

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

Fourth Quarterly Report, 2003  
(October - December)

**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 2003, samples were collected at each of the ten stations in the River on July 8, August 5, and September 9. Costs for sampling (including salaries and fringe and analysis) have been calculated at approximately \$320 per station per month. See table provided in the first quarterly report of 2002 for a matrix of parameters collected on the Miami River during DERM's monthly "Bay Run" and the frequency with which various types of parameters are collected. No sewage spills were reported on or around the River during the quarter. Such notification typically results in additional an emergency sampling response.

See **Figures 1 - 3** below for maps showing monthly Total Coliform results from October through December at stations in the Miami River and vicinity. **Figure 4** is a quarterly composite of Total Coliform results from station locations on the Miami River and its tributaries showing how frequently the results at each station exceeded the County standard (1000 cfu/100ml) during the fourth quarter of the year.

# Biscayne Bay Surface Water Quality Monitoring Program Total Coliform Violations

## October 2003

### Miami River & Tributaries

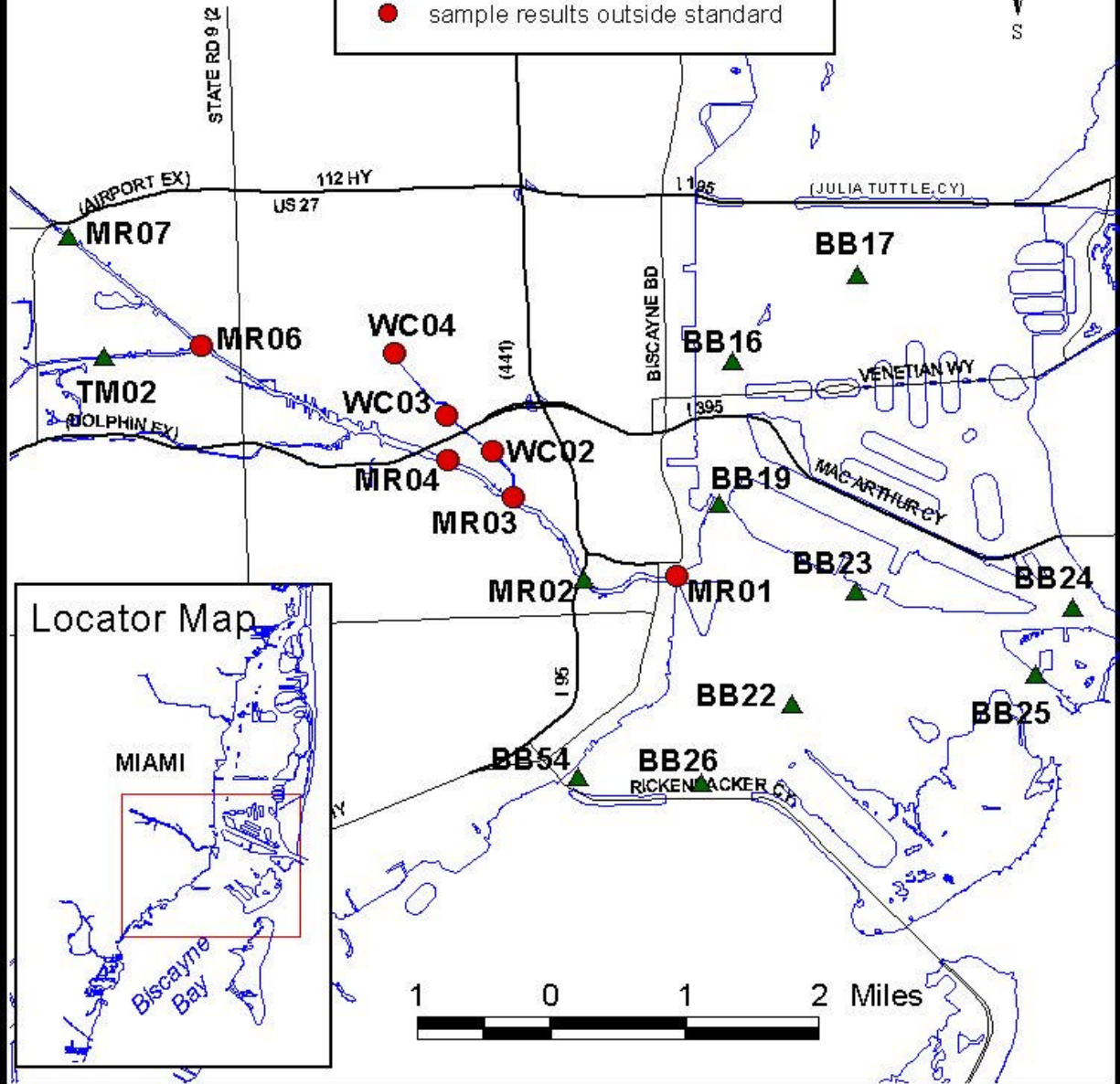
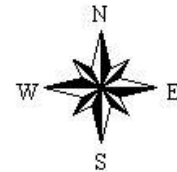


