

**CONSENT DECREE
PROGRESS REPORT**

**VOLUME 10
2004**

**TENTH QUARTERLY REPORT
APRIL 1, 2004 THROUGH JUNE 30, 2004**



July 2004

STATEMENT OF CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

W. Malcolm Steeves, P.E.

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1. Reporting Requirements

On January 24, 2002, the Board of Water and Sewer Commissioners of the City of Mobile entered into a Consent Decree (CD) with the United States, the State of Alabama and Mobile Bay Watch, Inc. (MBW). The following progress report consolidates the quarterly reporting requirements described in CD Paragraphs 44 and 98 regarding the following: (1) status of work performed; (2) unpermitted discharge information; (3) water quality monitoring data; and (4) the status of the Supplemental Environmental Projects (SEPs). Additionally, this report includes the semi-annual analysis of wastewater collection and transmission systems and wastewater treatment facilities required by CD Paragraph 21.

2. Report Organization

Water Quality Monitoring Program data and Grease Control Program Tables can be found on the MAWSS website, www.mawss.com, and are not included with this report. Report narrative for projects that have been completed for more than one year is no longer included in this report.

This report is divided into the following sections:

Section I: Summary – describes the reporting requirements of the CD, the report structure and a report summary.

Section II: Performance of Consent Decree Work – provides information described in CD Paragraph 98:

- CMOM measures pursuant to the CD implemented or discontinued during the previous quarter
- Description of the status of compliance with the Consent Decree
- Summary of Sanitary Sewer Overflows (SSOs) during previous quarter

Section III: Water Quality Monitoring – provides information regarding the status of the Water Quality Monitoring Program including water quality monitoring data as required by CD Paragraph 38.

Section IV: Supplemental Environmental Projects – describes progress of planning and implementation of each SEP as required by CD Paragraph 44.

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Section V: Civil Penalties – describes progress of paying Civil Penalties as required by CD Paragraph 53.

Appendix A-1: Analysis of Wastewater Collection and Transmission Systems and WWTFs – provides trend information with regard to Unpermitted Discharges and SSOs as required by CD Paragraph 21.

Appendix A-2: Table of Sanitary Sewer Overflows and Unpermitted Discharges – provides a listing of all sanitary sewer overflows and unpermitted discharges that occurred during the quarter as required by CD Paragraph 98.

3. Report Summary

This status report is the tenth quarterly report required by the Consent Decree (CD) and covers the period from April 1 to June 30, 2004.

3.1 Status of Compliance

All CMOM programs required by the CD have been submitted to the EPA for approval in accordance with the CD schedule.

3.1.1 EPA Approved Programs**Water Quality Monitoring (CD Chapter IX)**

On December 19, 2003, the EPA, having reviewed the Board's July 27, 2002 response to EPA comments, approved the Water Quality Monitoring Plan (WQMP). Further information regarding the WQMP can be found in Section III of this report.

3.1.2 Status of Implementation

The Board continues to proceed with implementation of the CMOM programs. The Board is continuously reviewing and modifying its programs to find ways to be more effective in reducing SSOs. Additional information regarding the implementation of each program can be found in Section II of this report.

Supplemental Environmental Projects (CD Chapter X)

Service lateral replacements required by SEP 1 were completed on December 19, 2003. SEP 2 money has been paid to the Forever Wild Land Trust and is complete. On August 4, 2003, MAWSS transferred the remaining funds in SEP 3 (\$30,984.60) not used by the

SECTION I: SUMMARY

Alabama Forest Resources Center to the Forever Wild Land Trust. SEP 3 is considered complete. On February 2, 2004, MAWSS transferred funds in the amount of \$50,089.35 from the SEP 4 escrow account to Mobile Bay Watch. All four SEPs are now considered complete.

Appendix B

To date, \$117,500 has been distributed into a special account for Appendix B penalties. The account balance is currently \$117,508.28 as the result of interest and bank charges. \$94,500 of the distribution balance is contingent upon a decision from the EPA regarding the Board's claim of Force Majeure made on July 23, 2003 for 116 SSOs. No funds from this account have been disbursed. The Board awaits certification from Mobile Bay Watch for fifty percent distribution of the funds to Mobile Bay Watch. The Board is allowing the portion of the Appendix B account for private lateral replacement to grow before performing a project to replace laterals.

Civil Penalties (CD Chapter XI)

The Civil Penalties, \$99,000 to the United States and \$15,000 to Alabama, have been paid.

Discontinued Operations and Maintenance Measures

The Board continues to pursue alternative methods to reducing corrosion and odors at six lift stations following a previous decision to discontinue use of a 50 percent hydrogen peroxide solution. Last quarter, a contaminated tank holding the 50 percent hydrogen peroxide solution at the Columbus Street Lift Station became unstable resulting in an emergency situation. Rather than have the various communities concerned about theoretical hydrogen peroxide dangers, the Board is pursuing the use of US Filter's Bioxide treatment at the six lift stations.

Delays in Completion

Under the Lift Station Action Plan provided to the EPA on April 29, 2002, Consultant Category 4 Tasks and Consultant Category 3 Tasks consisting of repair and replacement of electrical devices were scheduled for completion by December 31, 2002. The consultant experienced delays in the project and was unable to complete the work until January 31, 2003.

The Florida Street lift station renovation/relocation was initially due for completion on March 31, 2003. As mentioned in the Board's letter to the EPA on December 18, 2003, the

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acquisition of property for this project had been problematic. Consequently, the Board decided to renovate the lift station at its current location. The renovation of the lift station is now complete.

The Kerr McGee lift station was also scheduled for completion by March 31, 2003, but again, acquisition of property was problematic for several months. This matter was also mentioned in the letter to EPA on December 18. This project was substantially complete by the revised deadline of August 31, 2003.

On December 18, 2002, a letter was sent to the EPA identifying delays in modifying the Parshall flume and installing the dissolved oxygen (DO) sensors at the Williams WWTP. Software upgrades and electrical work needed to finish the project were expected to be completed by January 18, 2003 and January 31, 2003, respectively. Scheduling conflicts with the contractor resulted in these projects being completed on April 12, 2003 and April 9, 2003, respectively.

The submittal of the annual summary of overflows pursuant to CD Paragraph 21 was delayed past the January 31 deadline until February 17, 2003. The report provided a table and summary of unpermitted discharges and overflows, a description of severe natural event occurrences, and information regarding corrections made to previous overflow reports. Much of the information provided in the report was previously provided in the quarterly CD status reports submitted for 2002.

A feasibility study for the storage of wastewater at the Halls Mill, Eslava Creek and Virginia Street Lift Stations was due on June 30 as a part of the Contingency Plan. A draft of the report was submitted to MAWSS prior to June 30 and has been reviewed. The report concluded that the cost of constructing storage far exceeds the benefit of such an endeavor. The Board is pursuing steps to reduce the risk of failure by installing standby pumps, adding generating capacity, by-pass piping, and other upgrades. Additionally, the Board is pursuing the development of a long-term maintenance and inspection program specific to the pre-stressed concrete cylinder pipe (PCCP) force main to minimize the risk of force main failure due to material deterioration.

The initial due date for coating lift station wet wells was May 30, 2003. The Board submitted to the EPA on May 22, a request to allow moving the completion date to July 31.

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The contract for this work was awarded to Affholder, Inc. Due to a delay in the start date caused by insurance issues, Affholder completed the project on August 14, 2003.

The corrosion control field trial is complete. The original due date for this 90 day trial was June 30, 2003. The Board submitted to the EPA on May 22, 2003, a request for approval to extend the completion date to October 31, 2003. As previously mentioned, the Board is considering chemicals for the replacement of hydrogen peroxide for its Corrosion Control Program.

On May 22, 2003 the Board requested approval to extend the deadline for lift station renovations outlined in the Lift Station Action Plan Consultant Category 2 Priority Tasks to April 30, 2005. The renovations include improvements to access for maintenance and installation of electromagnetic flow meters and bypass quick connections in the force mains. Four lift station renovation projects were completed by the end of 2003. The request stated that five more stations would be renovated in 2004 and that the remaining four would be completed in 2005.

Recently, the Board determined that flows to the Eslava Creek Lift Station can be reduced by rerouting the force main of the Faye Lane Lift Station (FLLS). The FLLS force main currently discharges to a manhole just upstream of the Eslava Creek Lift Station. By rerouting the FLLS force main discharge to the Halls Mill and Eslava 36-inch/48-inch force main, as much as 4 MGD can be removed from the Eslava Creek Lift Station during heavy rain events.

The pumps at the FLLS will require upgrades to accommodate the rerouting of the force main. Consequently, a general renovation of the station is required. The estimated cost to make the aforementioned changes to the FLLS and force main is \$433,000.

The FLLS is not one of the nine lift stations that were scheduled for renovations in 2004 and 2005. However, the Board believes that FLLS has priority due to the wet weather related overflows occurring in the Eslava Creek basin.

To complete FLLS renovations, the Board has requested the EPA approve diverting funds from four of the five lift stations initially scheduled for 2004. The four stations not completed in 2004 will be completed in 2005 in addition to the four lift stations previously scheduled for renovations in 2005.

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Projected Long-Term Absence of the Collection Systems Manager

The responsibilities of Mr. Sneed, the Collection Systems Manager, continue to be addressed by the Board's other managers. The Board was notified that Mr. Sneed's scheduled return was once again delayed until September 2004. Due the difficulty in obtaining temporary replacement staffing with appropriate knowledge or training, the Board will continue to rely on the interim management team along with help from consultants to continue its progress towards meeting the requirements of the Consent Decree.

Projected Long-Term Absence of the Collection Systems Preventive Maintenance Supervisor

Mr. Norman Rollo, responsible for the preventive maintenance cleaning and TV inspection program, was called up for active military service in February of 2003. Mr. Rollo's scheduled return in January 2004 has been delayed again until October 2004. Other supervisors within the Collection Systems Department are currently addressing these duties.

3.1.3 Program Submittals

To date, the Board has submitted all program reports in accordance with the CD schedule. The following presents the dates of program submittals, EPA comments, and the Board's responses:

December 21, 2001 Program Submittals

- Short-Term Collection and Transmission Systems Capacity Assurance Program (CAP)
- Short-Term CAP for WWTPs
- Preliminary Industrial Storm Water Discharge Report
- Reporting, Notification, and Record Keeping Program

January 31, 2002 Program Submittal

- Proposed SEP 1 project locations

February 28, 2002 Program Submittals

- Short-Term CAP for WWTPs – Follow-up Report
- Capacity Assurance – Decentralized Wastewater Treatment Systems
- Legal Support Programs for Sewer System (Ordinances)

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- Water Quality Monitoring Program

April 29, 2002 Program Submittal

- Short-Term Pump Station Certification
- Lift Station Action Plan
- First Quarter 2002 CD Status Report (Volume 1)

May 1, 2002 EPA Program Comments to Submittal Dated December 21, 2001

- Short-term Collection and Transmission Systems Capacity Assurance Program (CAP)
- Short-term CAP for WWTPs
- Preliminary Industrial Storm Water Discharge Report

May 2, 2002 EPA SEP 1 Comments to Submittal Dated January 31, 2002May 10, 2002 Responses to EPA SEP 1 Comments of May 2, 2002May 29, 2002 Responses to EPA Comments of May 1, 2002

- Short-Term Collection and Transmission Systems CAP
- Short-Term CAP for WWTPs
- Preliminary Industrial Storm Water Discharge Report

May 29, 2002 Program Submittals

- Grease Control Program
- Proposed Grease Ordinance
- Service Contract for Eating Establishments

May 30, 2002 EPA Program Comments to Submittal Dated January 31, 2002

- Water Quality Monitoring Program

June 27, 2002 Response to EPA Comments of May 30, 2002

- Water Quality Monitoring Program

July 30, 2002 Second Quarter & Semi-Annual CD Status Report (Volume 2)July 31, 2002 Program Submittals

- Long-Term Capacity Assurance Program for Wastewater Collection and Transmission Systems
- Long-Term Capacity Assurance Program for WWTPs

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- Legal Support Programs for Sewer System and Wastewater Treatment Facilities (All Other Necessary Ordinances)
- Operations Contingency Plan for WWTPs
- Contingency Plan for Eslava Creek, Halls Mill, and Virginia Street Lift Stations and Force Mains
- Contingency Plan for Wastewater Collection and Transmission Systems
- Pump Station Operation Program
- Corrosion Control Program
- Pump Station Preventative Maintenance Program
- Force Main Preventative Maintenance Program
- Gravity Line Preventative Maintenance Program
- Maintenance of Rights of Way Program
- Coordination with the City of Mobile and Other Governmental Bodies

August 7, 2002 Program Corrections

- Correct CD Quarterly Report Volume 2 regarding implementation of Water Quality Monitoring Program February 28, 2002.
- ADS Report on the flow monitoring of 20 private satellite collection systems was furnished to supplement information provided in July 31 submittal of Long Term Collection System Capacity Assurance Program. Schedules for implementing the remaining flow monitoring of private satellite collection systems were provided in the Long Term Collection System Capacity Assurance Program. Results of the aforementioned ADS report were not placed in the Program and were provided as an attachment to this August 7 submittal.

August 9, 2002 Program Modifications

- Due to the long-term plan to remove the Ziebach WWTP from service and the high cost of relocating the recycle stream, MAWSS proposed an alternative to apply the total cost of \$78,650 of relocating the recycle stream to either additional SEP 1 private property lateral replacements or additional rehabilitation work in the Ziebach area.

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August 20, 2002 Corrections to August 9 Letter

- The post script to the August 9, 2002 letter should have stated that Williams WWTP fourth clarifier, which is required to treat the additional flows from the Ziebach WWTP following the Ziebach WWTP decommissioning, has been bid and awarded.
- A feasibility study for wastewater storage at the Board's Halls Mill, Eslava Creek, and Virginia Street lift stations is required to determine the need for and the effectiveness of such storage facilities at the aforementioned locations.
- Any product trials needed as identified in Montgomery Watson Harza corrosion control project (Task 2 and 3) report would occur after 9/31/02.

