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

Second Quarterly Report, 2025
(January – March 2025)

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 Regulatory and Economic Resources, Division of Environmental Resources Management (DERM)
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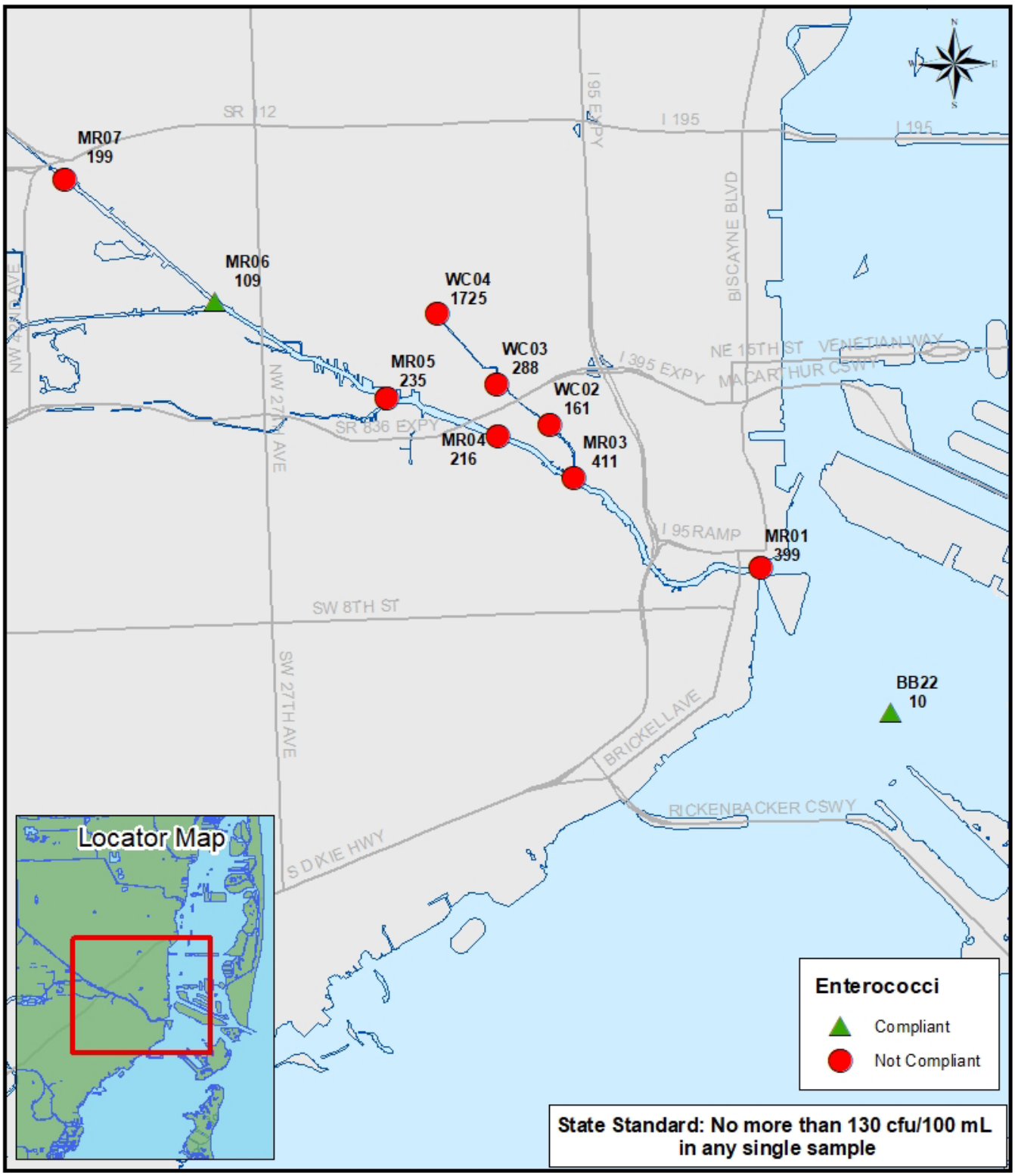
Action Item Status:

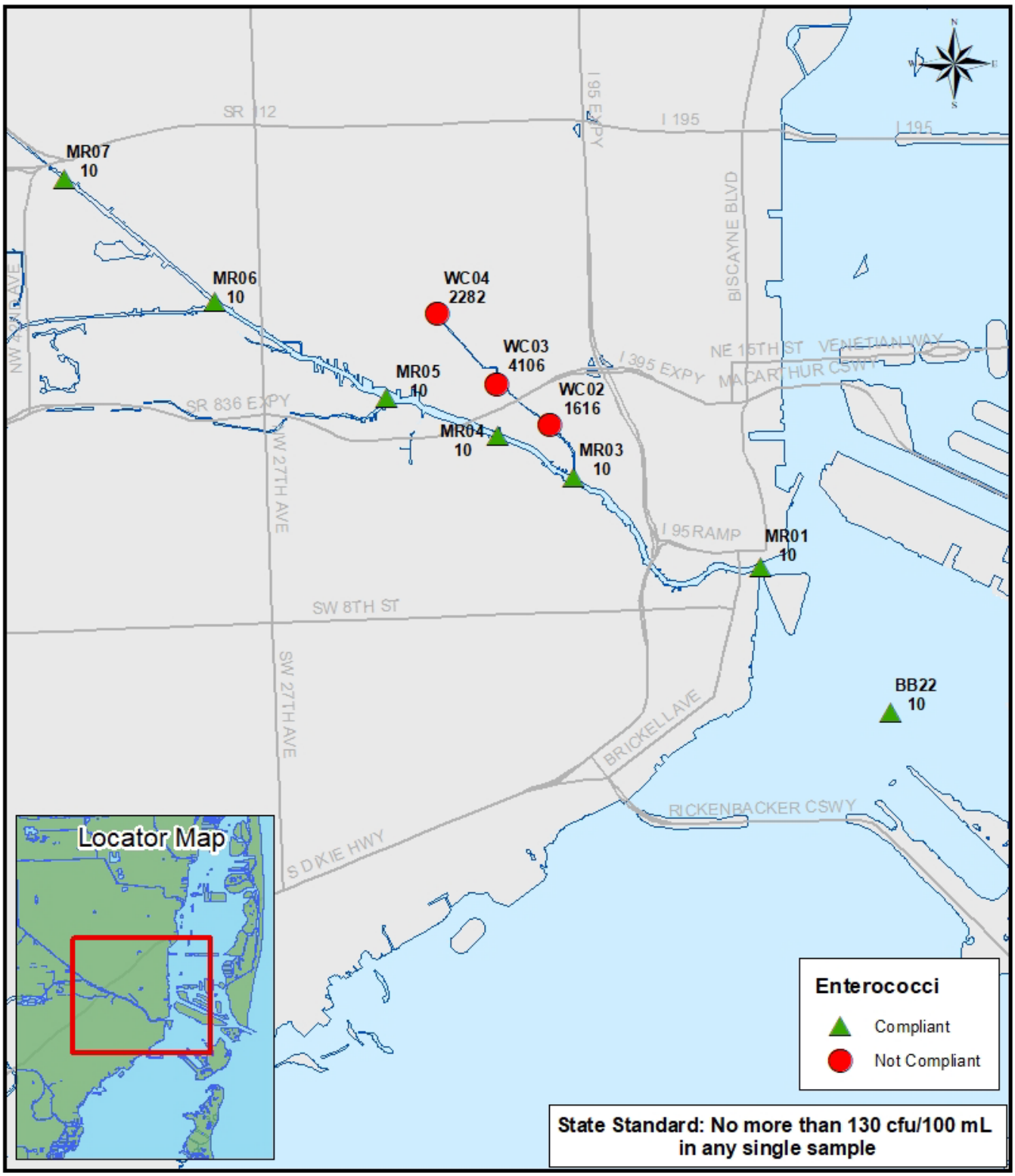
Miami-Dade County (the County) has continued to collect monthly water quality samples in the Miami River and its tributaries (including Tamiami Canal, Comfort Canal and Wagner Creek). Due to the time it takes for analytical laboratories to provide results, and additional time for data quality assurance/quality control, the County can only report on the previous quarter's results. During the second quarter of 2025, samples were collected at each of the ten (10) stations in the river and tributaries on the first Tuesday of the month in January, February, and March. Costs for sampling (including salaries and fringe and analysis) have been calculated at approximately $394 per station per month. A sewage spill was reported on February 27th, 2025 at 3801 NW 11th street, Miami, 33126. An estimated 607,593 gallons were released upstream of MR05 and an estimated 232,000 gallons were removed through recovery efforts. A supplemental plot (Chart 15) was included in the report showing the nearest County monitoring station, CM02, located upstream of MR05 and downstream of the spill.

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. Figures **1 -3** below depict where monthly results for stations in the Miami River and the vicinity exceed the single sample standard of 130 cfu/100 mL for *Enterococcus* spp.—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 second 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.