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County Standard (1000 cfu/100mL)

- ▲ sample results within standard
- sample results outside standard



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Action Item Matrix Quarterly Progress Report**

# Biscayne Bay Surface Water Quality Monitoring Program Total Coliform Violations



## November 2003

Miami River & Tributaries

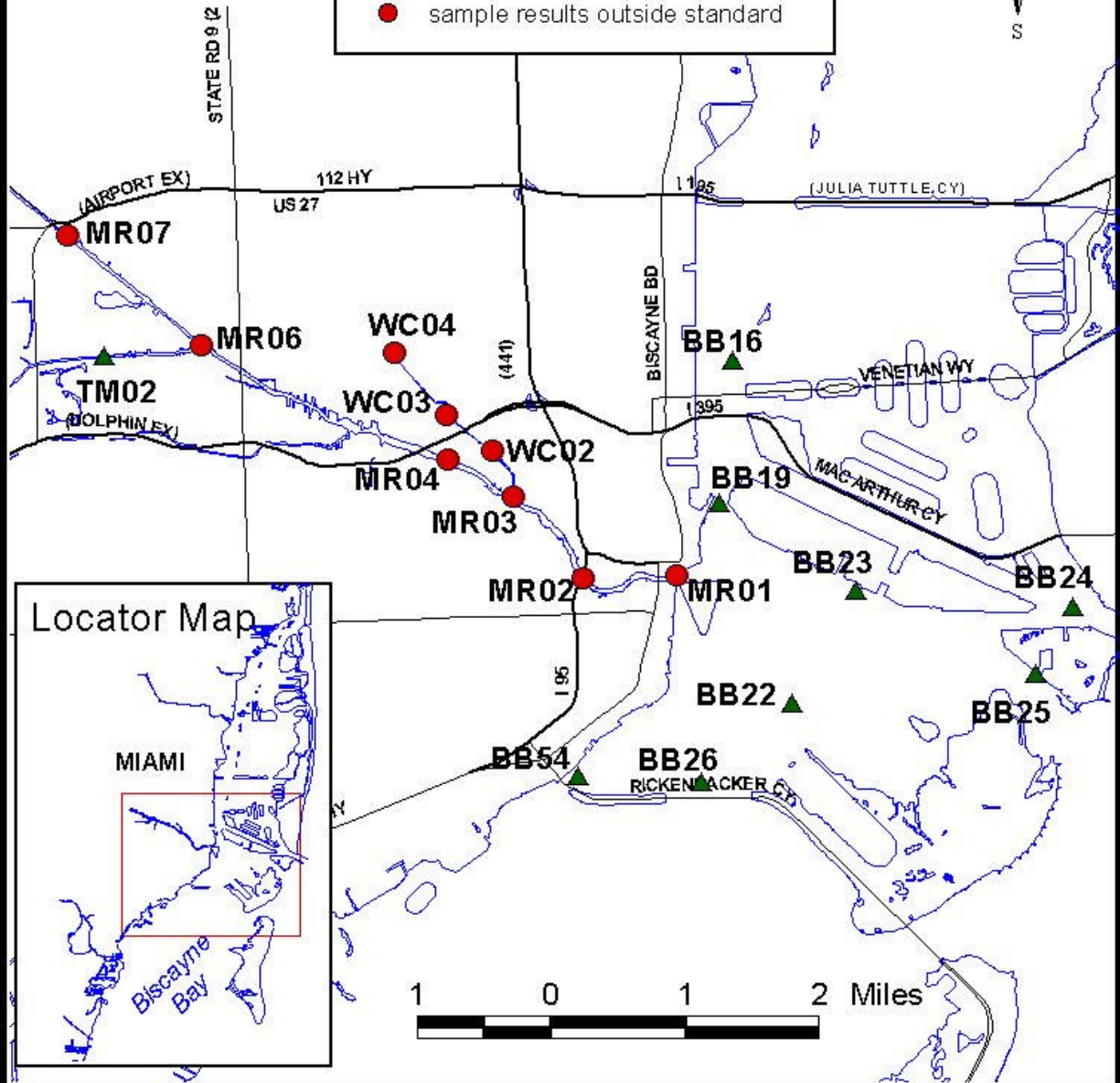
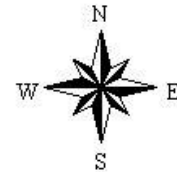


