

**“MIAMI RIVER BASIN WATER QUALITY IMPROVEMENT REPORT”**  
**Action Item Matrix Quarterly Progress Report**

First Quarterly Report, 2018  
(January-March)

**Action Item:**

4. Monitoring and Research

- a. Continue monthly monitoring for water quality of Wagner Creek, Miami River, and adjoining Biscayne Bay

**Lead Agency:** Miami-Dade County DERM

**Contact Name** Jamie Monty or Omar Abdelrahman, DERM  
**Address** 701 NW 1<sup>st</sup> Court  
Miami, FL 33136  
**Telephone** (305) 372-6853 or (305) 372-6872  
**Fax** (305) 372-6649

**E-mail** [montyj@miamidade.gov](mailto:montyj@miamidade.gov)  
[abdelo@miamidade.gov](mailto:abdelo@miamidade.gov)

**Action Item Status:**

Miami-Dade DERM has continued to collect monthly water quality samples in the Miami River and its tributaries (including Tamiami Canal, Comfort Canal and Wagner Creek). During the First Quarter of 2018 samples were collected at each of the eight stations in the River and tributaries on First Tuesday of the first full week in January, February, and March. Costs for sampling (including salaries and fringe and analysis) have been calculated at approximately \$394 per station per month. No sewage spills were reported on or around the Miami River or its tributaries during the quarter.

The Florida Department of Environmental Protection (FDEP) revised the human health-based surface water quality criteria in Chapter 62-302, F.A.C that are designed to ensure that Floridians can safely eat Florida fish and drink local tap water. Based on updated scientific information, the FDEP discontinued the Fecal Coliform standard and instead adopted E. Coli in Class III fresh water and Enterococci in Class III saline waters, and required NPDES permittees to implement the changes. To that end, DERM discontinued sampling Fecal Coliform in March, 2018 and transitioned to collecting the parameters adopted by the State. Since then, DERM has recognized the need for continuity in order to maintain comparability with long-term trends and has resumed Fecal Coliform sampling until there is enough E. Coli and Enterococcus data to characterize bacteriological contamination levels in the subject area.

Figures 1 -3 below depict where monthly results for stations in the Miami River and the vicinity exceed the single sample standard of 35 cfu/100ml for Enterococcus—the applicable indicator for saline locations. Figure 4 is a quarterly composite of Enterococci results from station locations on the Miami River and its tributaries showing how frequently the results at each station exceeded the standard during the First Quarter of the year. Table 1 lists the observed Enterococcus values, as well as E. Coli levels, in Wagner Creek and its confluence with the Miami River (MR03) for January-March.

“MIAMI RIVER BASIN WATER QUALITY IMPROVEMENT REPORT”  
Action Item Matrix Quarterly Progress Report

Biscayne Bay Surface Water Quality Monitoring Program  
Enterococci Bacteria Sample Compliance  
January 2018  
Miami River and Tributaries

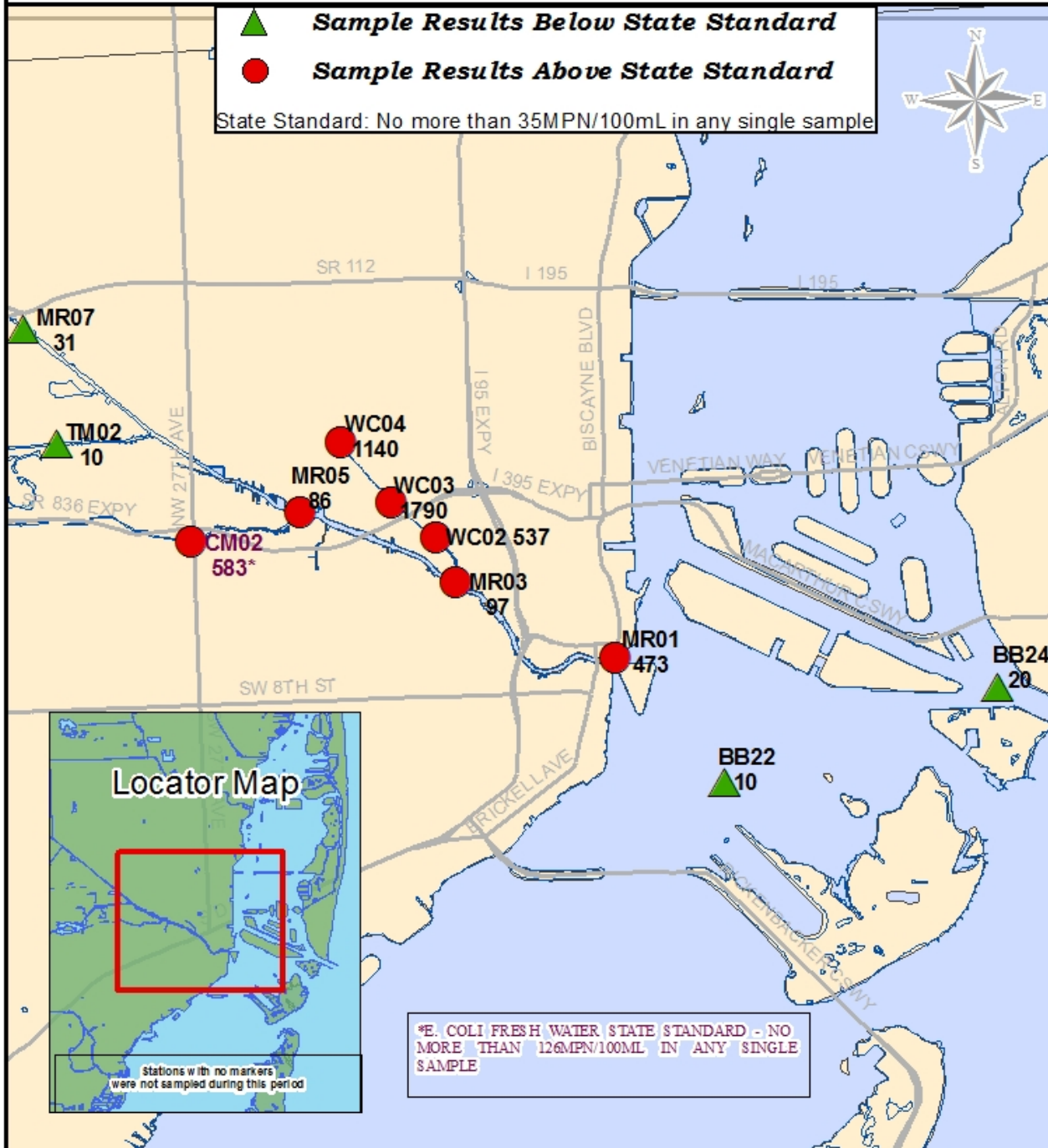


Figure 1.