August 26, 2002 EPA Response to August 9, 2002 Program Modifications

- The EPA agreed to the request to apply the cost of relocating the solids handling recycle stream at the Ziebach WWTP to either additional SEP1 private property lateral replacements or additional rehabilitation. The EPA requested that they receive notification of the specific plan to apply the additional funds.

September 16, 2002 Board Response to EPA August 26, 2002 Comments

- The Board will apply the cost for relocating the recycle stream at the Ziebach WWTP to replace a minimum of 39 laterals in the Ziebach area.

September 17, 2002 EPA Program Comments

- The Board received EPA comments and conditional approval of the Grease Control Program.

September 27, 2002 Response to EPA September 17, 2002 Comments

- The Grease Control Program is being modified from the initial submittal to the EPA to address comments received from the EPA and the Alabama Restaurant Association.

October 30, 2002 Third Quarter CD Status Report (Volume 3)November 26, 2002 Passage of Grease Control Ordinance

- The City of Mobile passed the Septage and Grease Hauler Ordinance requiring manifests for documenting proper disposal methods and disposal locations.

December 18, 2002 Letter to the EPA

- Identified delays for the Florida Street and Kerr McGee Lift Station projects as a result of property acquisition issues.

SECTION I: SUMMARY

- Identified completion dates for software upgrades to record data related to the parshall flume modifications and installation of dissolved oxygen sensors at the Williams WWTP.
- A request to relocate the Public Document Repository to the new Dennis Moore Training Facility was made.

January 30, 2003 Fourth Quarterly CD Status Report (Volume 4) & Semi-Annual AnalysisFebruary 17, 2003 Annual Summary Pursuant to CD Paragraph 21

- An annual summary of unpermitted discharges and overflows pursuant to Paragraph 21 was submitted to the EPA, ADEM, and Mobile Bay Watch. The information was also placed in the Public Document Repository and provided on the MAWSS website.

February 28, 2003 Program Submittal

- The Unscheduled Maintenance Program was submitted on February 28, 2003, completing all CMOM program submittals required by the Consent Decree.

April 29, 2003 Fifth Quarterly CD Status Report (Volume 5)May 22, 2003 Letter to the EPA

- Request to extend completion schedule for coating of wet wells under the Lift Station Action Plan from May 30, 2003 to July 31, 2003 due to investigations into more effective coating products. Request to limit the number of wet wells coated from ten to five.
- Request to extend the schedule by one year for building removal and renovations at 13 lift stations due to the addition of items outside the original recommendations that will allow for better monitoring, maintenance, and emergency response.
- Request to extend completion date of 90-day corrosion control field trial from June 30, 2003 to October 30, 2003. It was determined that the trial was outside the scope of the current annual contract and, therefore, required bidding of a new contract.
- Request to decrease the cleaning frequency of Cycle 5 and 6 category sewer lines. It was noted that, should sewer lines in these cycles be found to require more frequent cleaning, they can be reassigned to more frequent cleaning cycles such as Cycle 3 or 4.

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July 23, 2003 Letter to the EPA

- Request for EPA to consider Force Majeure regarding 116 of the 122 overflows that reached waters of the State or United States during three large and intense rain events that occurred on May 18, June 6, and June 30 of 2003.

July 30, 2003 Sixth Quarterly CD Status Report (Volume 6) & Semi-Annual AnalysisSeptember 25, 2003 Letter to the EPA

- Request to reverse the schedule of the Eslava Creek and Halls Mill Lift Station upgrades as stated in the *Pump Station Preventative Maintenance Program* submitted to the EPA on July 31, 2002. Under the proposed schedule swap, the Halls Mill Lift Station upgrades will be moved up to 2004 to expedite upgrades to the stand-by generator to address the vulnerability of the lift station to power outages. The Eslava Lift Station upgrades are under design and will be completed in 2005.

October 30, 2003 Seventh Quarterly CD Status Report (Volume 7)December 22, 2003 Letter to the EPA

- The Board presented findings from the feasibility study regarding the storage of wastewater in the event of catastrophic failure at the Eslava Creek, Halls Mill, and Virginia Street Lift Stations and force mains. The study concluded that the cost of constructing a facility far exceeds the benefit of such an endeavor.
- The letter also notified the EPA that one of the two isolation valves recommended in the *Contingency Plan for Eslava Creek, Halls Mill, and Virginia Street Lift Stations and Force Mains* already exists. The second recommended isolation valve will not be installed due to the cost required to relocate two 36 inch and 48 inch force mains.

December 29, 2003 EPA Approval of Water Quality Monitoring Plan

- The EPA gave final approval for the Board's Water Quality Monitoring Plan. The Plan is being implemented and is posted in the Public Document Repository and on the MAWSS website.

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January 30, 2004 EPA Eighth Quarterly CD Status Report (Volume 8)

April 27, 2004 EPA Ninth Quarterly CD Status Report (Volume 9)

**SECTION II: PERFORMANCE OF WORK
(CD CHAPTER VIII)**

SECTION II: PERFORMANCE OF CONSENT DECREE WORK

1. System Capacity Assurance Program (SCAP) (CD Paragraph 20)**1.1 Short-Term Capacity Assurance Program for New Connections**

The *Short-Term Collection and Transmission Systems Capacity Assurance Report* and the *Short-Term Capacity Assurance Program for WWTPs* was submitted to the EPA on December 21, 2001. On February 28, 2002, a follow-up report was submitted to the EPA identifying WWTP Capacity Improvement Projects. Comments regarding the program were received from the EPA on May 2, 2002. On May 29, 2002, MAWSS submitted responses to the EPA's comments.

1.1.1 Program Implementation**1.1.1.1 Wastewater Collection and Transmission Systems**

Requests for new connections continue to be passed through Volkert and Associates for collection system capacity evaluation.

1.1.1.2 Wastewater Treatment Plants (WWTPs)C.C. Williams WWTP*Reduction of Industrial Loads (December 18, 2002)*

Industrial Pretreatment contracts with reduced industrial loads requirements went into effect on January 1, 2003.

Installation of Online Dissolved Oxygen (DO) Meters (January 15, 2003)

The Board sent a letter to the EPA on December 18, 2002 revising the completion date for the DO meter software upgrades to February 1, 2003. Due to contractor scheduling conflicts, the probes were not placed on line until April 9, 2003. DO data has been accumulated for one year. DO is adequate for current peak flows to the plant.

Wright Smith, Jr. WWTP*Reduction of Industrial Loads (December 18, 2002)*

Industrial Pretreatment contracts with reduced industrial load requirements went into effect on January 1, 2003.

SECTION II: PERFORMANCE OF CONSENT DECREE WORK

Two industries, GAF Corp. and Mobile Paperboard, require plant modifications to comply with the new limits. Projects are underway at each business to complete the needed modifications.

Operational Modifications to Enhance Primary Chemical Treatment (August 31, 2002)

A ferric chloride dosing facility has been installed at the Smith WWTP. MAWSS is reviewing historical data from cold weather periods to determine the optimum schedule for chemical addition. Currently, MAWSS plans to use the ferric chloride when plant flows exceed 20 mgd.

1.2 Long-Term Capacity Assurance Program for New Connections

Reports for both the Long-Term Capacity Assurance Program for Wastewater Collection and Transmission Systems and the Long-Term Capacity Assurance Program for WWTPs were submitted to the EPA for approval on July 31, 2002. Under the Long-Term CAP, hydraulic modeling uses flow data to determine the impact of proposed future connections on system capacity as defined by the Short-Term CAP.

1.2.1 Wastewater Collection and Transmission Systems

1.2.1.1 Permanent Flow Monitoring

Long term (permanent) flow monitors and rain gauges have been installed in accordance with the dates provided in the Long Term CAP for the collection and transmission systems. A total of 67 long term flow monitors and ten rain gauges are being used in the system.

Long term flow monitoring data is used to prioritize the locations at which temporary flow monitoring studies are needed. MAWSS has purchased 25 additional portable flow monitors in 2004. These additional flow monitors allow better isolation of I/I sources by monitoring smaller areas. All 25 additional portable flow monitors are currently in the Eslava Basin.

1.2.1.2 Identification of Collection System Capacity

Volkert and Associates, Inc. is currently underway with the third semi-annual recalibration and is expected to be completed by August 1, 2004. New requests

SECTION II: PERFORMANCE OF CONSENT DECREE WORK

for service continue to be routed from the Board to Volkert for collection system capacity assessment.

Three Mile Creek Basin

Previous video inspection and cleaning efforts on the lower end of the Three Mile Creek Interceptor continue to yield a significant improvement in performance. Repairs to this interceptor sewer along with other rehabilitation work in this basin has removed sources of I/I estimated at 1.7 mgd.

A lift station has been designed for installation near Ridge Road to address overflows in the Ridge Road area. The needed location of the lift station is on property purchased by FEMA as part of a flood zone buy-out program. A request to locate the lift station on the property was initially denied by FEMA. As a result of the Board's appeal of the decision, the plans and specifications for the project were forwarded by FEMA to General Counsel in Washington D.C. for a final decision. The Board continues to request a decision from FEMA, but FEMA will not commit to a date by which the decision will be made.

Since April 1, 2004, there have been four new requests for connections in the Three Mile Basin totaling 26,875 gpd of peak flow and four new requests in the Eight Mile Basin totaling 4,125 gpd of peak flow. All of the new requests were approved based on the flow reductions from previous repairs. Since program implementation in August 2002, there have been 104 requests for connection to add 434,250 gpd in the Three Mile Basin and 165,000 gpd in the Eight Mile Basin.

Halls Mill Creek Basin

The recalibrated model identified two areas of concern in the Halls Mill Basin. A portion of the 18-inch diameter Second Creek Interceptor sewer and a portion of the 10-inch diameter interceptor sewer along Airport Boulevard are near capacity. Installation of manhole inflow dishes and rehabilitation of manhole castings along the Second Creek Interceptor has removed over 1.0 mgd of I/I. MAWSS staff is performing above ground inspections in the area

SECTION II: PERFORMANCE OF CONSENT DECREE WORK

to identify I/I sources. Additionally, temporary flow monitors were installed to further isolate the system and quantify I/I.

Since April 1, 2004, 23 requests for connection have been approved for an added 177,000 gpd of peak flow. Since the program implementation, 150 requests for connection have been approved for a total of 1.3 mgd in added peak flow.

Eslava Creek Basin

The recalibrated hydraulic model of this basin identified capacity concerns along the lower portions of the Eslava Creek Interceptor sewer and the Bolton Branch Interceptor sewer. MAWSS is continuing with flow monitoring, I/I investigations, video inspection and hydraulic cleaning to improve the performance of this basin. The Board recently added 25 portable flow monitors to the Eslava Basin. There are currently 48 flow monitors in the Eslava Basin.

Hydraulic cleaning and video inspection of the Eslava Creek Interceptor sewer, completed in March 2004, removed approximately 550 tons of soil and debris from 9,200 feet of the 36-inch to 48-inch interceptor. During the course of the cleaning and video work, two plugs from an abandoned sewer and a 36-inch polyethylene depressed sewer were found to be defective. A project to replace the depressed sewer is substantially complete.

As a result of repair work to remove I/I, the Board has banked approximately 549,000 gpd in added capacity.

Since April 1, 2004, 13 requests for connection have been approved for a total of 127,000 gpd of peak flow based upon capacity earned through recent rehabilitation efforts. Since program implementation, 56 requests have been approved to allow an additional 274,000 gpd of peak flow.

Virginia Street Basin

The Water Street Lift Station will need some upgrades to handle the additional flows that will come from the new RSA Tower in 2005. The upgrades will be completed prior to the RSA Tower needing sewer service. Flow monitoring data has confirmed that the gravity system has adequate capacity. This data

SECTION II: PERFORMANCE OF CONSENT DECREE WORK

along with pump down test results are currently being reviewed to determine the extent of the lift station upgrades.

Since April 1, 2004, two requests for connection have been submitted and subsequently approved to allow an additional 1,250 gpd of peak flow into the basin. Since program implementation, 17 requests for connection have been approved based on the available capacity and capacity gained from I/I removal. The total amount of additional peak flow from these approved connections is 63,500 gpd.

Ziebach WWTP Basin

The WWTP has capacity limitations at wet weather peak flows. Single home capacity requests have been accepted based upon repairs made in the basin. Replacement of portions of the 18-inch trunk sewer near Staples Road, repairs to the Gill Road Lift Station, and replacement of missing service lateral caps in a trailer park have removed approximately 154,000 gpd of I/I.

A project is currently underway to upgrade the existing Perch Creek Lift Station and re-route the force main to the 48-inch Eslava Creek Lift Station force main discharging to the Williams WWTP.

Since April 1, 2004, three requests for connection to allow a total of 1,875 gpd of added peak flow were received and approved based in part on I/I removal from repair work. Thirty-nine requests have been submitted and approved since program implementation adding a total peak flow demand of 50,000 gpd.

Theodore Area Basin

Since April 1, 2004, ten requests for connection have been received and approved to allow an additional 38,950 gpd of peak flow into the collection system. Since program implementation, 56 requests for connection have been received and approved allowing a total additional peak flow of 506,050 gpd.

Eight Mile Creek Basin

This basin's capacity is limited by the capacity of the lower Three Mile Trunk and the Smith WWTP. Capacity gains in the lower Three Mile Trunk have been realized through cleaning and I/I removal.

SECTION II: PERFORMANCE OF CONSENT DECREE WORK

A new force main along Schillinger Road is being designed to increase capacity in the Semmes area. The project is scheduled to bid on July 19, 2004.

See Three Mile Creek Basin for new connection requests in the Eight Mile Creek Basin.