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County Standard (1000 cfu/100mL)

- ▲ sample results within standard
- sample results outside standard





# Biscayne Bay Surface Water Quality Monitoring Program Total Coliform Violations



## December 2003

### Miami River & Tributaries

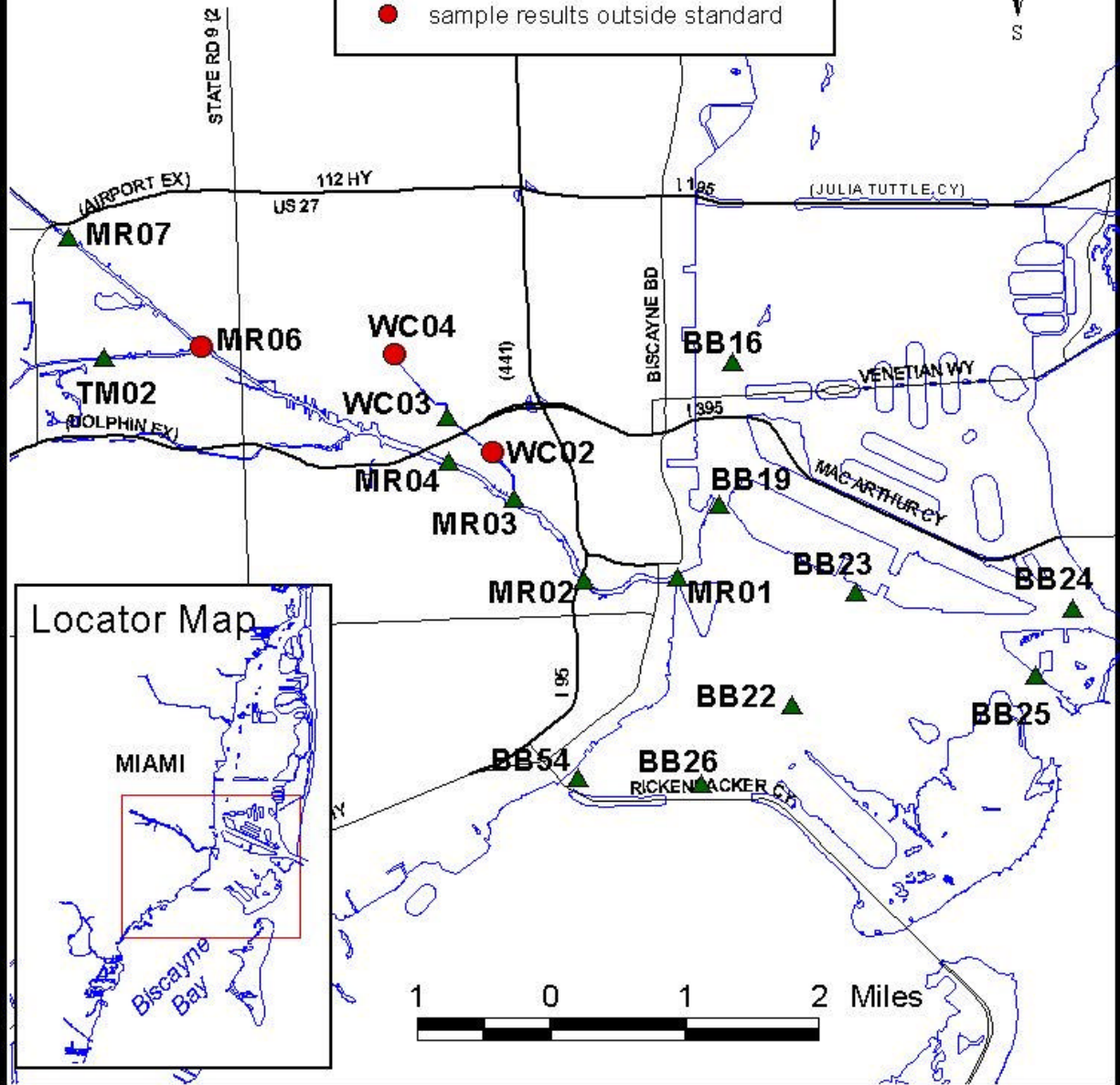
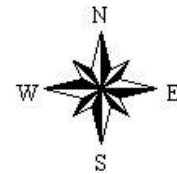


