

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

Second Quarterly Report, 2010  
(April - June)

**Action Item:**

4. Monitoring and Research

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

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**Action Item Status:**

Miami-Dade DERM has continued to collect monthly water quality samples in the Miami River and its tributaries (including Tamiami Canal and Wagner Creek). During the second quarter of 2010 samples were collected at each of the ten stations in the River on April 6, May 4, and June 8. Costs for sampling (including salaries and fringe and analysis) have been calculated at approximately \$394 per station per month. Since the beginning of this current 2009-2010 fiscal year, the sampling regime has been modified and Total Coliform sampling has been dropped from the program. Fecal Coliform sampling has been retained, but for some stations (i.e. BB19, BB22, BB26, and BB54) the frequency has been reduced to a bimonthly cycle, while at BB16 and MR04, coliform sampling has been discontinued. No sewage spills were reported on or around the Miami River or its tributaries during the quarter

See **Figures 1 - 3** below for maps that depict where monthly results for stations in the Miami River and vicinity exceed the single sample standard of (800 cfu/100ml). **Figure 4** is a quarterly composite of Fecal Coliform results from station locations on the Miami River and its tributaries showing how frequently the results at each station exceeded the State standard of 400 cfu/100ml (use where multiple samples are collected) during the second quarter of the year. Table 1 lists the observed Fecal Coliform levels in Wagner Creek from April – June 2010.