# Biscayne Bay Surface Water Quality Monitoring Program

## Enterococci Bacteria Sample Compliance

### February 2018

#### Miami River and Tributaries

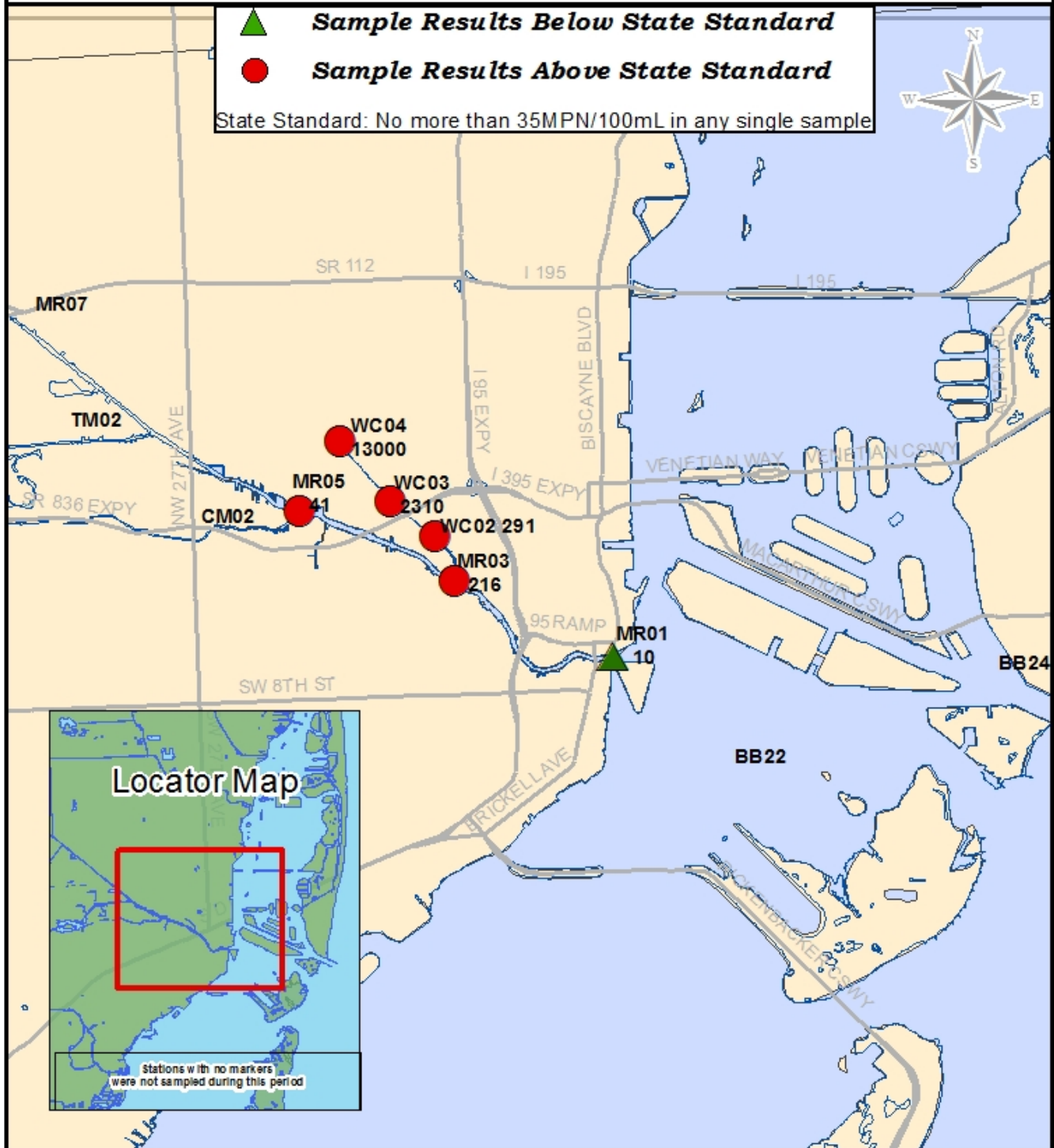


Figure 2.

# Biscayne Bay Surface Water Quality Monitoring Program

## Enterococci Bacteria Sample Compliance

### March 2018

#### Miami River and Tributaries

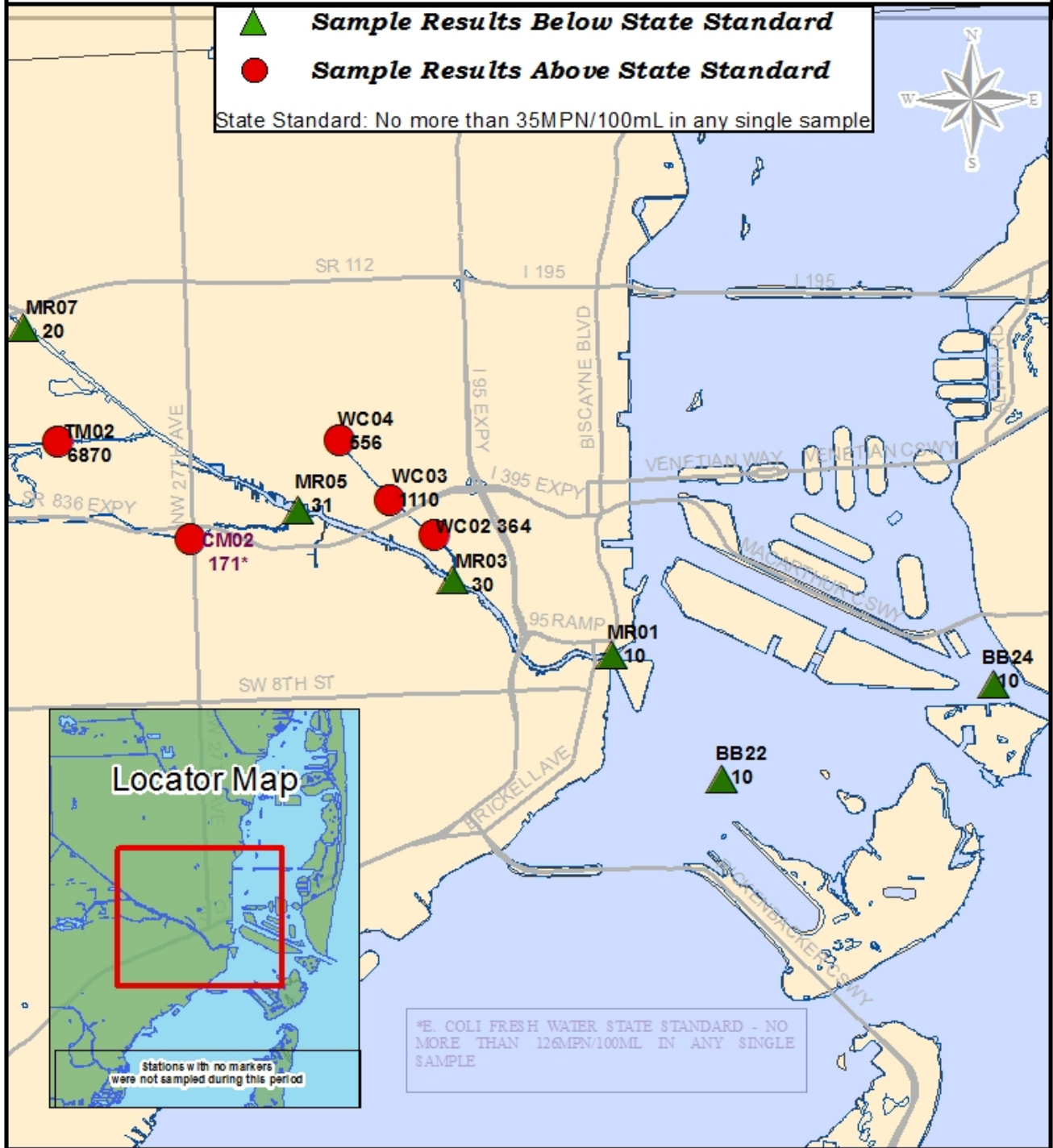


Figure 3.

# Biscayne Bay Surface Water Quality Monitoring Program

## Quarterly Summary of Enterococci Sample Compliance

### January to March 2018

### Miami River and Tributaries

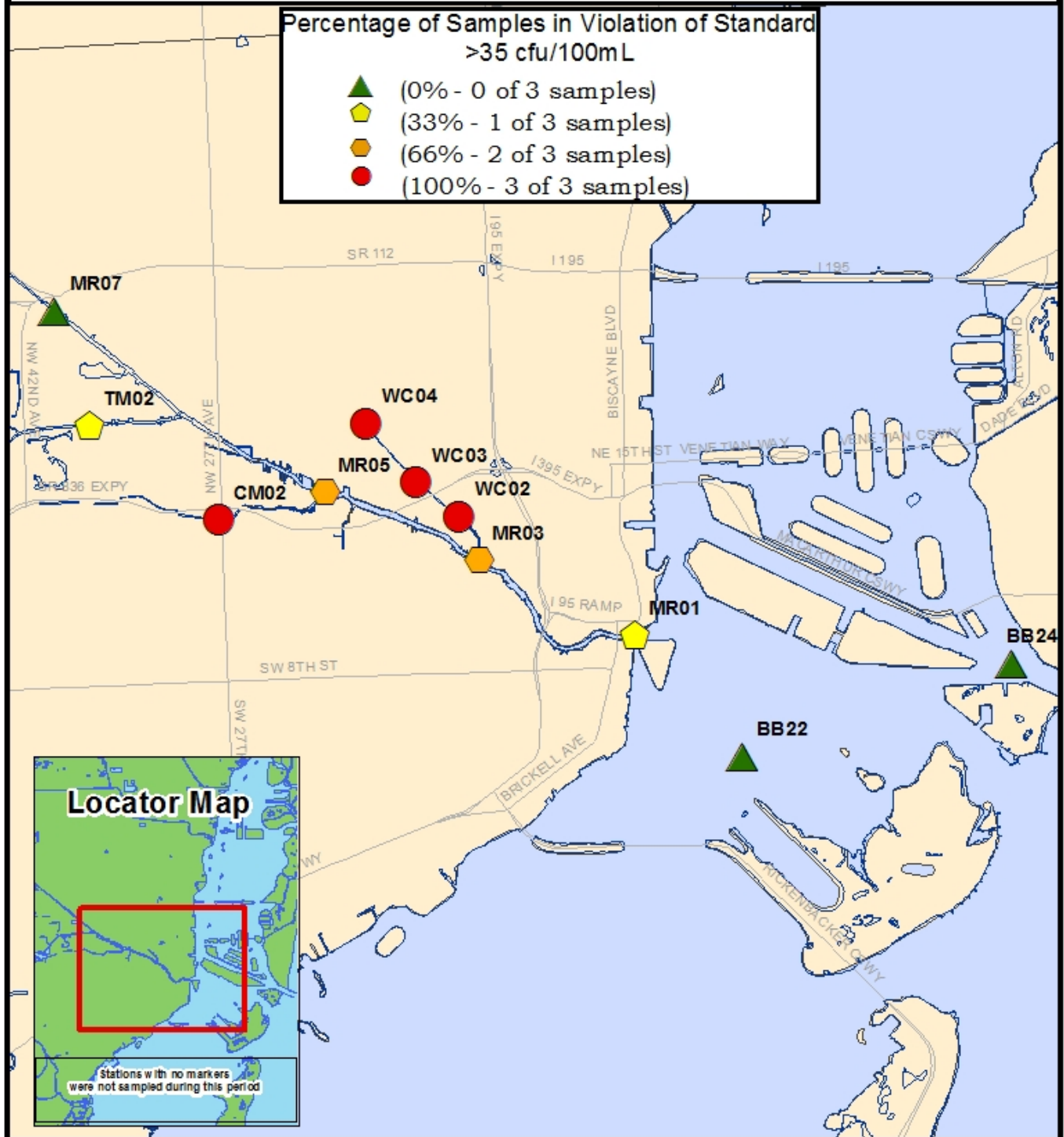


Figure 4.