1.2.1.3 Information Management System for Calculating the Net (Cumulative) Increase or Decrease in Wastewater Volume

Volkert and Associates continues to maintain the “Capacity Bank” for the Board’s wastewater collection and transmission systems. New requests for service are routed through the Board’s Mapping and Connections Department and then to Volkert for capacity analysis.

1.2.1.4 Identification and Elimination or Reduction of Industrial and Other Stormwater Discharges

A report on Industrial Stormwater Discharges was submitted to the EPA on December 21, 2001. On May 2, 2002, MAWSS received comments from the EPA regarding the program. MAWSS submitted responses to these comments on May 29, 2002.

Industrial and Non-Industrial Private Sanitary Sewer Systems

Flow monitoring studies have been completed for 36 industrial and 20 private sanitary sewer systems. The Board is contemplating how to structure enforcement actions that can be applied to both industrial and non-industrial customers. Site investigations for the remaining 107 private sanitary sewer systems have also been completed. By the end of 2004, the Board will conduct smoke testing and flow isolation activities to identify defects within the remaining systems. Smoke testing of sixty-five (65) Mobile County Schools will be completed in July.

1.2.2 Wastewater Treatment Plants (WWTPs)

Several projects related to long-term capacity assurance are in progress. Completion dates for each project are in parentheses.

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1.2.2.1 C.C. Williams WWTPInfiltration and Inflow (I/I) Reduction Program

Work is ongoing to reduce influent flows to the plant by removing collection system I/I. During the past quarter, closed circuit television inspection (CCTV) was performed on 141,268 feet of pipe. Inspections and smoke testing continue to find sources of I/I. The Board has in place annual contracts for CIPP, manhole rehabilitation, point repairs, and public lateral replacement. The contracts in addition to in-house forces are being used to make repairs to the collection system.

See Section 1.2.1.2 for information regarding the recent removal of I/I from the C.C. Williams WWTP Collection System.

1.2.2.2 Bill Ziebach WWTPInfiltration and Inflow (I/I) Reduction Program

Work is ongoing to reduce influent flows to the plant by removing collection system I/I. During the past quarter, closed circuit television inspection (CCTV) was performed on 27,718 feet of pipe. Inspections and smoke testing continue to find sources of I/I. The Board has in place annual contracts for CIPP, manhole rehabilitation, point repairs, and public lateral replacement. The contracts in addition to in-house forces are being used to make repairs to the collection system.

See Section 1.2.1.2 for information regarding the recent removal of I/I from the Bill Ziebach WWTP Collection System.

Modify Perch Creek Lift Station (January 9, 2004)

All necessary easements have been acquired. The project has been divided into three phases. Phase A was awarded to Construction Labor Services on June 21, 2004. Phase B was awarded on February 16, 2004, to SJ&L. Phase C was awarded on March 8th to Hughes Plumbing and Utility Contractors, Inc. All phases are under construction.

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Remove Ziebach WWTP From Service (March 26, 2004)

Following completion of the Perch Creek Lift Station modifications the Ziebach WWTP will be removed from service. Decommissioning the Ziebach WWTP will allow abandonment of the Ziebach NPDES discharge permit in 2005.

1.2.2.3 Wright Smith, Jr. WWTP

Infiltration and Inflow (I/I) Reduction Program

Work is ongoing to reduce influent flows to the plant by reducing collection system I/I. During the past quarter, closed circuit television inspection (CCTV) was performed on 30,260 feet of pipe to determine sources of I/I. Inspections and smoke testing continue to find sources of I/I. The Board has in place annual contracts for CIPP, manhole rehabilitation, point repairs, and public lateral replacement. The contracts in addition to in-house forces are being used to make repairs to the collection system.

See Section 1.2.1.2 for information regarding the recent removal of I/I from the Smith Basin.

Plan to Relocate Effluent Discharge (December 18, 2002)

This project will be developed according to a work plan for an EPA sponsored special projects grant. The work plan and grant application have been submitted to the EPA. The plan includes comparison of alternatives to the previously proposed discharge to the abandoned International Paper (IP) outfall and further meetings with residents from area neighborhoods. The plan also includes preparation of an inter-local agreement between interested wastewater utilities. Utility organizations associated with Mobile, Prichard, and Chickasaw, Alabama were asked to be the initial participants however, only Chickasaw and Mobile are currently sharing the effort.

Proposed Regional WWTP on the International Paper (IP) Site

The schedules for the closure and future use of this site for a regional wastewater treatment plant are on hold, perhaps indefinitely. International Paper Company has withdrawn from the previously reported memorandum of understanding. Regional facility siting will now be based on a selection of

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alternatives to be developed in the EPA sponsored special projects grant program.

2. Sanitary Sewer Overflow (SSO) Reporting, Notification & Record Keeping Program (CD Paragraph 21)**2.1 Program Development**

The *Sanitary Sewer Overflow Reporting, Notification and Record Keeping Program* was submitted to the EPA on December 21, 2001.

2.2 Program Implementation

The Board continues to report overflows to ADEM, the MS4 Storm Water Authority (Mobile Engineering), Bay Watch, the Mobile County Health Department and the local media per guidelines set forth in the program submittal.

2.2.1 SSO Information Summary

During the past quarter there were 54 sanitary sewer overflows (SSOs). Of this amount, 23 reached waters of the State or US Waters. The remaining overflows were contained and returned to the collection system.

Appendix B penalties of \$4,000 were incurred due to two overflows that occurred on April 16 and June 15, 2004.

Tables listing the overflow occurrences during the past quarter can be found in Appendix A-1.

Six (6) storms event met the severe natural event criteria described by CD Paragraph 23a, *Contingency Planning Process*.

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Severe Natural Event (April 30, 2004)

During this event, the largest volume of rainfall recorded was 3.12 inches. Rainfall intensities of 1.84 inches in 1 hour and 0.67 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. No overflows occurred during this storm event.

Severe Natural Event (May 13, 2004)

During this event, the largest volume of rainfall recorded was 2.17 inches. Rainfall intensity of 0.49 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. One overflow totaling 20 gallons was reported during this storm event.

Severe Natural Event (June 1, 2004)

During this event, the largest volume of rainfall recorded was 2.69 inches. Rainfall intensities of 1.07 inches in 1 hour and 0.63 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. No overflows were reported during this storm event.

Severe Natural Event (June 14, 2004)

During this event, the largest volume of rainfall recorded was 3.49 inches. Rainfall intensities of 2.10 inches in 1 hour and 0.84 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. Five (5) overflows totaling 5,800 gallons were attributed to this storm event.

Severe Natural Event (June 15, 2004)

During this event, the largest volume of rainfall recorded was 3.54 inches. Rainfall intensities of 1.16 inches in 1 hour and 0.7 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. Elevated flows resulting from the previous day's severe natural event resulted in 10 overflows totaling 38,125 gallons.

Severe Natural Event (June 18, 2004)

During this event, the largest volume of rainfall recorded was 3.24 inches. Rainfall intensities of 2.99 inches in 1 hour and 1.25 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. No overflows were reported during this rain event.

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**3. Legal Support Programs for Sewer System and Wastewater Treatment Facilities
(CD Paragraph 22)****3.1 Ordinance Program**

In 2002, the Board submitted information to the EPA demonstrating that ordinances would not be necessary to implement the following programs: the Short-Term Capacity Assurance Program; the SSO Reporting; Notification, and Record Keeping Program; and the Water Quality Monitoring Program. An ordinance was necessary to implement the Grease Control Program. The ordinance requiring septage and grease haulers to maintain manifests documenting proper disposal methods and locations was passed by the Mobile City Council on November 26, 2002.

3.2 Grease Control Program**3.2.1 Program Development**

The Grease Control Program, developed by Thompson Engineering, was submitted to the EPA for approval on May 29, 2002. On September 17, 2002, the EPA provided conditional approval of the Board's Grease Control Program. A response to the EPA's comments was submitted on September 27, 2002. The response identified changes to the original program submitted to the EPA to address the concerns of the EPA and the Alabama Restaurant Association.

3.2.2 Program Implementation

The Board continues to initiate grease control contracts with food service facilities (FSFs). Through June 30, 2004, a total of 1018 contracts were mailed. 432 FSFs have been removed from the program because investigations by MAWSS staff determined that these facilities did not prepare food on site, changed ownership, or closed since the contract was mailed. 586 FSFs remain in the program and have returned signed contracts.

3.3 Maintenance of Adequate Legal Staff

The Board continues to retain the law firm of Atchison, Crosby, Saad, and Beebe to assist the Board in interpreting and fulfilling the obligations under the CD. The firm has adequate resources and personnel to meet the needs of the Board in this regard.

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4. Contingency Plan for Sewer Systems and Wastewater Treatment Facilities (CD Paragraph 23)**4.1 Wastewater Collection and Transmission Systems****4.1.1 Program Development**

The *Contingency Plan for Wastewater Collection and Transmission Systems* was submitted for EPA approval on July 31, 2002. In addition to the Contingency Plan described above, the *Contingency Plan for Eslava Creek, Halls Mill, and Virginia Street Lift Stations and Force Mains* was also submitted for EPA approval on July 31, 2002. This program provides contingency planning for the Board's three primary lift stations.

4.1.2 Program Implementation**4.1.2.1 Preparedness Committee**

The Assistant Director meets each week with engineering and the appropriate operations staff to discuss any unpermitted discharges, including those resulting from severe natural events, that occurred in the previous week. Performance of the wastewater systems and staff are reviewed to decide a course of action that will focus on preventing the unpermitted discharges in the future. The resulting actions may include repairs, preventive maintenance, further investigation of the cause, re-assessment of I/I investigation locations, and/or changes in operations procedures including how we respond to emergency situations.

4.1.2.2 Capital Improvements

A number of capital improvements have been completed to eliminate or minimize collection and transmission failures during emergencies and severe natural events. Ongoing improvements are presented below. Scheduled completion dates are in parentheses.

SCADA and VFD critical spare parts storage (December 31, 2002)

Critical spare parts for SCADA and VFD are in inventory at the Board. MAWSS has received the Channel Monster and two hydraulic units for spares at Eslava Creek and Virginia Street Lift Stations.

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Inventory 48" and 36" force main repair sleeves (March 31, 2003)

MAWSS has received 24-inch, 36-inch, 48-inch, and 60-inch repair sleeves for the force main repair inventory.

Relocate Aerial Lighting at Eslava Pump Station (March 31, 2003)

On January 17, 2003, TC Broome was awarded the contract to relocate the aerial lighting at the pump station. This work was completed on schedule.

Feasibility Study to evaluate on-site wastewater storage at the three primary pump stations (June 30, 2003)

A feasibility study for the storage of wastewater at the Halls Mill, Eslava Creek, and Virginia Street Lift Stations concluded that the cost of constructing adequate containment far exceeds the benefit of such an endeavor. The risk of a catastrophic failure of one of the aforementioned stations or the PCCP force main is minimal.

Coupons taken from the wall of the PCCP force main indicate that it is in good condition. The coating of the PCCP where it is exposed above ground is complete. Three additional locations are being tapped on the force main to inspect the wall of the pipe and to install air release valves. All field work and investigations regarding transient flows in the force main are complete. The report on transient flows is currently under review. Repairs to the pile bents supporting the force main creek crossings were bid on May 3, 2004 and awarded to Rohland Pugh, Inc. The contractor is awaiting CSX railroad to approve working on CSX property.

A draft version of a long-term operations and maintenance manual for the PCCP force main to minimize the risk of failure is under review. The Board is taking steps to further decrease the risk of lift station failure by installing standby pumps, adding generating capacity, by-pass piping, and other upgrades to the three lift stations. The Virginia Street Lift Station upgrades are complete. The Halls Mill Lift Station Upgrades are under construction. The Eslava Creek Lift Station upgrades are under design and will be bid on August 16, 2004 and completed by May 31, 2005.

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MAWSS Communications Center (September 30, 2002)

A Contingency Plan was developed for the MAWSS Communications Center to ensure that the communication process remains active during a hurricane or major failure of the wastewater system. The plan details the preparation and implementation of alternative work processes in the event of system failures of varying severity.

Installation of Automatic Vehicle Locating (AVL) System (December 31, 2003)

AVL units have been installed in vehicles and are linked to a computer and display screen in the Dispatch Center. During the past quarter, 3 additional units were installed bringing the total number of vehicles equipped with AVL to 127.

Install Fourth Pump at Virginia Street Pump Station (December 31, 2003)

Under this project, four Flygt dry pit submersible pumps, a Caterpillar standby generator, two Channel Monster sewage grinders, a Bristol Babcock RTU and new bypass piping were installed. The station was placed into operation on December 13, 2003.

Halls Mill Creek and Eslava Creek Pump Station Contingency Projects (July 1, 2005)

The Halls Mill Creek Lift Station upgrades are under construction. The Eslava Creek Lift Station upgrades will bid on August 16, 2004.

Installation of emergency backup for pumps greater than 15 horsepower (December 31, 2005)

A project to install auxiliary diesel pumps for five lift stations was recently completed. Design is underway for the installation of eight more auxiliary pumps or generators. The previous plan to install emergency backup equipment at all pump stations greater than 15 horsepower (HP) is being re-evaluated. Two stations with 15 HP motors do not warrant auxiliary power. The IP Lift Station flow is less than 1,000 gpd due to the closing of the IP Plant. The QMS Lift Station will receive a generator quick connect. This station has a history of vandalism and, therefore, a permanent generator would

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be at risk. The re-evaluation of the plan has also found that four stations with motors less than 15 HP receive higher flows and may be added to the program.

4.2 Wastewater Treatment Plants

The *Operations Contingency Plan for WWTPs* was submitted for EPA approval on July 31, 2002.

