

**CONSENT DECREE  
PROGRESS REPORT**

**VOLUME 15  
2005**

**FIFTEENTH QUARTERLY REPORT  
JULY 1, 2005 THROUGH SEPTEMBER 30, 2005**



**October 2005**

## STATEMENT OF CERTIFICATION

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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.

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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).

### 2. Report Organization

Water Quality Monitoring Program data and Grease Control Program Tables can be found on the MAWSS website, [www.mawss.com](http://www.mawss.com), and are not included with this report. There are no narratives in Section II of this report for projects that have been completed for more than one year.

This report is divided into the following sections:

*Section I: Summary* – describes the reporting requirements of the CD, the report structure and includes 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, and
- 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 as required by CD Paragraph 38.

*Appendix A-1: 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.

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### 3. Report Summary

This status report is the fifteenth quarterly report required by the Consent Decree (CD) and covers the period from July 1 to September 30, 2005.

#### 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). On July 29, 2004, the Board requested approval from the EPA to make minor changes to the Water Quality Monitoring Plan based on an evaluation of the results from the first year of implementation. The changes resulted in significant cost savings without compromising the goals of the Plan. Further information regarding the WQMP can be found in Section III of this report.

##### 3.1.2 Status of Implementation

The Board continues 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)

The Board has completed the requirements for all four of the Supplemental Environmental Projects. On January 26, 2005 the Board submitted the SEP 1 Completion Report to the EPA. In the cover letter accompanying the report, the Board provided brief summaries of previously completed SEPS 2, 3, and 4.

###### Appendix B

During the third quarter of 2005, \$116,000 was distributed to a special account for Appendix B penalties. During the quarter, the Board has submitted three claims of Force Majeure to the EPA for 41 SSOs that occurred due Tropical Storm Cindy, Hurricane Dennis, and Hurricane Katrina. Appendix B penalties resulting from these 41 SSOs account for \$114,000 of the total amount distributed.

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An annual project to replace private laterals using a portion of funds from the Appendix B account as stipulated by the Consent Decree was bid and subsequently awarded to Hughes Plumbing and Utility Contractors, Inc. The project will begin in Mini-Basin A156A10 where, previously, SEP 1 funds were depleted prior to completing lateral replacement work. The Board is currently preparing Right of Entry letters to the affected customers in the project area.

### Civil Penalties (CD Chapter XI)

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

### Delays in Completion

On April 4, 2005 the lift station renovation project for the remaining eight stations was bid. The bids received were significantly above the engineer's estimate due to the short completion schedule for the project. The project was subsequently rebid with the performance (construction) period increased by two months. On April 19, 2005 the Board submitted a request to the EPA to extend the deadline for completion of the upgrades from December 31, 2005 to March 31, 2006. The rebid project was awarded to Hughes Plumbing and Utility Contractors, Inc. and a Notice to Proceed letter was issued on July 18, 2005. The contract has a 240 day performance period.

The Eslava Creek Lift Station upgrade was bid on August 16, 2004 and awarded to Hughes Plumbing and Utility Contractors, Inc. The contractor experienced a delay as the result of having to install additional flood-proofing measures in order to meet new flood zone requirements by the City of Mobile. The project was substantially complete on July 7, 2005.

### **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

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- 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)
- 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

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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
- 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

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aforementioned ADS report were not placed in the Program and were provided as an attachment to the 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.

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.

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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.
- 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.

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- 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.

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.

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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.

January 30, 2004 EPA Eighth Quarterly CD Status Report (Volume 8)April 27, 2004 EPA Ninth Quarterly CD Status Report (Volume 9)July 29, 2004 EPA Tenth Quarterly CD Status Report (Volume 10)

- In the cover letter accompanying the report, the Board requested minor changes to the Water Quality Monitoring Plan. Additionally, the Board informed the EPA of the project to reroute the Faye Lane Lift Station force main and the impact this would have on the previously submitted schedule to renovate nine other lift stations. Four of the five lift station renovations scheduled for 2004 will be rescheduled for completion by December 31, 2005 along with four other lift stations previously scheduled for 2005.