**Table 1.**

MONTHLY INDICATOR BACTERIA LEVELS (cfu's/100 ml) IN WAGNER CREEK								
	MR03		WC02		WC03		WC04	
Parameter	E.Coli	Entero	E.Coli	Entero	E.Coli	Entero	E.Coli	Entero
January	233*	97*	1620*	537*	4610*	1790*	4610*	1140*
February	331*	216	884*	291*	24200*	2310*	4610*	13000*
March	134*	30	341*	364*	446*	1110*	2610*	556*

A” \*” indicates results that exceed the State’s E. Coli Standard (126 cfu/100ml) or Enterococci (35 cfu/100ml); a “0” indicates that the true value was below the method detection limit.

**First Quarterly Report, 2018**  
(January-March)

**Action Item:**

- 5. Management
- d. Establish standardized water quality tracking for key characteristics

<b>Lead Agency:</b>	Miami-Dade County DERM
<b>Contact Name</b>	Omar Abdelrahman DERM
<b>Address</b>	701 NW 1 <sup>ST</sup> Court Miami, FL 33136
<b>Telephone</b>	(305) 372-6872
<b>Fax</b>	(305) 372-6630
<b>e-mail</b>	<a href="mailto:abdelo@miamidade.gov">abdelo@miamidade.gov</a>

**Action Item Status:**

This report presents selected results of the water quality monitoring that occurred in the First Quarter (January-March) of 2018. Due to the extensive nature of the database, it is not feasible to track each parameter collected at each station for the period of record. Therefore, representative parameters have been selected to achieve the objective of this Action Item. Current water quality trends will be tracked by plotting the actual sample results of several key parameters (see Charts 1-14 for graphs of Ammonia Nitrogen, Total Phosphate, Bacteriological Indicator species, and Turbidity data) throughout the river.

All currently monitored stations in the river were included with each parameter plotted on 3 separate graphs each representing the lower river, upper river, and Wagner Creek (See maps presented under action item 4.a for station locations). Data are plotted in time series from the previous ten-year (2008-2018) period, except for Enterococcus which only has 3 months of data available. For further comparison, the target values developed under Action Item 4.f are plotted, and where applicable, the existing state or county standard for each parameter is shown.

Chart 1.

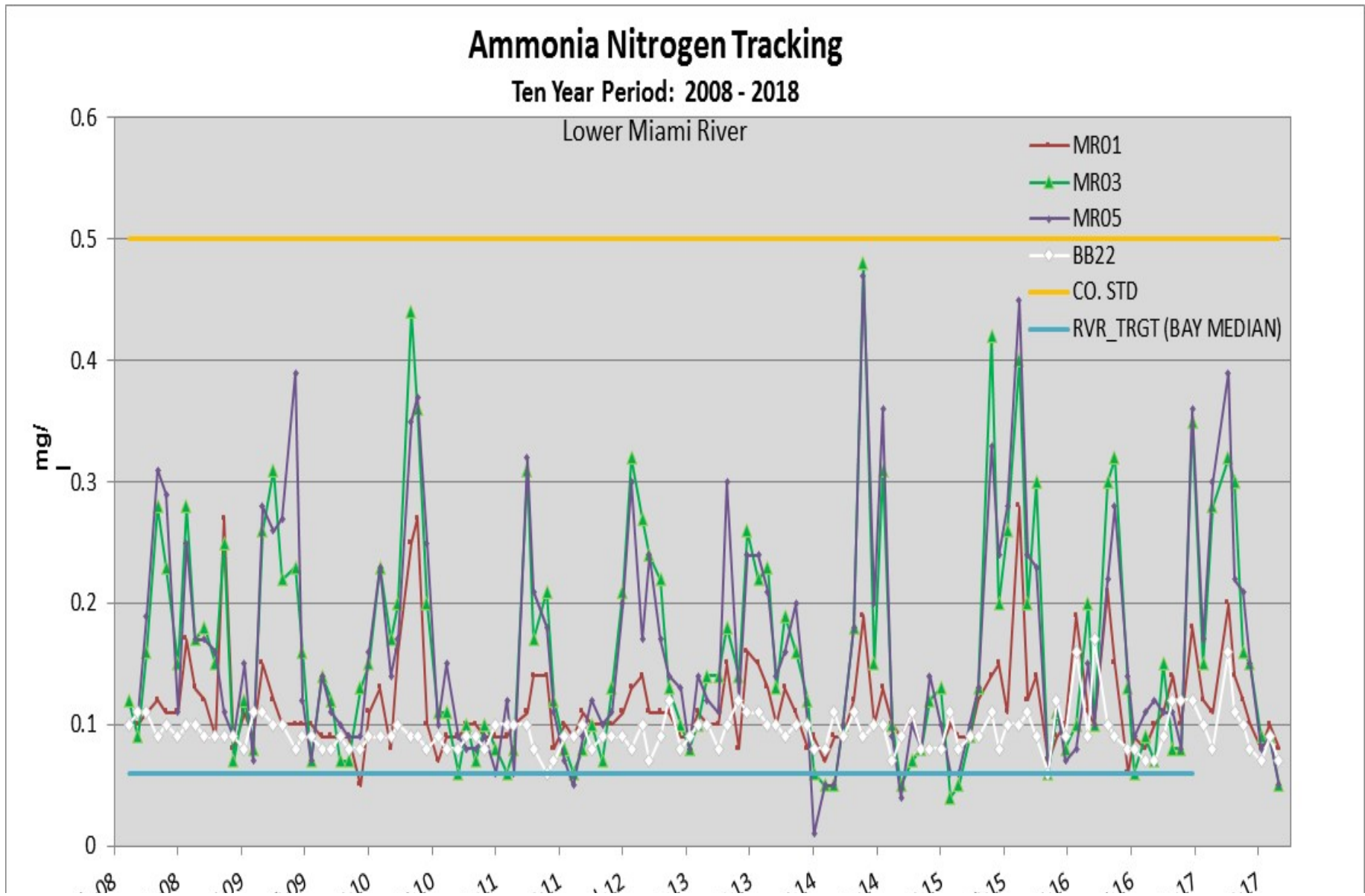




Chart 2.