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

**Biscayne Bay Surface Water Quality Monitoring Program**

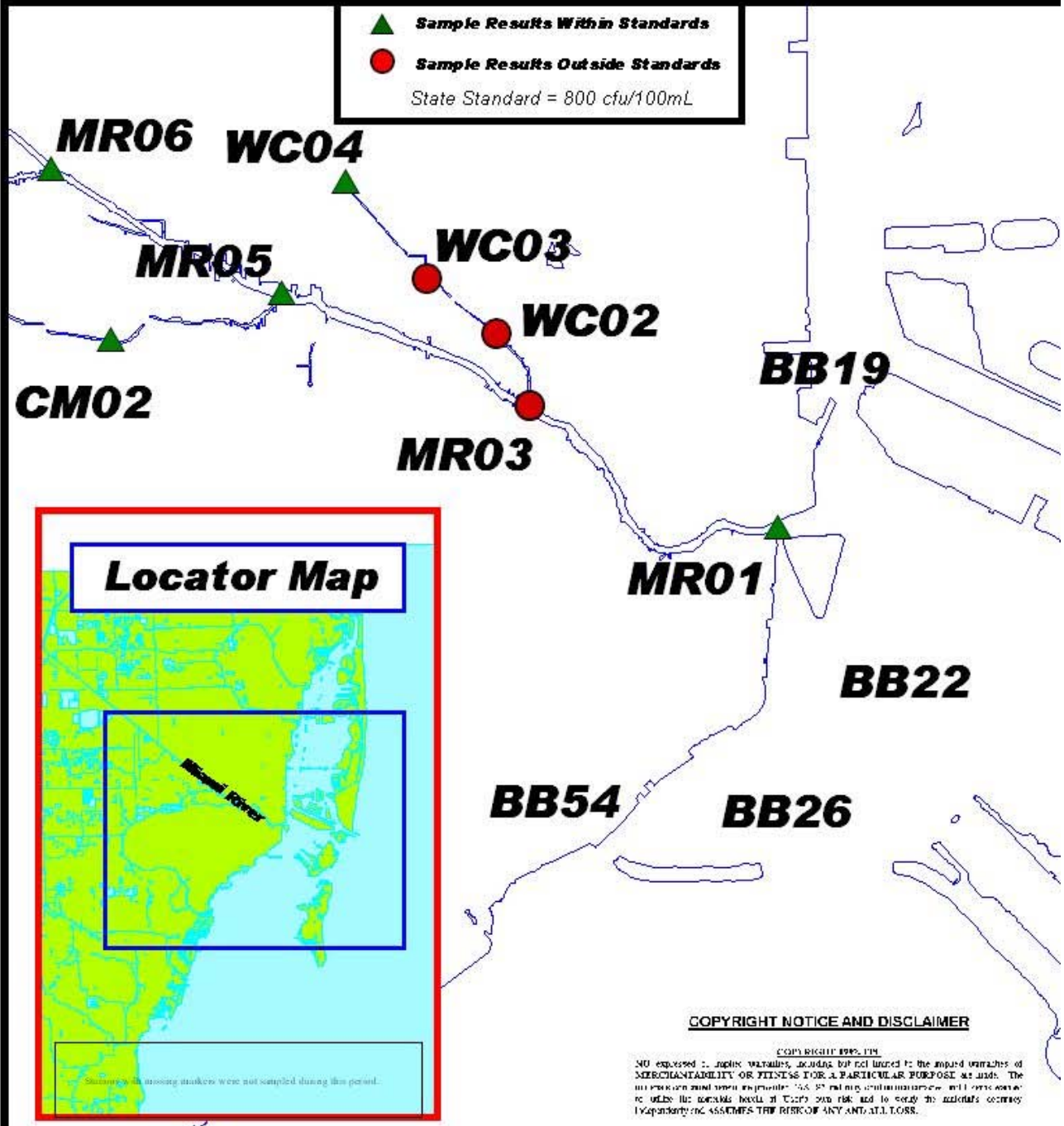
**Water Quality Sample Compliance**

**April 2010**

**Miami River & Tributaries**



▲ **Sample Results Within Standards**  
● **Sample Results Outside Standards**  