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County Standard (1000 cfu/100mL)

- ▲ sample results within standard
- sample results outside standard



# Biscayne Bay Surface Water Quality Monitoring Program Total Coliform Violations



**Oct - Dec 2003**  
Miami River & Tributaries

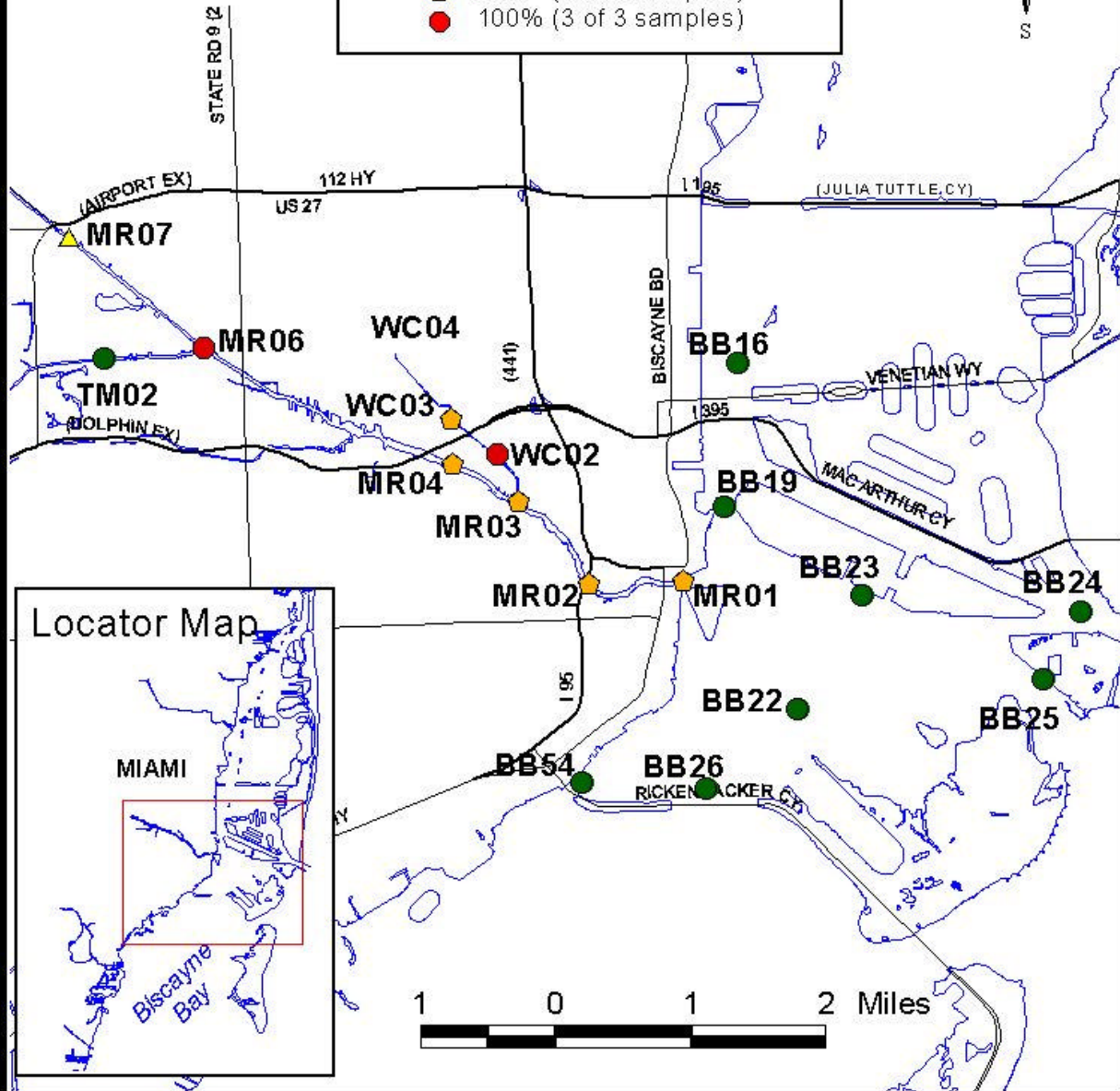
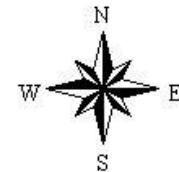