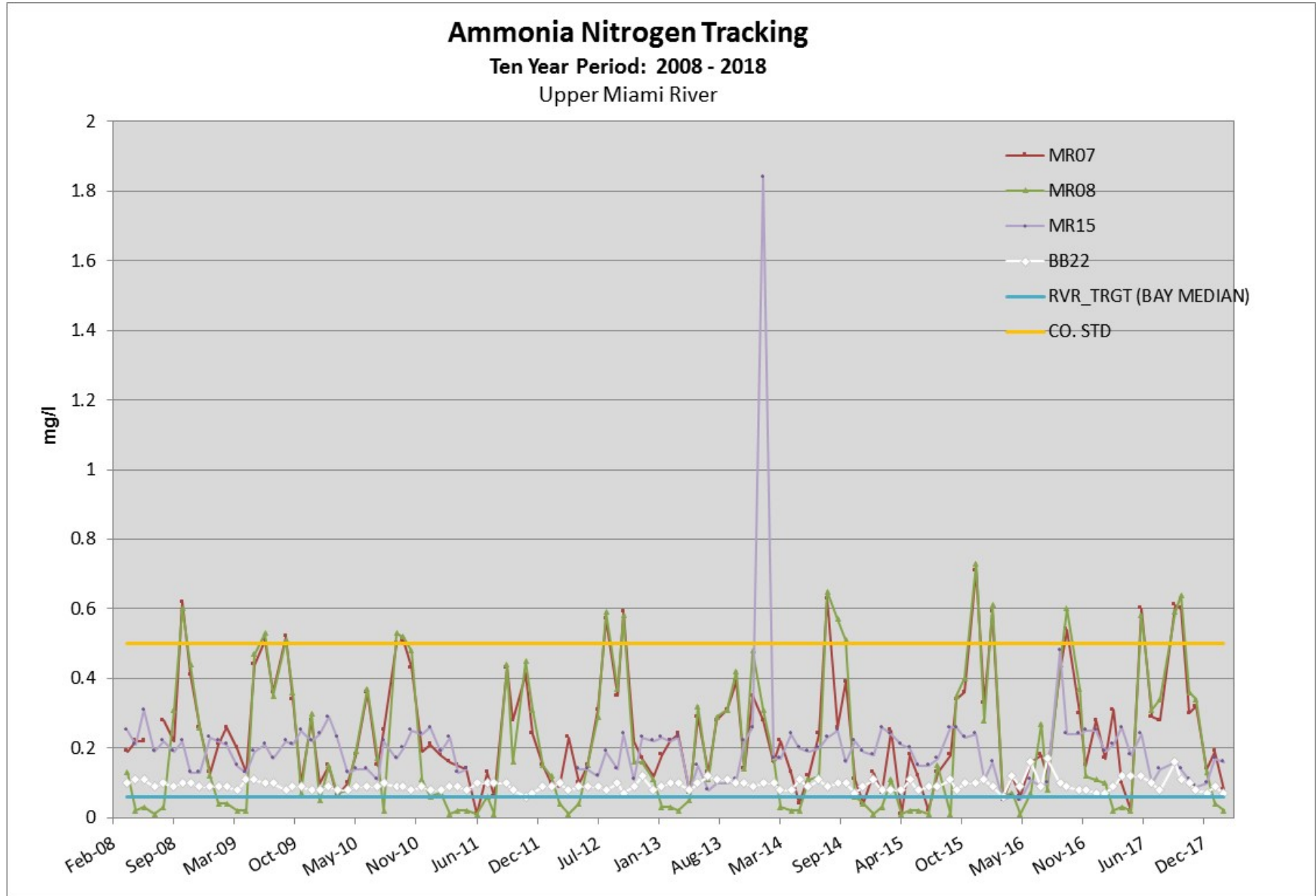


Chart 3

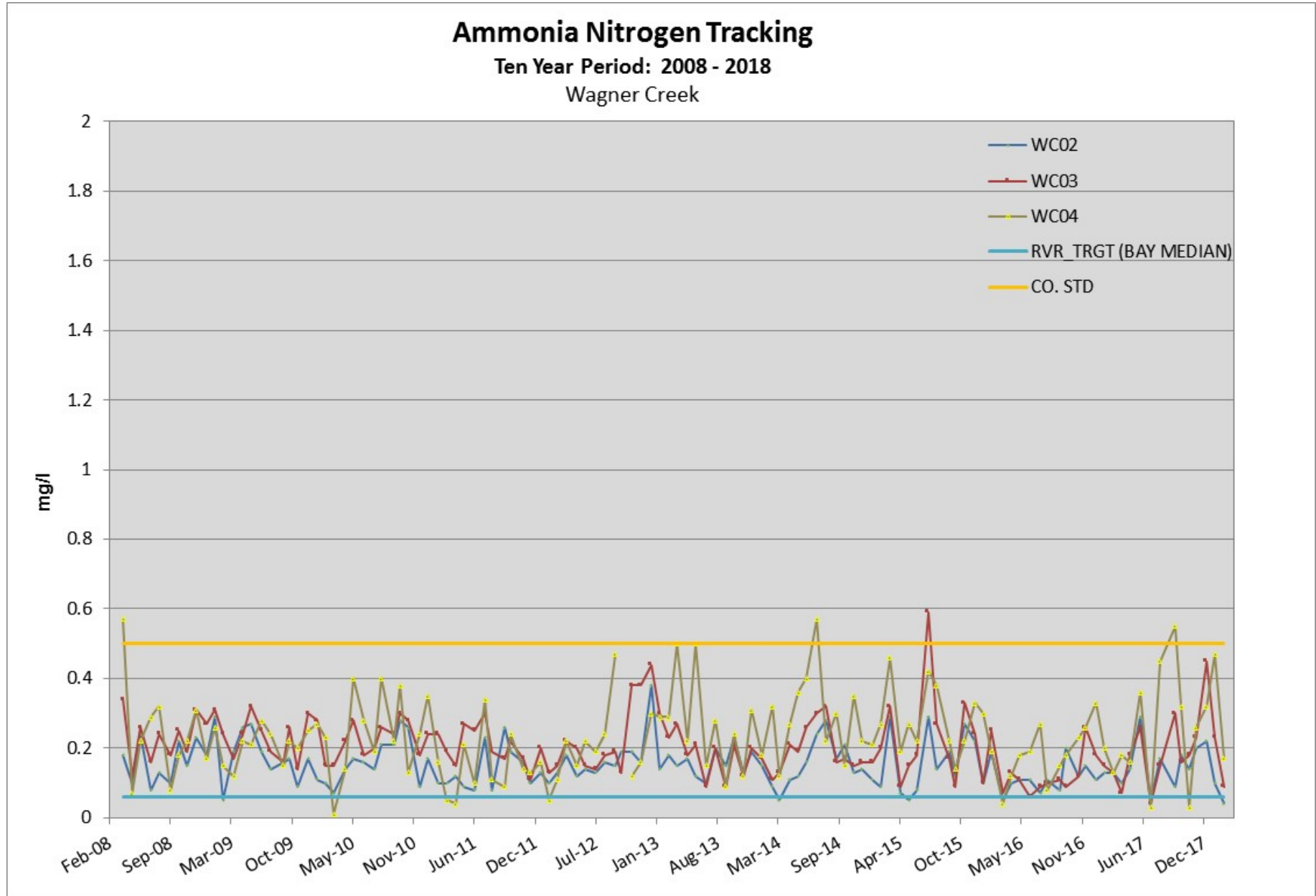


Chart 4.

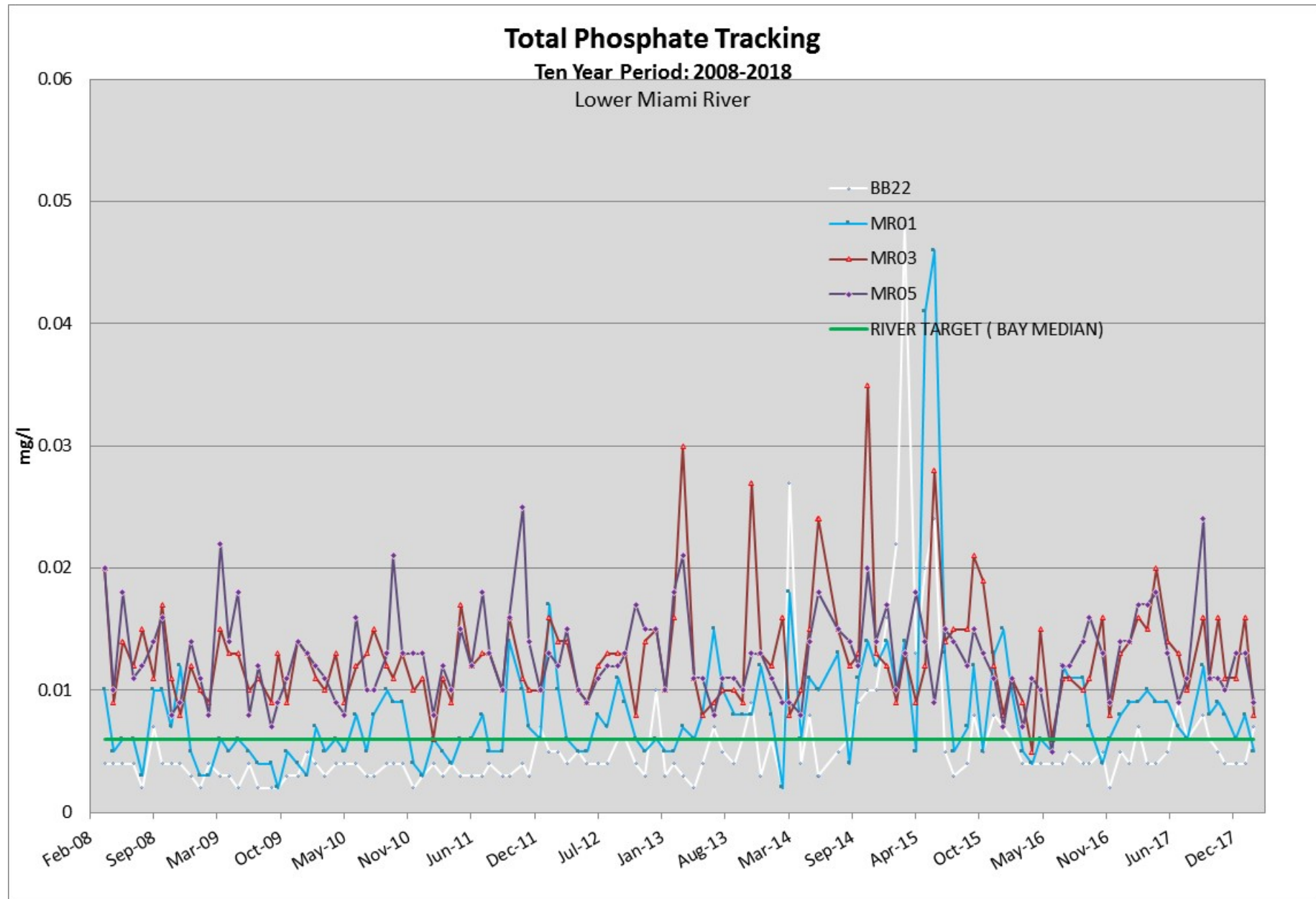


Chart 5.