October 27, 2004 EPA Eleventh Quarterly CD Status Report (Volume 11)

- In the cover letter accompanying the report, the Board requested that the EPA grant Force Majeure status for all SSOs resulting from Hurricane Ivan. Abandonment of the Ziebach WWTP due to safety concerns resulted in the bypass of 1.1 million gallons of untreated flow into Mobile Bay. Additionally, there were eight other overflows attributed to Hurricane Ivan, seven of which were the result of power outages at lift stations.
- The cover letter also requested an extension of the December 31, 2004 deadline for initial investigations of Private Sanitary Sewer Collection Systems (PSSCSs) to June 30, 2005. The additional time will allow the Board more flexibility in working with customers in regard to scheduling smoke testing.

December 8, 2004 Letter to the EPA

- In a previous letter to the EPA dated July 29, 2004, the Board requested approval from the EPA to reschedule the deadline to the end of 2005 for all of the remaining lift station upgrades with the exception of the Bricord Lift Station. Emergency repairs to an interceptor sewer required the contractor to shift resources from the Bricord Lift Station project, delaying its completion. As a result, the Board requested approval from

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the EPA to extend the completion date of the Bricord Lift Station upgrades to February 15, 2005.

January 18, 2005 Submittals to the EPA

- The Board submitted the *Operations and Maintenance Procedures for the Halls Mill Creek and Eslava Force Mains*. A previous feasibility study referenced in a letter to the EPA on December 31, 2003 determined that storage of wastewater from the Halls Mill Creek, Eslava Creek, and Virginia Street Lift Stations was cost prohibitive. As a result, upgrades to the lift stations and an improved O&M program for the force main was pursued.
- The Board submitted the Lift Station Force Main Action Plan. Development of the plan was an action item identified in the Force Main Preventative Maintenance Program submitted to the EPA on July 31, 2002.

January 26, 2005 Submittals to the EPA

- The Board submitted the SEP 1 Completion Report to the EPA as required by Paragraph 43 of the Consent Decree.
- SEPs 2, 3, and 4 were considered completed under the terms of the Consent Decree at the time funds were transferred to the respective parties. Summaries of these SEPs were included in the cover letter to the SEP 1 Completion Report submittal.

January 27, 2005 Twelfth Quarterly CD Status Report (Volume 12)

- In the cover letter accompanying the report, the Board informed the EPA that it had recently authorized a ten percent rate increase and the borrowing of \$25 million from the State Revolving Fund to accelerate collection system rehabilitation and other capital projects. Also, the Board stated that it may request an extension to the Consent Decree deadline after evaluating overflow reductions in 2005.

April 6, 2005 Letter to the EPA

- Request for EPA to consider Force Majeure regarding 54 overflows that reached waters of the State or United States as the result of a severe storm event that occurred on April 1, 2005. The storm event measured over 11 inches in certain areas of the MAWSS service area, indicating a 50 year rain event.

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April 7, 2005 Letter to the EPA

- Request for EPA to consider Force Majeure regarding 11 overflows that reached waters of the State or United States as the result of a heavy rain event measuring 3.68 inches in 9 hours. The impact of this storm on the collection systems was exacerbated by the previous April 1 storm event which had created flood conditions and high groundwater levels.
- The letter also relayed information from the Coastal Weather Research Center (CWRC) regarding a Force Majeure request for rain events of May 18 to July 1 of 2003. The official rainfall total during this 44 day period (29.63 inches) was the second largest over that duration since records were first kept in 1871.

April 8, 2005 Letter to the EPA

- Follow-up to the April 7 letter increasing the total number of overflows requested for Force Majeure status to 12.

April 19, 2005 Letter to the EPA

- The Board submitted a request to extend the deadline for completion of upgrades to the remaining eight lift stations from December 31, 2005 to March 31, 2006. The initial bid of the project was significantly over the engineer's estimate due to a short completion schedule. The time extension allowed the Board to rebid the project with a longer completion schedule thus reducing the cost. Since the upgrades were for equipment that is currently operational, the Board determined that the extension would not be detrimental to collection system performance.

