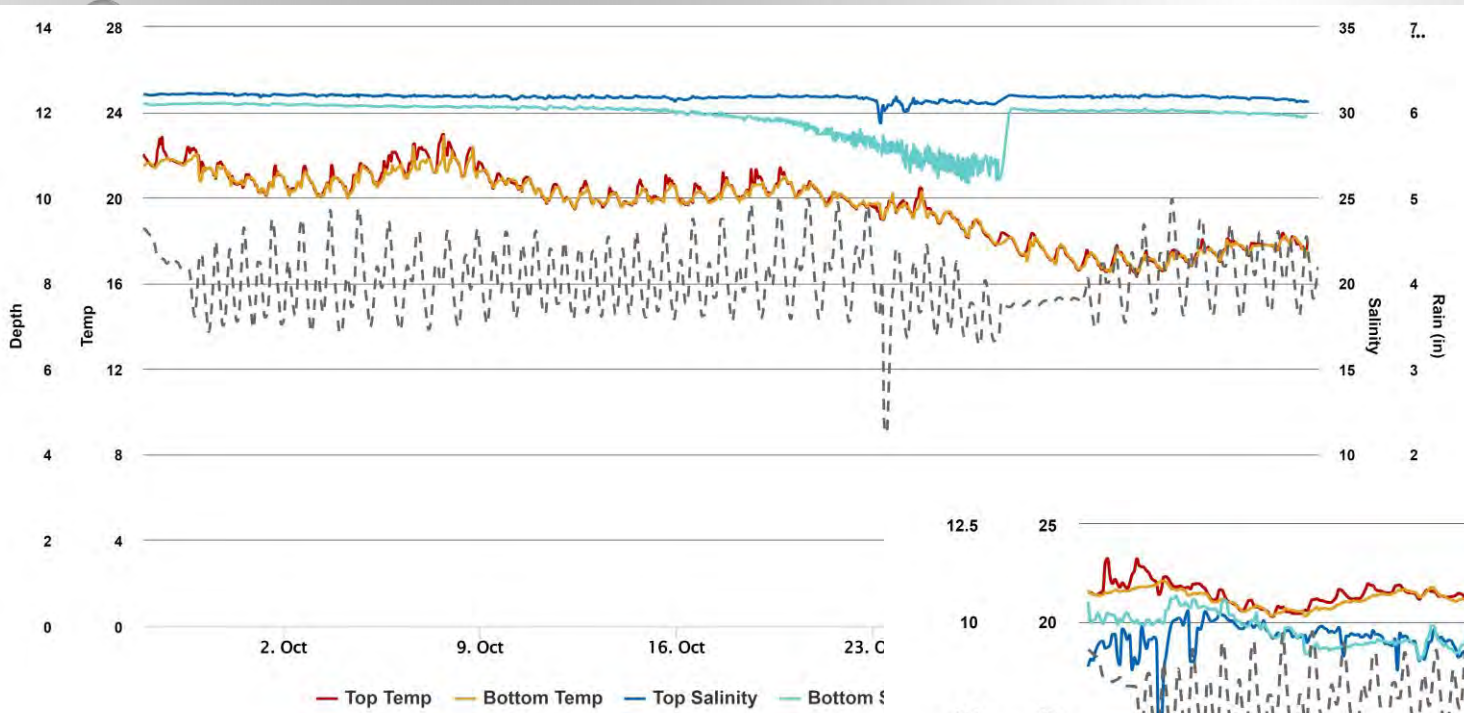
## Estuary Stratification

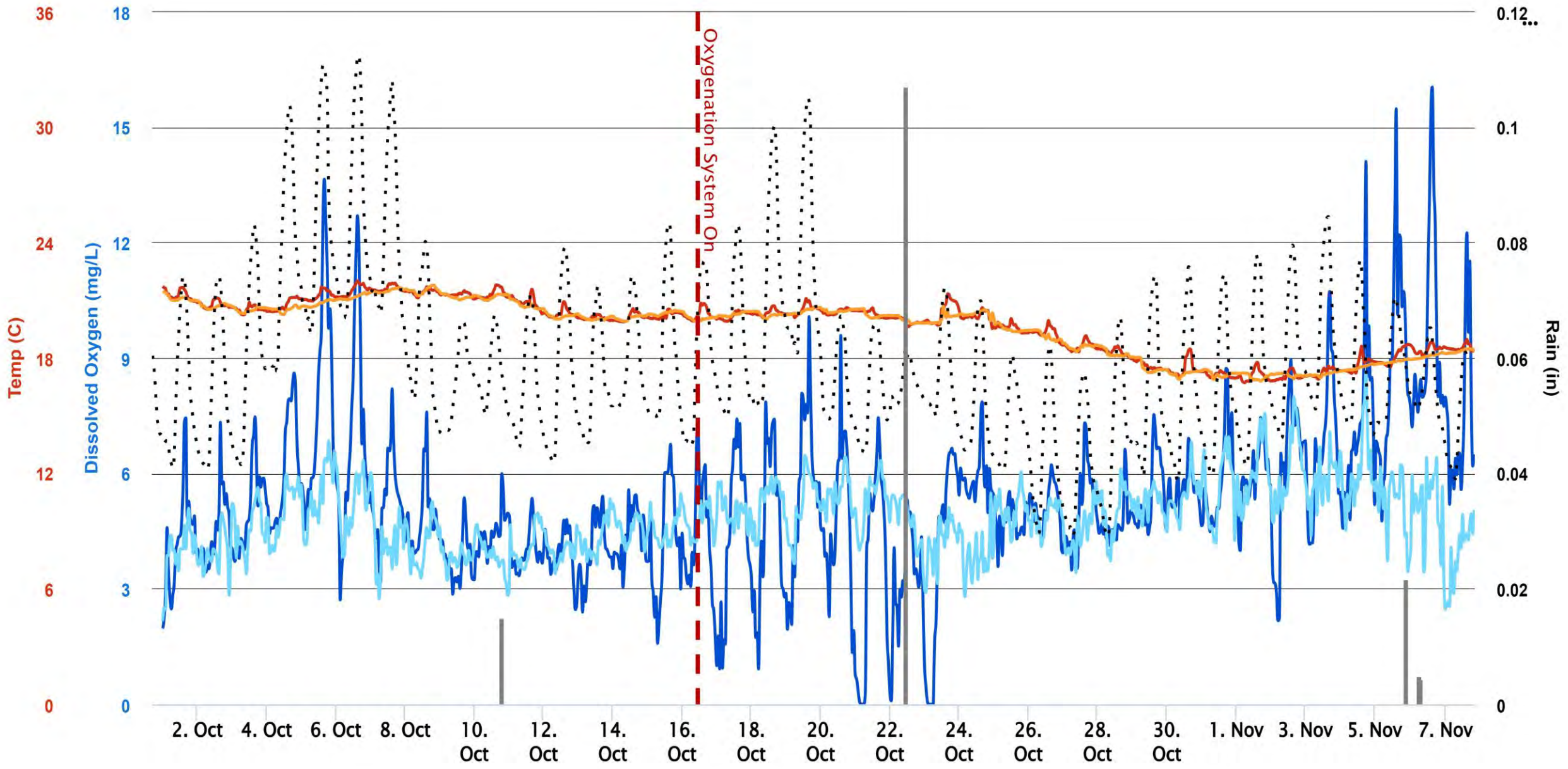
Estuary stratifications are based on salinity distributions. Because saltwater holds less dissolved oxygen than freshwater, this can affect aquatic organism distribution. The stronger the river flow, the higher the oxygen concentrations. This stratification can be horizontal, with DO levels dropping from inland to open ocean, or vertical, with the fresh, oxygenated river water floating over the low DO seawater <sup>46</sup>. When the stratification is clearly defined, a pycnocline divides the fresher water from the salt water, contributing to separate dissolved oxygen concentrations in each strata.



*Dissolved oxygen stratification in an estuary is dependent on salinity (expressed in PSU).*