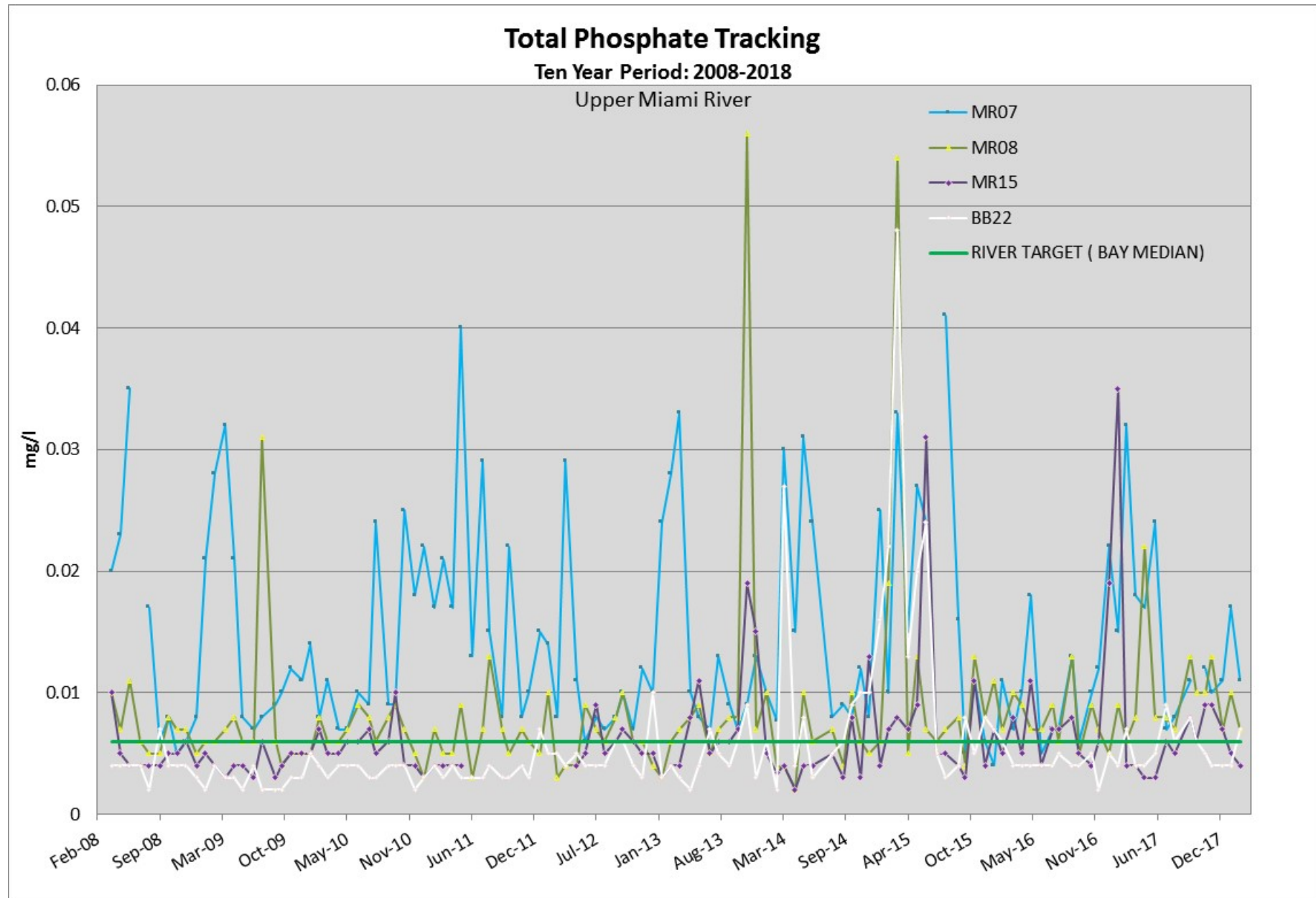


Chart 6.

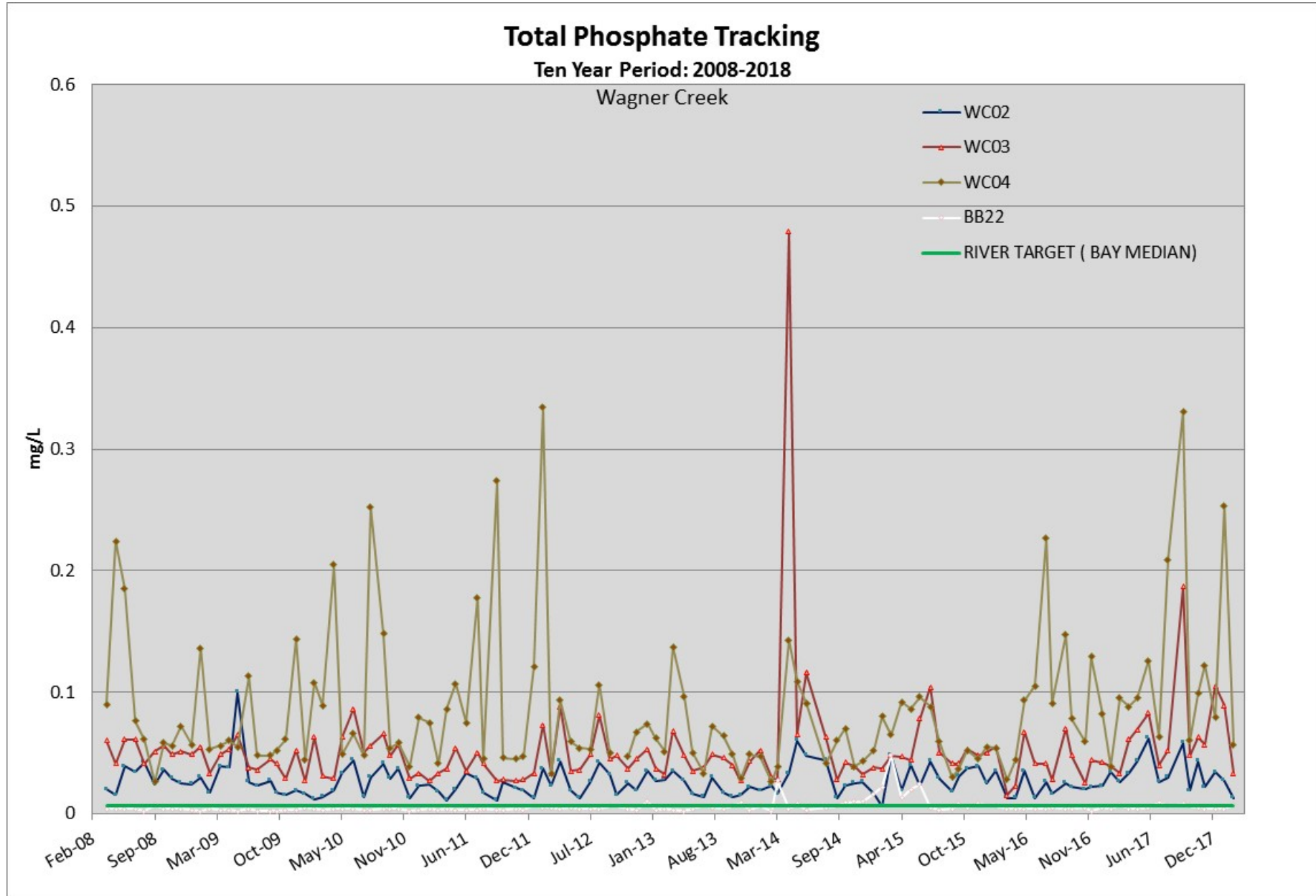


Chart 7.