April 7, 2005 Letter to the EPA

- Request for EPA to consider Force Majeure regarding 11 overflows that reached waters of the State or United States as the result of a heavy rain event measuring 3.68 inches in 9 hours. The impact of this storm on the collection systems was exacerbated by the previous April 1 storm event which had created flood conditions and high groundwater levels.

April 27, 2005 EPA Thirteenth Quarterly CD Status Report (Volume 13)May 2, 2005 Letter to the EPA

- Request for EPA to consider Force Majeure regarding 21 overflows that reached waters of the State or United States as the result of a severe storm event that occurred on

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April 29 and 30, 2005. Rain gauges recorded as much as 6.19 inches of rainfall in a 24 hour period. The highest intensity recorded was 5.0 inches in two hours, a 50 year storm event.

May 3, 2005 Letter to the EPA

- Submission of article from the Mobile Register providing information regarding widespread flooding as a result of the May 2 storm event. The article further cited the fact that April 2005 was the third wettest April in 164 years.

July 7, 2005 Letter to the EPA

- Request for EPA to consider Force Majeure regarding nine overflows that reached waters of the State or United States as the result of Tropical Storm Cindy that moved through the area on July 6, 2005. Rain gauges recorded as much as 6.34 inches of rainfall in a 24 hour period.

July 13, 2005 Letter to the EPA

- Request for EPA to consider Force Majeure regarding 10 overflows that reached waters of the State or United States as the result of Hurricane Dennis on July 10, 2005. Rain gauges recorded a maximum of 5.3 inches of rainfall during the storm. The Ziebach WWTP and the Perch Creek Lift Station were taken out of service in preparation for the anticipated storm surge.

July 28, 2005 EPA Fourteenth Quarterly CD Status Report (Volume 14)August 31, 2005 Email to the EPA

- Email informing the EPA of the record flooding caused by Hurricane Katrina. As a result, the Smith WWTP and the Three Mile Creek Lift Station were out of service for several hours on August 30, 2005. Additionally, generators at several other lift stations were flooded and inoperable.

September 8, 2005 Letter to the EPA

- Letter confirming and extending previous email correspondence. The power outages and the surge of high water from Hurricane Katrina resulted in 23 overflows reaching waters of the State or United States. Rain gauges recorded a maximum of 4.70 inches of rainfall.

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

## SECTION II: PERFORMANCE OF CONSENT DECREE WORK

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### 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.

###### 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.

GAF Corporation and Mobile Paperboard have not yet completed plant requirements to comply with their 900 pounds per day BOD loading limitation. They are currently operating below the limit but will need modifications should they wish to increase production.

## **SECTION II: PERFORMANCE OF CONSENT DECREE WORK**

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### **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. There are a total of 33 temporary flow meters installed throughout the collection systems. These flow monitors allow better isolation of I/I sources by monitoring smaller areas. The majority of these portable flow meters are now in the Three Mile Basin.

##### **1.2.1.2 Identification of Collection System Capacity**

Volkert and Associates, Inc. last performed a recalibration of the collection system hydraulic model in March 2005. The recalibration incorporated flow monitoring data up to August 2004. The model indicated significant capacity improvements in some areas of the collection systems as identified below. Volkert is currently working on a new recalibration of the model with flow data through April 2005.

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

##### Three Mile Creek Basin

There are currently 23 temporary flow meters installed in the Three Mile Creek basin to further isolate I/I sources.

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The last model calibration showed that capacity issues are present in the Conti and Demouy area of the Basin. A significant portion of the manholes and main lines in this area have previously been lined. MAWSS continues to replace or rehabilitate public laterals in the area to further reduce I/I. One hundred laterals are scheduled to be lined with Cured-In-Place-Pipe (CIPP).

After several attempts to appeal FEMA's decision to disallow construction of a new lift station near Ridge Road failed, the Board determined that an alternative location for the lift station was necessary. As a result, the Board purchased a permanent easement in the backyard of an adjacent property for the new lift station. The project bid August 15, 2005 and was awarded to Hughes Construction and Utility Contractors, Inc.