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Percentage of Samples in Violation of Standard (>1000 cfu/100mL)

- 0% (0 of 3 samples)
- ▲ 33% (1 of 3 samples)
- ◆ 67% (2 of 3 samples)
- 100% (3 of 3 samples)



MONTHLY TOTAL COLIFORM LEVELS (cfu's/100 ml) IN WAGNER CREEK				
	WC04	WC03	WC02	MR03
<b>October</b>	<b>60000</b>	<b>12000</b>	<b>50000</b>	<b>1200</b>
<b>November</b>	<b>7000</b>	<b>8000</b>	<b>9000</b>	<b>2300</b>
<b>December</b>	<b>2400</b>	<b>580</b>	<b>7200</b>	<b>580</b>

Red text colour indicates results that exceed the County Standard (1000 cfu/100ml).

Third and Fourth Quarterly Report, 2003  
(July - December)

**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 third and fourth quarter (July through December) of 2003. 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 – 4** for graphs of ammonia nitrogen, total phosphate, total 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). See maps presented under action item 4.a for station locations. Data collected at both stations during the most recent quarter are plotted in time series along with historic data from the previous ten-year (1993 - 2003) period. For further comparative purposes, 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: 1993 - 2003**  
Second and Third Quarter 2003 Data (July - Dec) Highlighted