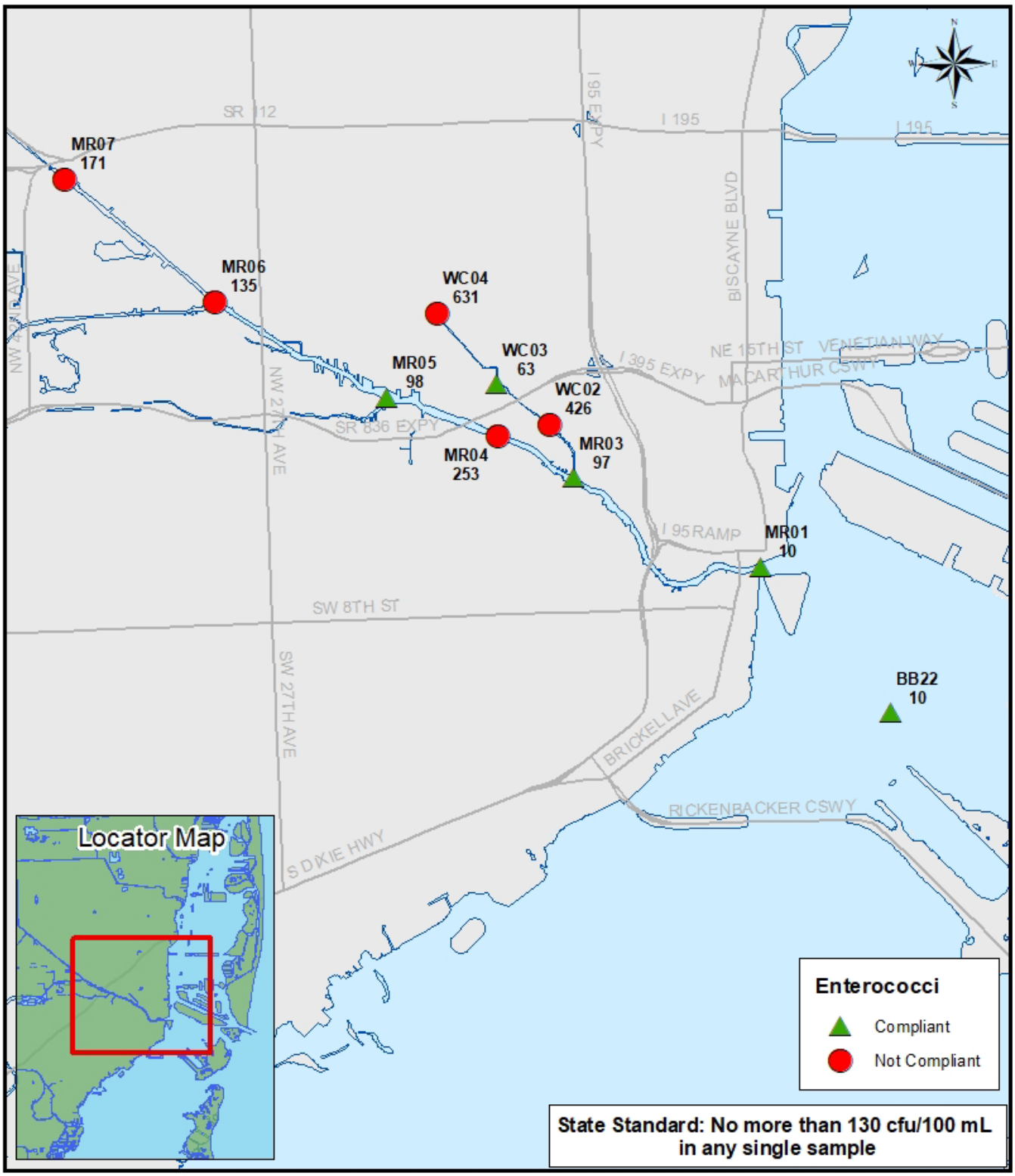
Biscayne Bay Surface Water Quality Monitoring Program
Enterococci Bacteria Sample Compliance
January 2025
Miami River and Tributaries



Biscayne Bay Surface Water Quality Monitoring Program
Enterococci Bacteria Sample Compliance
February 2025
Miami River and Tributaries



Biscayne Bay Surface Water Quality Monitoring Program
Enterococci Bacteria Sample Compliance
March 2025
Miami River and Tributaries



Biscayne Bay Surface Water Quality Monitoring Program
Quarterly Summary of Enterococci Bacteria Sample Compliance
January to March 2025
Miami River and Tributaries

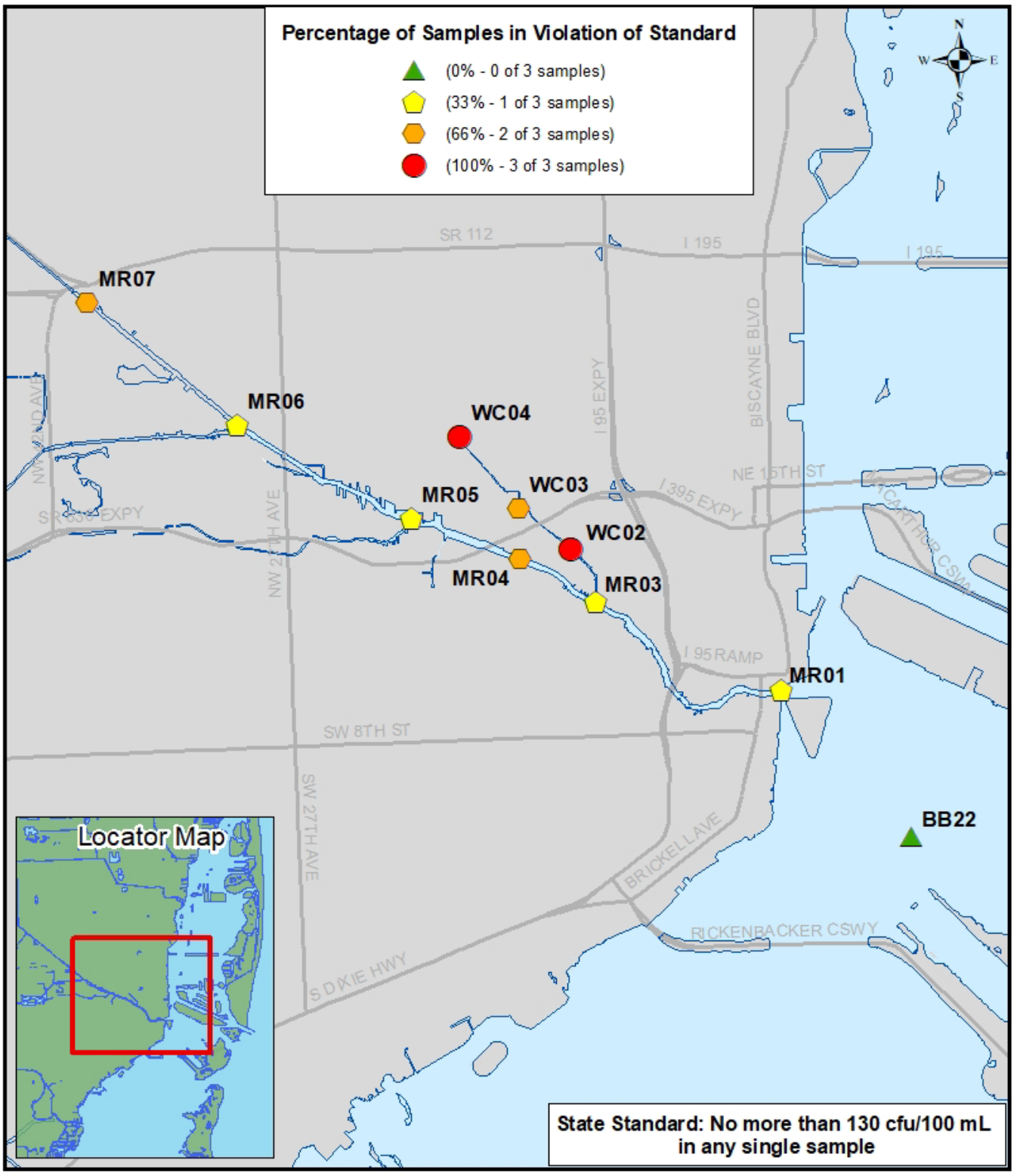


Table 1.

MONTHLY INDICATOR BACTERIA LEVELS (cfu's/100 mL) IN WAGNER CREEK								
	MR03		**WC02**		**WC03**		**WC04**	
Parameter	**Entero**	***E. coli***	**Entero**	***E. coli***	**Entero**	***E. coli***	**Entero**	***E. coli***
January	**411***	193	**161***	**554***	**288***	379	**1725***	**5172***
February	10	**1354***	**1616***	**6867***	**4106***	**9208***	**2282***	**9804***
March	97	74	**426***	**663***	63	**441***	**631***	**9208***

An asterisk (*) indicates a result that exceeds the state standard for enterococci (130 cfu/100 mL) or *E. coli* (410 cfu/100 mL); a "0" indicates that the true value was below the method detection limit.