State Standard = 800 cfu/100mL



**Locator Map**



Stations with missing markers were not sampled during this period.

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# Biscayne Bay Surface Water Quality Monitoring Program

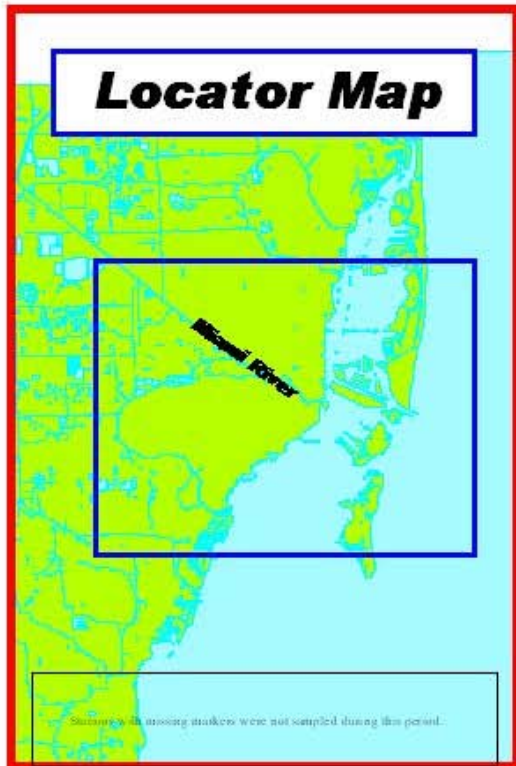
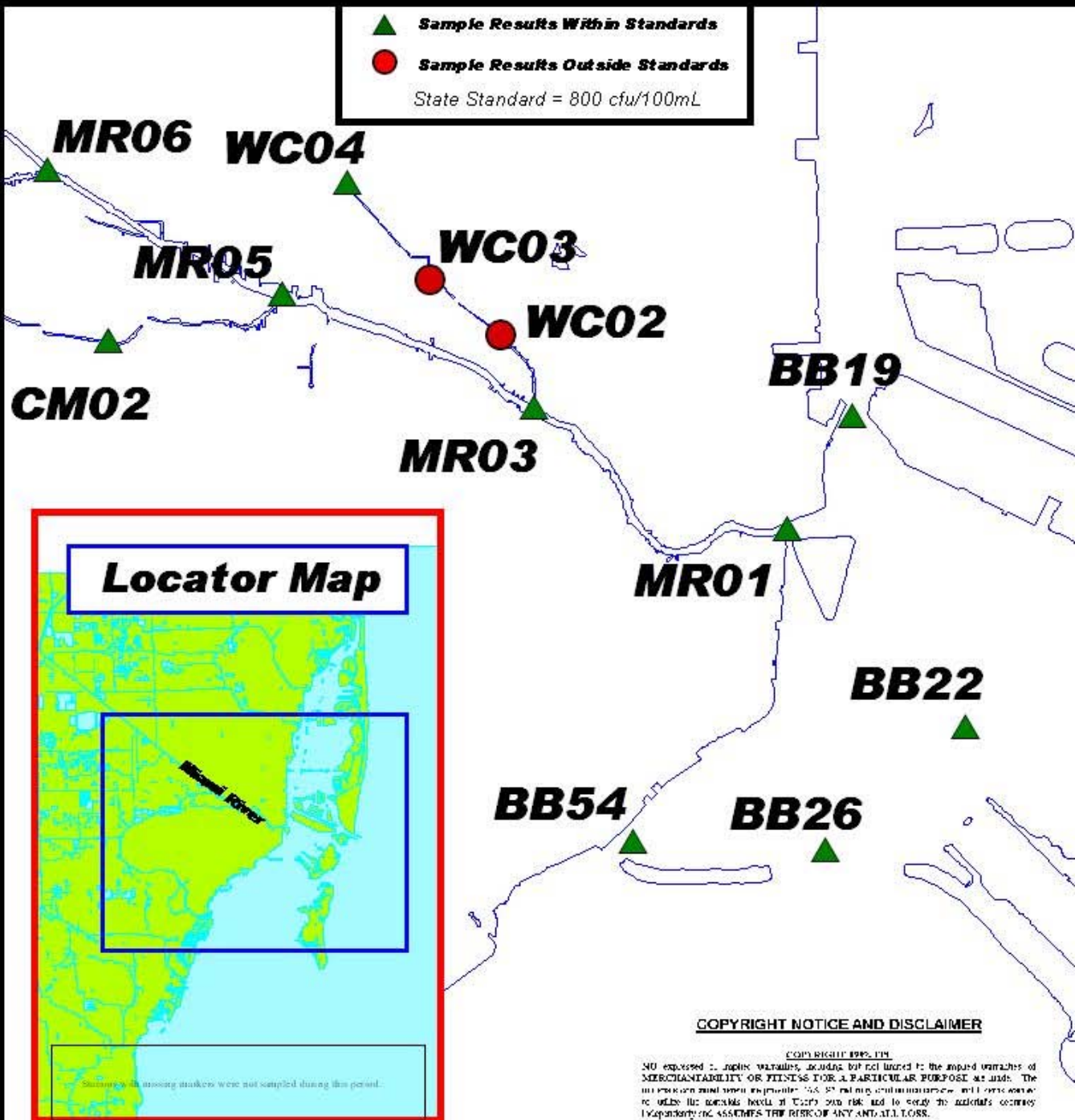
## Water Quality Sample Compliance