# Salinity, Temperature, Rain, Runoff, Tides, Tide Gate Operations

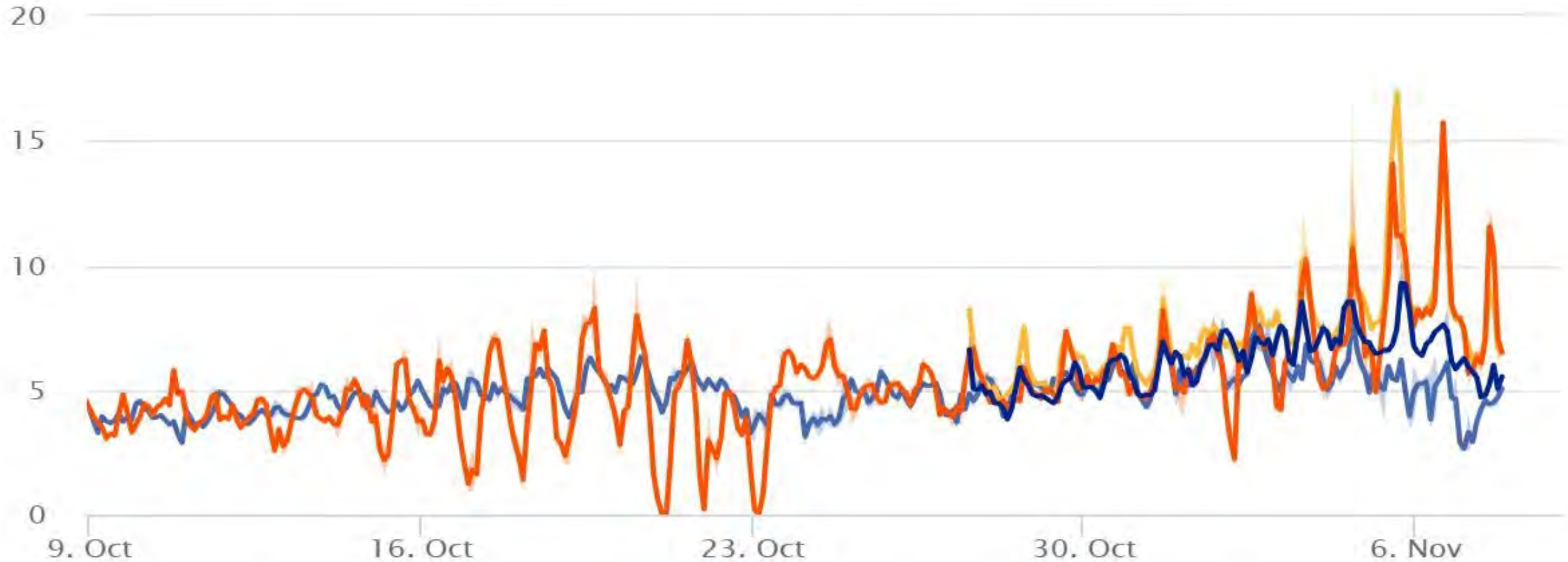




— Surface DO    — Bottom DO    — Surface Temp    — Bottom Temp    ·· Air Temp    ● Rain