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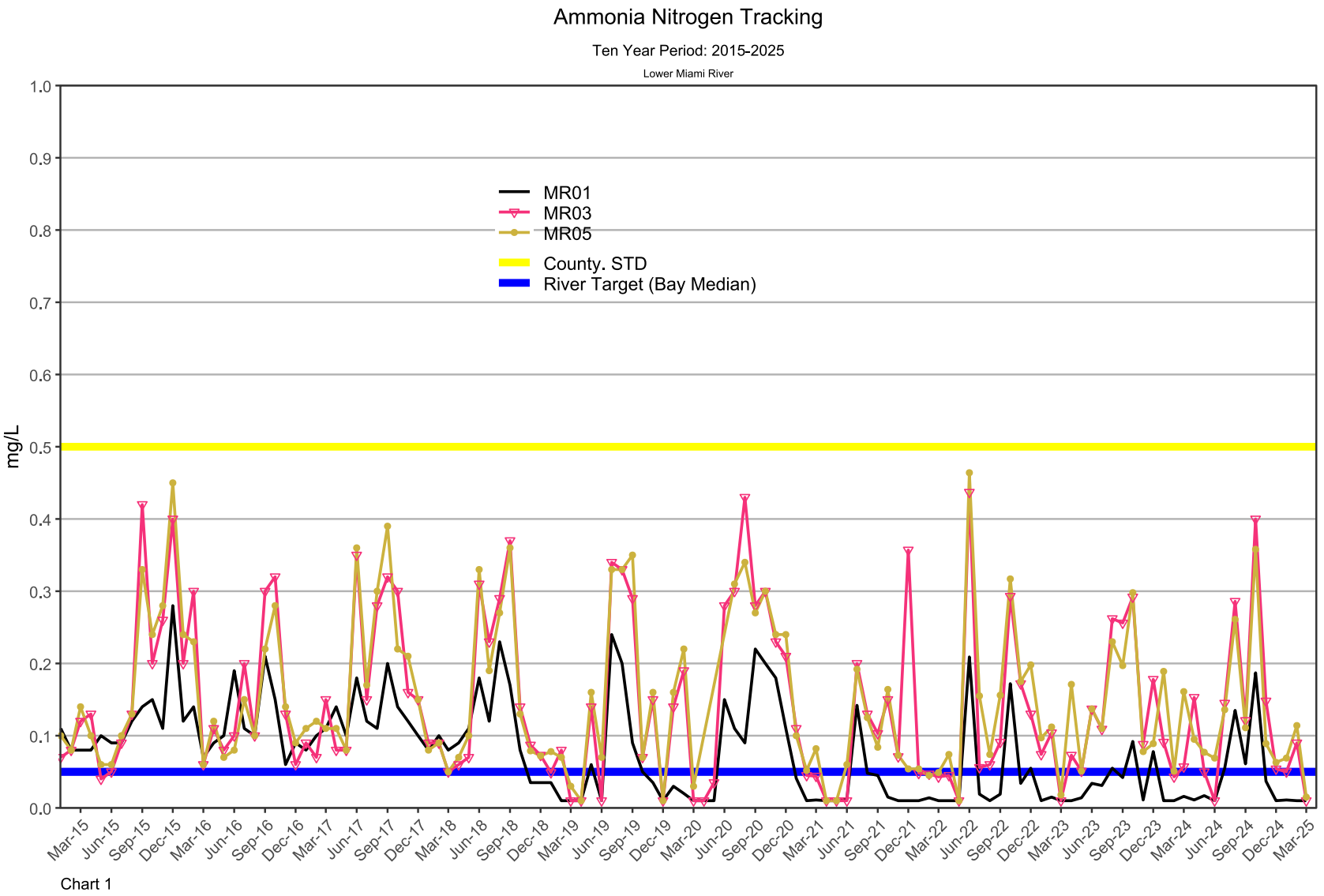