4.3 Preparedness Training Program

Each week the Assistant Director meets with engineering and operations staff to discuss any unpermitted discharges, including those resulting from severe natural events. The performance of the wastewater systems and staff are reviewed to determine if procedures need to be created or modified to address deficiencies. Employees are then trained on the new or revised procedures.

5. Pump Station Operation Program (CD Paragraph 24)

The *Pump Station Operation Program* was submitted to the EPA on July 31, 2002.

5.1 Scheduled Pump Station Operation Program

The Pump Station Operation Program is being used to track operation schedules, priorities, record keeping forms, and performance measures. A new computer program is being used to generate work orders based on lift station run times.

The program to upgrade the pump station SCADA systems is complete. Further information regarding the status of this project can be found in Section 8.1 of this report.

5.2 Emergency Pump Station Operation Program

The Emergency Pump Station Operation Program was incorporated in the overall Pump Station Operation Program identified above.

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6. Corrosion Control Program (CD Paragraph 25)

6.1 Program Development

The Corrosion Control Program was submitted to the EPA on July 31, 2002. The program emphasizes field investigations by Montgomery Watson Harza (MWH) and modifications to the Board's standard specifications and pretreatment program.

6.2 Program Implementation

Several tasks identified in the Corrosion Control program are currently being implemented.

Reduction of Industrial Loads

All industries currently under contract have submitted information regarding yard piping diagrams, a list of corrosive compounds, their storage, and the possible use of alternative compounds. Chlorine loadings from industries are limited through the industrial pretreatment program to ensure chloride concentrations within the collection systems remain below 500 mg/l. The Board has determined that the primary contributors to hydrogen sulfide induced corrosion are long force mains rather than particular industries. This type of corrosion will be addressed by the Board and industries found to contribute sulfides to these locations will either be charged an equitable share of the treatment or will be required to install their own hydrogen sulfide treatment system.

Chemical Addition

A contaminated tank holding 50 percent hydrogen peroxide at the Columbus Street Lift Station became unstable and resulted in the evacuation of approximately 30 homes as a precautionary measure. As a result of the incident, hydrogen peroxide has been removed from six lift stations. Two other stations continue to use ferric chloride for odor and corrosion control. The Board is currently pursuing the use of US Filter's Bioxide as an alternative means to address odor and corrosion at the six lift stations.

The Board is contemplating installing a biofilter for the Eslava Creek Lift Station to control odors.

Monitoring and Preventive Maintenance

Work is ongoing to monitor lift station hot spots for H₂S and odors.

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7. Grease Control Program (CD Paragraph 26)

7.1 Program Development

The Grease Control Program was submitted to the EPA on May 29, 2002. The EPA provided conditional approval on September 17, 2002.

7.2 Program Implementation

During the second quarter of 2004, 31 FSFs were visited (initial visit) to review grease trap size requirements and provide training in grease disposal. Since the start of the program, 534 initial visits have been completed.

After the initial visit, FSFs are required to submit action plans that provide details and a schedule for addressing undersized grease traps. Three (3) action plans were approved this past quarter.

During the quarter, the Pretreatment Department inspected 367 FSFs for compliance. Thirty-nine (39) of these facilities were in violation of the Grease Control Program and received fines totaling \$8,600. Also, during the quarter, 15 facilities placed on monthly compliance sampling had sample results greater than the 200 mg/l limit. Fines resulting from sampling totaled \$3,000.

Distribution of a revised Grease Control Program Manual began in mid-March. A total of 395 manuals were delivered by the end of the quarter.

Initial visits for churches, schools, and daycare facilities should begin during the third quarter of 2004.

The Grease Control Program has been expanded to include placing door hangers in areas where video inspection of the sanitary sewer indicates grease control education is needed.

7.3 Grease Control Compliance Table

The Grease Control Compliance Table can be found on the MAWSS website at www.mawss.com/consentdecreedocs.htm. The table lists FSFs under contract, the dates of the initial visits, required grease trap size, actual grease trap size, and enforcement actions. The dates on which FSFs are inspected are not included in the table unless there is an enforcement action taken.

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8. Pump Station Preventative Maintenance Program (CD Paragraph 27)**8.1 Short-Term Pump Station Certification**

Montgomery Watson Harza completed the evaluation of 116 lift stations as required in the CD. The findings are presented in the *Inspection and Evaluation of Lift Stations* report. The evaluation report was submitted to the EPA on April 29, 2002 with the required certification and a schedule for addressing the recommendations made by MWH.

The recommendations were incorporated into a Lift Station Action Plan. Tasks to address the recommendations were grouped according to priority rating. Several of the tasks have previously been completed. Ongoing tasks are presented below. Scheduled completion dates are in parentheses.

Clean Lift Stations (July 15, 2002)

MAWSS staff continues to clean lift stations. The lift station cleaning schedule is being revised to reflect reductions in grease and debris entering the stations. A combination cleaning truck is being purchased by the Board to facilitate lift station cleaning. During the past quarter, 44 lift stations were cleaned.

SCADA System Upgrades (July 31, 2003)

The project was substantially completed on July 10, 2003. The Board has approved final acceptance of the project following the contractor's resolution of computer related issues.

Consultant Category 3 Priority Tasks (December 31, 2002)

Consultant Category 3 Priority Tasks that are of an electrical nature were completed under the same project for Category 4 tasks mentioned above. With the exception of Halls Mill, Eslava, and Virginia Street Lift Stations, wet well lining work was completed by August 2003. Wet well lining work at the Virginia Street Lift Station was completed in addition to other upgrade work in the fourth quarter of 2003.

Halls Mill Creek Lift Station upgrades are under construction and will address Category 3 Priority Tasks. The new 1500 KW generator and 4,000 gallon fuel tank has been installed. The expansion of the electrical control building has been completed and electrical switchgear is currently being installed.

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The Eslava Creek Lift Station Category 3 Priority Tasks will be addressed as part of a project to upgrade the station. The Eslava Creek Lift Station renovations project will bid on August 16, 2004. Completion is expected no later than May 31, 2005.

Consultant Category 2 Priority Tasks (revised December 31, 2006)

Consultant Category 2 Priority Tasks involves building removal and major lift station renovations to thirteen stations. The renovations include improvements to access for maintenance and installation of electromagnetic flow meters and bypass quick connections in the force mains. On May 22, 2003, the Board requested approval to extend the deadline for renovations to April 30, 2005. Four of these were completed by the end of 2003. The request stated that five more stations would be renovated in 2004 and that the remaining four would be completed in 2005.

It has been determined that flows to the Eslava Creek Lift Station can be reduced by rerouting the force main of the Faye Lane Lift Station (FLLS). The FLLS force main currently discharges to a manhole just upstream of the Eslava Creek Lift Station. By rerouting the FLLS force main discharge to the Halls Mill and Eslava 36-inch/48-inch force main, as much as 4 MGD can be removed from the Eslava Creek Lift Station during heavy rain events. The removal of this flow will give the Eslava Creek Lift Station more capacity for flows in the Eslava Creek Interceptors.

The pumps at the FLLS will require upgrades to accommodate the rerouting of the force main. Consequently, a general renovation of the station is required. The estimated cost to make the aforementioned changes to the FLLS and force main is \$433,000.

The FLLS is not one of the nine lift stations that were scheduled for renovations in 2004 and 2005. However, the Board believes that FLLS has priority due to the wet weather related overflows occurring in the Eslava Creek basin.

To complete FLLS renovations, the Board has requested the EPA approve diverting funds from four of the five lift stations initially scheduled for 2004. The four stations not completed in 2004 will be completed in 2005 in addition to the four lift stations previously scheduled for 2005.

In-House Category 1 Priority Tasks (December 31, 2004)

In-House Category 1 Priority Tasks include less critical improvements to lift station devices. This work includes installation of safety hatches as well as minor electrical

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work. The 12 safety hatches requisitioned in the first quarter of 2004 have been installed. To date, a total of 28 safety hatches have been installed.

Consultant Category 1 Priority Tasks (December 31, 2004)

Category 1 Priority tasks with the exception of lift station lighting are complete. Lift station lighting will be addressed in the second half of 2004.

Florida Street Lift Station Relocation (March 31, 2003)

Renovations to the Florida Street Lift Station are complete and the station is in operation. The force main from this lift station was cleaned in the fourth quarter of 2003. All recommendations associated with the Florida Street Lift Station were addressed through the renovations.

Kerr McGee Lift Station Replacement (August 31, 2003 revised)

The Board experienced delays in acquiring property for the Kerr McGee Lift Station Replacement Project. As a result of the delays, the Board requested an extension of the completion date to August 31, 2003. The project was completed by the revised deadline.

The new lift station transmits the majority of industrial flows in the Theodore Basin directly to the Halls Mill Lift Station. As a result, flows in the 24-inch Coca-Cola interceptor sewer decreased by 750,000 gpd, substantially reducing demands on smaller lift stations in the area.

Halls Mill, Eslava, and Virginia Street Lift Station Upgrade Schedule (July 1, 2005)

The schedule for upgrades of these lift stations was presented in the Pump Station Maintenance Program submitted to the EPA in August 2002. The Virginia Street Lift Station renovations were completed at the end of 2003. On September 25, 2003, the Board sent a letter to the EPA outlining the proposal to swap the schedule of the Eslava and Halls Mill Lift Station upgrades in order to complete the Halls Mill Lift Station upgrades in 2004. As stated previously, upgrades to the Halls Mill Lift Station are underway. The Eslava Creek Lift Station upgrades will be bid on August 16, 2004 and completed by May 31, 2005.

8.2 Electrical Maintenance Program

Procedures for maintenance of electrical components have been developed and were included in the *Pump Station Preventative Maintenance Program* submitted to the EPA

SECTION II: PERFORMANCE OF CONSENT DECREE WORK

for approval on July 31, 2002. A database to track the performance of electrical maintenance is complete and in use.

8.3 Mechanical Maintenance Program

Procedures for maintenance of mechanical components have been developed and were also included in the *Pump Station Preventative Maintenance Program* submitted on July 31, 2002. A database to track the performance of mechanical maintenance is complete and in use.

9. Force Main Preventative Maintenance Program (CD Paragraph 28)

Development of the *Force Main Preventative Maintenance Program* was submitted to the EPA for approval on July 31, 2002.

9.1 Air Release Valve Maintenance Program

The Air Release Valve Maintenance Program has been developed. The program identifies the necessary personnel and equipment, documents procedures, and identifies maintenance performance measures. Air release valves (ARVs) have been identified on 24 force mains. During the past quarter, ARV's installed on 22 force mains were inspected to determine if they are operational. Eight (8) of these valves were repaired.

9.2 Valve Exercise Program

The Valve Exercise Program was developed to establish scheduling and procedures for the routine exercise of force main gate valves. The valve on the Halls Mill Lift Station force main has been located and excavated and is accessible for operation. Valves have been identified at 183 lift stations. During the past quarter, valves were exercised at 64 of these lift stations.

MAWSS ordered air release valves and manhole assemblies for installation on the Halls Mill and Eslava Lift Station force mains. Four air release valves have been installed on the Halls Mill Lift Station force main and two have been installed on the Eslava Lift Station force main. MAWSS is currently reviewing the results of a transient flow study on the 36-inch/48-inch PCCP Halls Mill and Eslava Lift Station force main. Additional

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installations or modifications of ARVs will be made once review of the report is completed.

9.3 Program Implementation

Several tasks identified in the Force Main Preventative Maintenance Program are complete. Ongoing tasks are presented below with scheduled completion dates in parentheses.

Force Main Inventory (December 31, 2003)

All force mains were located by the end of 2003. The wooded easements for force mains were cleared. Force main materials, sizes, locations, lengths, and age were determined in the inventory.

Initial inspection and maintenance of force mains (December 31, 2004)

All force mains have been visually inspected from above ground to determine if any leakage from the force mains was evident. No leakage was identified. Walking the force mains to inspect for leaks will be a maintenance item performed at least once each year.

The 36-inch/48-inch Halls Mill Creek and Eslava Creek Lift Stations force main and the Pinto Island lift Station force main, which passes under Mobile River, have been identified as the force mains with the most critical needs for maintenance and/or replacement.

The Halls Mill and Eslava Lift Stations force main is constructed of pre-stressed concrete pipe and has been extensively evaluated to determine its condition. All pipe joints exposed above ground have been sounded and repaired where necessary. All pipe exposed above ground has been coated for protection. A long line close interval survey of the force main was performed by Allied Corrosion to determine if any of the reinforcing steel or end rings of the pipe were exposed to soil. No such defects were found. Coupons were taken from the pipe at strategic locations to inspect the inner wall of the pipe and determine if deterioration from hydrogen sulfide corrosion was significant. Coupons pulled earlier in the year indicated no significant corrosion is present. Recent coupons were pulled at locations where air release valves will be installed. Those coupons are being evaluated. Bridge inspection of pilings supporting the force main at Eslava Creek, Baker Street, and Yeend Street was completed. A contract is underway to

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repair and replace pilings where needed. A transient flow study was completed to identify how to protect the force main from water hammer. The recommendations of that study are currently being reviewed. Additional air release valves may be installed as recommended in the transient flow report.

The Pinto Island force main will be replaced because a bulkhead on the east side of Mobile River where the force main rises at the river bank has been damaged repeatedly by barges and/or ships. A project to replace the force main was bid in May 2004. The new force main will be directionally drilled HDPE pipe and rise far enough away from the river bank that no bulkhead will be necessary to protect it.

Evaluations of other force mains by reviewing inventory data and head loss characteristics are underway to determine maintenance needs and priority. The evaluations will be completed by the end of 2004.

10. Gravity Line Preventative Maintenance Program (CD Paragraph 29)

10.1 Program Development

Development of the Gravity Line Preventative Maintenance Program was submitted to the EPA for approval on July 31, 2002.

10.2 Program Implementation

During the past quarter, MAWSS cleaned approximately 292,363 feet of gravity sewer and conducted television inspection on approximately 199,246 feet of pipe.

