

# Del-Co Water Reservoir Management Strategies

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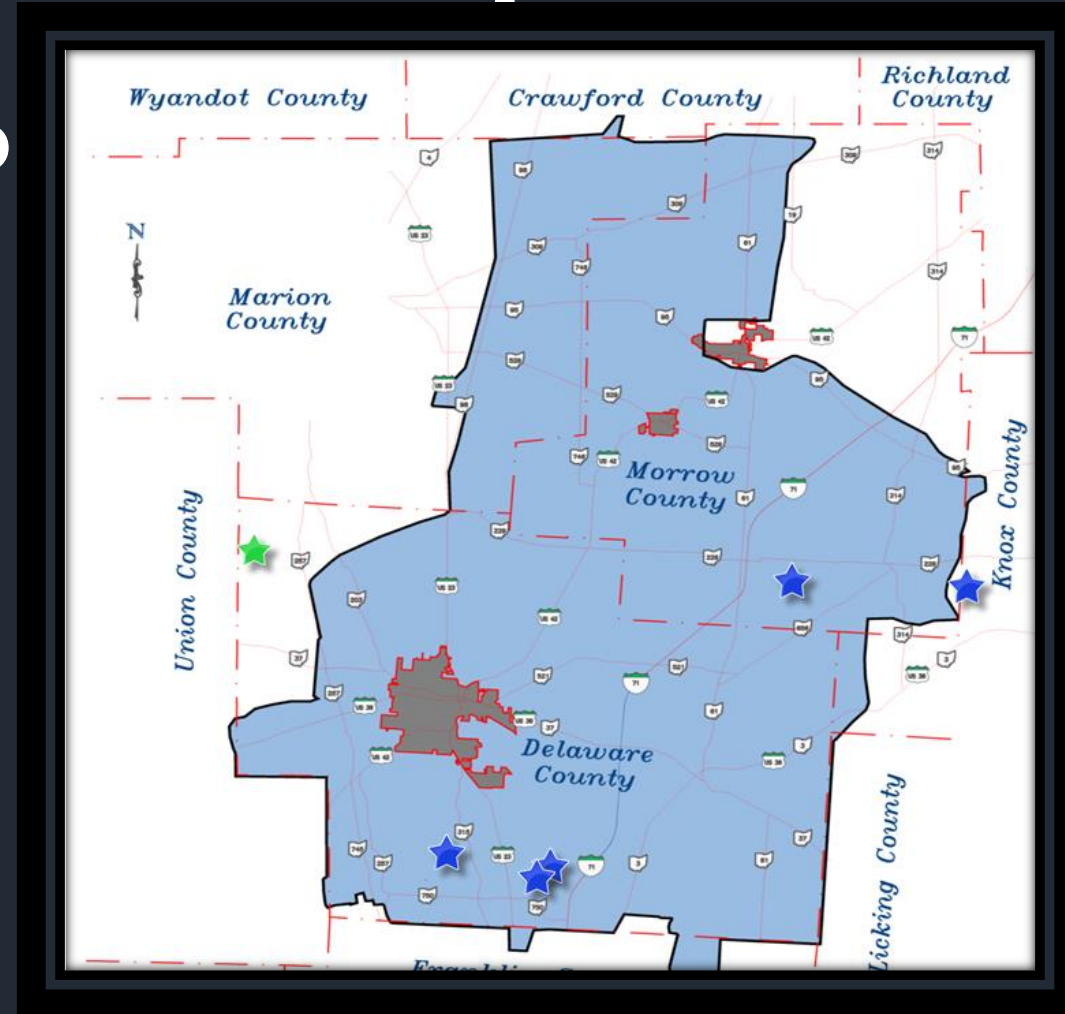


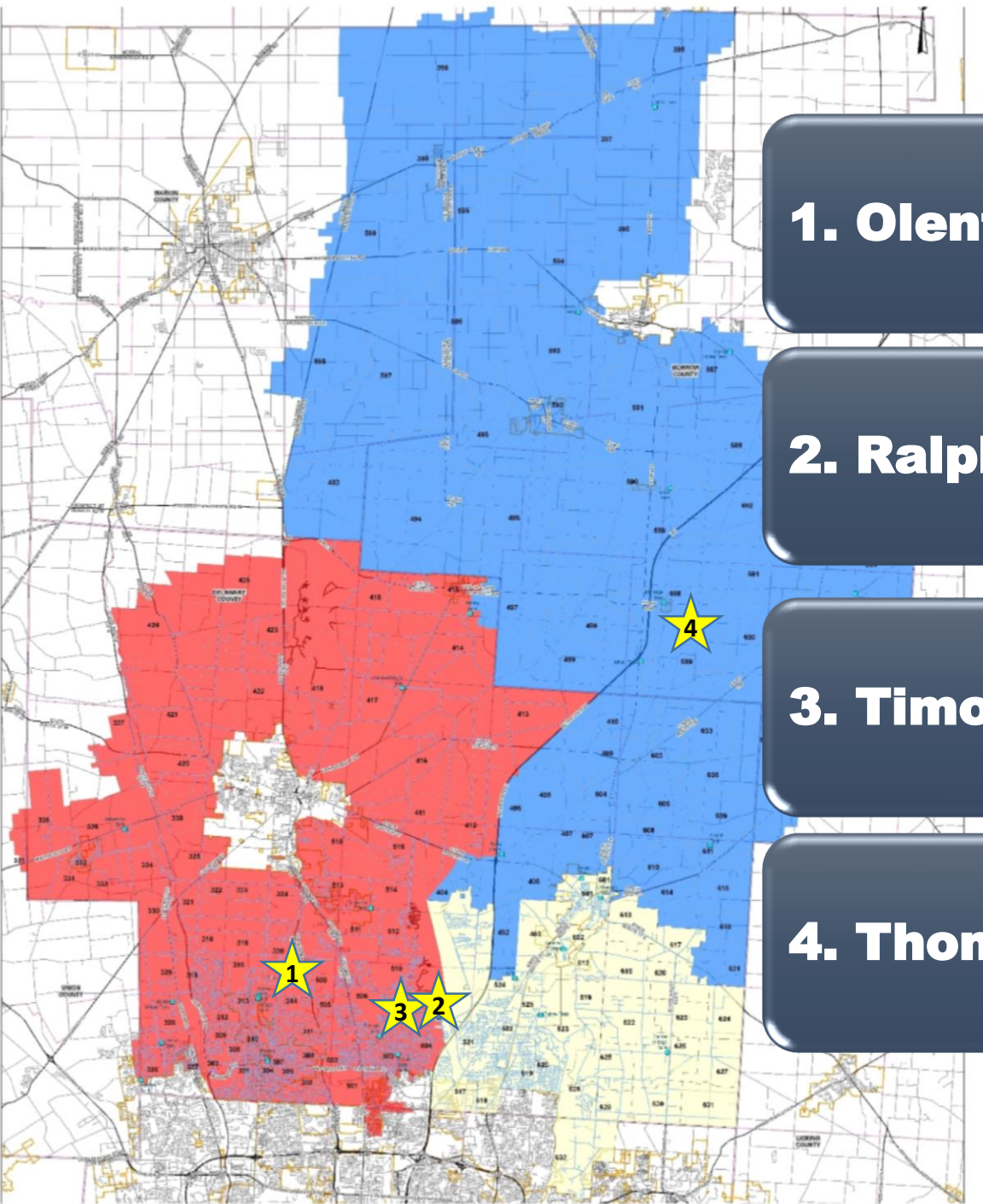
# Opening Remarks

- **Del-Co Water Background**
- **Management Strategies**
- **Recent Data**
- **Operational Decisions**