Chart 1

Ammonia Nitrogen Tracking

Ten Year Period: 2015-2025

Upper Miami River

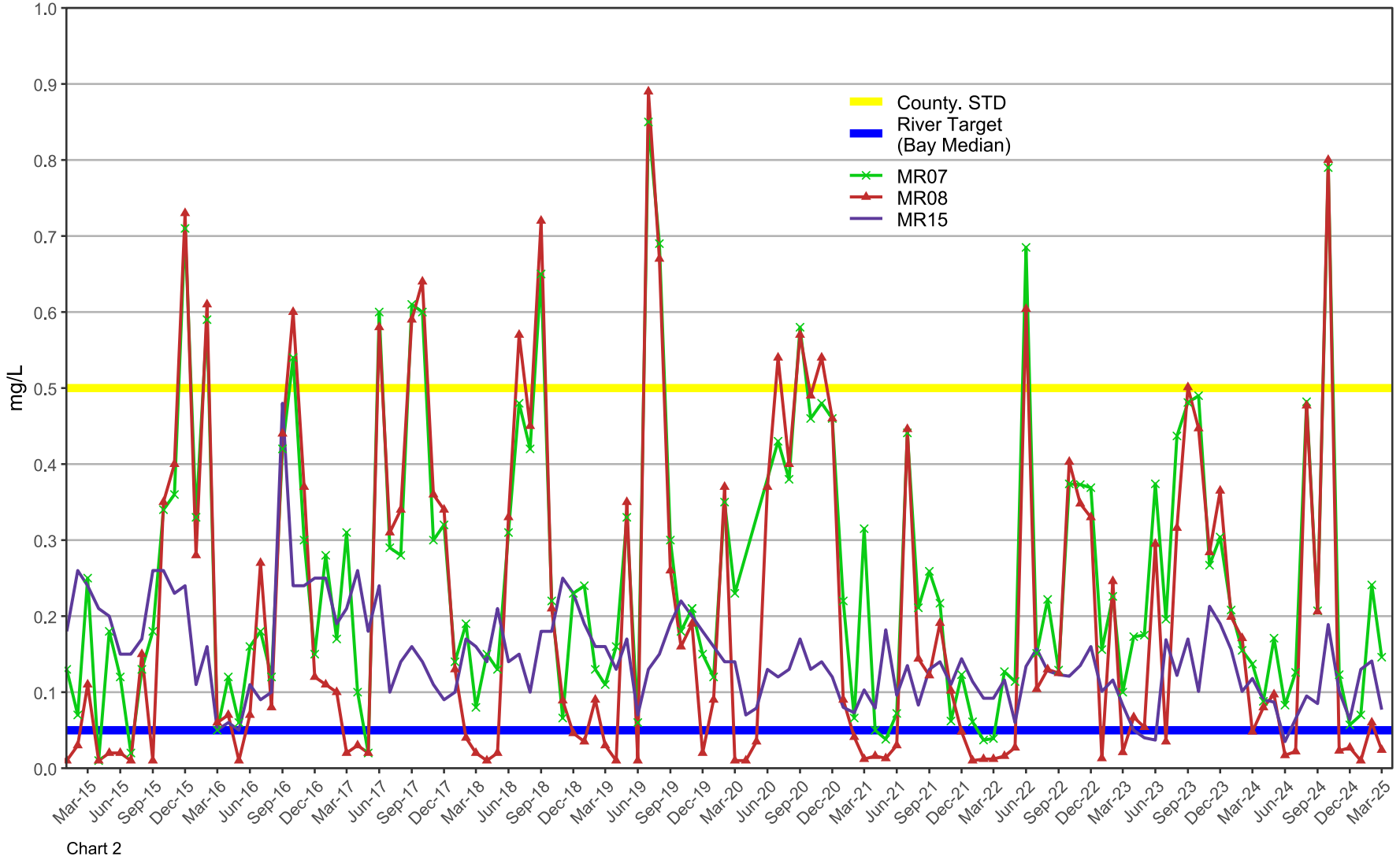


Chart 2

Ammonia Nitrogen Tracking

Ten Year Period: 2015-2025

Wagner Creek

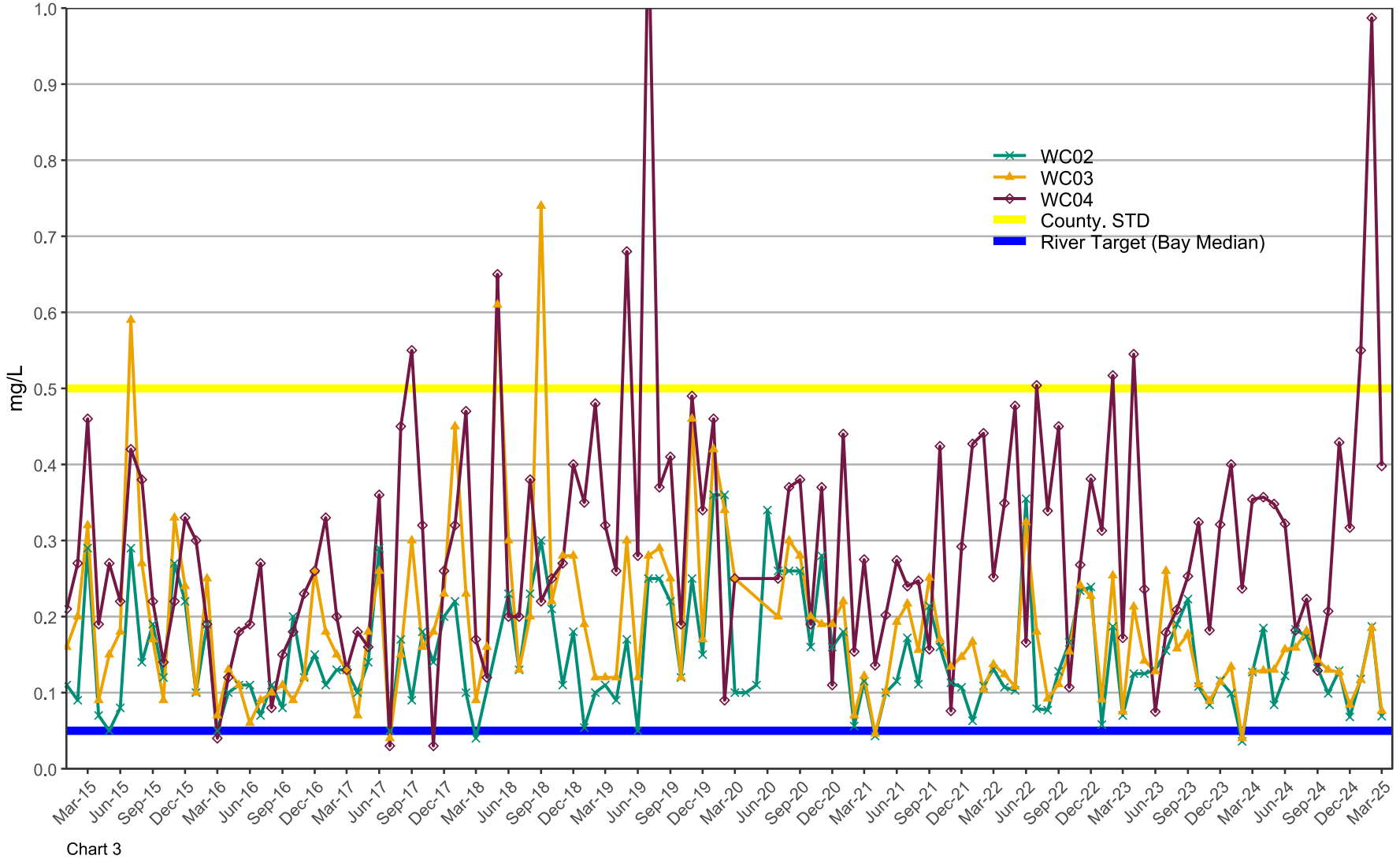


Chart 3

Total Phosphate Tracking

Ten Year Period: 2015-2025

Lower Miami River

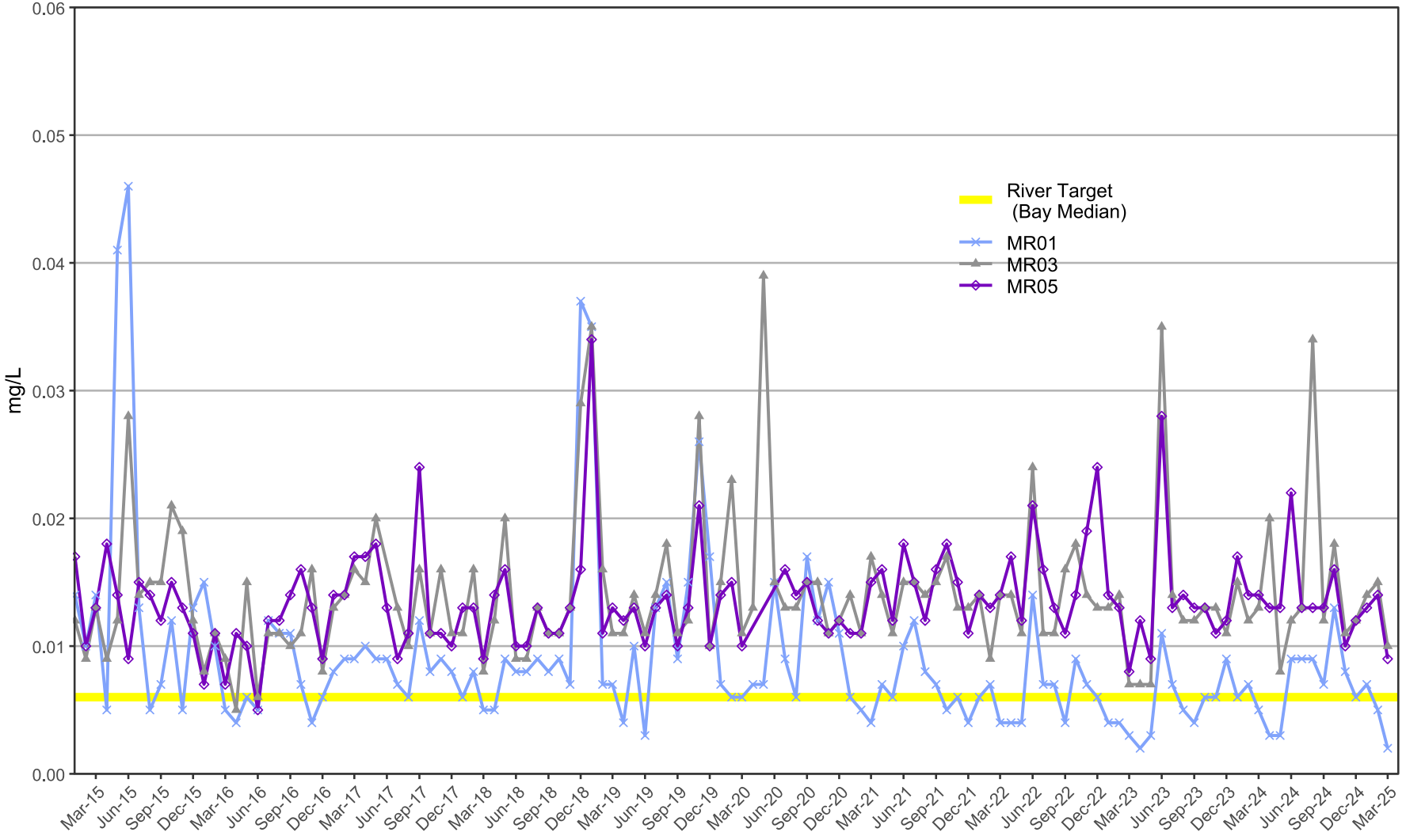
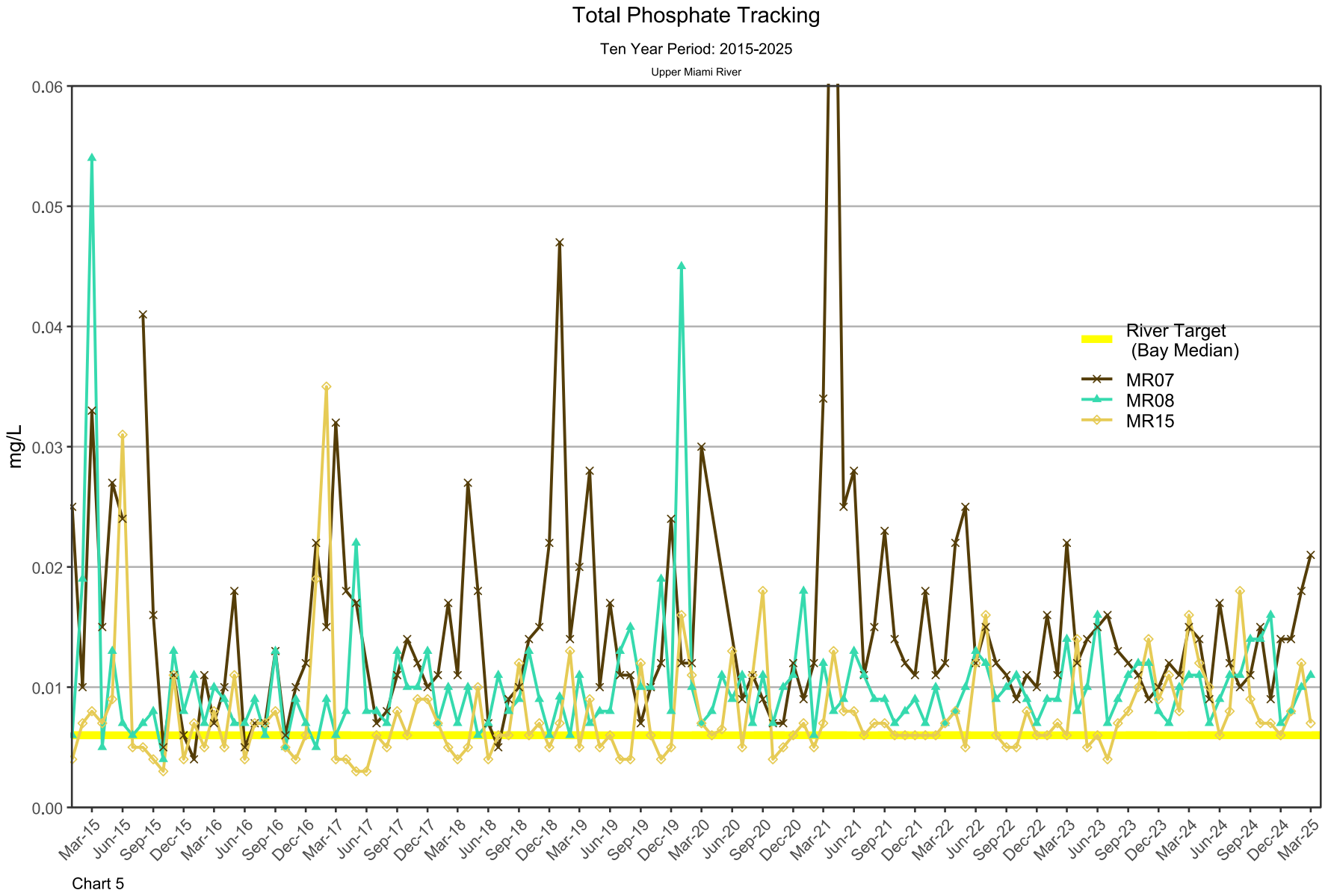


Chart 4


Total Phosphate Tracking
Ten Year Period: 2015-2025
Upper Miami River
mg/L
0.06
0.05
0.04
0.03
0.02
0.01
0.00
River Target
(Bay Median)
MR07
MR08
MR15
Mar-15
Jun-15
Sep-15
Dec-15
Mar-16
Jun-16
Sep-16
Dec-16
Mar-17
Jun-17
Sep-17
Dec-17
Mar-18
Jun-18
Sep-18
Dec-18
Mar-19
Jun-19
Sep-19
Dec-19
Mar-20
Jun-20
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Dec-20
Mar-21
Jun-21
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Dec-23
Mar-24
Jun-24
Sep-24
Dec-24
Mar-25