### May 2010

**Miami River & Tributaries**



▲ **Sample Results Within Standards**  
 ● **Sample Results Outside Standards**  
 State Standard = 800 cfu/100mL



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# Biscayne Bay Surface Water Quality Monitoring Program

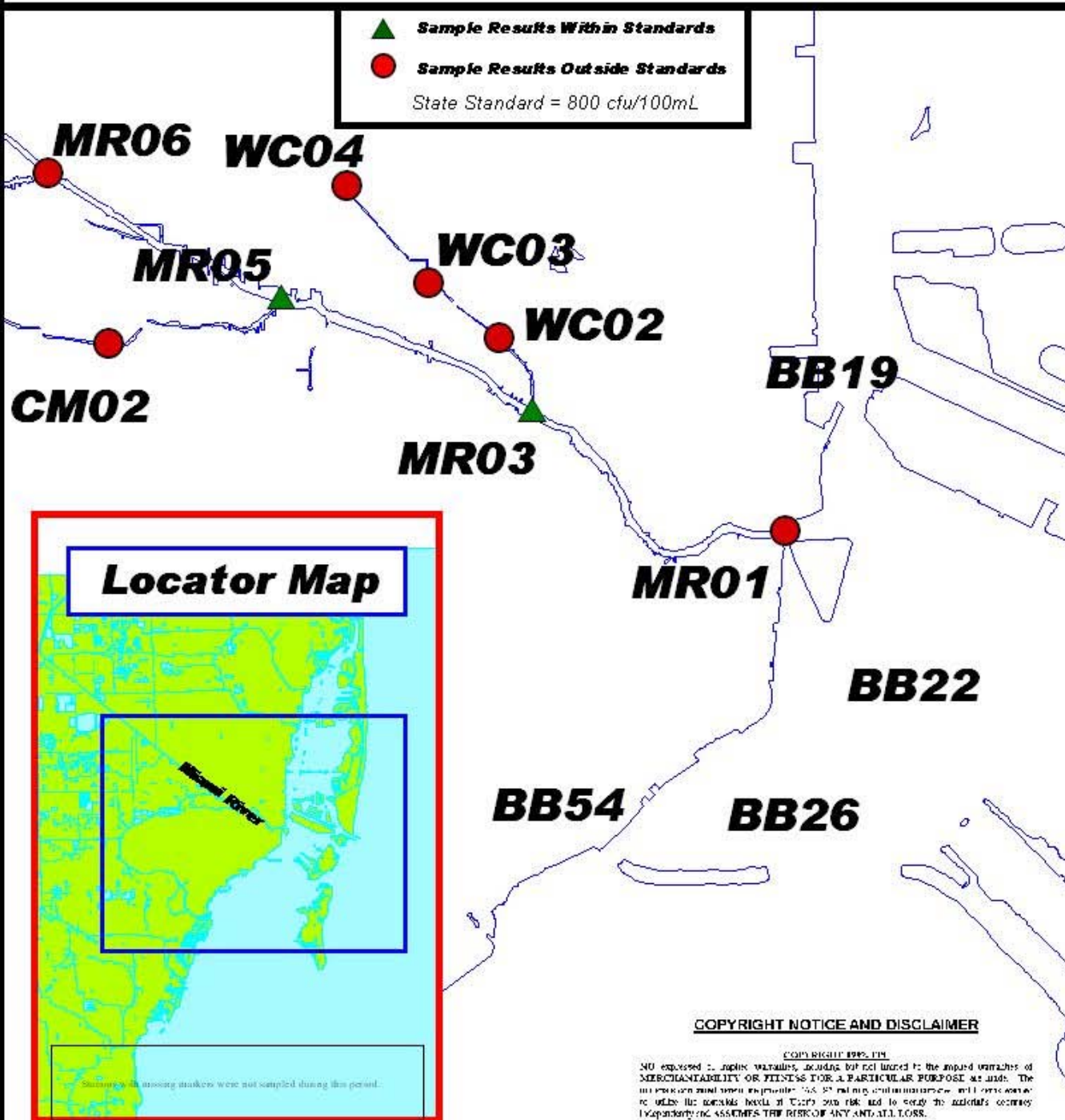
## Water Quality Sample Compliance

### June 2010

#### Miami River & Tributaries



▲ **Sample Results Within Standards**  
● **Sample Results Outside Standards**  
State Standard = 800 cfu/100mL



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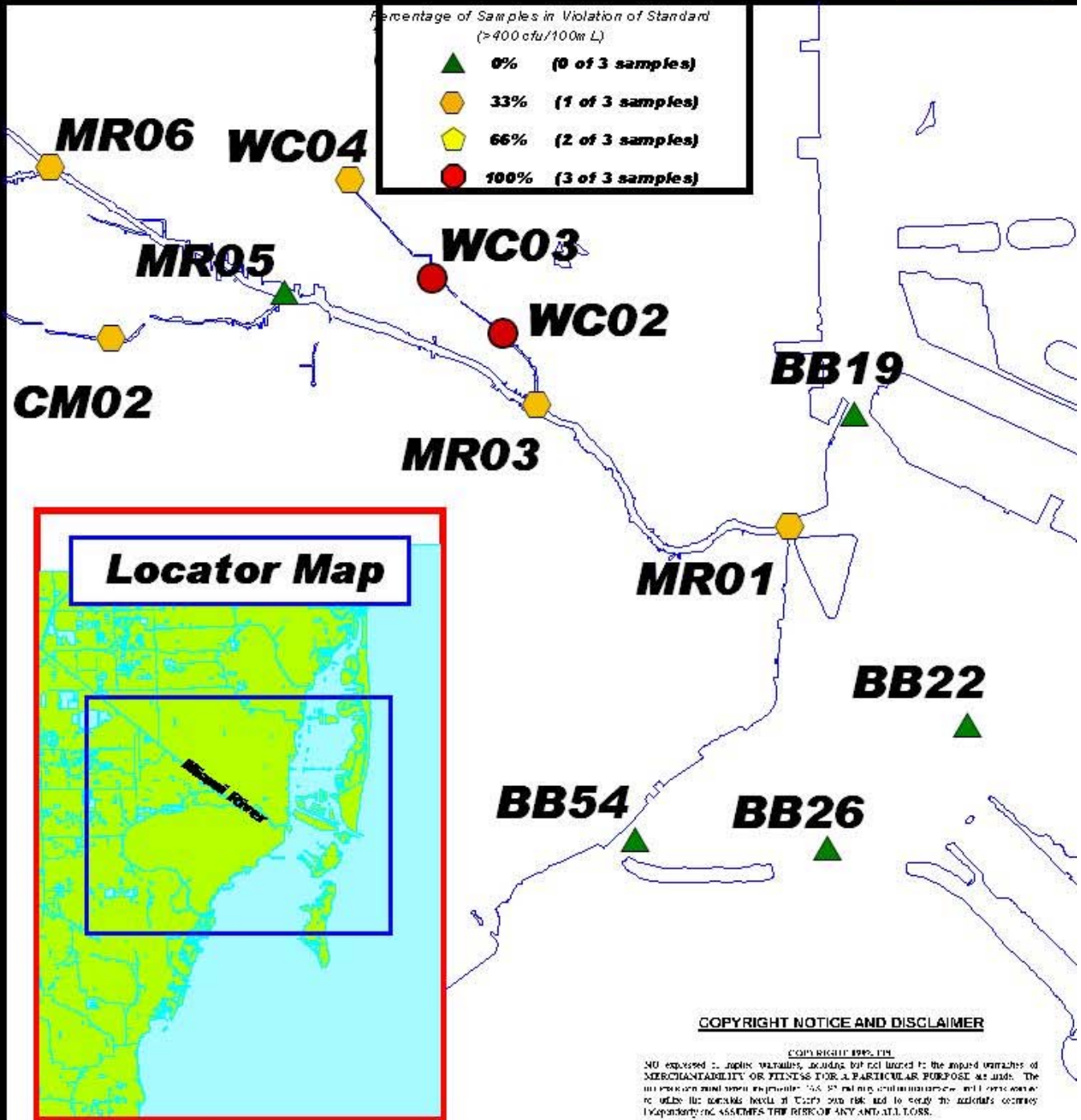
Stations with missing markers were not sampled during this period.