# Del-Co General Information

- Member owned 501 (c) Not-for-Profit Corporation
- Largest 'Rural' System in Ohio
- 7<sup>th</sup> largest PWS in Ohio
- Population = 150,000
- Serve 7 counties





**1. Olentangy Plant / Reservoirs**

**2. Ralph E. Scott Plant**

**3. Timothy F. McNamara Plant / Reservoirs**

**4. Thomas E. Steward Plant**

# Olentangy Reservoirs

An aerial photograph showing three large, dark blue reservoirs arranged in a row, separated by green grassy embankments. To the right of the reservoirs is a wastewater treatment plant with several large circular tanks and industrial buildings. The surrounding landscape includes fields, trees, and power lines.

**~ 1.6 Billion Gallons**

**Olentangy & Scioto Rivers**

# McNamara Reservoirs



**~ 900 Million Gallons**

**Alum Creek Reservoir**

# **Management Strategies**

- **Reservoir Monitoring**
- **Intake Monitoring**
- **Algaecide Applications**
- **Required OEPA Analysis**

# **Reservoir Monitoring**

- **Weekly, profiling, and event monitoring**
- **Chemical and biological parameters**
- **HABs is the most significant issue**
- **Assist in operational decisions**





# Reservoir Monitoring

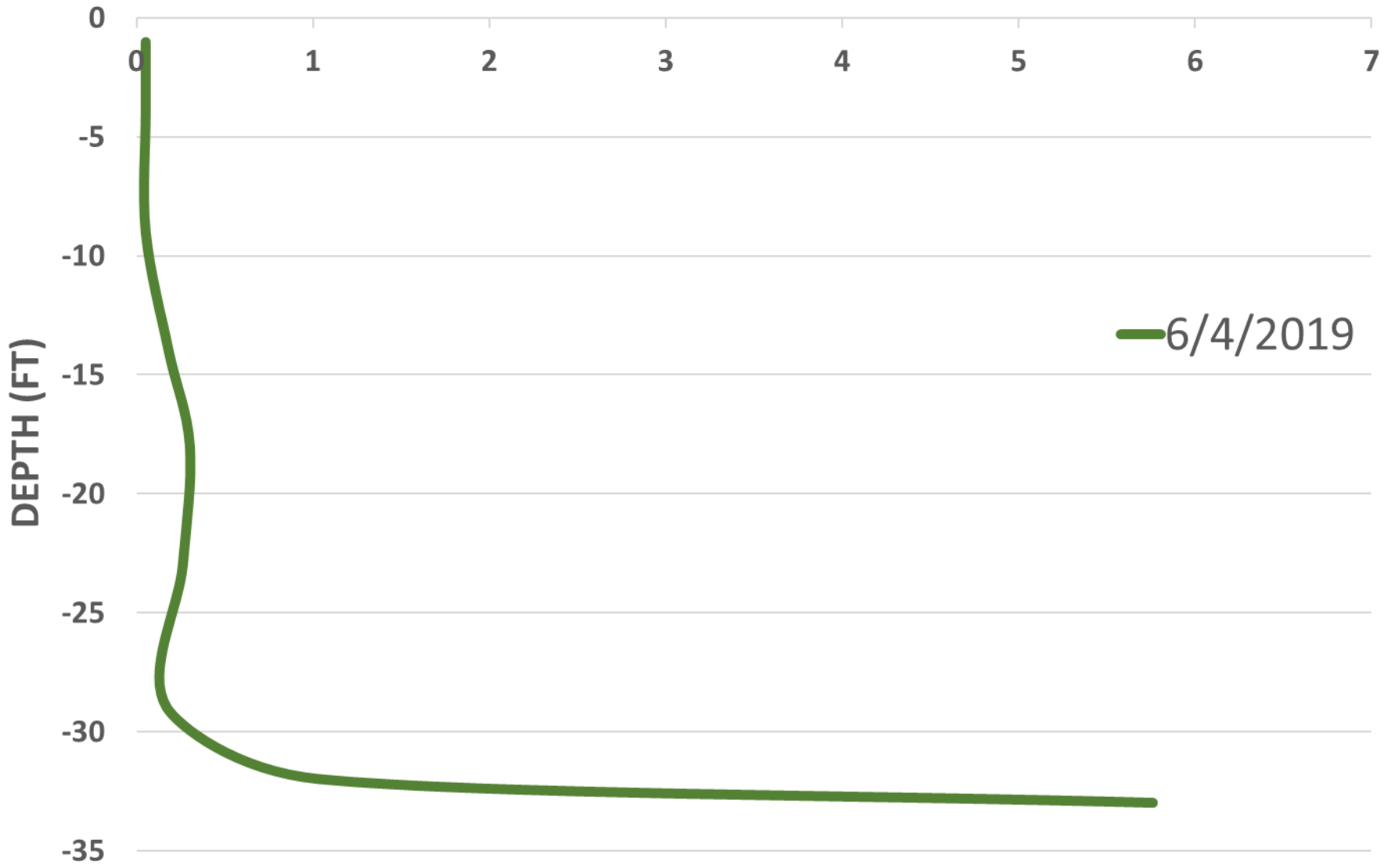


# Recent Data



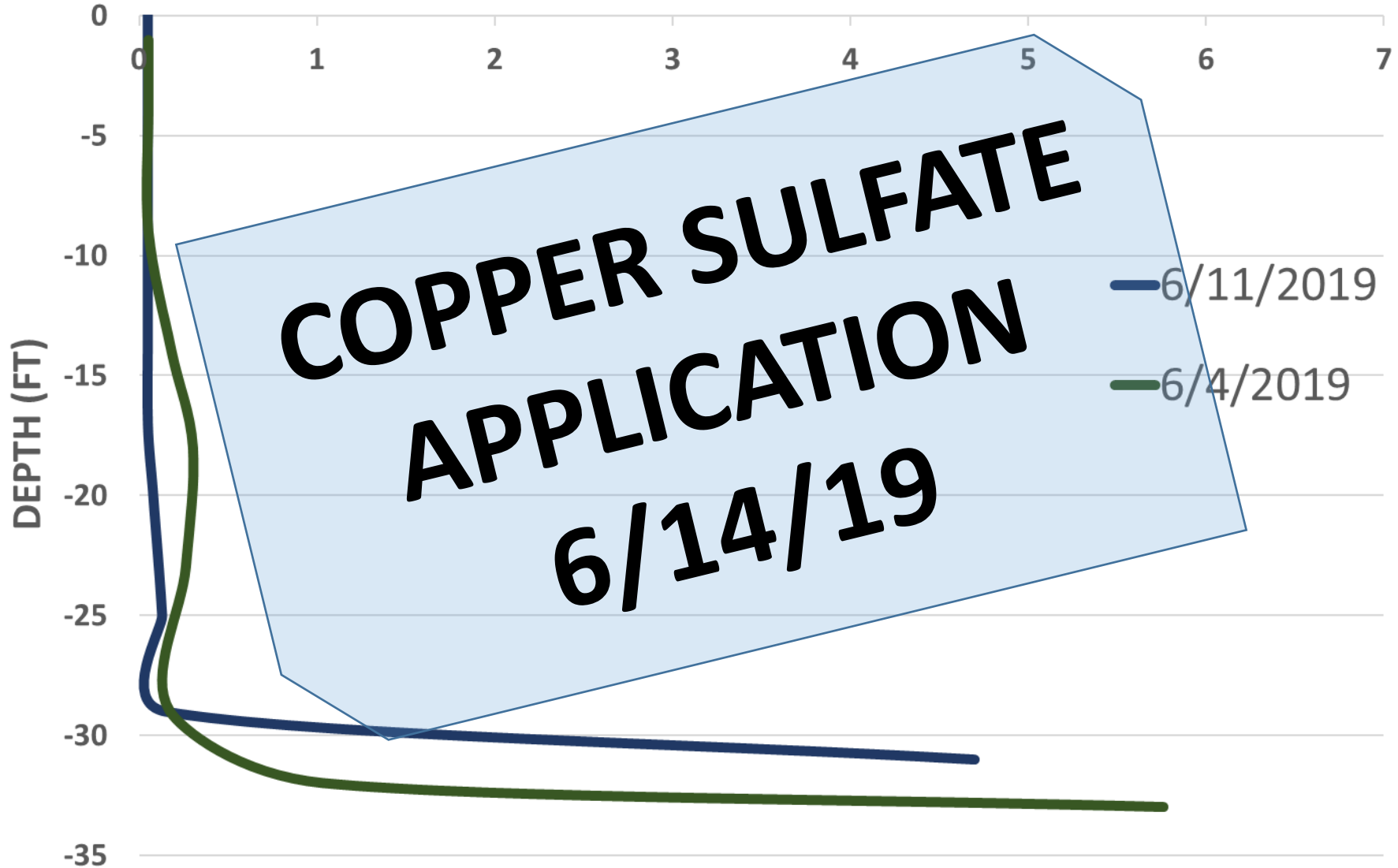
# McNamara #2

BGA-PC (RFU)



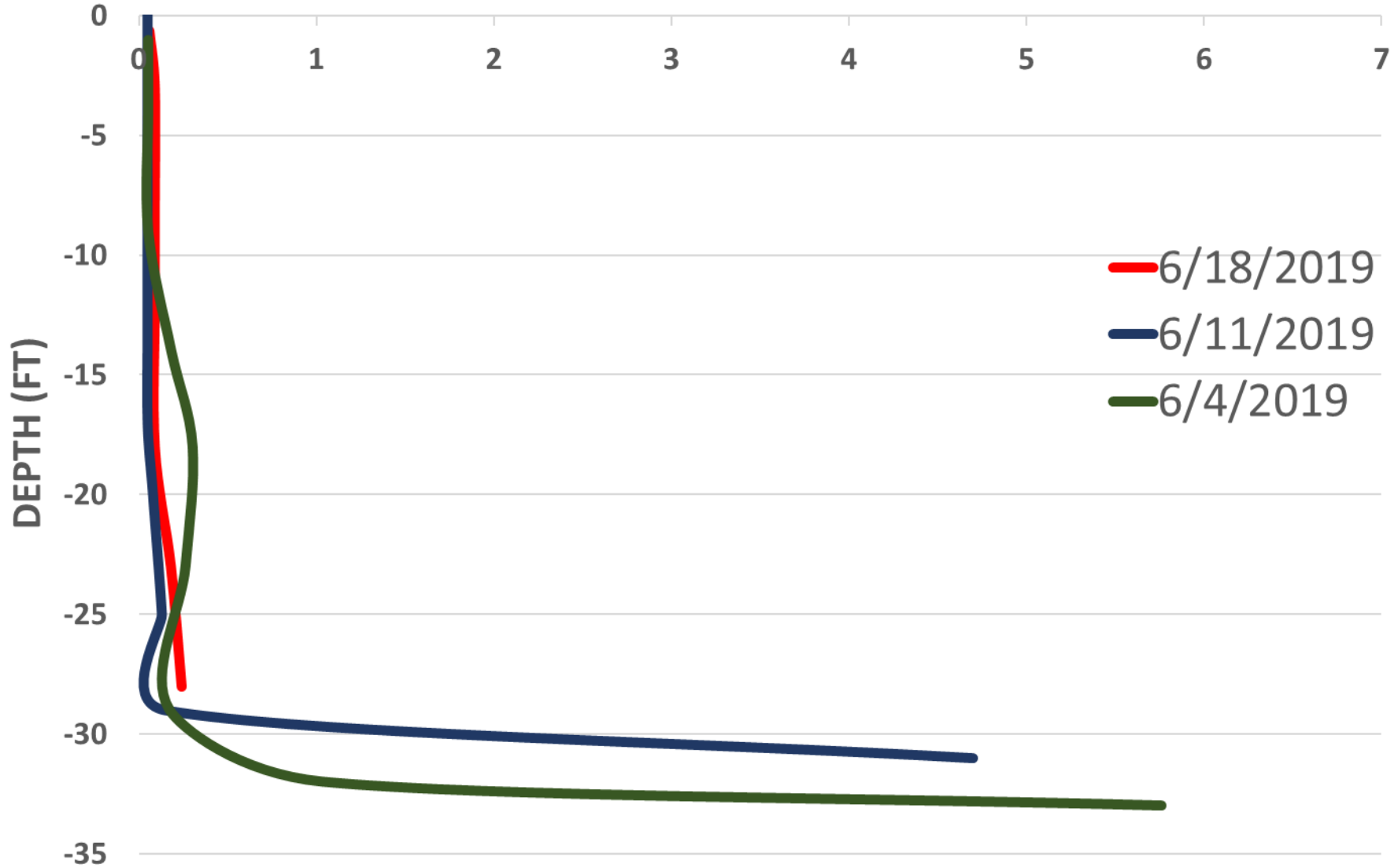
# McNamara #2

BGA-PC (RFU)