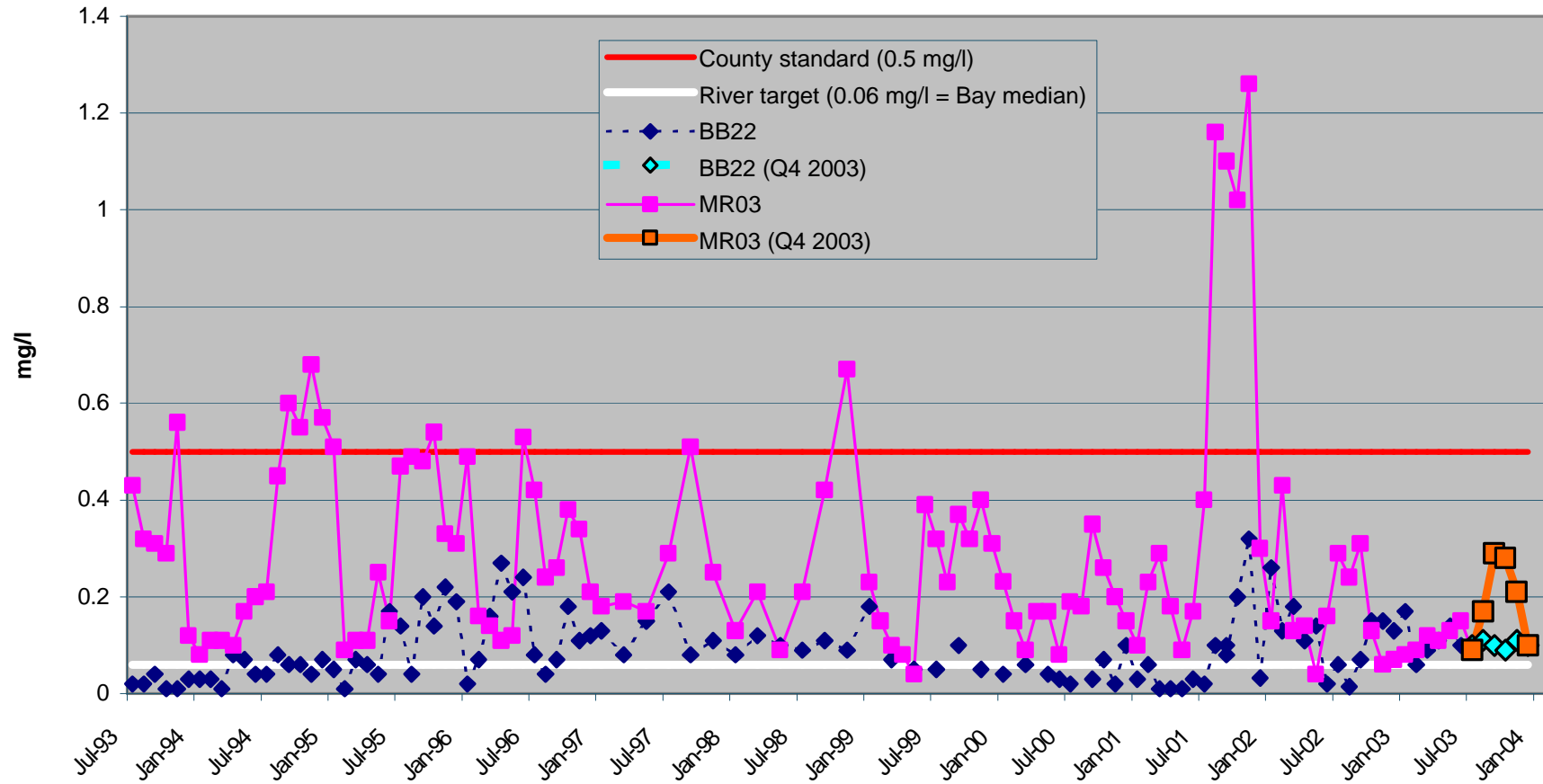




Chart 2.