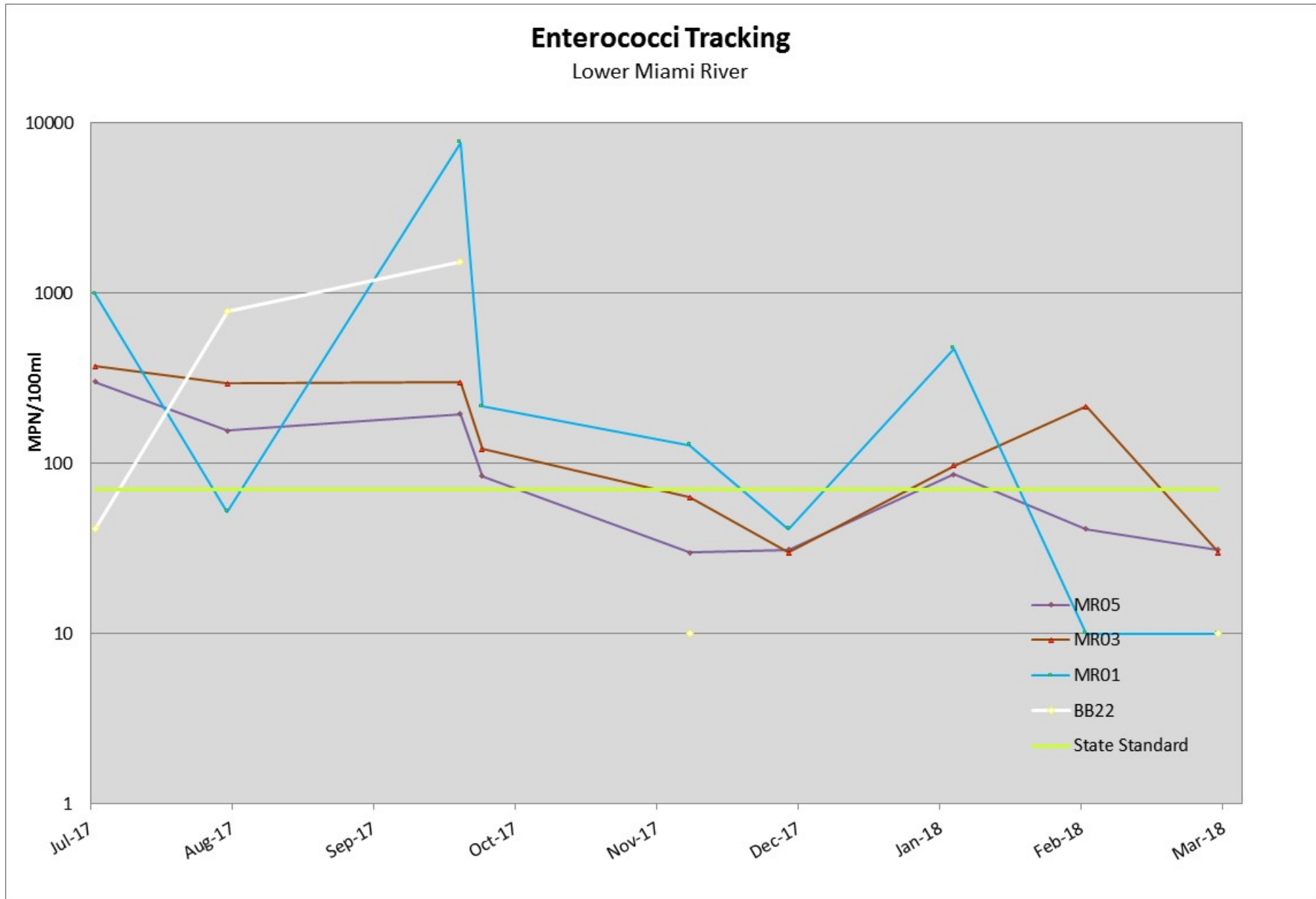


Chart 8.

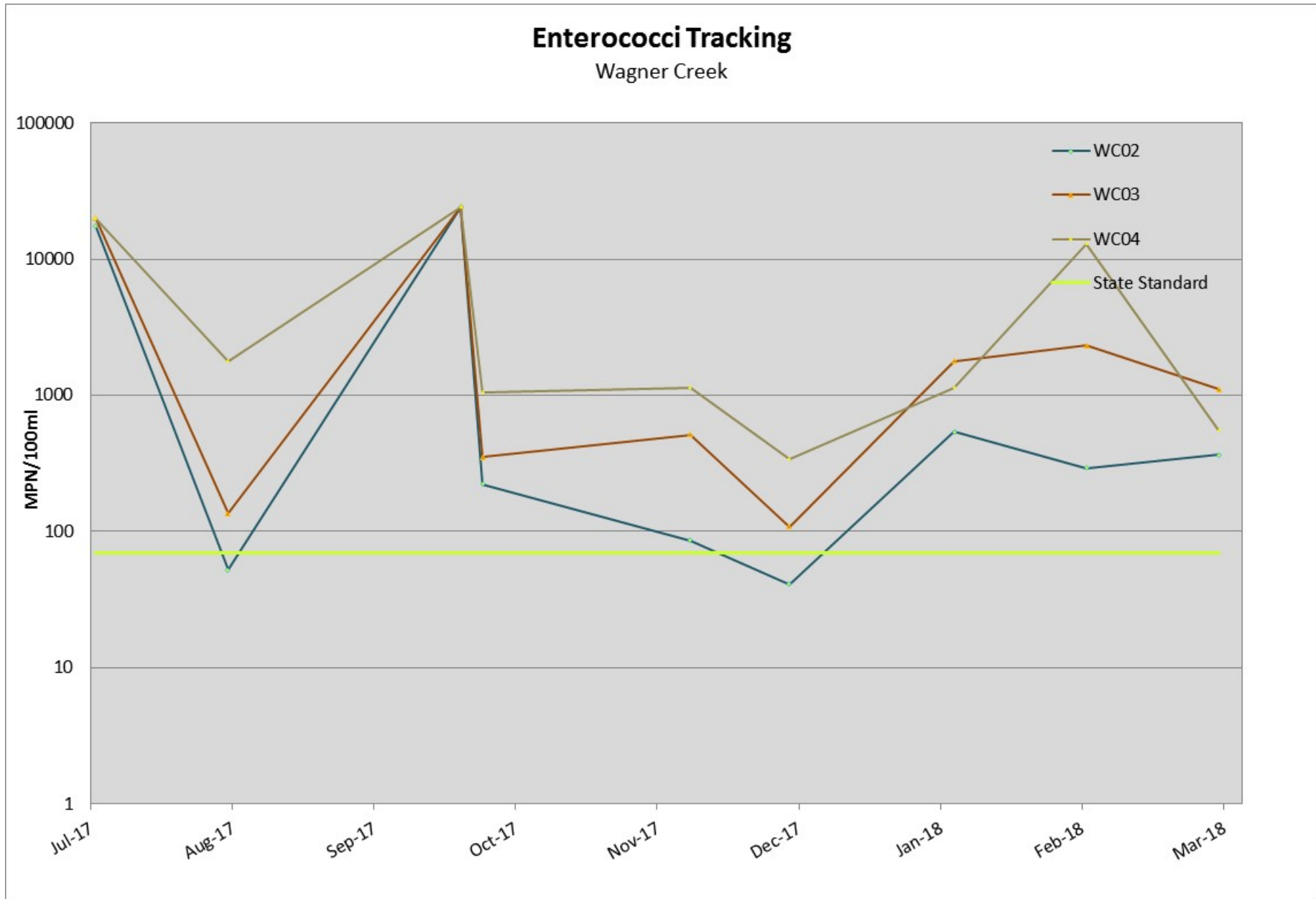


Chart 9.