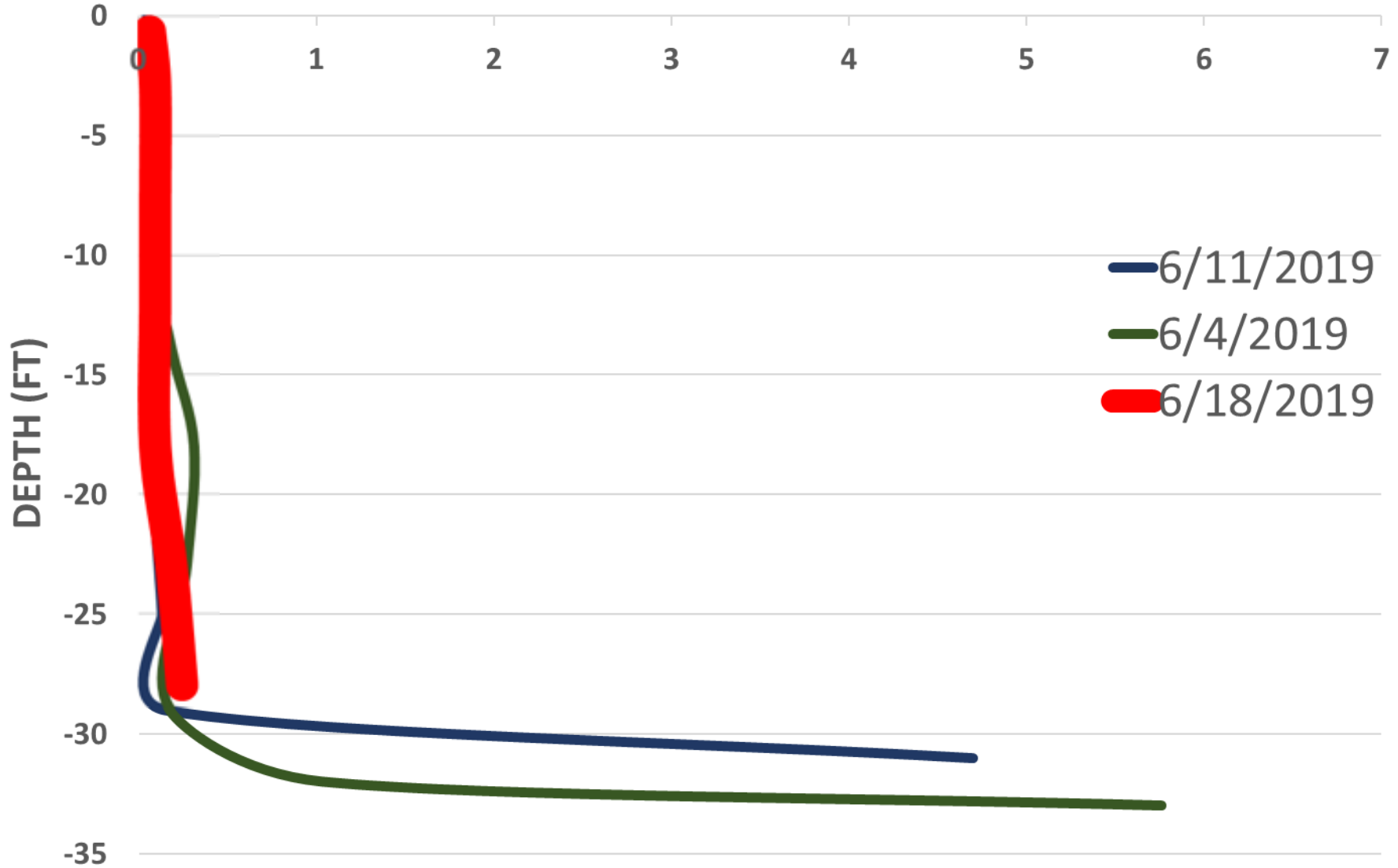
# McNamara #2

BGA-PC (RFU)



# McNamara #2

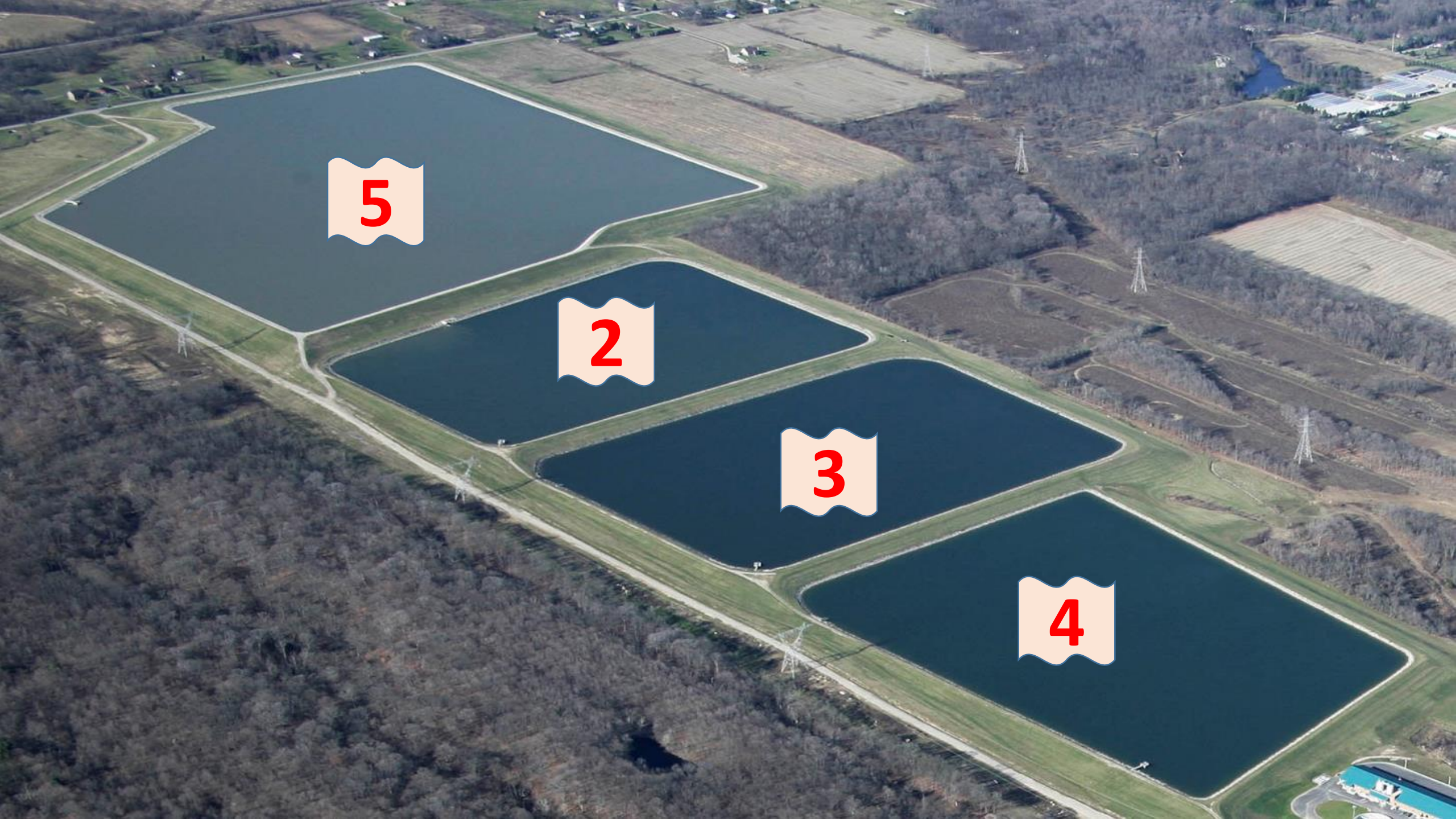
BGA-PC (RFU)