# Biscayne Bay Surface Water Quality Monitoring Program

## Water Quality Sample Compliance

### April to June 2010

#### Miami River & Tributaries



**Table 1.**

MONTHLY FECAL COLIFORM LEVELS (cfu's/100 ml) IN WAGNER CREEK				
	<b>WC04</b>	<b>WC03</b>	<b>WC02</b>	<b>MR03</b>
<b>April</b>	<b>400</b>	<b>1000*</b>	<b>1000*</b>	<b>6100*</b>
<b>May</b>	<b>100</b>	<b>2000*</b>	<b>2100*</b>	<b>100</b>
<b>June</b>	<b>2000*</b>	<b>2000*</b>	<b>2000*</b>	<b>220</b>

A” \*” indicates results that exceed the State’s Standard (800 cfu/100ml); a “0” indicates that the true value was below the method detection limit.

Second Quarterly Report, 2010  
(April - June)

**Action Item:**

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

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**Action Item Status:**

This report presents selected results of the water quality monitoring that occurred in the second quarter (April- June) of 2010. 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 stations and 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– 5**) for graphs of ammonia nitrogen, total phosphate, fecal coliform, and turbidity data) from a station representing the Miami River (MR03) against the same parameters evaluated at another station in adjacent Biscayne Bay (BB22). **Chart 4** represents the Fecal Coliform levels for sampling stations within Wagner Creek (WC02, WC03, and WC04). See maps presented under action item 4.a for station locations. Data collected during the most recent quarter are plotted in time series along with historic data from the previous ten-year (2000 - 2010) period. 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.