Chart 5

Total Phosphate Tracking

Ten Year Period: 2015-2025

Wagner Creek

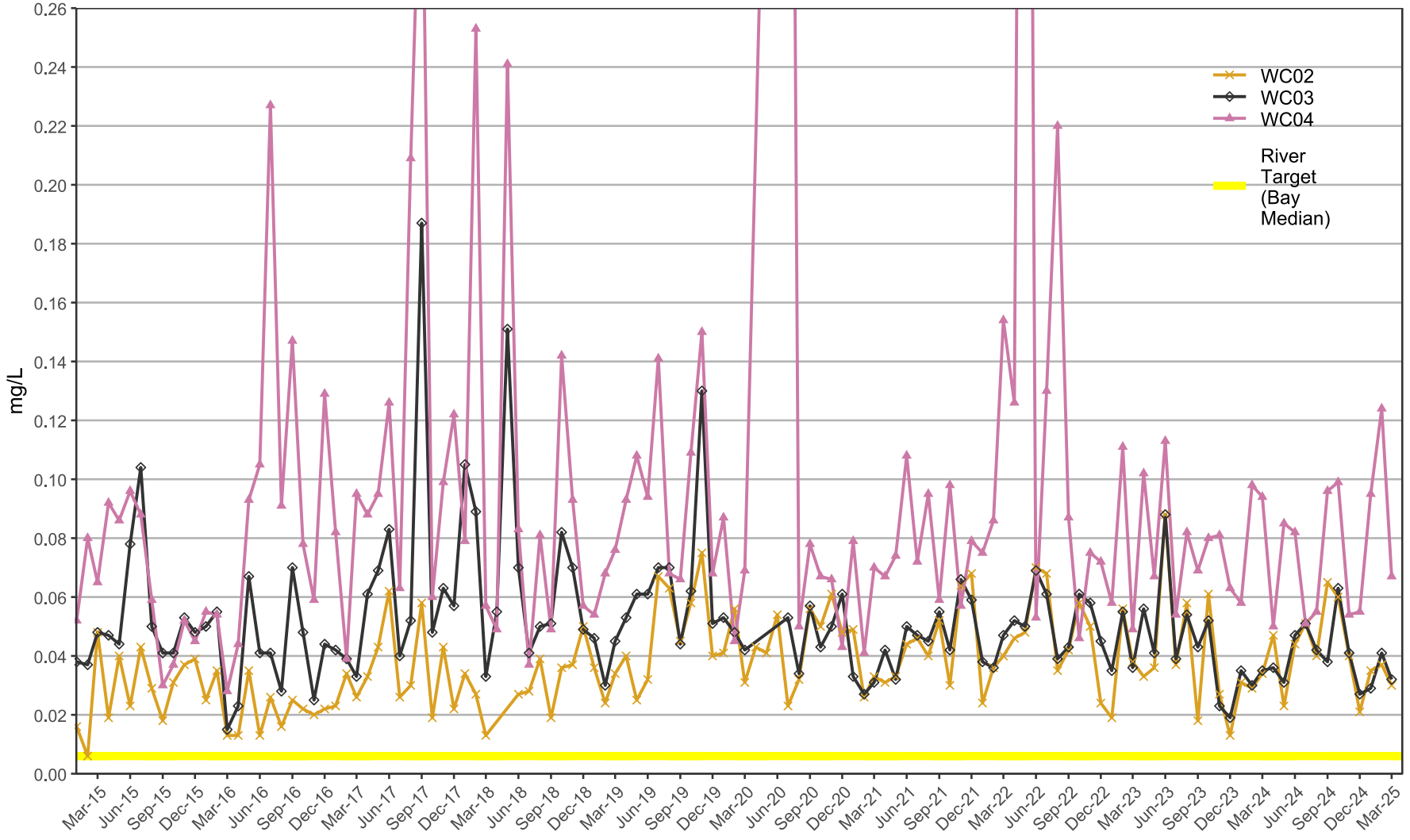
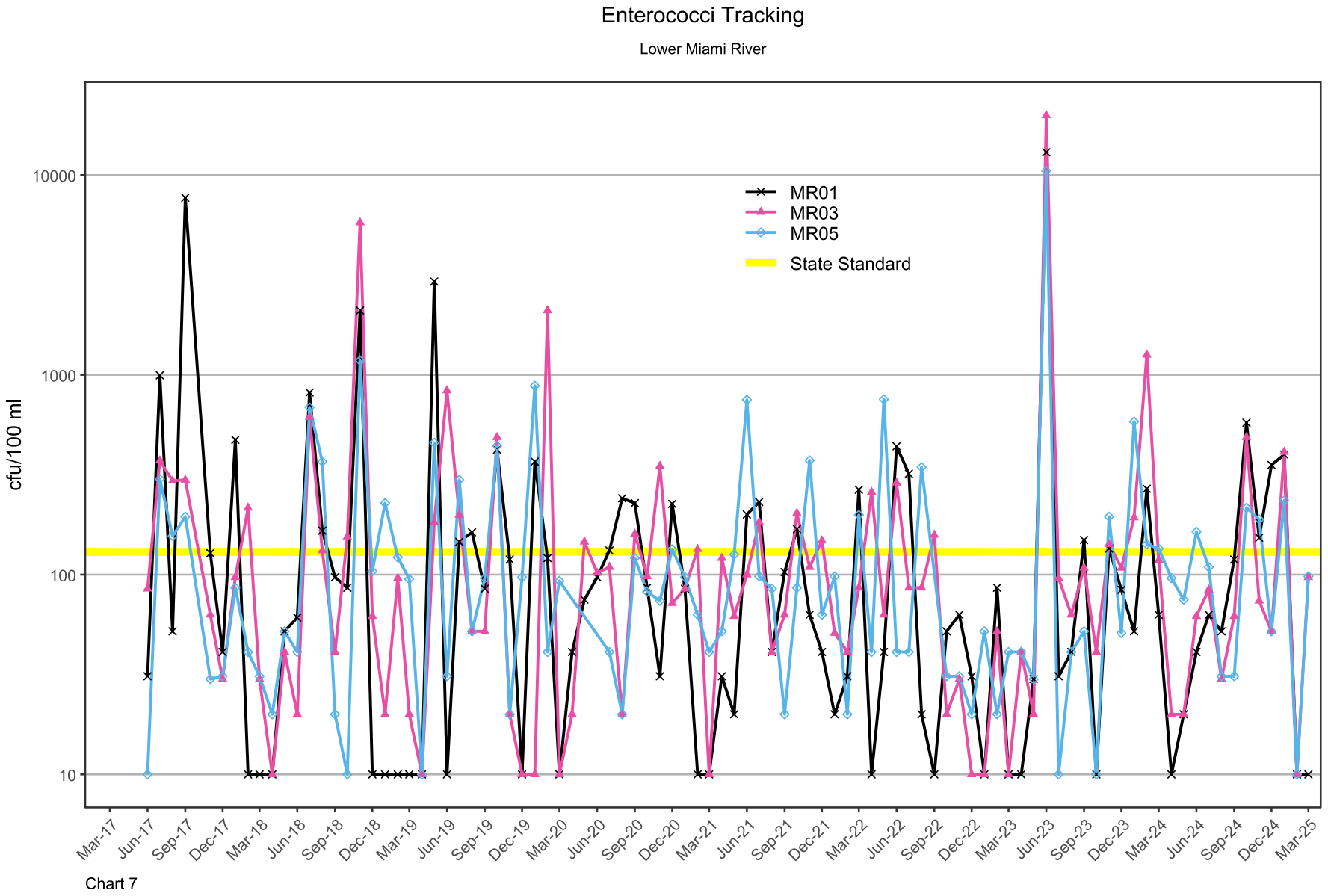


Chart 6


Enterococci Tracking
Lower Miami River
cfu/100 ml
10000
1000
100
10
MR01
MR03
MR05
State Standard
Mar-17
Jun-17
Sep-17
Dec-17
Mar-18
Jun-18
Sep-18
Dec-18
Mar-19
Jun-19
Sep-19
Dec-19
Mar-20
Jun-20
Sep-20
Dec-20
Mar-21
Jun-21
Sep-21
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Mar-22
Jun-22
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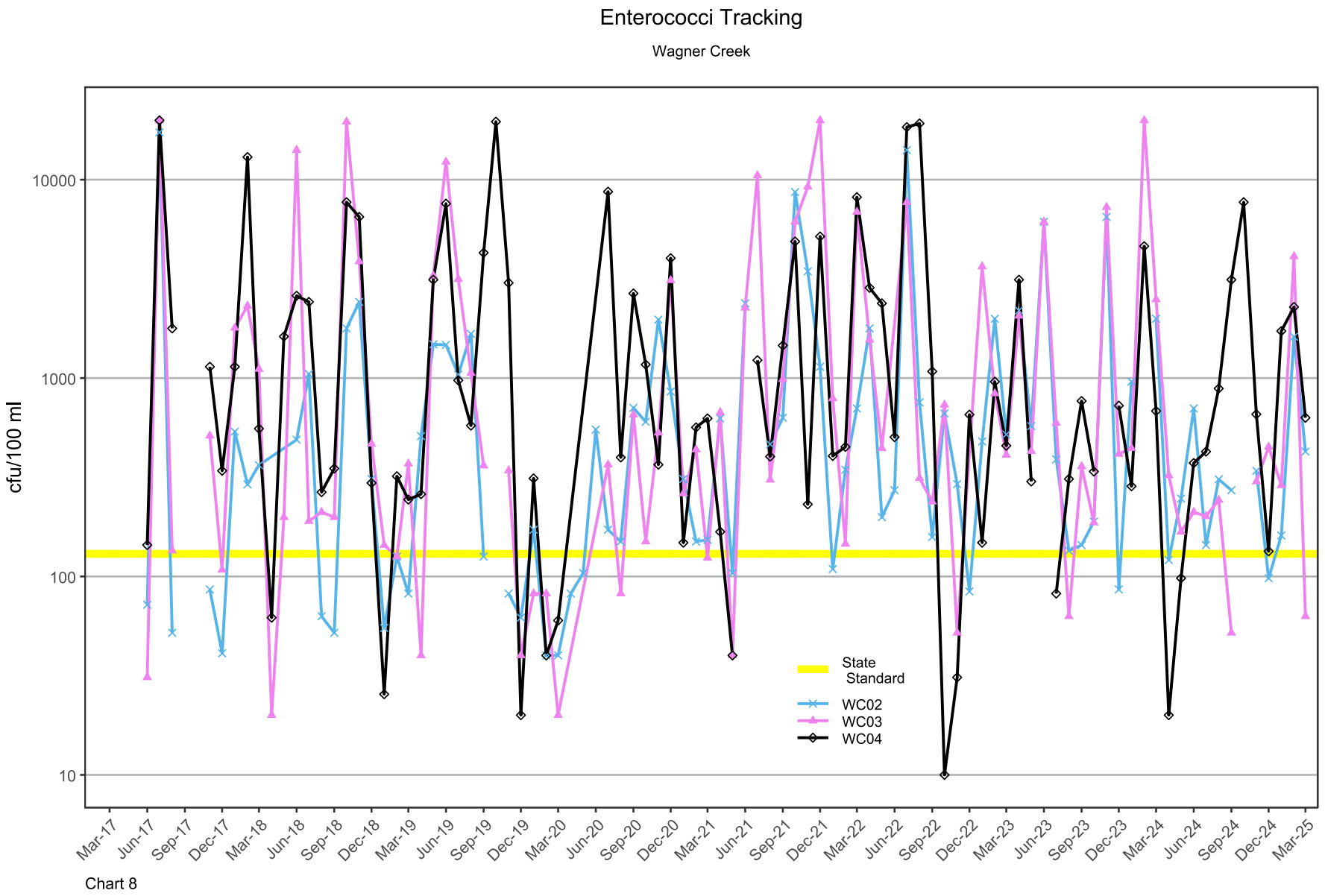
Dec-23
Mar-24
Jun-24
Sep-24
Dec-24
Mar-25