# Olentangy #3







5

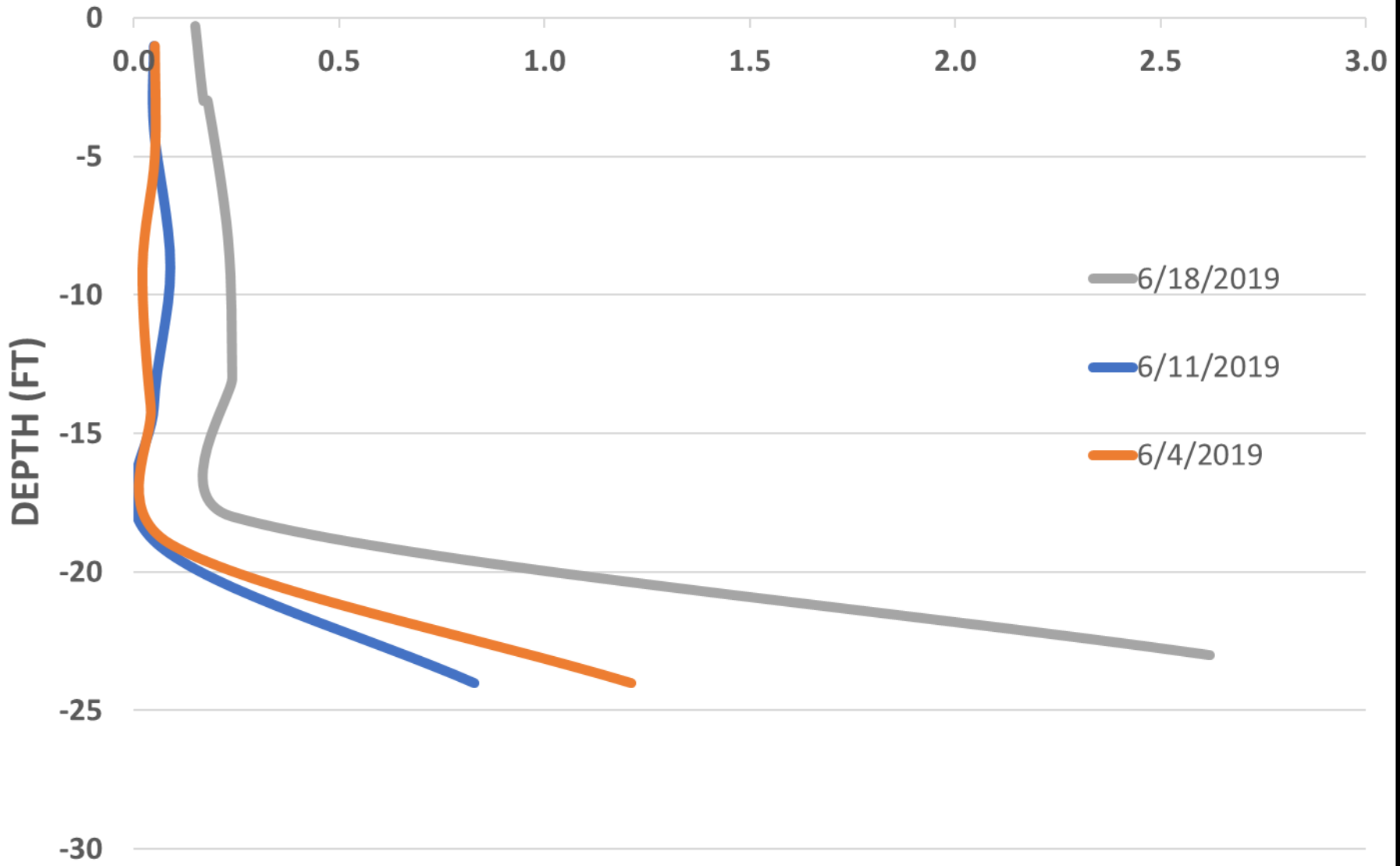
2

3

4

# Olentangy #3

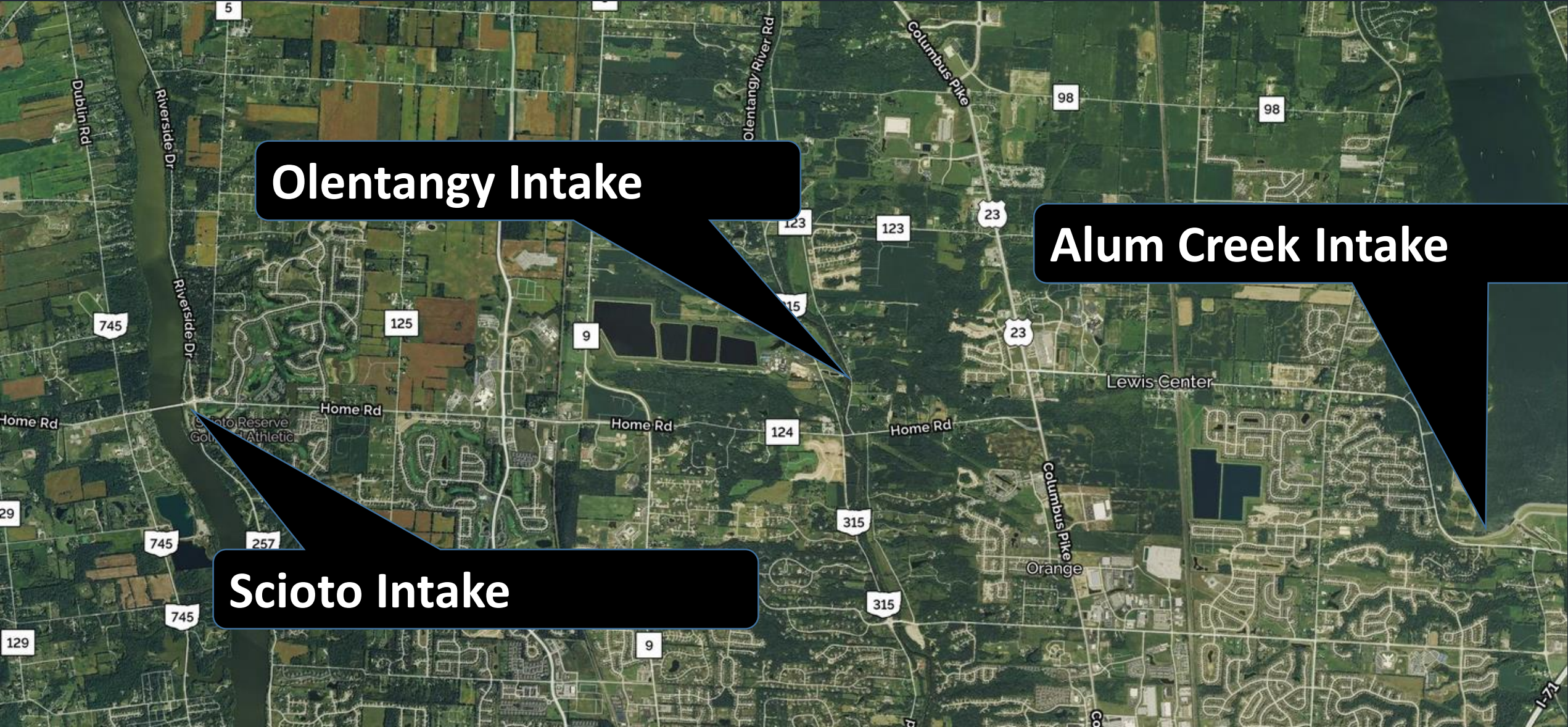
BGA-PC (RFU)