### Ammonia Nitrogen Tracking Ten Year Period: 2001 - 2010

Second Quarter 2010 Data (Apr - Jun) Highlighted

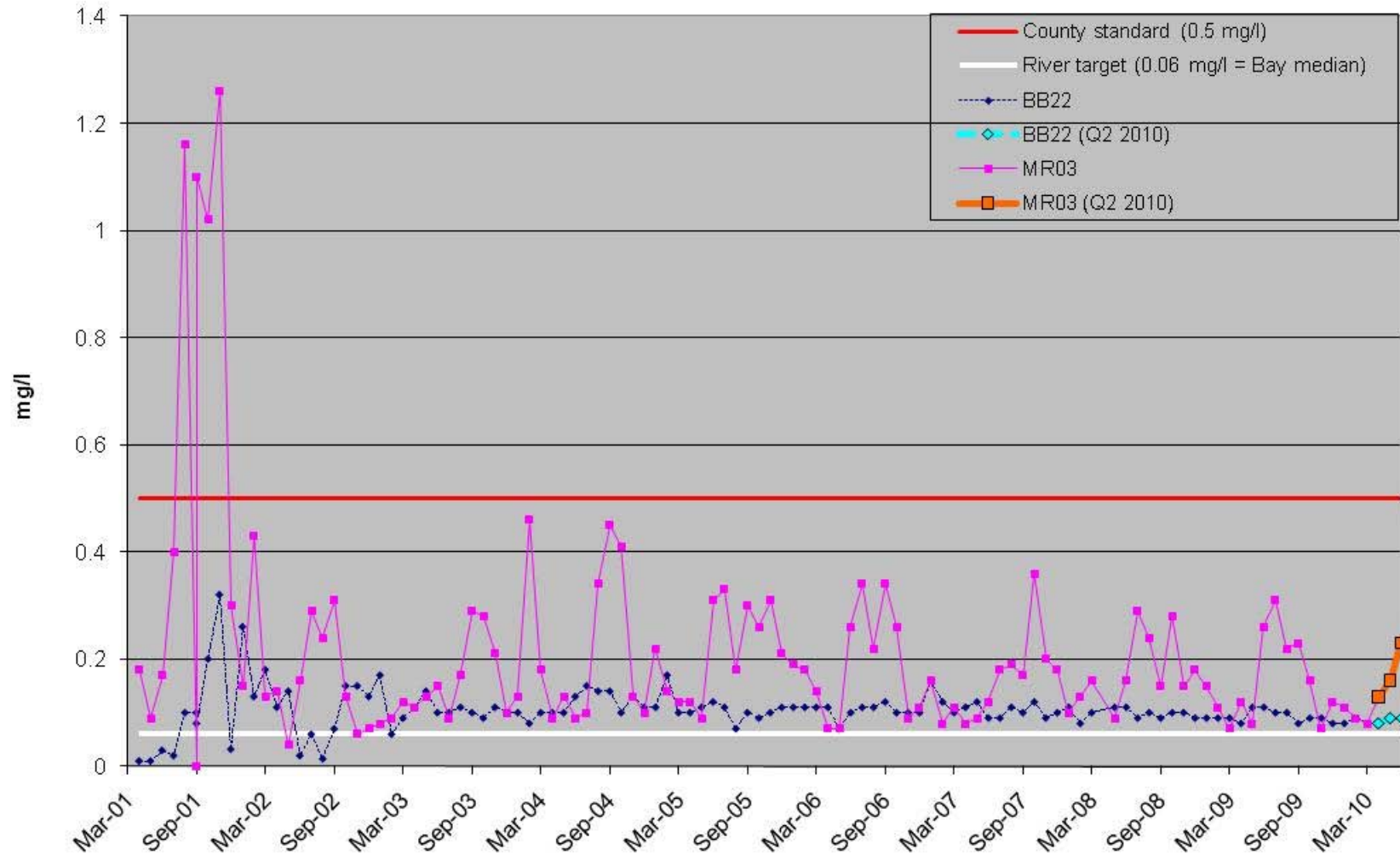




Chart 2.