Chart 7


Enterococci Tracking
Wagner Creek
cfu/100 ml
10000
1000
100
10
State Standard
WC02
WC03
WC04
Mar-17
Jun-17
Sep-17
Dec-17
Mar-18
Jun-18
Sep-18
Dec-18
Mar-19
Jun-19
Sep-19
Dec-19
Mar-20
Jun-20
Sep-20
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Sep-24
Dec-24
Mar-25

Chart 8

E.coli Tracking

Lower Miami River

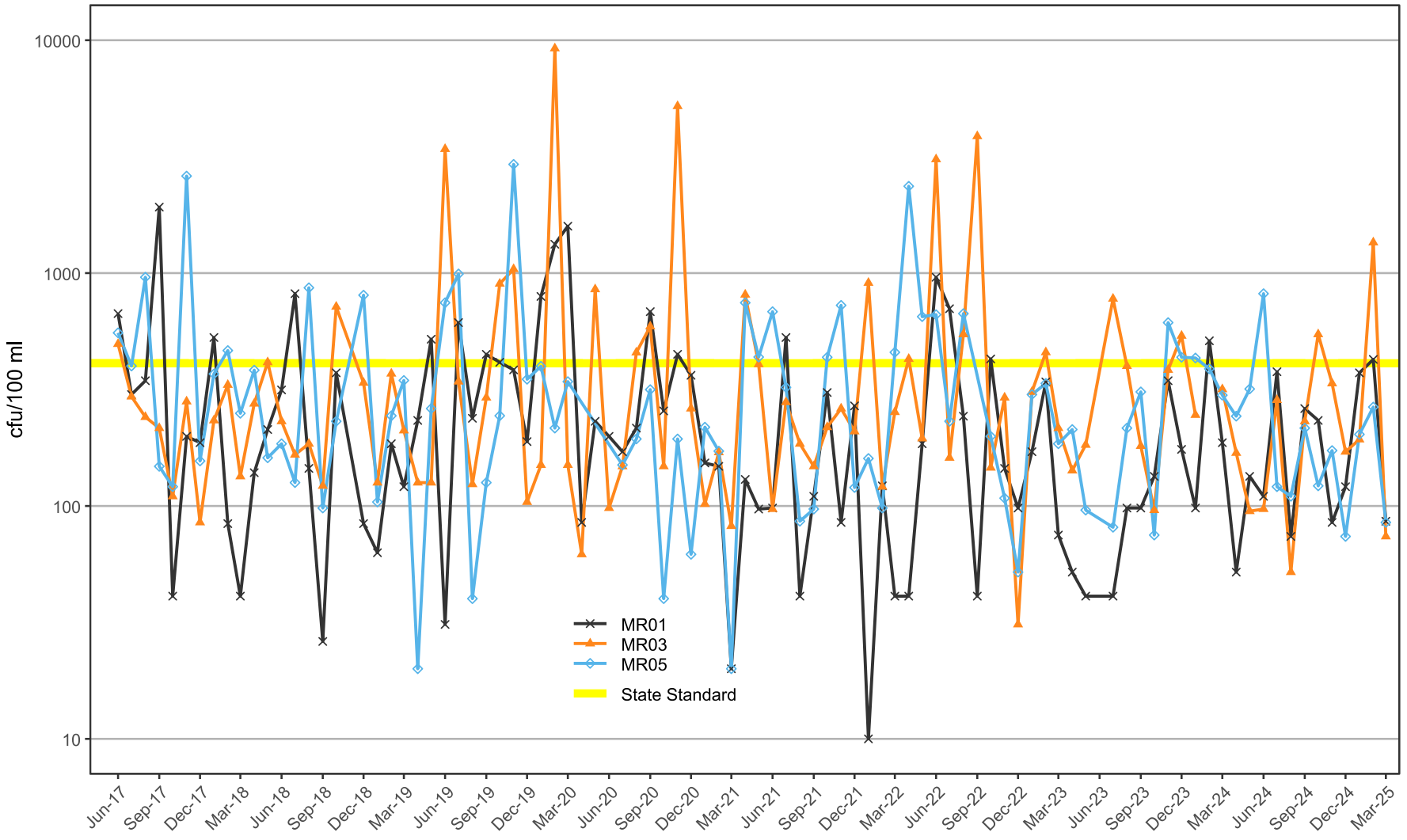


Chart 9

E.coli Tracking

Upper Miami River

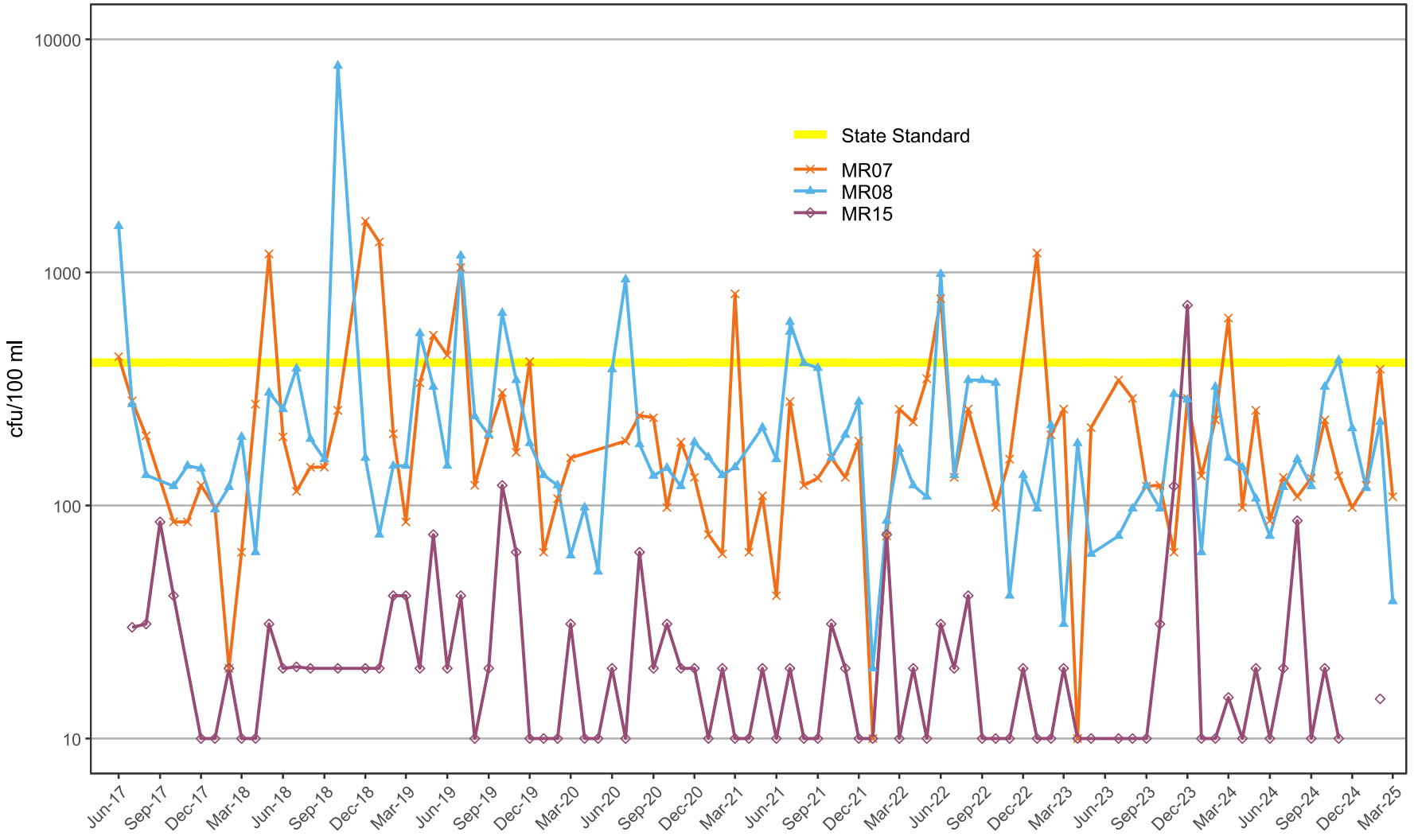
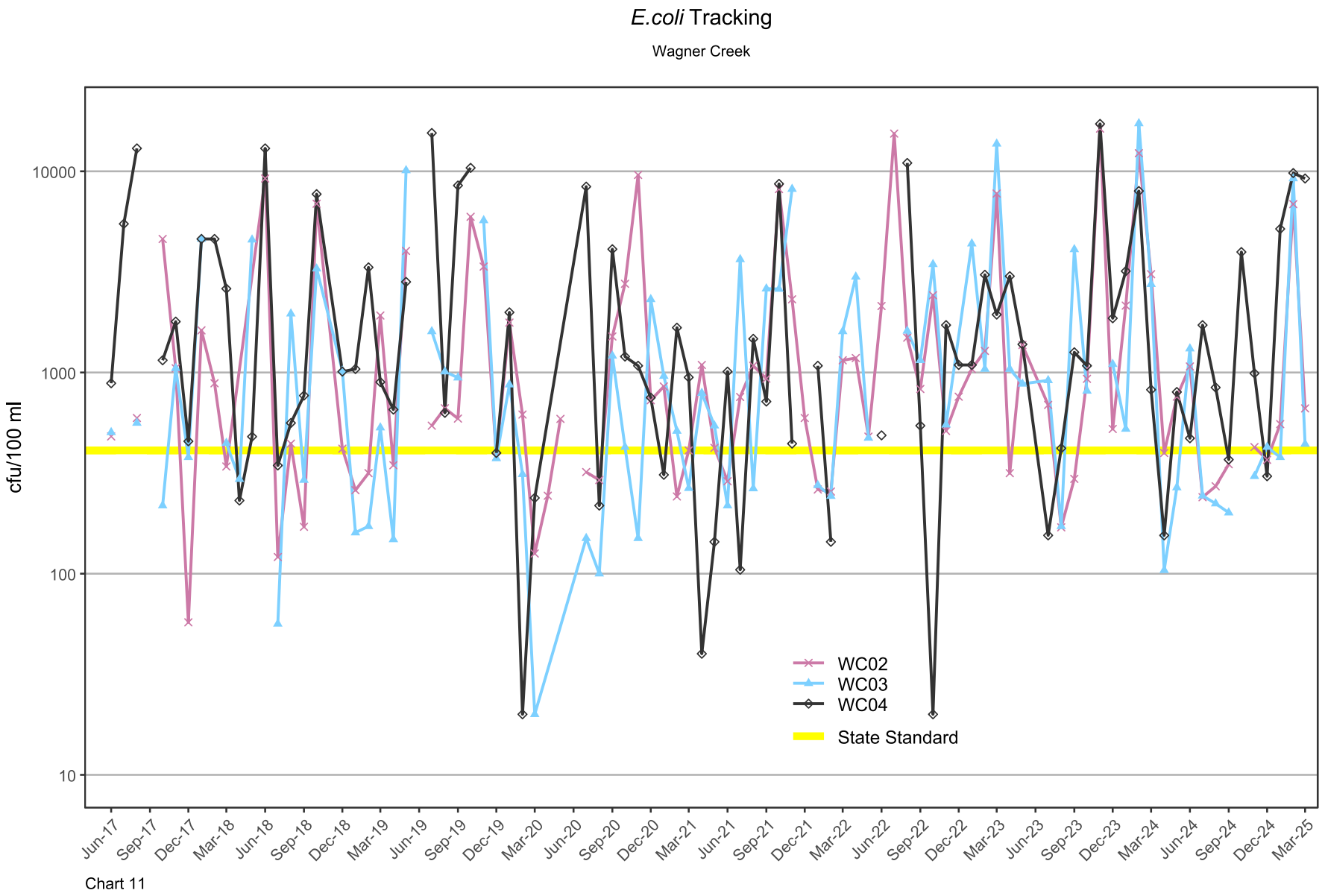