# DO (mg/L)

Oct 9, 2023 8:00 PM – Nov 8, 2023 8:00 PM



● LMI3-Hypo-755966  
● Beta-AT500-643287

● Beta-AT800-1013503

● LMI3-Epi-994943

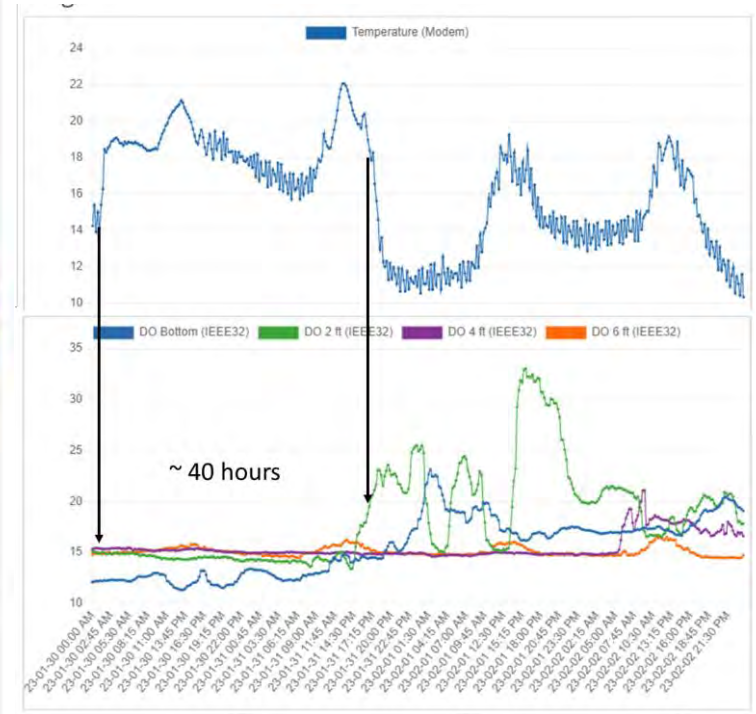
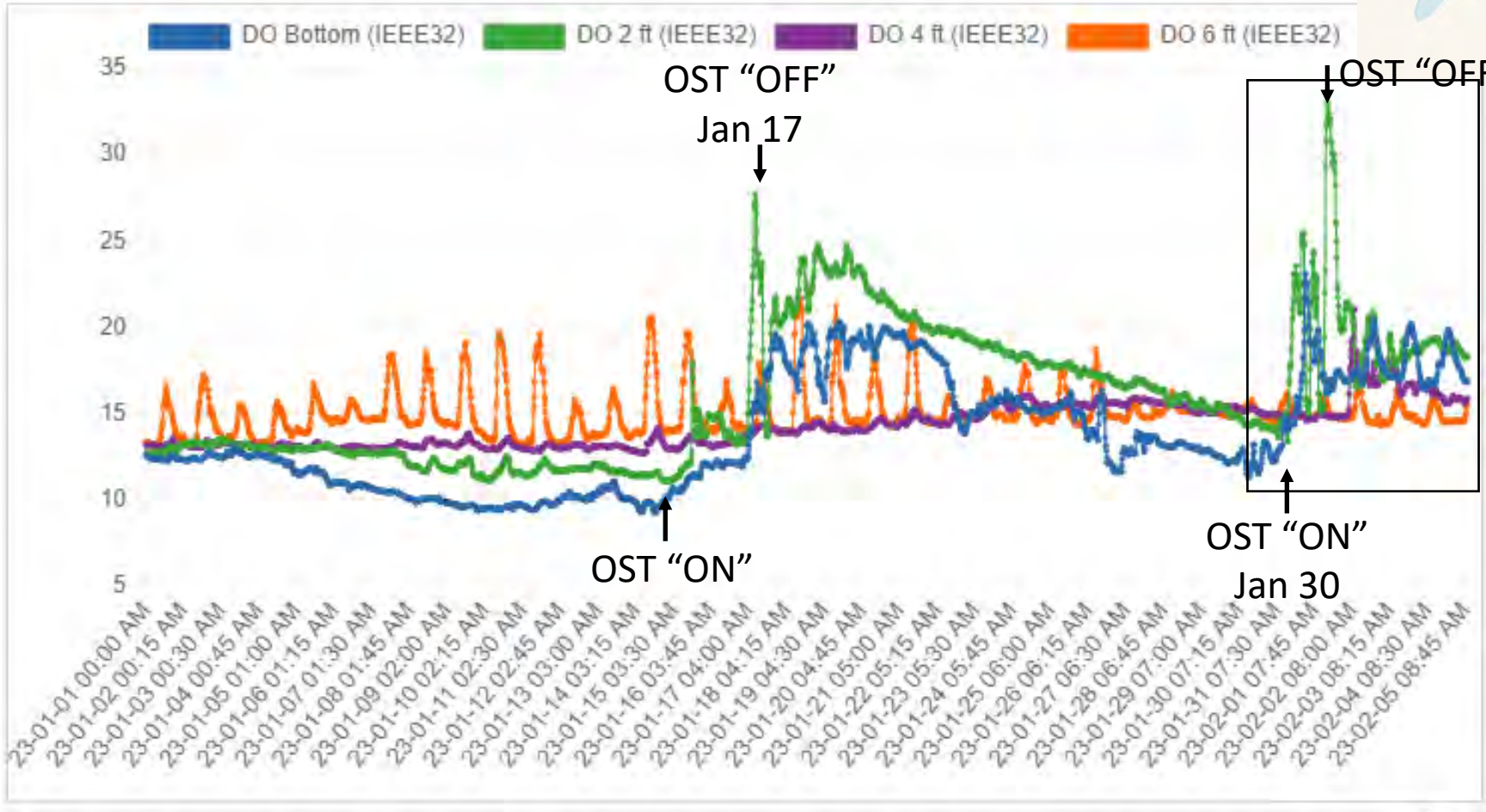
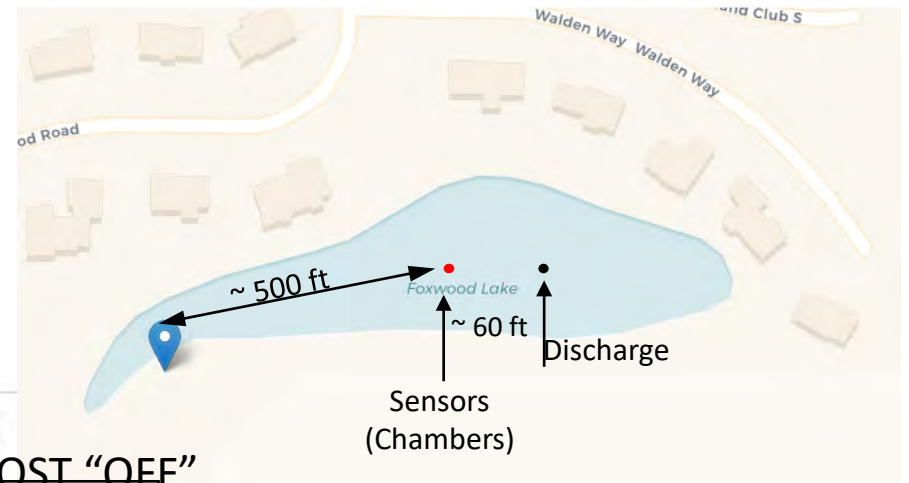
Oxygen Saturation Technology<sup>®</sup>