### Total Phosphate Tracking Ten Year Period: 2001 - 2010 Second Quarter 2010 Data (Apr - Jun) Highlighted

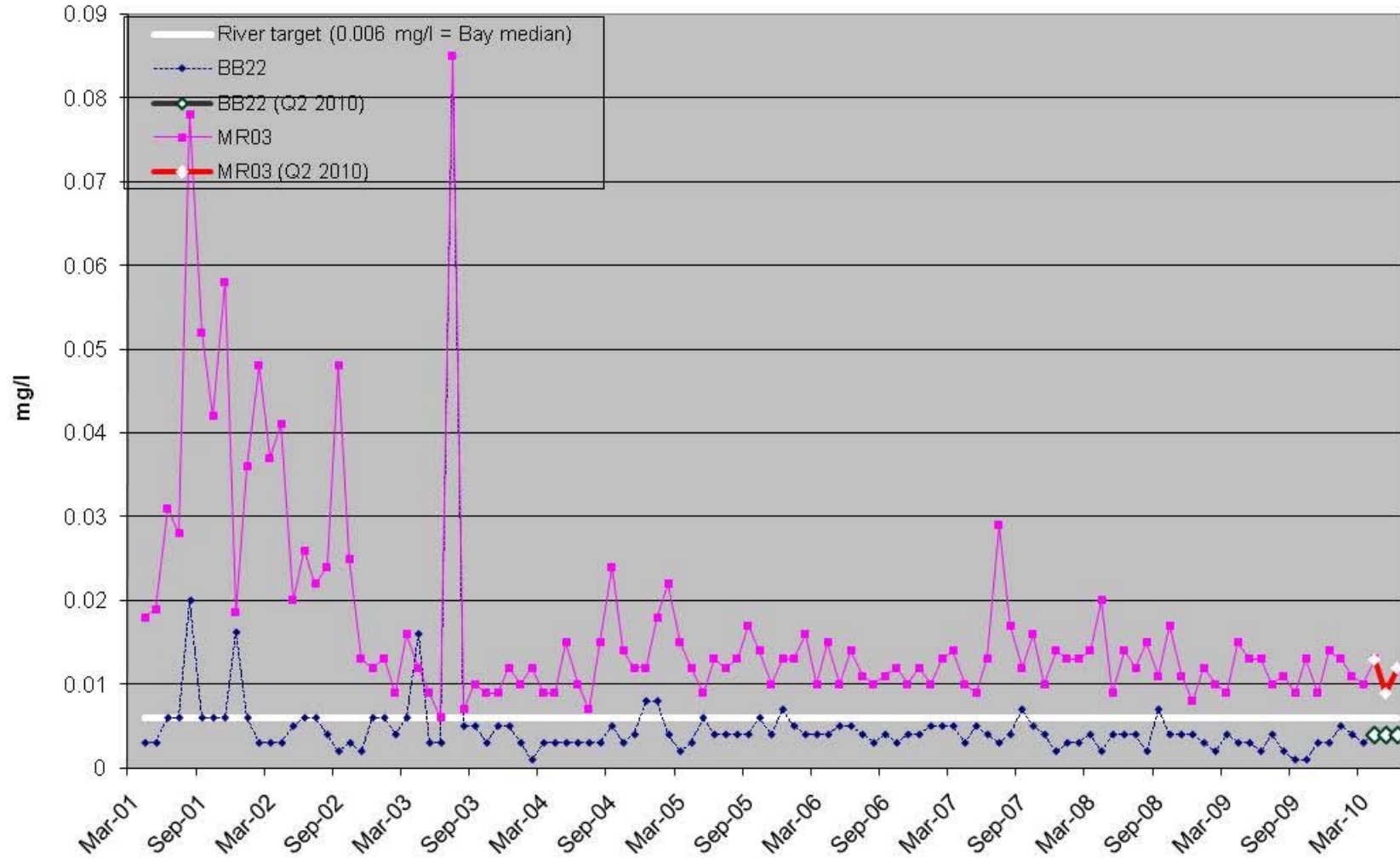


Chart 3.

### Fecal Coliform Tracking Ten Year Period: 2001 - 2010 Second Quarter 2010 Data (Apr - Jun) Highlighted

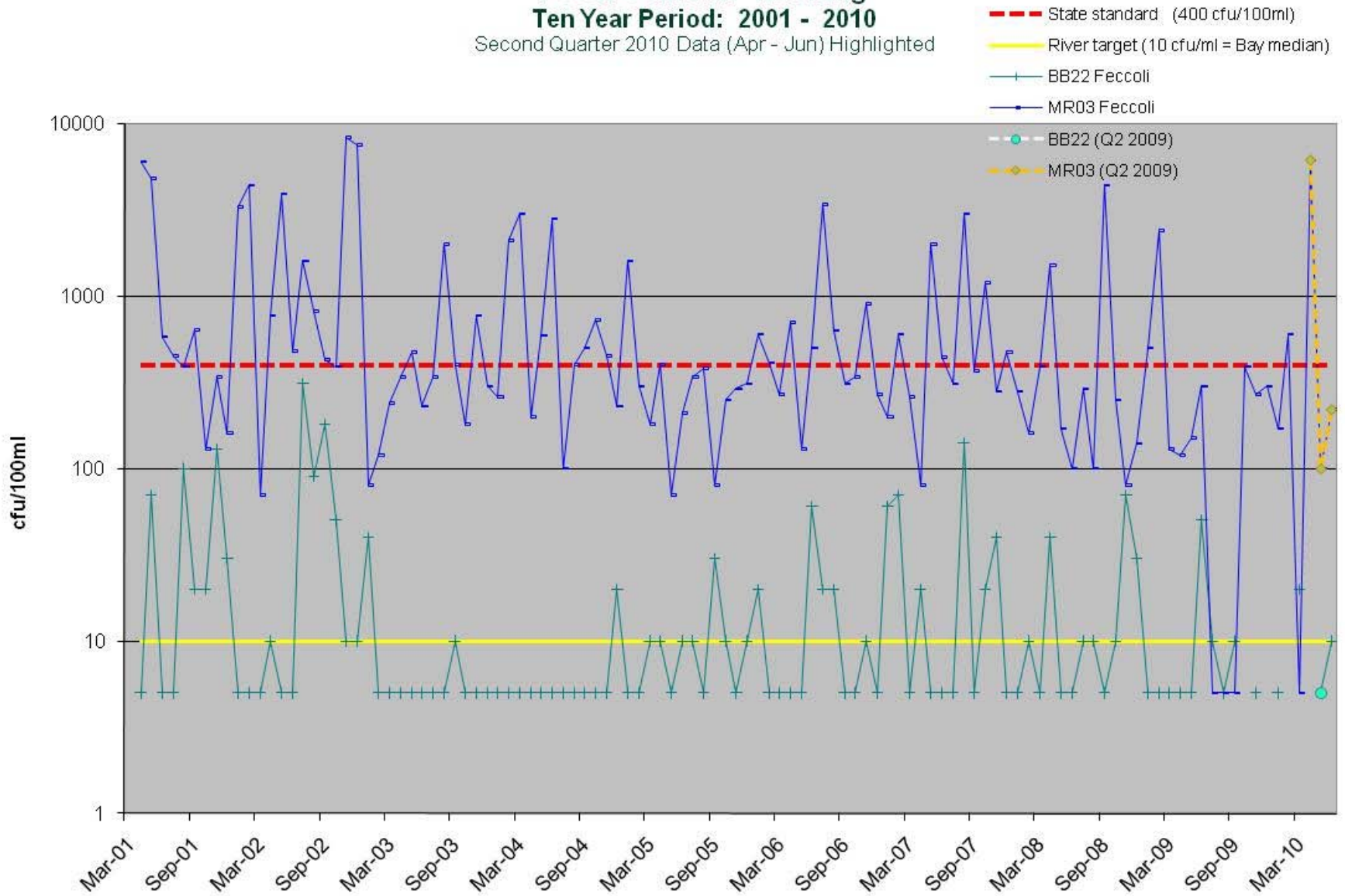


Chart 4.