### Total Phosphate Tracking

Ten Year Period: 1993 - 2003

Second and Third Quarter 2003 Data (July - Dec) Highlighted

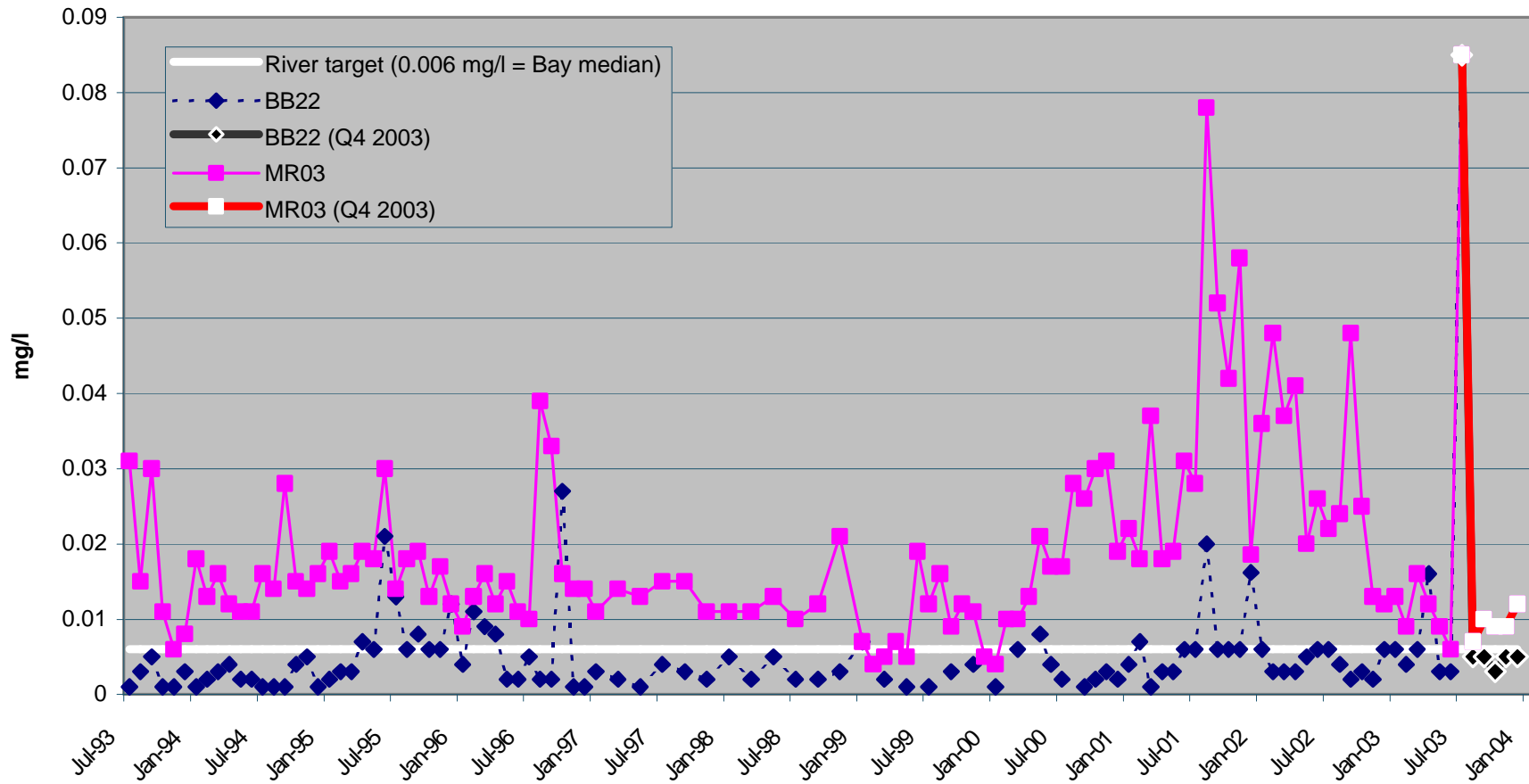


Chart 3.