*Results*

# Results: Foxwood (WI)



# Results Foxwood (WI)

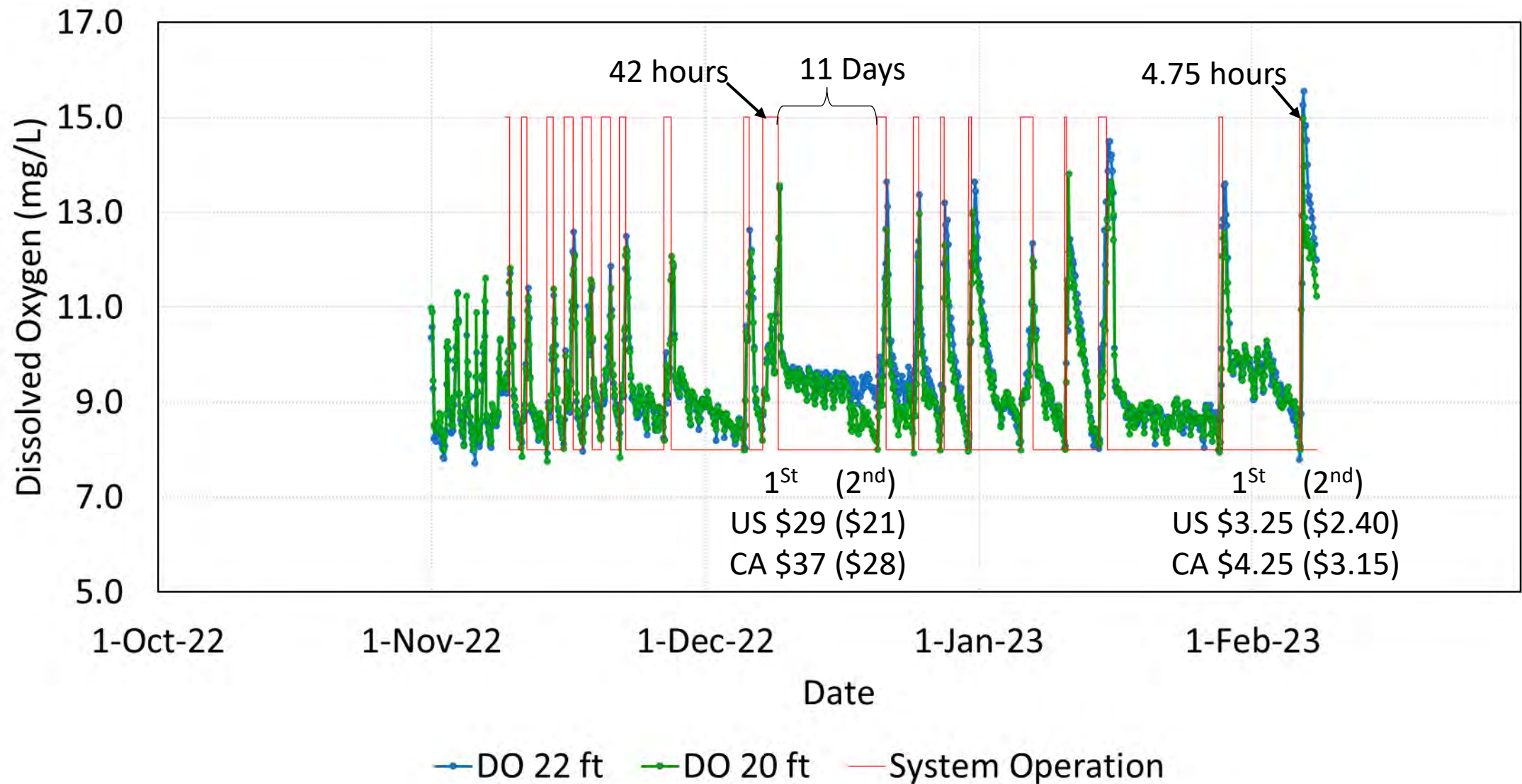


# Results: Brooklime (CA)





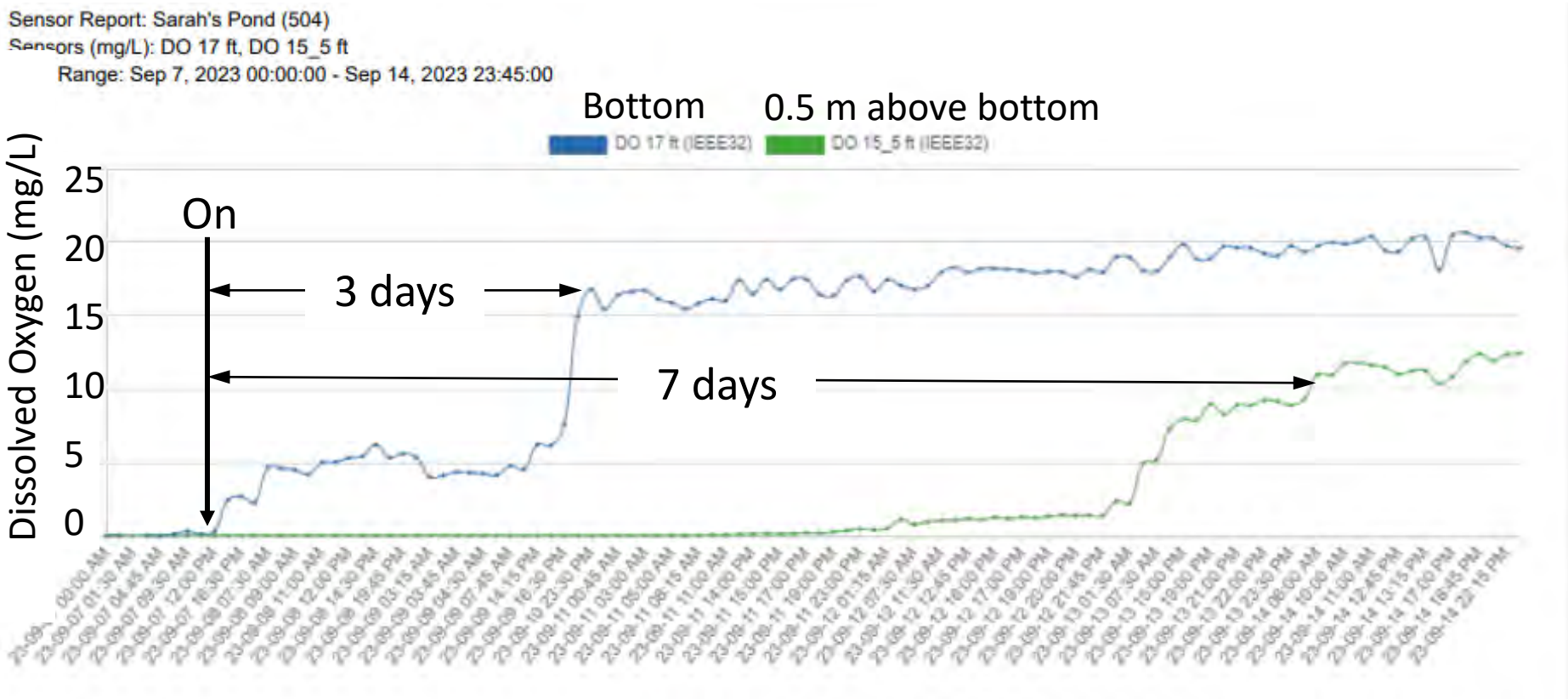
# Results Brooklime, CA



# Results: Sarah's Pond (MA)



# Results (Cape Cod, MA)



# Results: Rutabaga (WI)



Before (Late September 2022)



After (Late July 2023)

# Results (Madison, WI)

Sensor Report: Rutabaga Sports (569)  
Sensors (mg/L): DO Bottom, DO 2 ft  
Date Range: Jun 6, 2023 00:00:08 - Jun 24, 2023 23:45:08



# Nawakwa (WI) Trout Habitat



# Results (Geneva, WI)

Sensor Report: Nawakwa (567)

Sensors (mg/L): DO 23, DO 20

Date Range: Jul 18, 2022 00:00:01 - Jul 25, 2022 23:45:01