Chart 10


E.coli Tracking
Wagner Creek
cfu/100 ml
10000
1000
100
10
WC02
WC03
WC04
State Standard
Jun-17
Sep-17
Dec-17
Mar-18
Jun-18
Sep-18
Dec-18
Mar-19
Jun-19
Sep-19
Dec-19
Mar-20
Jun-20
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Jun-24
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Dec-24
Mar-25

Chart 11

Turbidity Tracking

Ten Year Period: 2015-2025

Lower Miami River

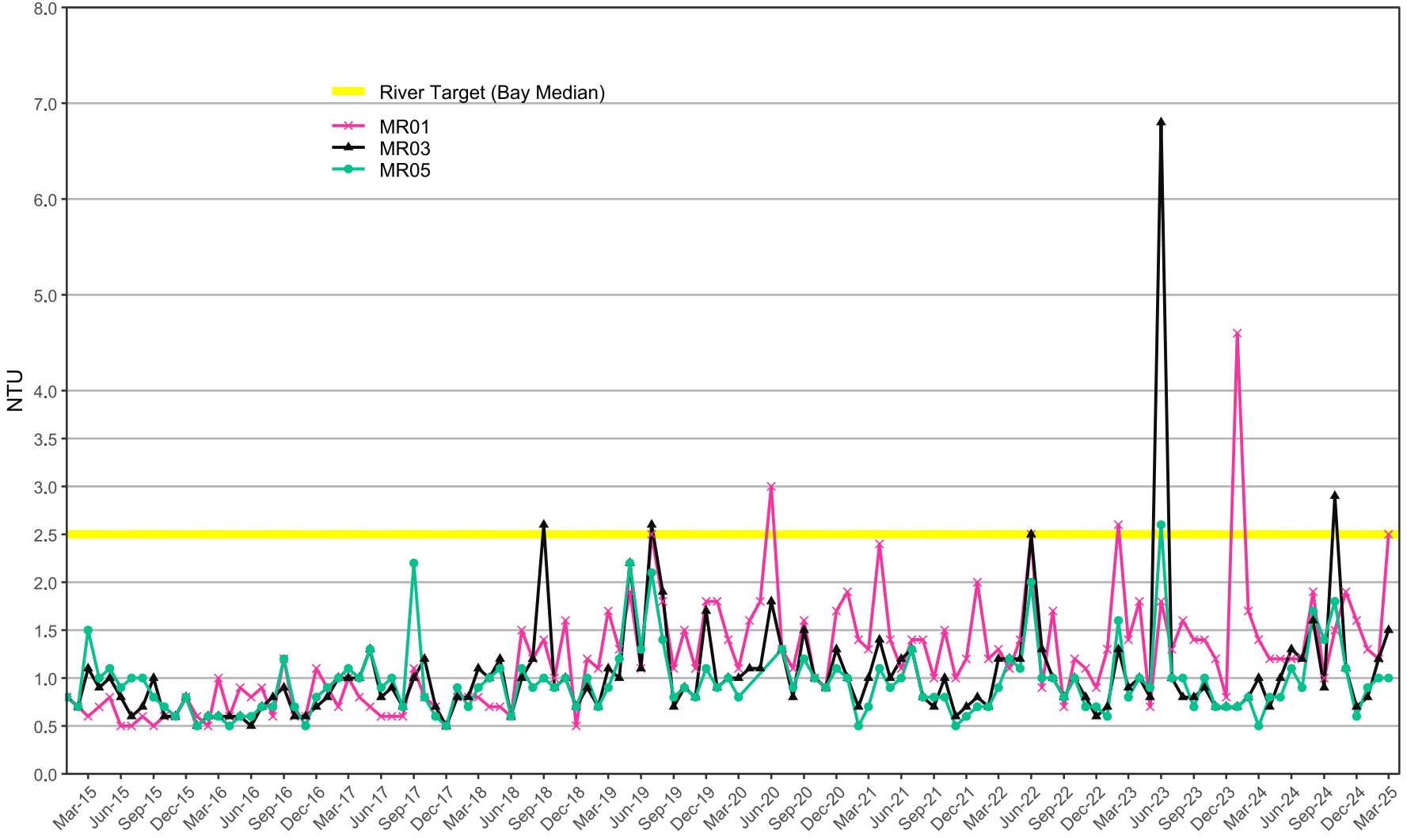
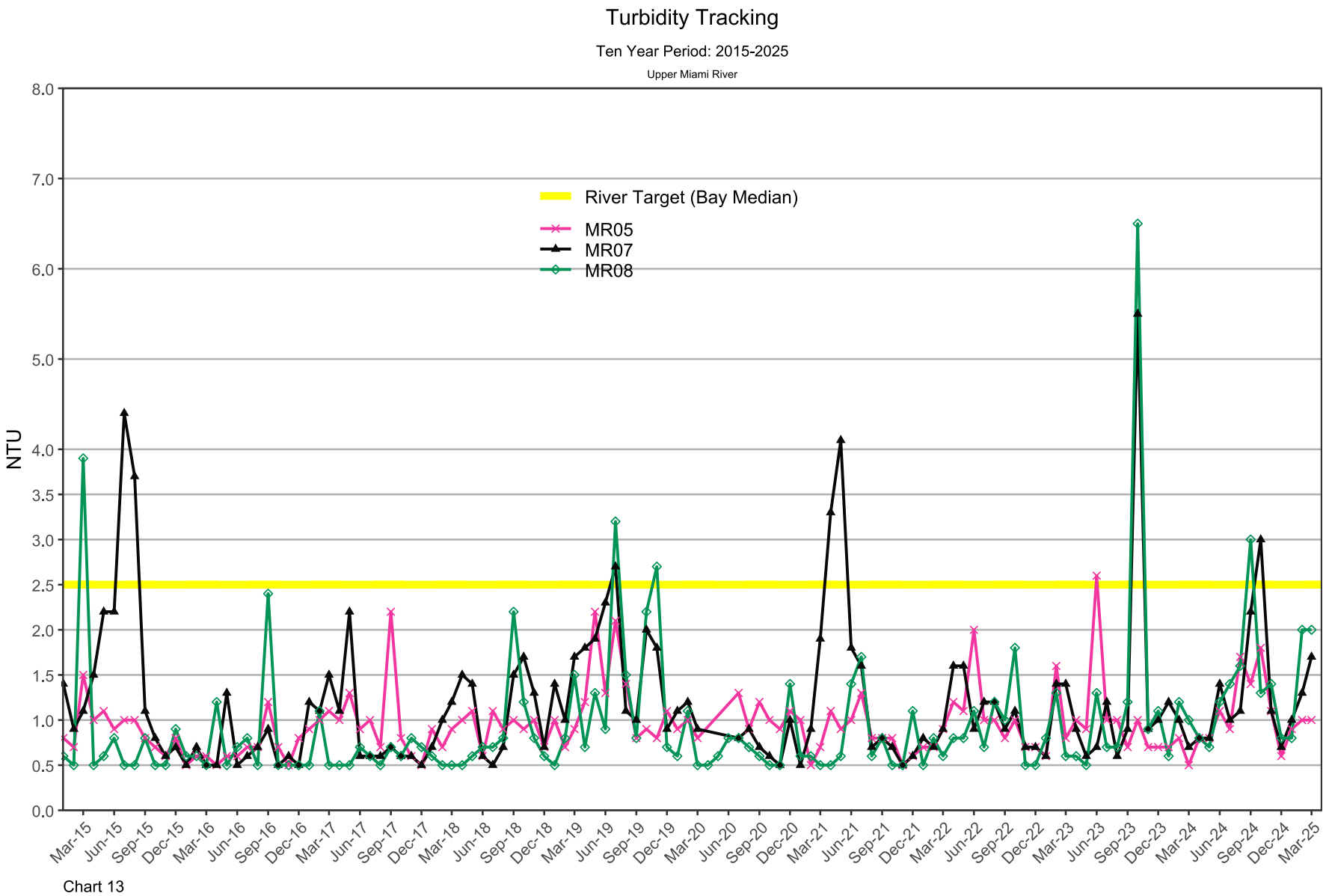