**Fecal Coliform Tracking**  
(Wagner Creek Stations Only)  
**Ten Year Period: 2001 - 2010**  
Second Quarter 2010 Data (Apr - Jun) Highlighted

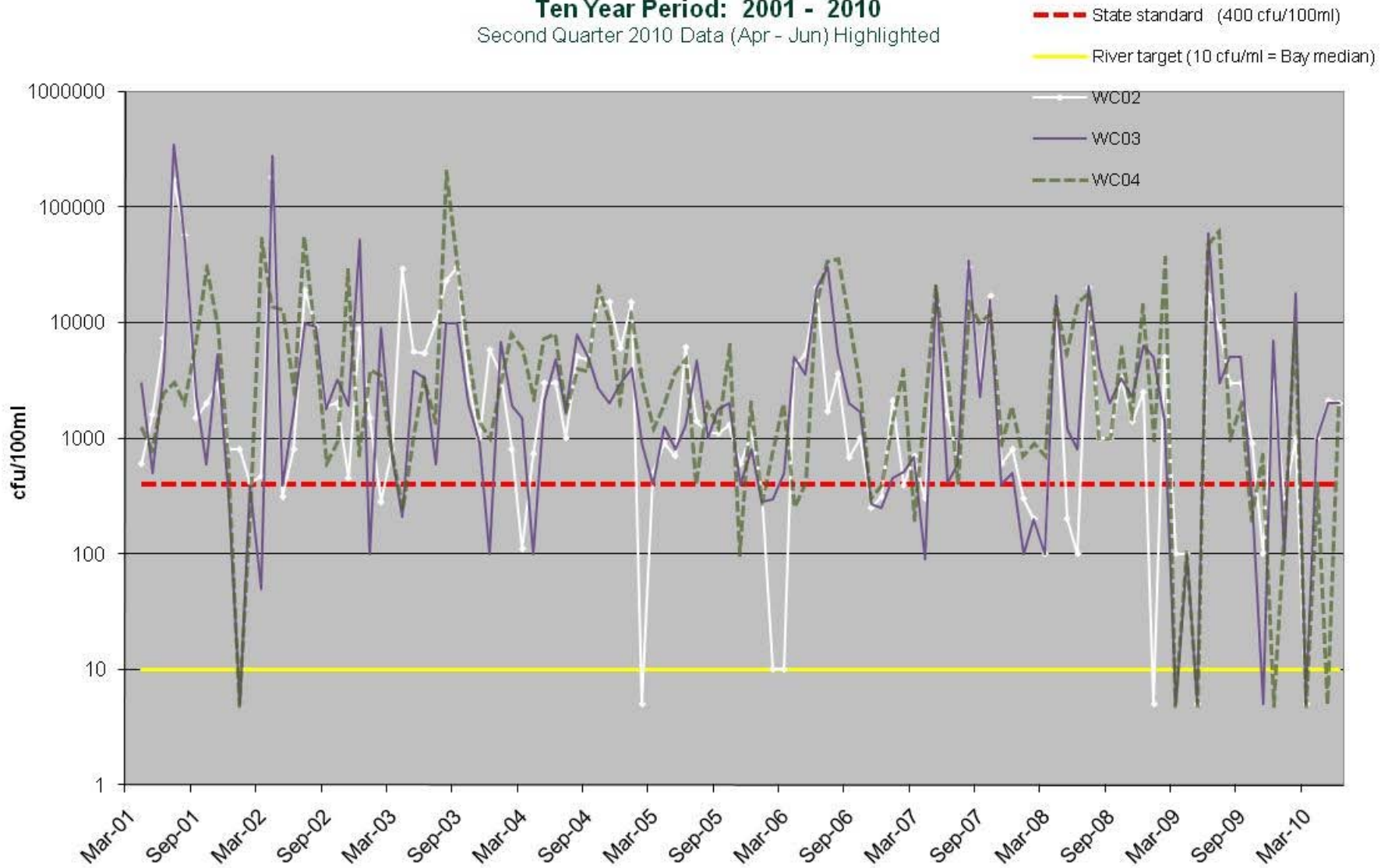


Chart 5.

### Turbidity Tracking Ten Year Period: 2001 - 2010 Second Quarter 2010 Data (Apr - Jun) Highlighted