Inframatrix, Inc. is performing a pilot study to video inspect approximately 50,000 LF of sewer from within manholes. Inframatrix uses a special camera with very bright lighting and substantial zoom capabilities to video inspect pipe. The purpose of the pilot is to determine if this technology is an effective means to quickly assess the condition of sewer lines that are 12 inches in diameter and larger.

The Board recently approved the purchase of hardware and software to upgrade its VHS-based sewer video program to digital format. The videos will be recorded digitally and downloaded to a network server database via wireless communications. The network will make videos readily accessible to all departments that need the information. Also, the

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videos will be linked to the sanitary sewer GIS. Overall management of video information will be improved by this new system.

Further information regarding the cleaning and video inspection of the collection systems can be found in Appendix A-1: *Analysis of Wastewater Collection and Transmission Systems and WWTFs*.

11. Maintenance of Rights-of-Way Program (CD Paragraph 30)

11.1 Program Development

The Maintenance of Rights-of-Way Program has been implemented since 2001. Program documentation was submitted to the EPA for approval on July 31, 2002.

11.2 Program Implementation

Contracts to complete grass cutting at the treatment plants, lift stations, and other facilities have expired. New contracts for this work were recently bid. Currently, the MAWSS Grounds and Maintenance Department is maintaining these facilities.

Gravity Sewer Easements

The Grounds and Maintenance Department continue to maintain easements over gravity sewer lines. During the second quarter of 2004, approximately 162,540 feet was re-cleared. During the course of this work, 6 gravity sewer defects were identified. These defects have been photographed and assigned to the wastewater repair department for repair. MAWSS is reviewing the use of herbicides for easement maintenance.

Force Main Easements

All force main easements are currently cleared. No re-clearing work was conducted during the past quarter.

Confirm Sewer Line Stream Crossings

Following development of the GIS for the collection systems, GPS features collected in the field were overlaid with the previously developed hydrology layer to create a map layer of stream crossings. Presently, 2,509 stream crossing have been identified in the GIS. Field verification of each crossing has not occurred. Visual inspections of stream

SECTION II: PERFORMANCE OF CONSENT DECREE WORK

crossings are made by MAWSS' easement clearing forces. Any sewer defects that are visible above ground are identified for repair.

12. Unscheduled Maintenance Program (CD Paragraph 31)**12.1 Program Development**

The Board submitted the Unscheduled Maintenance Program to the EPA for approval on February 28, 2003. The Program documents the process for receiving and responding to customer complaints.

13. Coordination with the City of Mobile and Other Governmental Bodies (CD Paragraph 32)**13.1 Program Development**

A report detailing the coordination responsibilities and activities relating to City, County, and State personnel was submitted to the EPA for approval on July 31, 2002.

13.2 Program Implementation

The Board continues to coordinate Right of Way (ROW) activities with the City. The Board's Mapping and Connections Department was moved under the Planning and Engineering Manager so that all new water and sewer projects could be tracked by one department and coordinated as necessary with the City, County, or State. The Board's construction inspectors and ROW representative to the City also work under the Planning and Engineering Manager. Additionally, a database application ensures sewer repair projects are properly permitted and completed within the permit schedule. The Board has personnel raising manholes in city street resurfacing projects.

**SECTION III: WATER QUALITY MONITORING
(CD CHAPTER IX)**

SECTION III: WATER QUALITY MONITORING

1. Establishing a Plan (CD Paragraph 33)

1.1 Program Development

The *Water Quality Monitoring Program* report was submitted to the EPA on February 28, 2002. Comments regarding the program were received from the EPA on May 30, 2002. MAWSS submitted responses to these comments on June 27, 2002. On December 19, 2003 the EPA accepted the responses and approved the program.

1.2 Program Implementation

The Water Quality Monitoring Program is fully implemented

A web-based data archive for the Water Quality Monitoring Program has been developed by Barry Vittor & Associates, Inc. (BVA) to present data summaries and to facilitate the downloading of monitoring data.

The data along with a map of sampling locations can be accessed through both the MAWSS website at www.mawss.com/consentdecreedocs.htm and the Barry Vittor & Associates, Inc. website at www.bvaenviro.com. Monitoring data is provided and summarized on a monthly basis.

2. Routine Water Quality Monitoring (CD Paragraph 34)

2.1 Program Development

The procedures for routine water quality monitoring of the Halls Mill, Eslava, Three Mile, Eight Mile, Ziebach, and Muddy Creek drainage basins were included in the *Water Quality Monitoring Program* report.

2.2 Program Implementation

Barry Vittor and Associates, Inc. (BVA) is continuing the biweekly, routine water quality monitoring which was initiated in June 2003. Routine water quality monitoring is currently being conducted at 25 monitoring stations. At each station, water samples for fecal coliform bacteria determination are collected. Additionally, the following water quality parameters are measured using a YSI Multiprobe: Temperature (°C), Dissolved Oxygen (mg/l), Percent Dissolved Oxygen Saturation (%), Salinity (ppt), and pH. Any

SECTION III: WATER QUALITY MONITORING

station identified by BVA with consistently elevated fecal coliform concentrations will be investigated by MAWSS.

Dry background monitoring was completed on October 29, 2003. The data indicated considerable variation in fecal coliform concentrations among the 25 monitoring stations. Station 16 in the Halls Mill drainage had consistently higher fecal coliform counts than other stations in the drainage basin. Investigations in the area conducted by MAWSS found a damaged pipe that was subsequently repaired. BVA is reviewing recent sampling from Station 16 to determine if the repairs have impacted fecal coliform concentrations.

Any coliform datum collected from a station during routine (biweekly) monitoring which exceeds the 75th quartile is flagged for further investigative monitoring as set out in the *Water Quality Monitoring Program*. If, after up to three days of monitoring, the fecal coliform concentrations do not return to background, MAWSS is notified by BVA to investigate the potential problem. BVA will also contact MAWSS when above threshold data are encountered to see if they can be explained by an SSO or other localized spill event. The data collected to date is presented on both the MAWSS website and BVA's website.

Wet background monitoring was completed on June 15, 2004. All 25 stations were sampled four times over a 24 hour period during a major storm event. The wet background data indicated considerable variation in fecal coliform concentrations among the 25 monitoring stations. All 25 monitoring stations exhibited increased levels of fecal coliform concentrations compared to dry background levels. This could indicate a natural build-up during dry conditions, which is washed into streams during rain events. BVA and MAWSS are contemplating how to test this theory.

BVA has recommended that routine monitoring should not be conducted during or immediately (next day) following rain events. The wet background data indicates that fecal coliform concentrations are not a reliable indicator of unpermitted discharges. BVA has recommended that routine monitoring be conducted two days after a rain event, after initial stream flushing has occurred. This will avoid triggering unnecessary follow-up investigative monitoring based upon data not representative of actual background conditions.

SECTION III: WATER QUALITY MONITORING

3. Investigative Water Quality Monitoring (CD Paragraph 35)

3.1 Program Development

Investigative water quality monitoring procedures to determine the source of pollution indicated by public complaints or the Routine Water Quality Monitoring Program were included in the *Water Quality Monitoring Program* report.

3.2 Program Implementation

Dye testing of the Three Mile Basin Interceptor was completed in March 2004. It was determined that there were no apparent leaks in the 18-inch or greater trunk lines during dye testing. A full report on the dye testing of the Three Mile Basin Interceptor can be found on both the MAWSS and BVA web sites.

The Eslava Basin was divided into two sections due to its configuration. Dye testing of the 18-inch or greater trunk lines in west section of the Eslava Basin was completed in April 2004. The results indicated a leak in this area. MAWSS was already aware of the leak and was actively repairing the problem at the time of the dye testing. Follow-up dye testing conducted after the repairs were completed confirmed the source of the leak was repaired. This report will be available at both the MAWSS and BVA web sites.

Dye testing of the 15-inch or greater trunk lines in East Section Eslava Basin was completed in June 2004. It was determined that there were no apparent leaks in the 15-inch or greater trunk lines during dye testing. This report will be available at both the MAWSS and BVA web sites. Dye testing of the Virginia Street trunk line will begin in August 2004.

4. Water Quality Monitoring for Spill Impact (CD Paragraph 34)

4.1 Program Development

Procedures for water quality monitoring to determine the impact of unpermitted discharges were included in the *Water Quality Monitoring Program* report.

SECTION III: WATER QUALITY MONITORING

4.2 Program Implementation

Water quality monitoring for spill impact began on February 1, 2004. Once a spill occurs, a spill assessment team of BVA and MAWSS personnel is immediately notified for rapid response to the spill site. If necessary, personnel from the Mobile County Health Department, ADEM, and the EPA are notified and/or consulted.

If the overflow enters waters and is of sufficient magnitude, the spill response team determines the number of downstream stations needed to characterize the spill (dependent on magnitude of spill, stream order and other physical parameters). Immediate water quality and fecal coliform sampling takes place at each station. A YSA Multiprobe is used to collect temperature, dissolved oxygen, percent dissolved oxygen saturation, pH, salinity, and conductivity data at each station.

The information collected during the site assessment will be evaluated to formulate a spill monitoring sampling plan. The spill monitoring plan will consist of further water quality monitoring to gauge the impacts to and recovery of the stream system to background levels. BVA has found that daily follow-up monitoring of spills is not necessary. It has been determined that most spills return to background levels within three to five days. Spill monitoring will now take place on day of the spill and on day five. If a spill does not return to background levels after five days, further monitoring would take place until background levels are reached. Spill assessment data collected during the past quarter can be found on the MAWSS website and BVA's website.

**SECTION IV: SUPPLEMENTAL ENVIRONMENTAL PROJECTS
(CONSENT DECREE CHAPTER X AND APPENDIX A)**

SECTION IV: SUPPLEMENTAL ENVIRONMENTAL PROJECTS

The Board has completed the requirements for all four of the Supplemental Environmental Projects.

1. SEP 1: Installation of New Private Residential Service Laterals in Low Income Areas within the Board's Service Area (CD Appendix A, Section I)

The Board has completed SEP 1. Lateral installations were completed on December 19, 2003. \$2,000,621.51 (present value) was spent towards the project. A total of 783 laterals were installed.

Ziebach Mini-Basin ZB09, Sub-Basin B (January 31, 2004)

As stated in Paragraph 1.1.2.2 of this status report, an additional \$78,650 was allocated to the replacement of a minimum of 39 service laterals in Ziebach Mini-Basin ZB09, Sub-Basin B. Forty service laterals were replaced at a cost of \$76,191.

2. SEP 2: Acquisition of Environmentally Valuable Habitat in Mobile County Through the Forever Wild Program (CD Appendix A, Section II)

A letter was received from the State of Alabama on May 6, 2002 requesting transfer of \$300,000 from the Board's escrow account to the Alabama Forever Wild Trust Fund for the purchase of property in Mobile County pursuant to SEP 2 requirements. On May 15, 2002, the US Department of Justice approved the disbursement. Subsequently, the funds were transferred. As a result, the Board has completed the requirements of SEP 2 as stipulated by Paragraph 41 of the CD.

3. SEP 3: Acquisition of Environmentally Valuable Habitat in Mobile County, with a Preference for Property within the Dog River Watershed Area (CD Appendix A, Section III)

MAWSS placed \$150,000 in an escrow account for the Alabama Forest Resources Center (AFRC) on January 25, 2002. On November 7, 2002 Mobile Bay Watch requested approval from the US Justice Department for disbursement of \$120,000 to the AFRC. On November 22, 2002, the US Justice Department approved the request. Subsequently, on November 27, 2002 the Board authorized Regions Bank to mail the payment to the AFRC.

SECTION IV: SUPPLEMENTAL ENVIRONMENTAL PROJECTS

On August 4, 2003, the Board transferred the remaining funds in the escrow account to the Alabama Forever Wild Land Trust Fund. As a result of this transfer, SEP 3 is considered complete.

4. SEP 4: Creation and Maintenance of a Publicly Available Database of Water Quality Monitoring in the Mobile Delta (CD Appendix A, Section IV)

On January 25, 2002 MAWSS deposited \$50,000 into an escrow account for this SEP. On February 2, 2004, MAWSS transferred funds in the amount of \$50,089.35 from the SEP 4 escrow account to Mobile Bay Watch. As a result of the transfer, SEP 4 is considered complete.

SECTION V: CIVIL PENALTIES
(CONSENT DECREE CHAPTER XI)

SECTION V: CIVIL PENALTIES

1. Penalties to the United States (CD Paragraph 53)

\$99,000 plus interest was electronically transferred from MAWSS to the US Justice Department on April 22, 2002 to fulfill the United States Civil Penalty requirements of the Consent Decree.

2. Penalties to the State of Alabama (CD Paragraph 53)

A certified check for \$15,000 plus interest was sent certified mail to the Alabama Attorney General's Office on April 22, 2002 to fulfill the State of Alabama Civil Penalty requirements of the Consent Decree.

**APPENDIX A-1: ANALYSIS OF WASTEWATER COLLECTION AND
TRANSMISSION SYSTEMS AND WWTFs**

APPENDIX A-1: ANALYSIS OF WASTEWATER COLLECTION AND TRANSMISSION SYSTEMS AND WWTFs

1. Introduction

The following semi-annual analysis of wastewater collection and transmission systems and wastewater treatment facilities meets the requirements set forth in Paragraph 23 of the CD.

2. Trends in Rehabilitation, Operation, and Maintenance

2.1 Gravity Line Maintenance

2.1.1 Hydraulic Cleaning

Over 775,000 linear feet (LF) of gravity sewer was cleaned since July 1, 2003. Of this total, 389,000 LF of gravity sewer was cleaned for the first time. Excluding repeat cleaning of lines, 37 percent of the entire collection system has been cleaned since implementation of the program in 2000. Figure 2.1.1-1 shows the amount of cleaning and video inspection completed during the past four quarters.