Chart 12


Turbidity Tracking
Ten Year Period: 2015-2025
Upper Miami River
NTU
8.0
7.0
6.0
5.0
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
River Target (Bay Median)
MR05
MR07
MR08
Mar-15
Jun-15
Sep-15
Dec-15
Mar-16
Jun-16
Sep-16
Dec-16
Mar-17
Jun-17
Sep-17
Dec-17
Mar-18
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Mar-25

Chart 13

Turbidity Tracking

Ten Year Period: 2015-2025

Wagner Creek

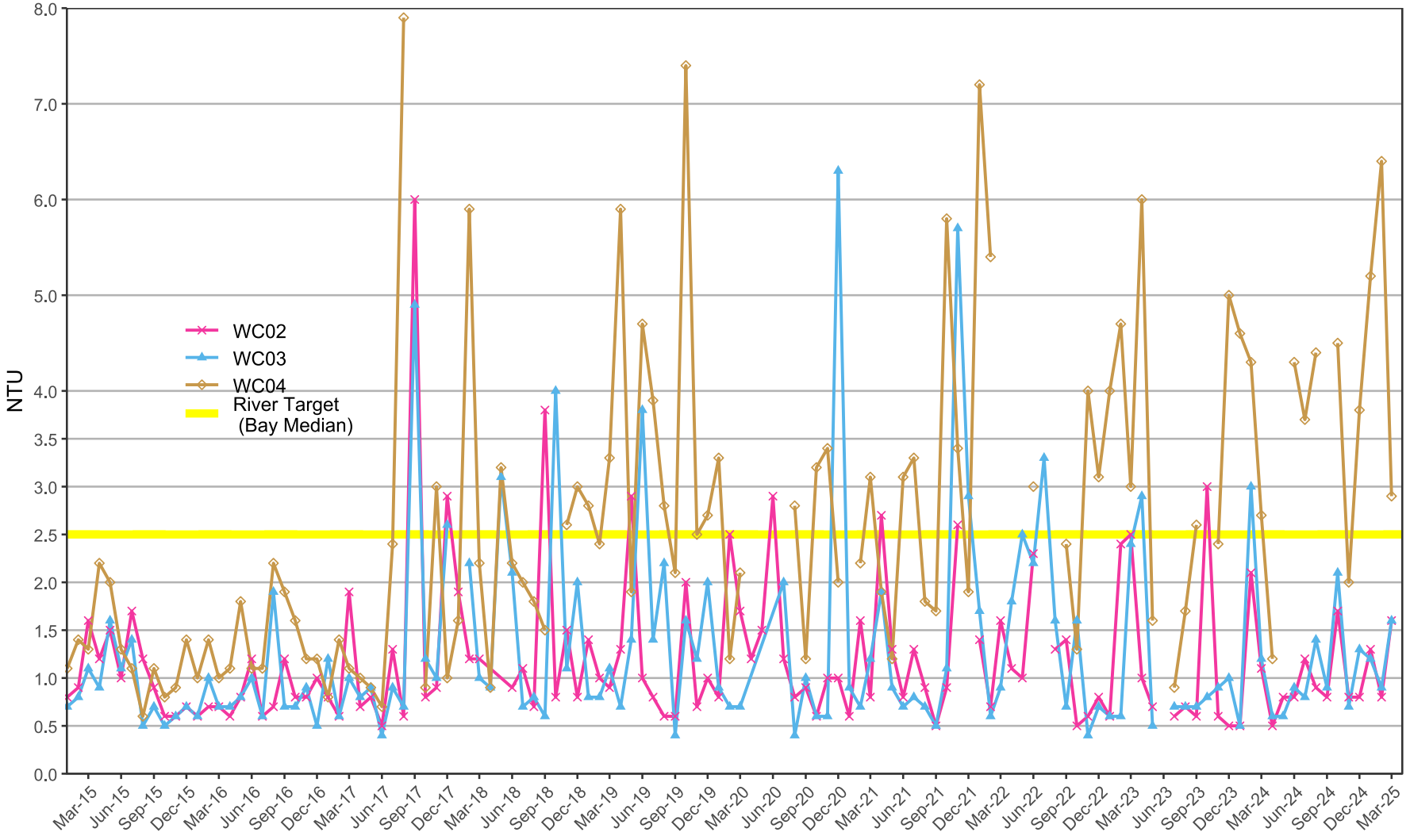

Chart 14

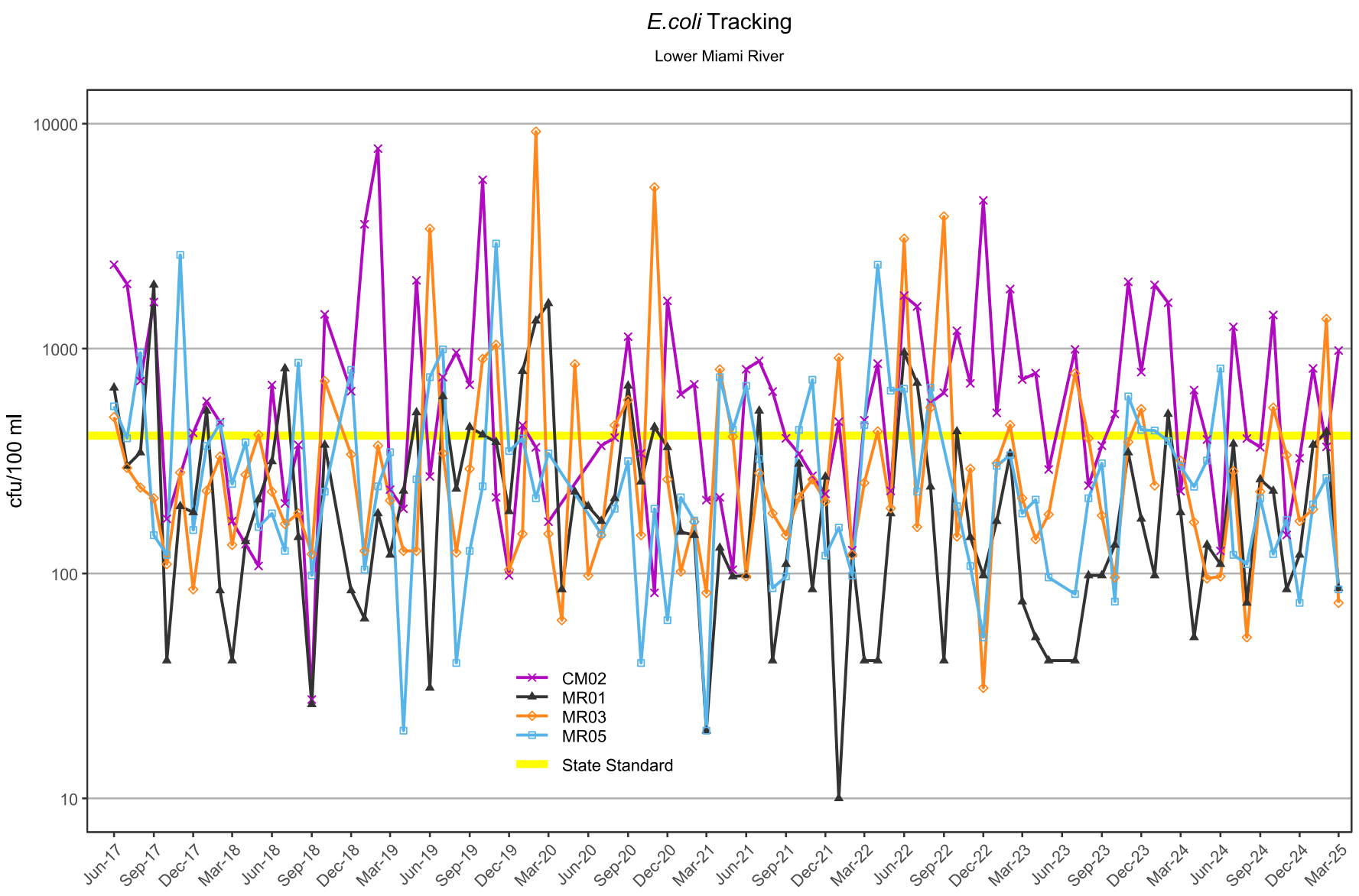

Chart 15 - Supplemental station CM02