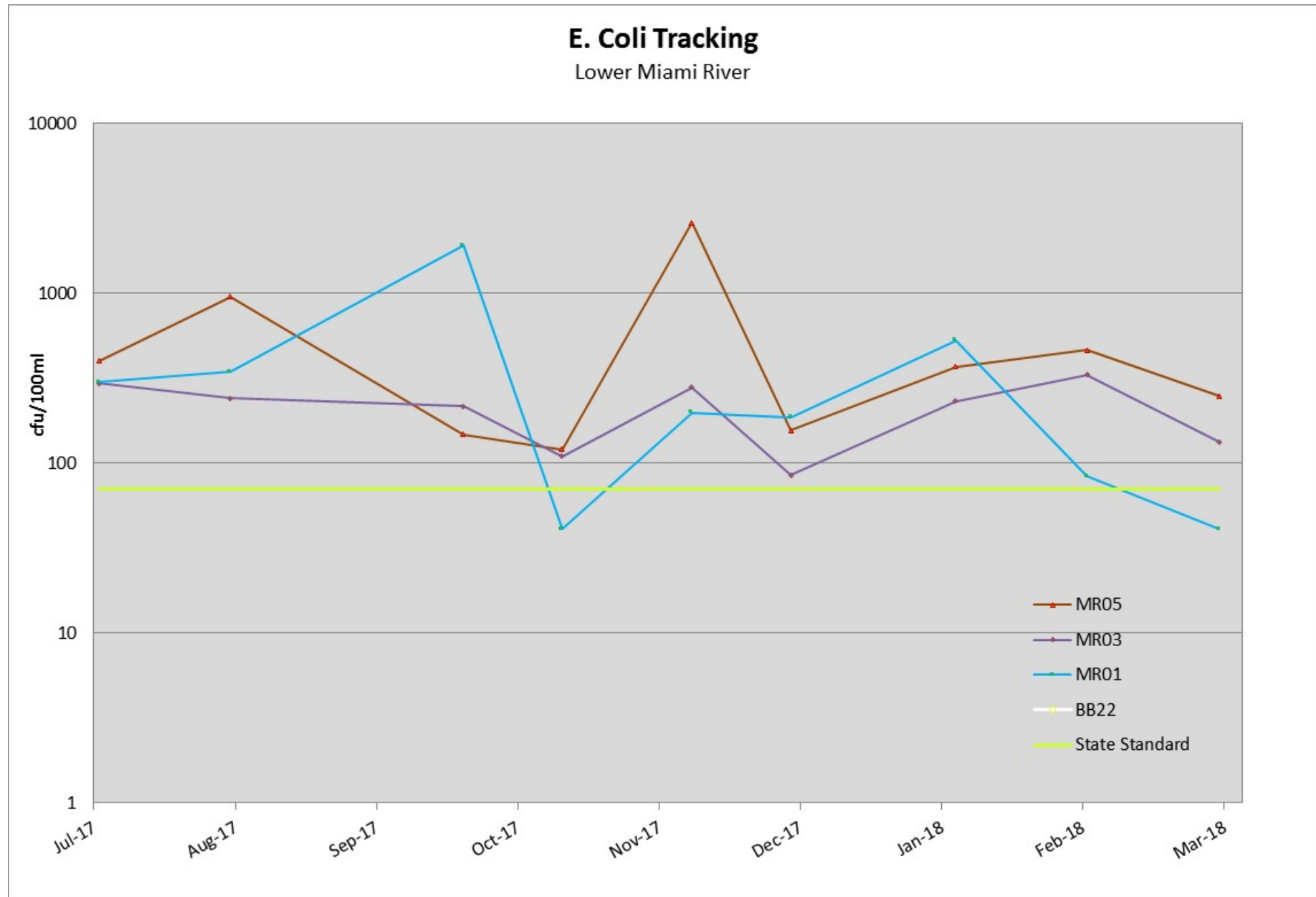




Chart 10.

### E. Coli Tracking Upper Miami River

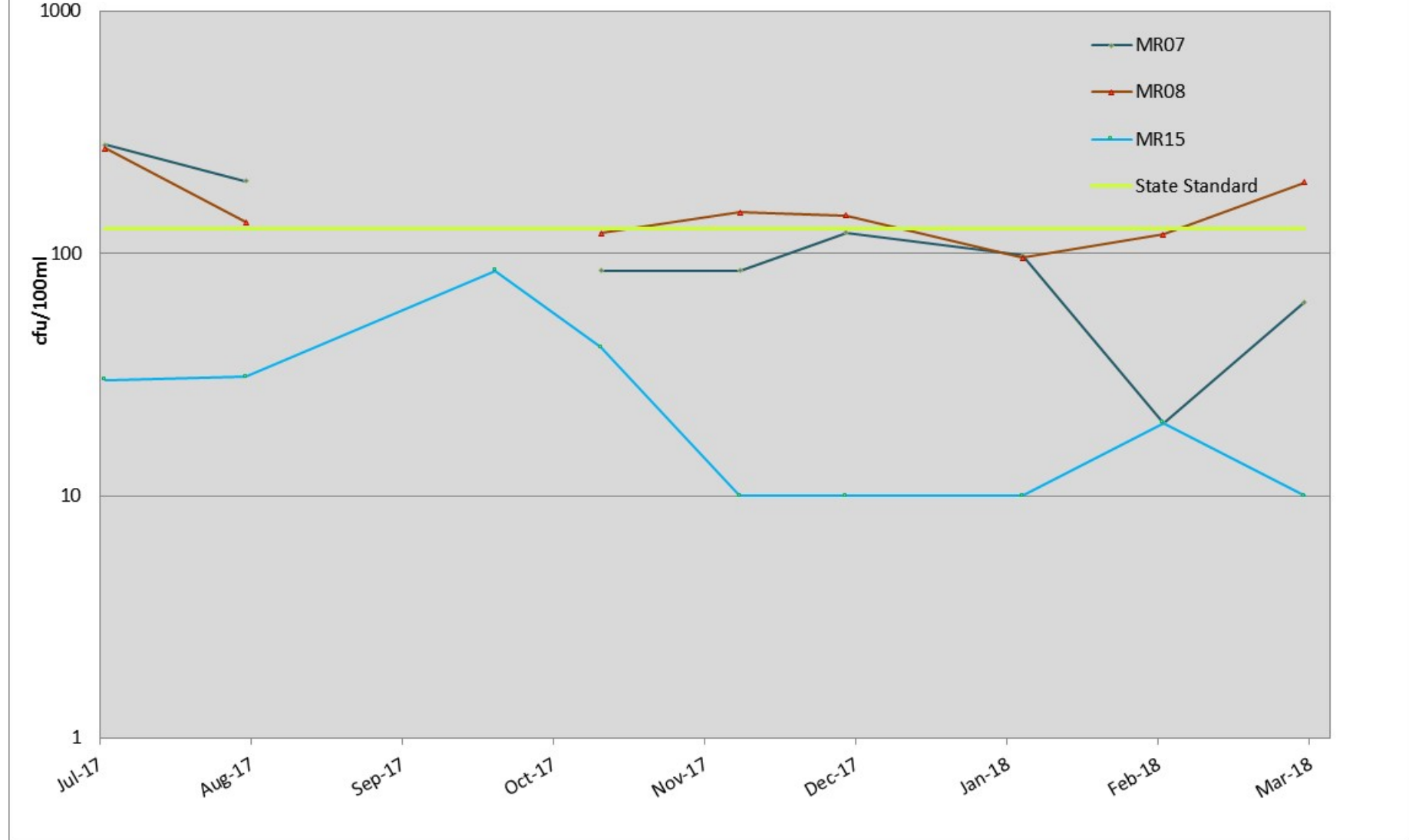


Chart 11.

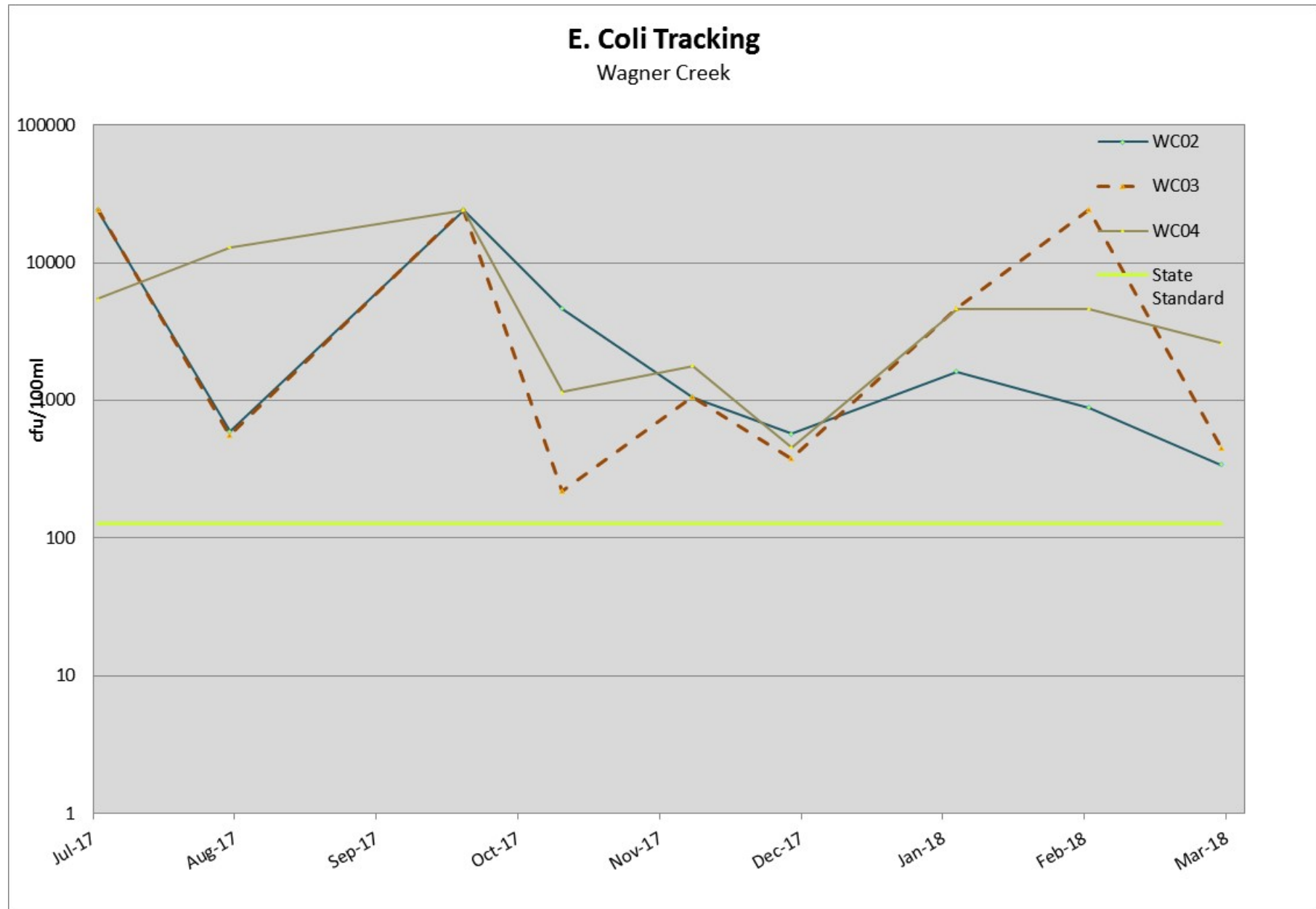


Chart 12.