# **Intake Monitoring**

- **Continuous, on-line monitoring**
- **Chemical and biological parameters**
- **Hosted on secure website**
- **Alarms sent by text or email**

# Intake Monitoring



**Olentangy Intake**

**Alum Creek Intake**

**Scioto Intake**



**Olentangy Intake**



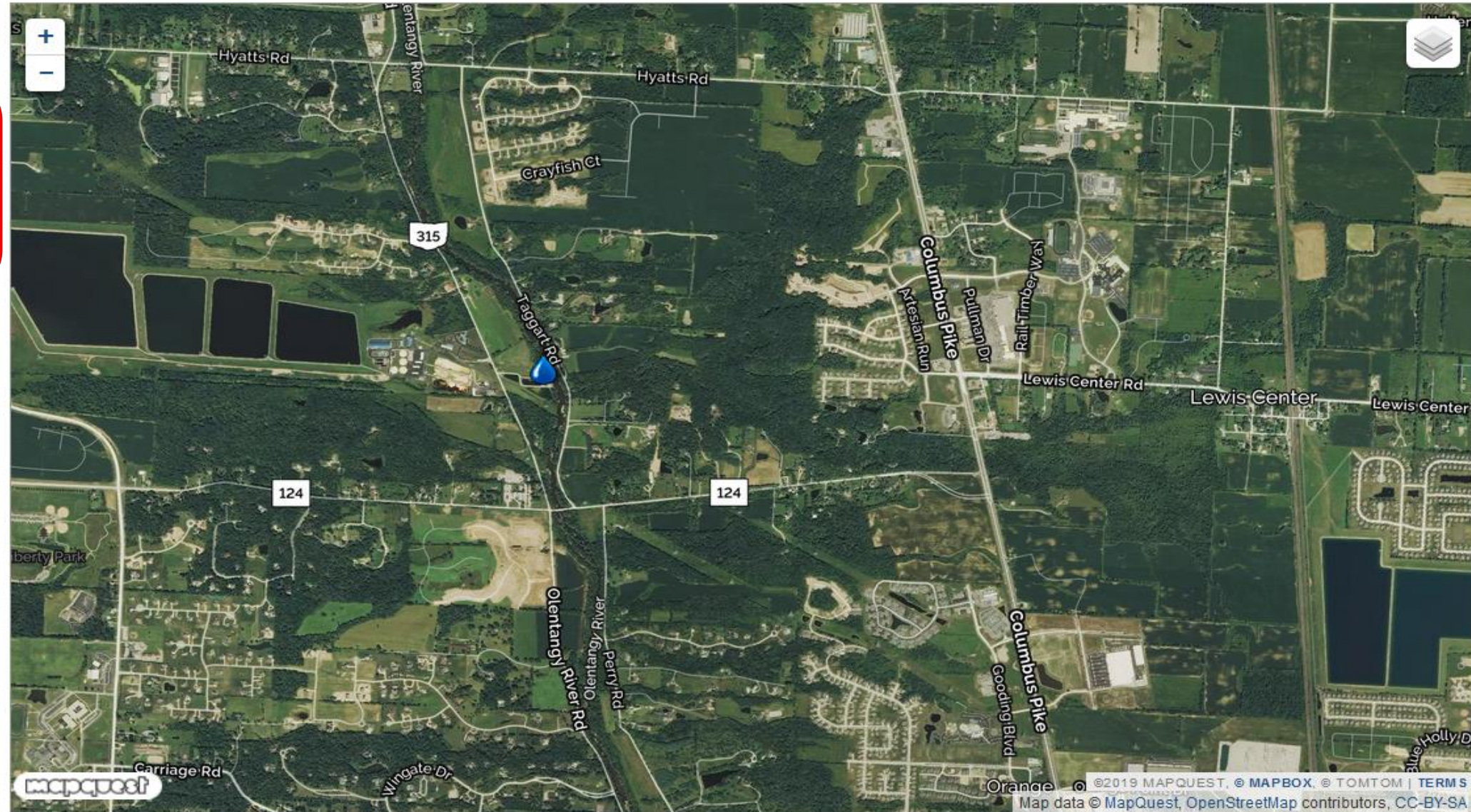
**Alum Creek Intake**



## NETWORKS

### My Networks Map

- Olentangy Raw Intake
- RES Raw Intake
- Schreiber Raw Water Pump Station

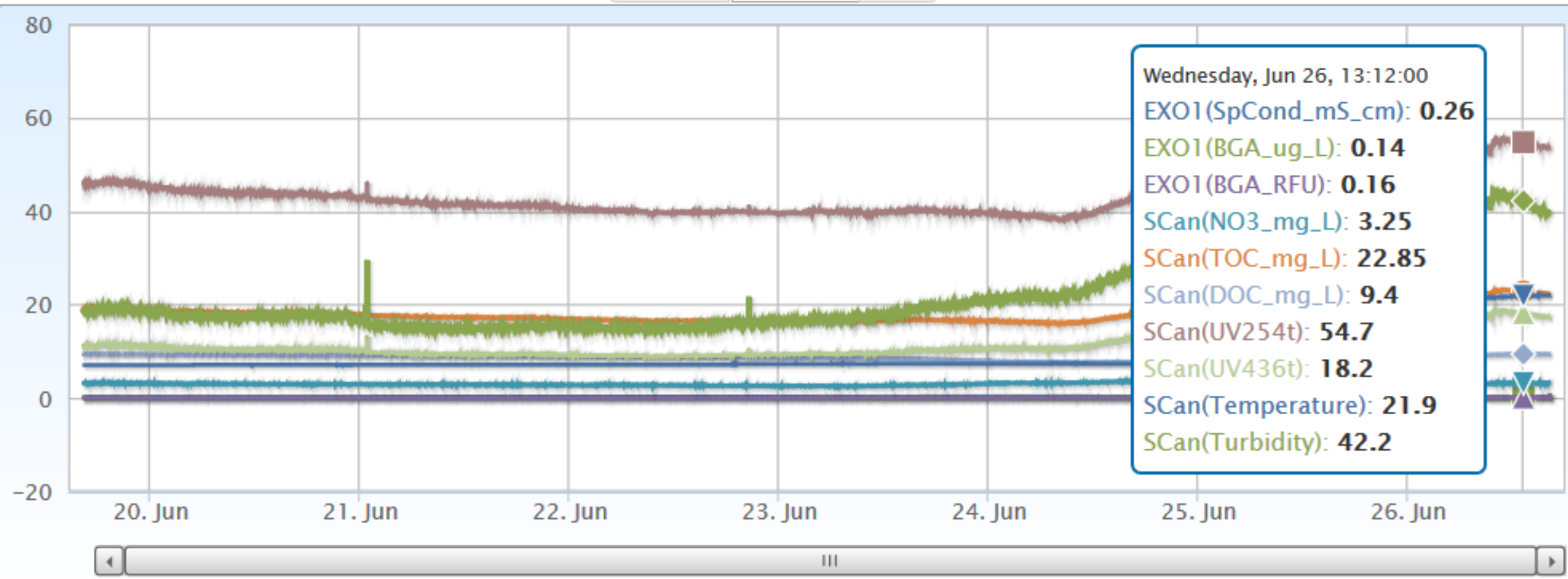