Cleaning activities have increased significantly every quarter since July 1, 2003. The increase in footage cleaned can be attributed to increased production from in-house forces. MAWSS is continuing to clean inverted siphons, sand traps, and overflow locations. Additional focus was placed on cleaning and televising pipe not previously televised or cleaned. In addition to work conducted by in-house crews, cleaning of large diameter trunk sewers by contractors significantly impacted capacity in areas. Hydraulic cleaning of 9,200 LF of the Eslava Creek Interceptor sewer, completed in March of 2004, removed over 550 tons of silt and debris.

APPENDIX A-1: ANALYSIS OF WASTEWATER COLLECTION AND TRANSMISSION SYSTEMS AND WWTFs

Figure 2.1.1-1: Footage of Gravity Sewer Cleaned and Televised

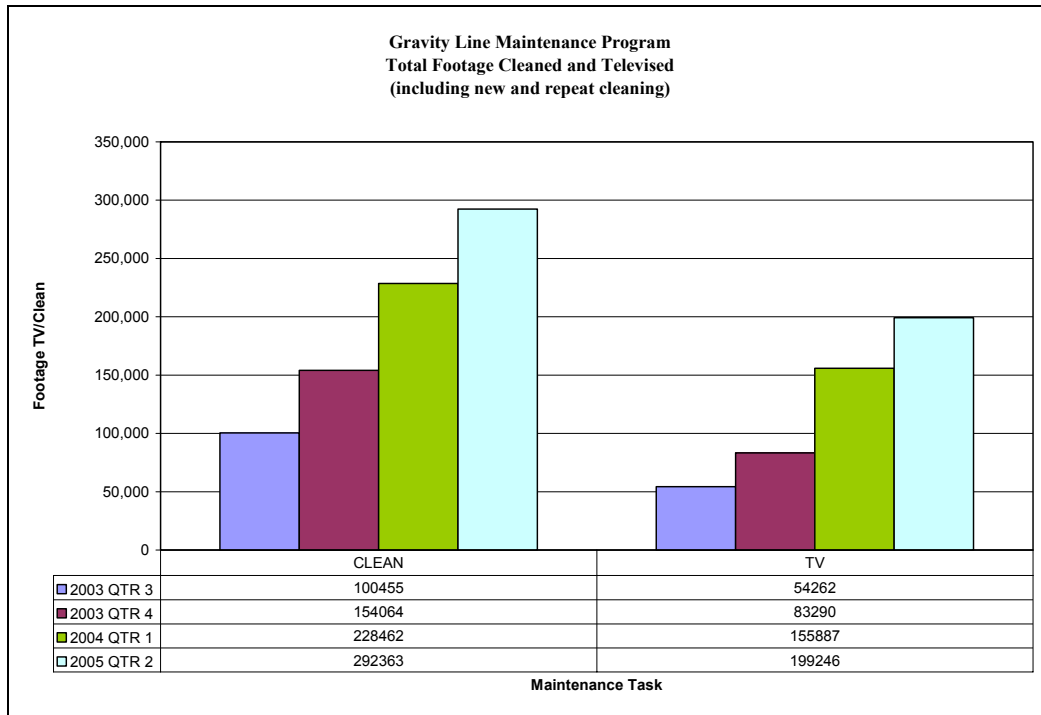
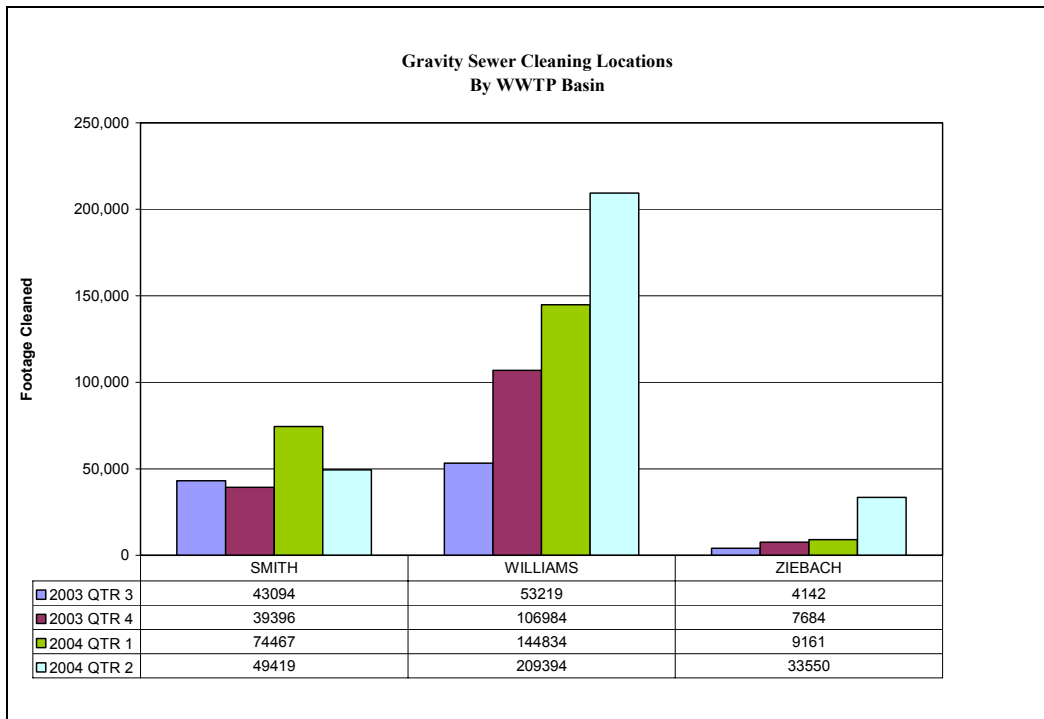


Figure 2.1.1-2 shows the distribution of cleaning efforts in each WWTP basin.

Figure 2.1.1-2: Location of Gravity Line Cleaning



APPENDIX A-1: ANALYSIS OF WASTEWATER COLLECTION AND TRANSMISSION SYSTEMS AND WWTFs

2.1.2 Closed Circuit Television Inspections

In addition to hydraulic cleaning, over 492,685 LF of gravity sewer was inspected by closed circuit TV in the past year. TV inspection activities followed the increasing quarterly trend of hydraulic cleaning (see Figure 2.1.1-1). Since implementation of the program, approximately 29 percent of the collection systems has been inspected by TV. As with the increase in the amount of hydraulic cleaning per basin, the increase in television inspection activities can be attributed to the increase production from in-house forces.

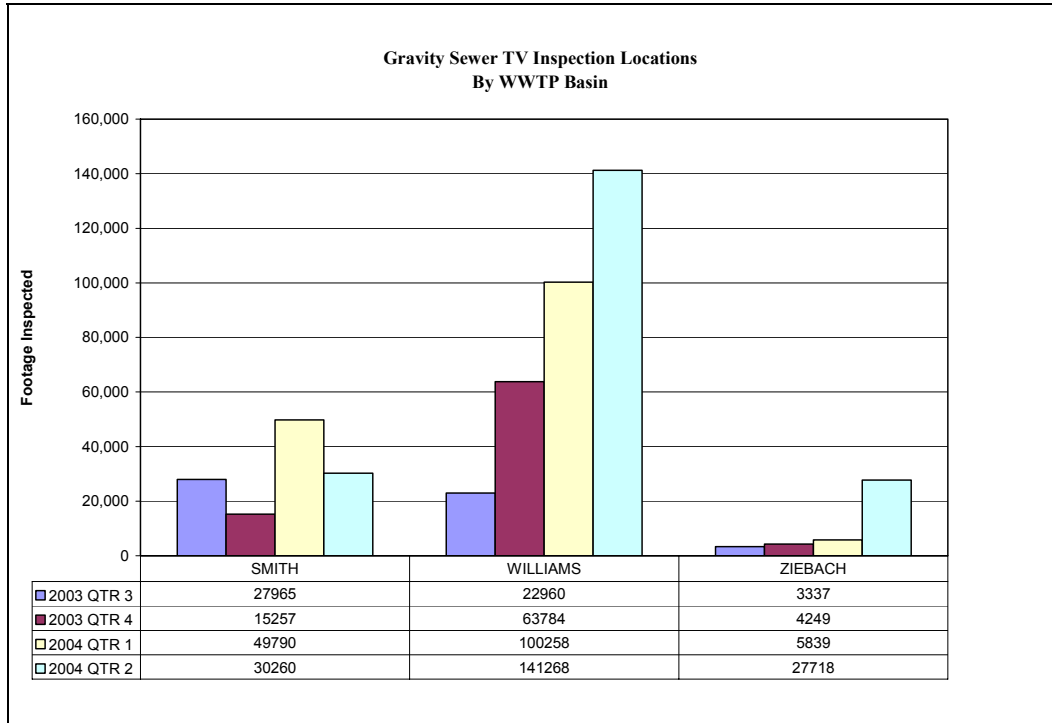
Inframatrix, Inc. is performing a pilot project for MAWSS that includes the video inspection of approximately 50,000 LF of sewer line. Inframatrix uses a special camera with very bright lighting and substantial zoom capabilities to video main lines from within manholes. The pilot project is being performed to determine if this technology is an effective means of quickly assessing sewer condition. The videos will be used to prioritize defects and identify whether cleaning and conventional in-line video inspection is required.

The Board recently approved the purchase of hardware and software to upgrade its VHS-based sewer video program to digital format. The new digital capabilities will allow sewer videos to be stored in a database on a network server. The videos will be recorded digitally and downloaded to the server via wireless communications. The network will make videos readily accessible to all departments that need the information. The videos will also be linked to the sanitary sewer GIS. Overall management of video information will be improved by this new system.

Figure 2.1.2-1 shows distribution of TV inspection activities in each WWTP basin.

APPENDIX A-1: ANALYSIS OF WASTEWATER COLLECTION AND TRANSMISSION SYSTEMS AND WWTFs

Figure 2.1.2-1: Location of Gravity Line TV Inspection



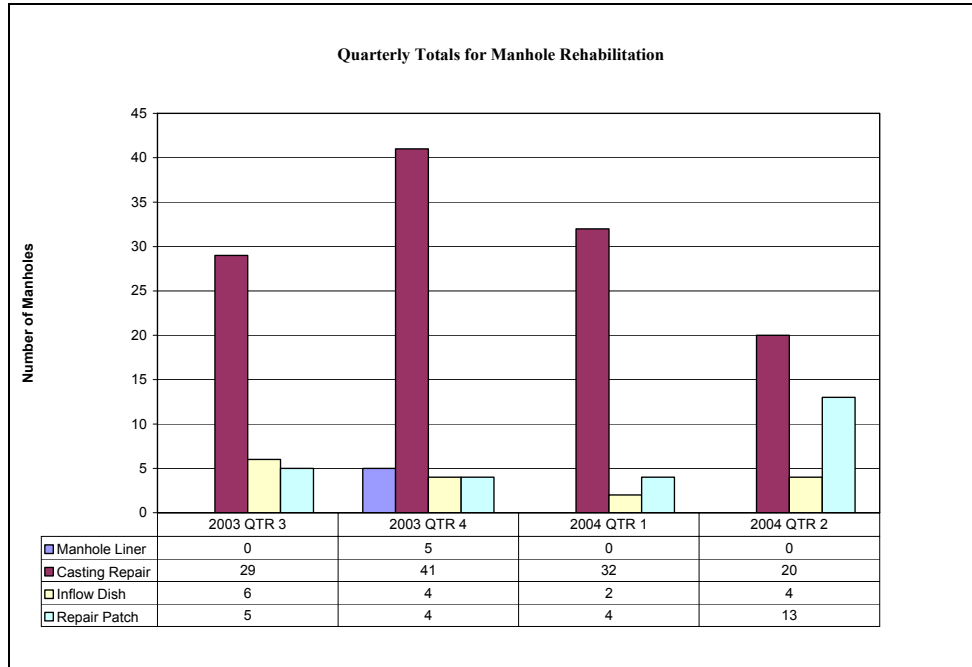
2.2 Collection System Rehabilitation

2.2.1 Manhole Rehabilitation

Manhole rehabilitation activities such as installation of inflow dishes, applying repair patches, and sealing or replacement of manhole castings are being completed by in-house personnel in order to address I/I sources. The Board has an annual contract for manhole repair and rehabilitation. Manhole rehabilitation will be performed by the contractor as needed. Figure 2.2.1-1 shows quarterly totals for manhole rehabilitation.

APPENDIX A-1: ANALYSIS OF WASTEWATER COLLECTION AND TRANSMISSION SYSTEMS AND WWTFs

Figure 2.2.1-1: Totals for Manhole Rehabilitation



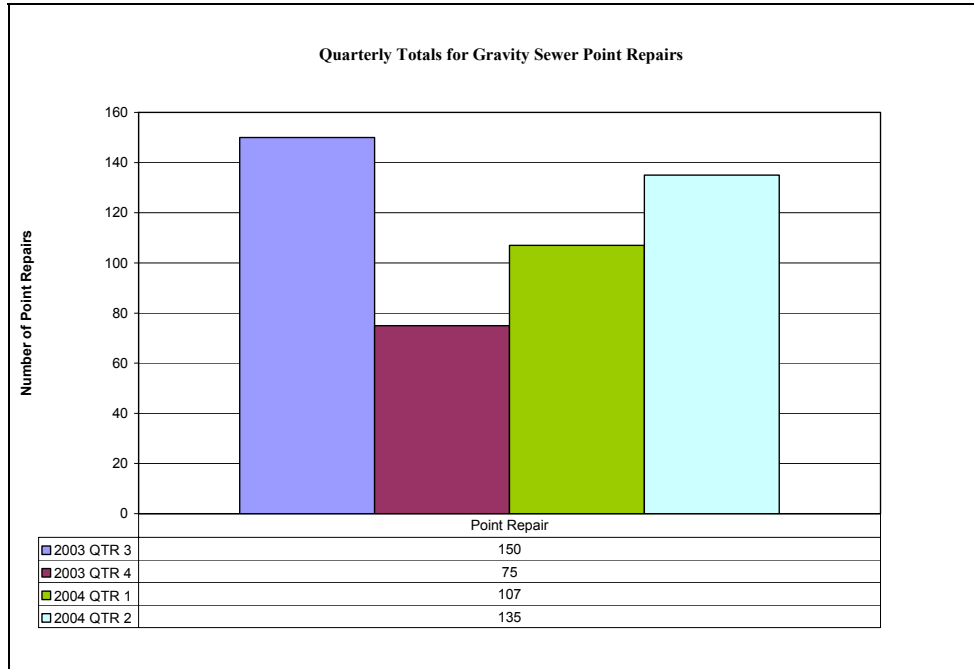
2.2.2 Gravity Sewer Rehabilitation

In January 2004, Suncoast Infrastructure, Inc. began a annual contract to install cured-in-place liners in gravity sewer lines. Since the beginning of 2004, over 6,000 LF of gravity sewer has been lined. In addition to this work, contractor and in-house crews have completed a significant number of point repairs. Correlating with the increase in video inspection activities, quarterly totals for point repairs have increased since the beginning of 2004.