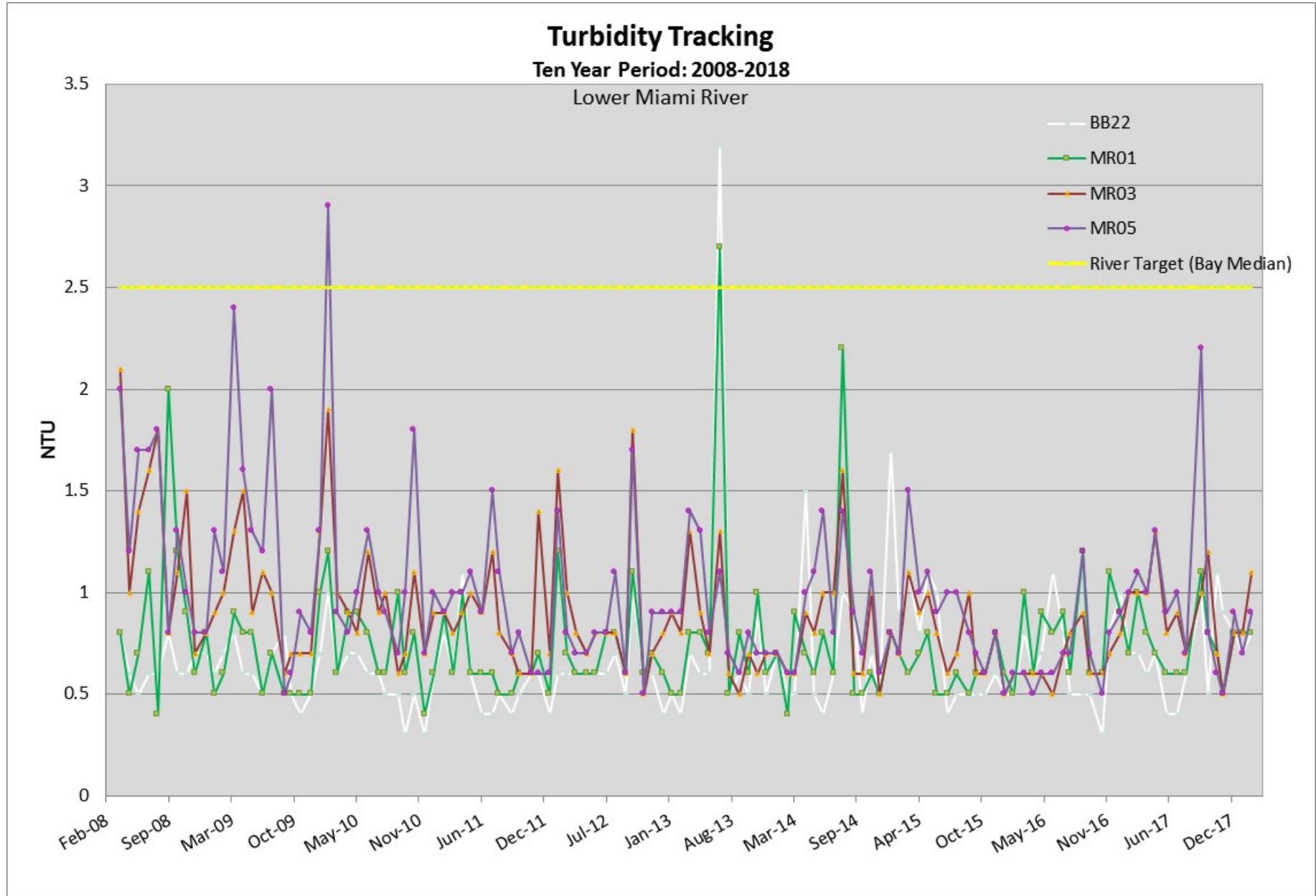


Chart 13.

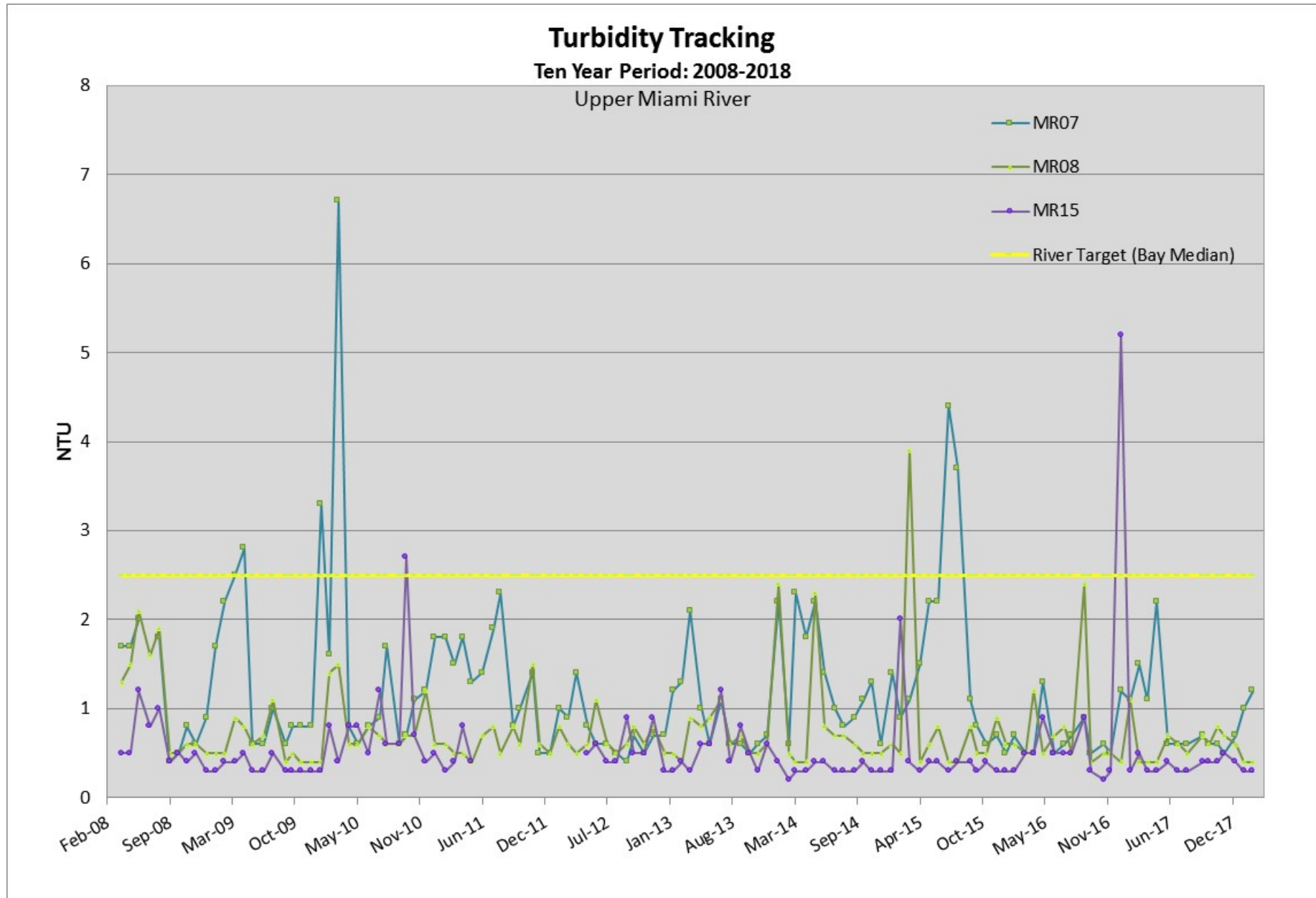


Chart 14.