# Data History

Data Range from:  to:

Click and drag to zoom. Toggle sensors in the legend.

Y-axis Scaling Min:



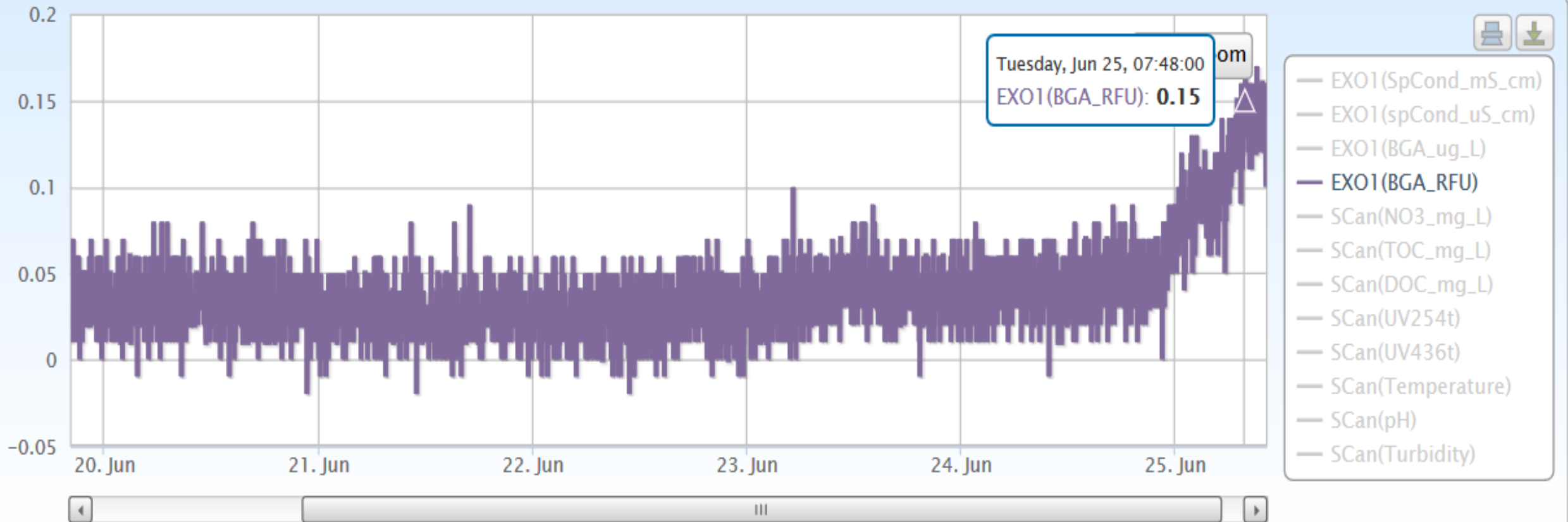
# Olentangy Intake - BGA

## Data History

Data Range from:  to:

Click and drag to zoom. Toggle sensors in the legend.

Y-axis Scaling Min:  Max:





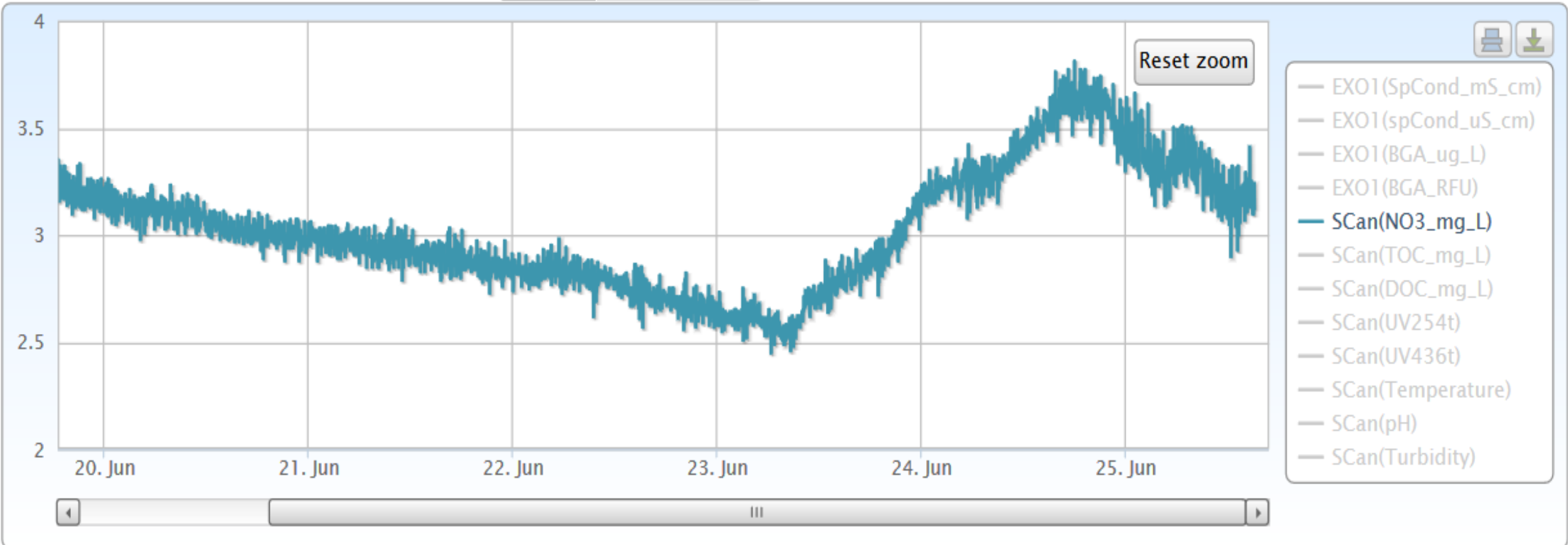
# Olentangy Intake – NO<sub>3</sub>

## Data History

Data Range from:  to:

Click and drag to zoom. Toggle sensors in the legend.