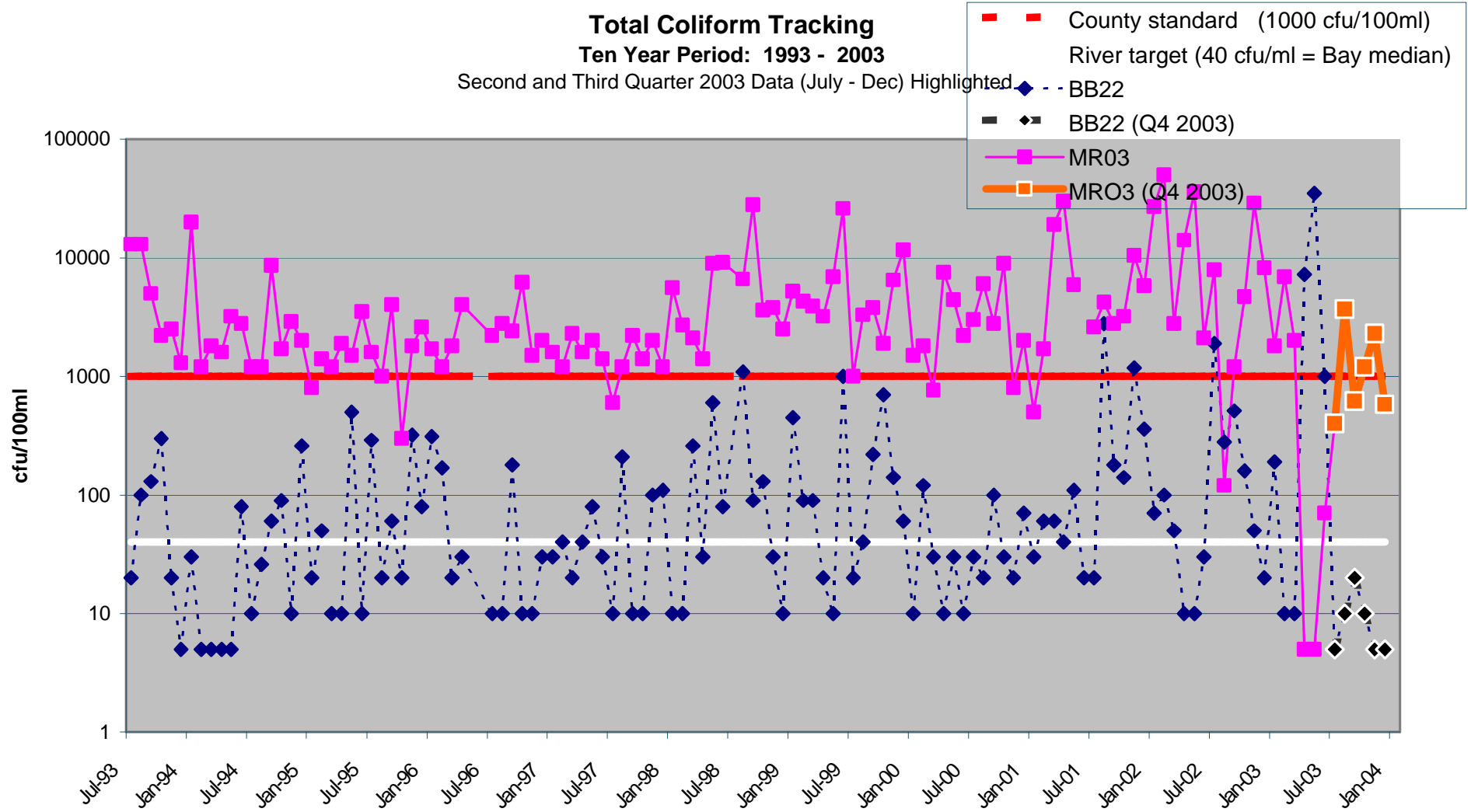
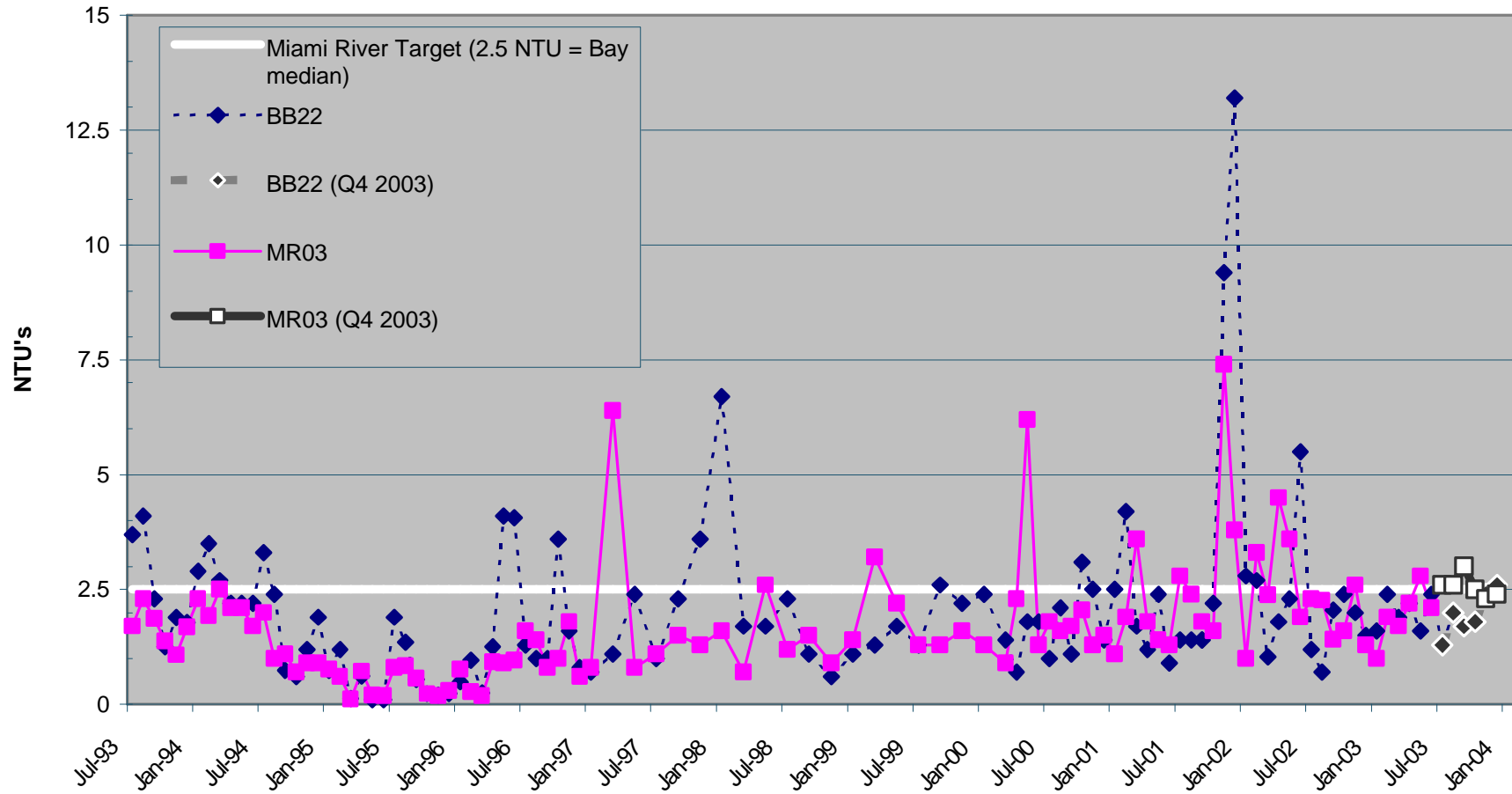


Chart 4.

### Turbidity Tracking

Ten Year Period: 1993 - 2003

Second and Third Quarter 2003 Data (July - Dec) Highlighted



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