Figure 2.2.2-1 shows quarter totals for point repairs completed by the annual contractor and in-house forces.

APPENDIX A-1: ANALYSIS OF WASTEWATER COLLECTION AND TRANSMISSION SYSTEMS AND WWTFs

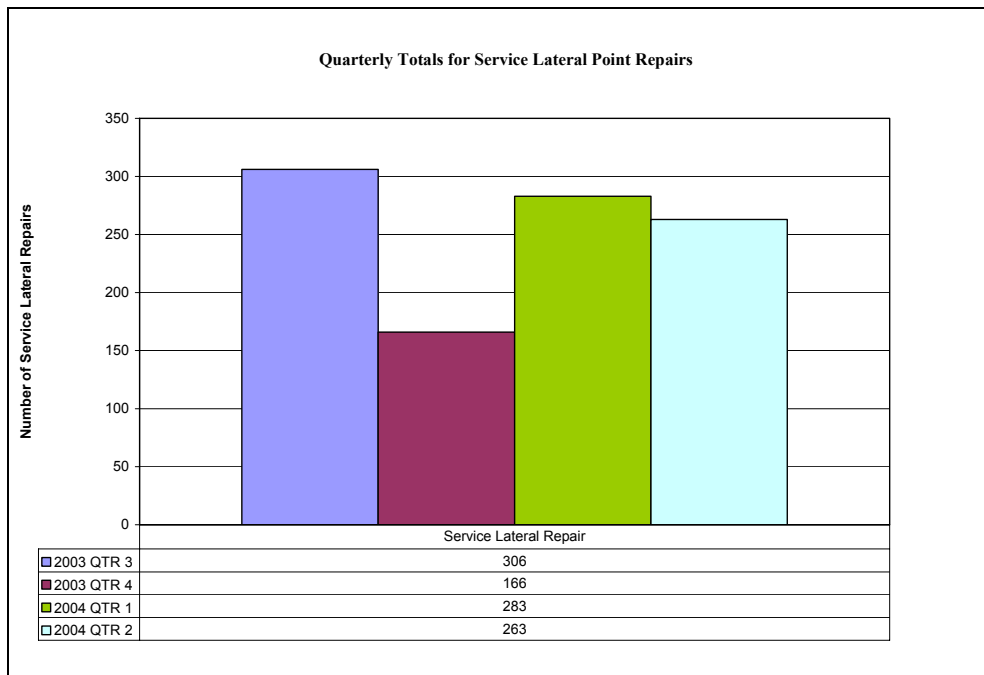
Figure 2.2.2-1: Totals Gravity Sewer Point Repairs



2.2.3 Service Lateral Rehabilitation

Numerous public service laterals were repaired by contractors and in-house forces. Figure 2.2.3-1 shows quarterly totals for public service lateral repairs.

Figure 2.2.3-1: Totals Service Lateral Repairs



APPENDIX A-1: ANALYSIS OF WASTEWATER COLLECTION AND TRANSMISSION SYSTEMS AND WWTFs

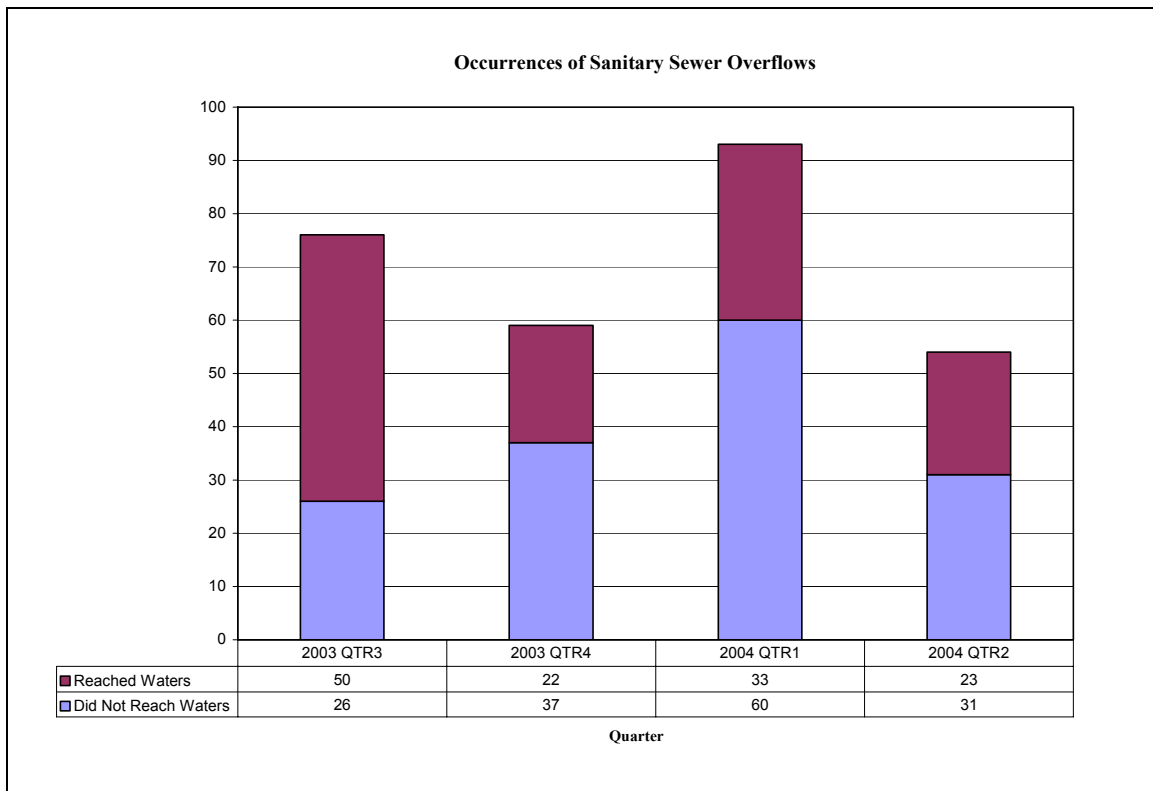
3. Analysis of Unpermitted Discharges and SSOs

3.1 Trend in Number of and Volume of Unpermitted Discharges and SSOs

A total of 282 overflows were reported over the past four quarters. This total is 51 fewer than the 333 overflows reported for the year in the previous semi-annual report. 128 of the overflows reported during the last four quarters were classified as Unpermitted Discharges, that is, reached waters of the State or United States. This total is 82 fewer than the total of Unpermitted Discharges reported in 2003 and 3 fewer than the total reported in 2002. Figure 3.1-1 shows quarterly overflow totals for the previous four quarters.

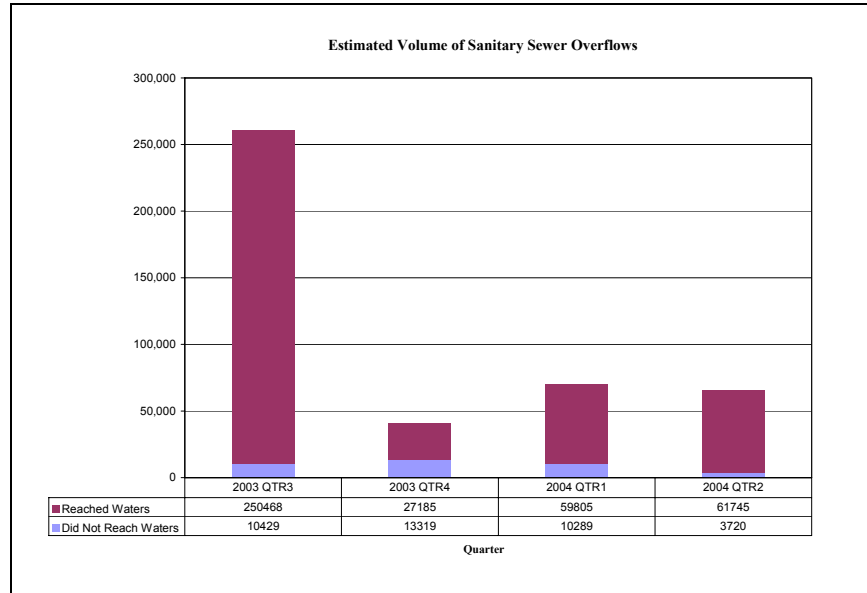
Figure 3.1-2 shows the quarterly total volumes of reported overflows during the last four quarters.

Figure 3.1-1: Trend in Number of Unpermitted Discharges and SSOs



APPENDIX A-1: ANALYSIS OF WASTEWATER COLLECTION AND TRANSMISSION SYSTEMS AND WWTFs

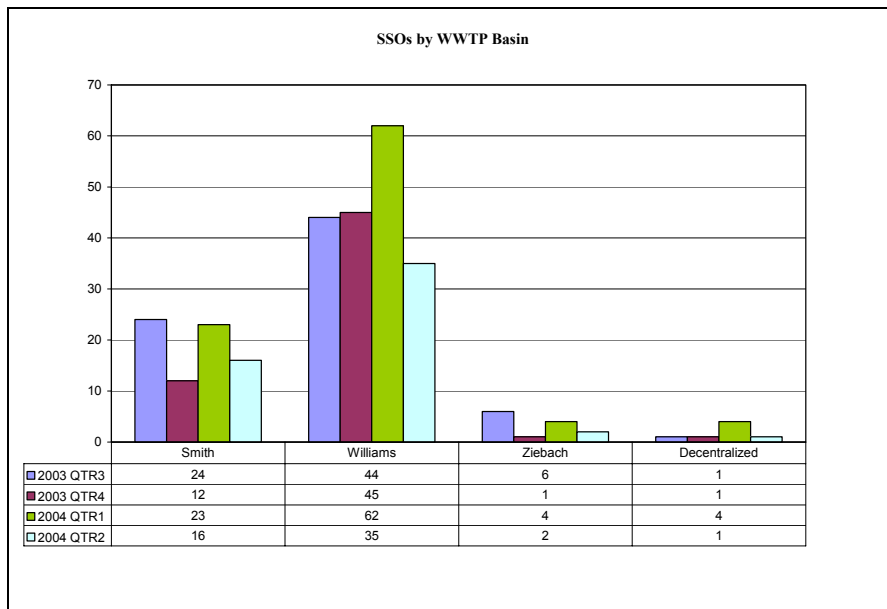
Figure 3.1-2: Trend in Volume of Unpermitted Discharges and SSOs



3.2 Trend in the Location of Unpermitted Discharges and Overflows

A quarterly total of SSOs per WWTP basin is provided below. An increase in overflows occurred in each basin during the first quarter of 2004. Other than the increase in overflows that occurred during this quarter, overflows within each basin appear to display a downward trend.

Figure 3.2-1: Trend in Location of Unpermitted Discharges and SSOs

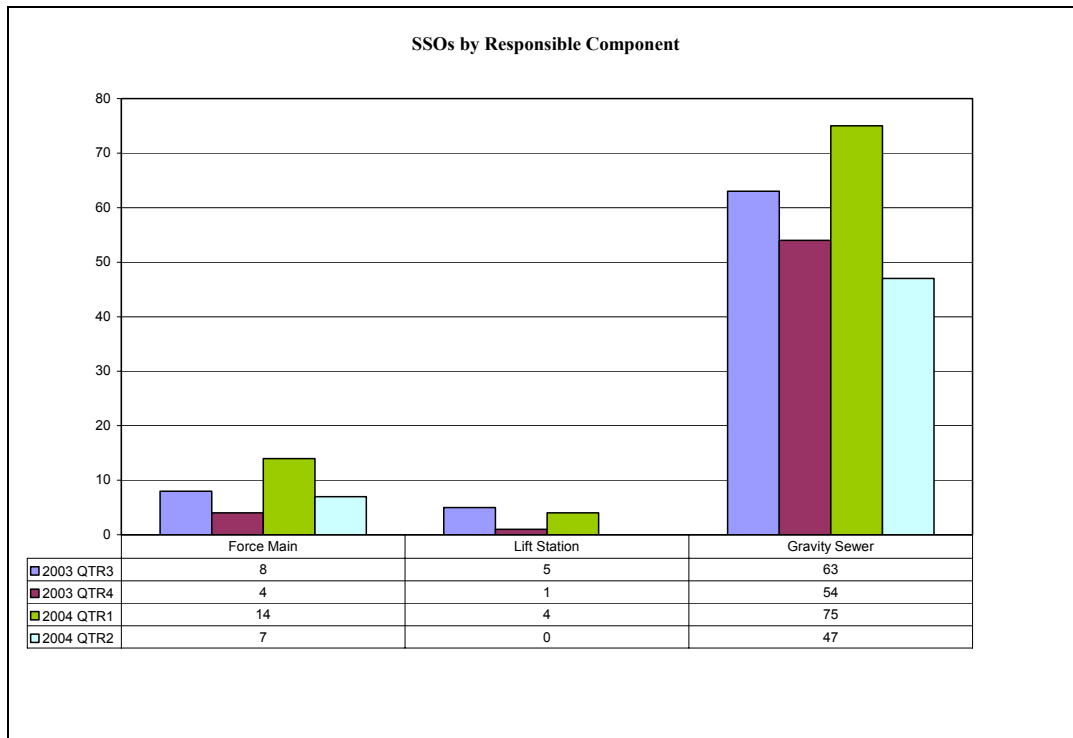


APPENDIX A-1: ANALYSIS OF WASTEWATER COLLECTION AND TRANSMISSION SYSTEMS AND WWTFs

3.3 Trend in the System Component Responsible for Unpermitted Discharges and SSOs

Figure 3.3-1 identifies the distribution of SSOs between force mains, lift stations, and gravity sewers per quarters. The Board continues to focus on finding and repairing inflow defects in the gravity system. Flow monitoring and hydraulic modeling results are being used to identify the presence of inflow defects in the gravity system. Removal of these defects in addition to cleaning trunk sewers is expected to continue to reduce wet weather SSOs.