Y-axis Scaling Min:  Max:



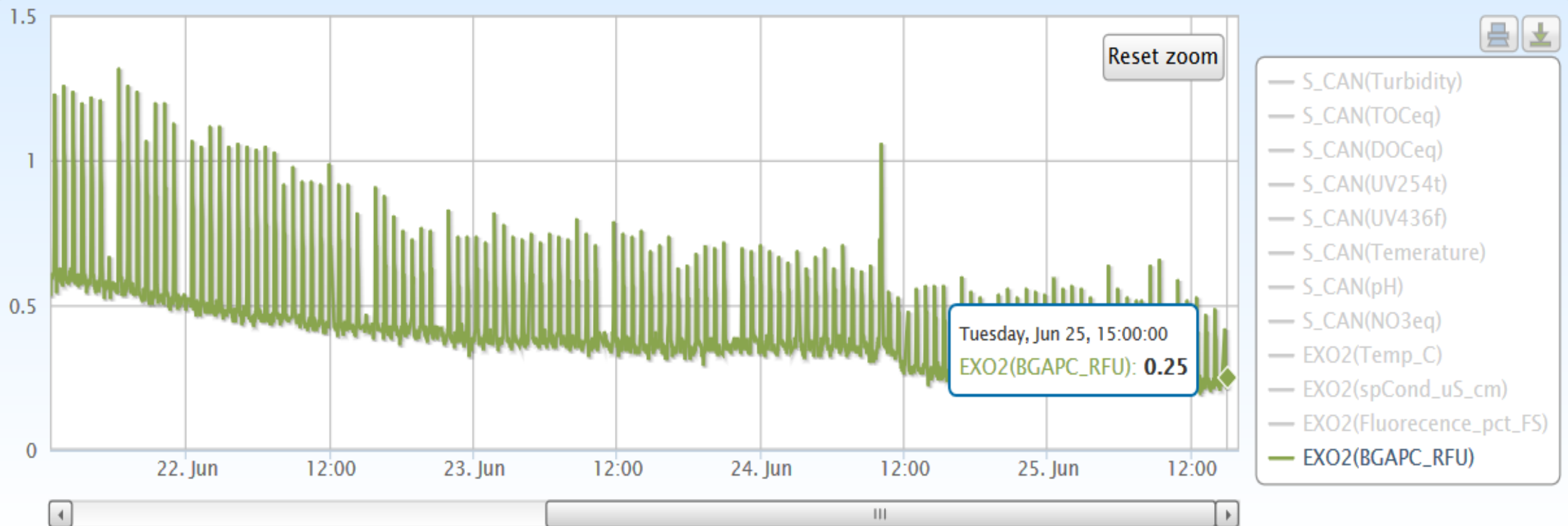
# Scioto Intake - BGA

## Data History

Data Range from:  to:

Click and drag to zoom. Toggle sensors in the legend.

Y-axis Scaling Min:  Max:



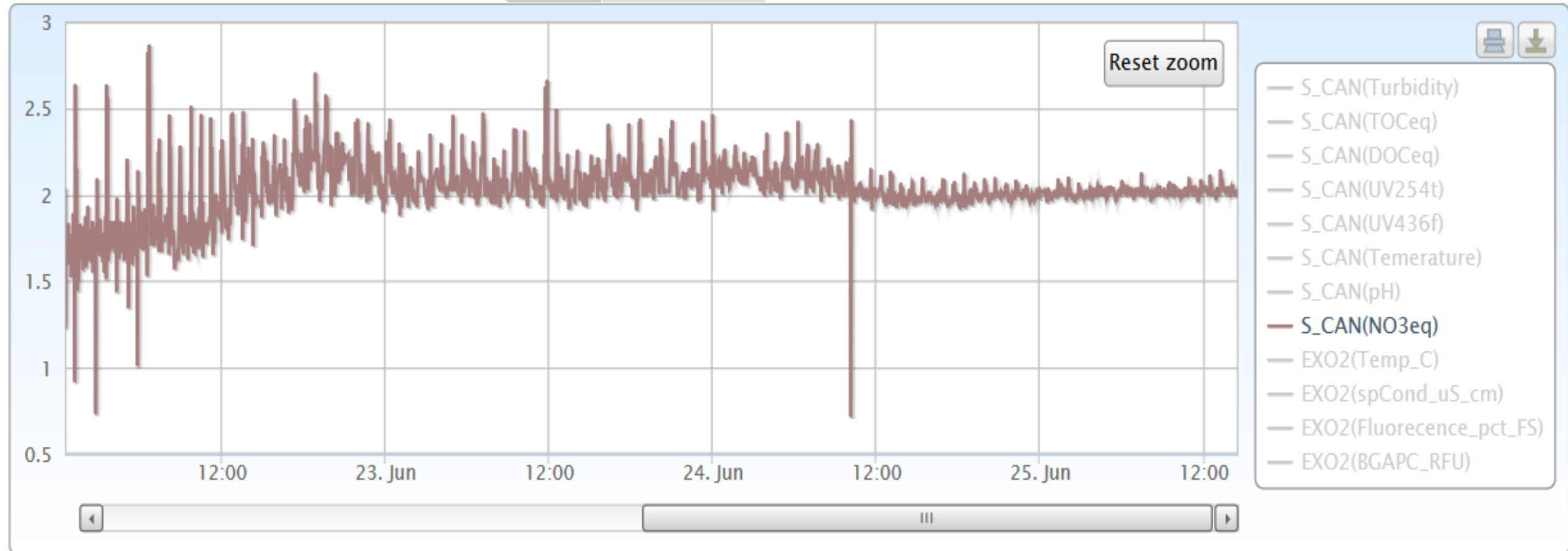
# Scioto Intake – NO<sub>3</sub>

## Data History

Data Range from:  to:

Click and drag to zoom. Toggle sensors in the legend.

Y-axis Scaling Min:  Max:



# Alarm Notifications

## Alarm Condition

**Simple:**

Site	Sensor	Condition	Set Point	Reset Point
<input type="text" value="Olentangy Raw Intake"/>	<input type="text" value="SCan(NO3_mg_L)"/>	<input type="text" value="greater than"/>	<input type="text" value="5"/>	<input type="text"/>

**Advanced:**

Debug:

Status: *(Not evaluated)*

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## Alarm Actions & Notifications

### Actions:

Change Icon on Map

### Notifications:

Frequency:  Until Acknowledged  First occurrence only

Send E-mail

Send SMS Text Message



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