Figure 3.3-1: Trend in Components Responsible for Unpermitted Discharges and SSOs

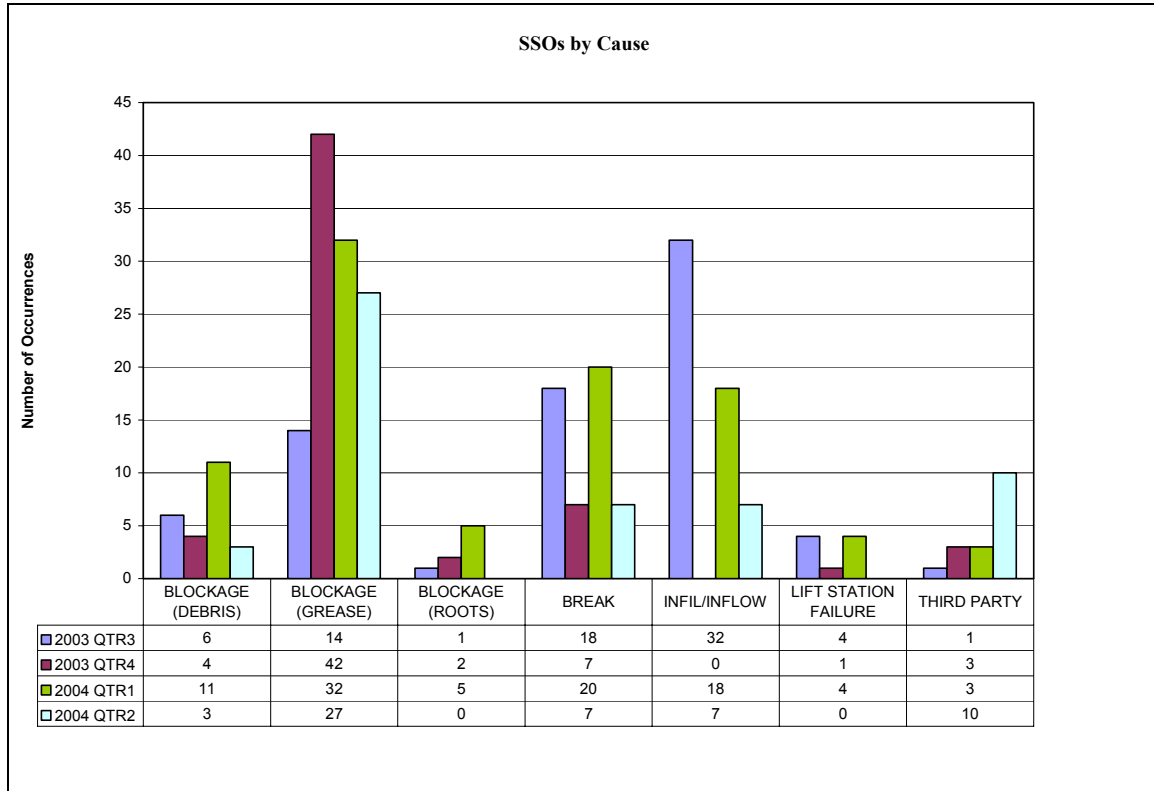


3.4 Trend in the Suspected Cause of Unpermitted Discharges and Overflows

Figure 3.4-1 identifies the trend in causes of Unpermitted Discharges and SSOs for the last four quarters. Grease related overflows trended down from the highest quarterly total found during the fourth quarter of 2003. Overflows attributed to third party actions increased significantly during the second quarter of 2004.

APPENDIX A-1: ANALYSIS OF WASTEWATER COLLECTION AND TRANSMISSION SYSTEMS AND WWTFs

Figure 3.4-1: Trend in Causes of Unpermitted Discharges and SSOs



4. Conclusions

The Board is continuously reviewing and modifying its programs to find ways to be more effective in reducing SSOs. The Infiltration/Inflow (I/I) reduction effort has been revised to focus primarily on inflow. New flow monitors are in place to better identify priority basins with regard to I/I. Flow monitor alarming features are being used to notify operators when flows reach predetermined surcharge levels within the collection system. Smoke testing and video inspections are being pursued in priority I/I areas.

A pilot study is being performed by Inframatrix to determine if the condition of 12” and larger diameter sewers can be quickly and effectively assessed using a special digital camera that records video from within the manhole. This technology may save much time in evaluating portions of the collection system not previously video inspected.

Digital technology is being pursued to improve the management of video inspection data.

Both in-house forces and annual contractors are being used to make repairs to the system.

APPENDIX A-1: ANALYSIS OF WASTEWATER COLLECTION AND TRANSMISSION SYSTEMS AND WWTFs

Much effort is being made to address SSOs in the Eslava Creek Basin. Fifty-eight (45%) of the 128 unpermitted discharges (reaching Waters of the U.S.) in the MAWSS service area in the past 12 months occurred in the Eslava Creek Basin. MAWSS' efforts to reduce unpermitted discharges in the Eslava Creek Basin include:

- 1) Cleaning the lower end of the Eslava Creek Interceptor
- 2) Cleaning the lower end of the Bolton Branch Interceptor
- 3) Purchasing 23 long term flow monitors to replace older less reliable flow monitors in the Eslava basin with more reliable flow monitors
- 4) Adding 25 new temporary flow monitors to the Eslava Creek basin for more inflow data
- 5) Smoke testing and video efforts are being concentrated in Eslava to find wet and dry weather sources of SSOs.
- 6) Numerous defects are being repaired including the replacement of defective public laterals.
- 7) A portion of the Eslava Interceptor was replaced at Bolton Branch
- 7) The Faye Lane Lift Station force main will be rerouted to reduce flow to the Eslava Creek Lift Station. This project will bid September 13, 2004 and be completed by January 31, 2005.
- 8) The Design of the Eslava Creek Lift Station Upgrade Project is complete. This project is bidding on August 16, 2004. Completion is expected by no later than May 31, 2005.

Approximately 22 inches of rainfall was recorded, including six rain events exceeding the Consent Decree criteria for a Severe Natural Event, in the second quarter of 2002. Nine unpermitted discharges were reported in the Eslava Basin during this quarter. Five of the nine unpermitted discharges were related to a contractor's inadequate by-pass operation during a rain event while replacing a portion of the Eslava Creek Interceptor at Bolton Branch. When considering the rainfall, this performance of the Eslava System is a substantial improvement over prior quarters. Continued efforts as described above will further reduce SSOs in the Eslava Basin.

**APPENDIX A-2: SSO AND UNPERMITTED DISCHARGE TABLES
(CD PARAGRAPH 98)**

APPENDIX A-1: SSO AND UNPERMITTED DISCHARGE TABLES

Table 1: Sanitary Sewer Overflows **Not Reaching Waters** of the State or United States (April 1, 2004 through June 30, 2004)

Related to Severe Natural Events (see Section II, 2.2.1)

OCCURRENCE ID	COLLECTION SYSTEM	DISCHARGE DATE	CAUSE OF DISCHARGE	DURATION (HOURS)	ESTIMATED VOLUME (GAL.)	DISCHARGE SOURCE	DISCHARGE LOCATION	CORRECTIVE ACTION
108	SMITH	4/6/2004	BREAK	4.5	150	FORCE MAIN	MARY MONTGOMERY (NURSERY RD)	POINT REPAIR
109	WILLIAMS	4/7/2004	BREAK	1	25	FORCE MAIN	ROSEBUD DR	POINT REPAIR
110	WILLIAMS	4/8/2004	BREAK	1.5	59	SERVICE	559 HICKORY ST	POINT REPAIR
111	WILLIAMS	4/10/2004	BLOCKAGE (DEBRIS)	1	300	MANHOLE	3 DEAN WAY	PLACE ON CLEANING CYCLE 1
114	WILLIAMS	4/14/2004	BLOCKAGE (GREASE)	0.5	105	MAIN LINE	3970 PINEBROOK DR S	PLACE ON CLEANING CYCLE 1
116	SMITH	4/18/2004	BREAK	5	300	FORCE MAIN	6245 HOWELLS FERRY RD	POINT REPAIR
117	WILLIAMS	4/19/2004	BLOCKAGE (GREASE)	0.5	30	MANHOLE	ALBATROSS & E. CARDINAL DR	PLACE ON CLEANING CYCLE 1
118	WILLIAMS	4/20/2004	3RD PARTY-BREAK	3	15	FORCE MAIN	7101 COTTAGE HILL RD	POINT REPAIR
120	WILLIAMS	4/26/2004	BLOCKAGE (GREASE)	3.5	15	SERVICE	3060 WESTGATE ST	PLACE ON CLEANING CYCLE 1
122	WILLIAMS	4/29/2004	BLOCKAGE (GREASE)	3.75	200	MAIN LINE	2261 CARRINGTON DR	PLACE ON CLEANING CYCLE 1
123	WILLIAMS	5/3/2004	BLOCKAGE (GREASE)	0.5	5	SERVICE	254 CHEROKEE ST	PLACE ON CLEANING CYCLE 1
125	WILLIAMS	5/4/2004	BREAK	1	65	FORCE MAIN	5644 GULFCREEK CIR	POINT REPAIR
126	SMITH	5/4/2004	BLOCKAGE (GREASE)	1.75	525	MAIN LINE	1008 BALTHORPE ST	PLACE ON CLEANING CYCLE 1
128	WILLIAMS	5/5/2004	BLOCKAGE (GREASE)	1.75	40	MAIN LINE	2806 EMOGENE ST	PLACE ON CLEANING CYCLE 1
127	SMITH	5/5/2004	BLOCKAGE (GREASE)	0.25	270	SERVICE	5415 OVERLOOK RD	PLACE ON CLEANING CYCLE 1
131	SMITH	5/6/2004	BLOCKAGE (GREASE)	1	60	MANHOLE	258 DOGWOOD LN	PLACE ON CLEANING CYCLE 1
130	SMITH	5/7/2004	BLOCKAGE (GREASE)	4	240	MANHOLE	578 BUFORD DR	PLACE ON CLEANING CYCLE 1
129	WILLIAMS	5/9/2004	BLOCKAGE (GREASE)	2.5	120	MANHOLE	6232 SPANISH TRAIL DR	PLACE ON CLEANING CYCLE 1
132	SMITH	5/11/2004	BLOCKAGE (GREASE)	2.5	40	SERVICE	129 SILVERWOOD ST	PLACE ON CLEANING CYCLE 1
133	SMITH	5/13/2004	BLOCKAGE (GREASE)	2	20	SERVICE	76 LEFEVRE ST	PLACE ON CLEANING CYCLE 1
136	WILLIAMS	5/24/2004	BLOCKAGE (GREASE)	0.75	230	SERVICE	3700 DAUPHIN ST	PLACE ON CLEANING CYCLE 1
137	WILLIAMS	6/4/2004	BREAK	0.25	15	FORCE MAIN	8418 OAK POINTE CT	POINT REPAIR
139	WILLIAMS	6/6/2004	BLOCKAGE (GREASE)	1.75	50	SERVICE	5451 QUAIL RUN E	MAIN LINE POINT REPAIR
138	WILLIAMS	6/8/2004	BLOCKAGE (GREASE)	1.75	100	MANHOLE	1212 MACARTHUR PL CT	PLACE ON CLEANING CYCLE 1
142	WILLIAMS	6/14/2004	3RD PARTY-BREAK	1.75	500	MANHOLE	1540 SAN SOUCI RD (REAR)	BYPASS PUMP REPAIR
144	WILLIAMS	6/14/2004	BLOCKAGE (GREASE)	0.5	150	MANHOLE	1530 WOODPECKER DR	PLACE ON CLEANING CYCLE 1
155	SMITH	6/17/2004	BLOCKAGE (GREASE)	0.25	10	COMMODE	1116 GREENWAY DR	PLACE ON CLEANING CYCLE 1
158	DECENTRALIZED	6/20/2004	BREAK	2.5	1	FORCE MAIN	4921 COPELAND ISLAND DR	POINT REPAIR
159	WILLIAMS	6/20/2004	BLOCKAGE (GREASE)	0.25	30	SERVICE	1461 W LINWOOD DR	PLACE ON CLEANING CYCLE 1
161	WILLIAMS	6/22/2004	3RD PARTY-	0.25	15	MANHOLE	3652 HERITAGE DR	LINING COMPLETED - LINE UNPLUGGED
162	WILLIAMS	6/25/2004	BLOCKAGE (GREASE)	0.75	35	LAMPHOLE	958 VIRGINIA ST	PLACE ON CLEANING CYCLE 1