Since July 1, 2005, the Board has received 11 new applications for connections in the Three Mile Basin for a total capacity of 7,055 gpd. During this period, 10 applications for the basin were reviewed and approved for a total of 21,585 gpd. Since program implementation in August 2002, 144 requests for connection have been approved adding 692,075 gpd in the Three Mile Basin.

### Halls Mill Creek Basin

The most recent recalibration of the model found significant capacity improvements along the Second Creek Interceptor. The lower portion of the interceptor still shows capacity issues, however. The model also shows capacity concerns along the 10-inch diameter Airport Boulevard interceptor. MAWSS staff continues to perform above ground inspections in the area to identify I/I sources.

Since July 1, 2005, 15 new applications for connection have been received requesting capacity for a total of 214,163 gpd. During this period, 16 applications were reviewed and approved for a total of 225,538 gpd. Since the program implementation, 240 requests for connection have been approved for a total of 2.117 mgd in added peak flow.

### Eslava Creek Basin

The latest model recalibration showed that capacity issues on the Bolton Branch and Eslava Creek Interceptor sewers have been resolved. Surcharge

## **SECTION II: PERFORMANCE OF CONSENT DECREE WORK**

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conditions are still indicated on the Eslava Creek Interceptor during the design storm but the extent is well below the Board's definition of full capacity as described in the Capacity Assurance Program.

MAWSS is continuing with flow monitoring, I/I investigations, video inspection and hydraulic cleaning to improve the performance of this basin. There are currently, a total of 20 flow meters installed within the Basin.

MAWSS is continuing with efforts to eliminate I/I and improve capacity. Previous I/I removal projects have banked approximately 549,000 gpd in added capacity.

The Faye Lane Lift Station force main discharge has been rerouted from its previous location upstream of the Eslava Lift Station to the Halls Mill and Eslava 36-inch/48-inch force main. It is estimated that as much as 4 MGD can be removed from the Eslava Lift Station during heavy rains.

Since July 1, 2005, eight new applications for connection have been received requesting a total capacity of 13,650 gpd of peak flow. During this period, seven applications for the basin were reviewed and approved for a total of 7,400 gpd of additional peak flow. Since the implementation of the program, 105 requests for connection have been approved to allow an additional 349,448 gpd of peak flow.

### Virginia Street Basin

The Board is continuing to determine if upgrades will be required at the Water Street Lift Station to address the future capacity needs of the RSA Tower under construction.

Since July 1, 2005, two requests for connection have been received and subsequently approved for a total of 16,500 gpd of additional peak flow. Since program implementation, 27 requests for connection have been approved based on the available capacity and capacity gained from I/I removal. The total amount of peak flow approved for these connections is 168,594 gpd.

### Ziebach WWTP Basin

The project 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

## **SECTION II: PERFORMANCE OF CONSENT DECREE WORK**

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the Williams WWTP is substantially complete. All flow from the Ziebach Basin is now being transmitted to the Williams WWTP.

The last model recalibration for the Ziebach Basin found areas with capacity issues not previously identified. A recent review of permanent flow meter data suggests that repairs that were made subsequent to the last model calibration have resulted in reduced flow rates during comparable rain events.

During the first half of 2005, the Board completed hydraulic cleaning and video inspection on 5,640 LF of the 30-inch and 36-inch Perch Creek Interceptor sewer. Cleaning activities removed approximately 300 tons of debris.

Since July 1, 2005, five requests for connection to allow a total of 3,125 gpd of added peak flow were received, and four requests were approved based in part on I/I removal from repair work for a total of 2,500 gpd of additional peak flow. Since the implementation of the program, 56 requests have been approved based on the available capacity and capacity gains from I/I removal. The total amount of peak flow approved for these connections is 60,360 gpd.

### Theodore Area Basin

MAWSS continues routine inspection in this basin to identify and remove I/I.

Since July 1, 2005, 10 applications for connection have been received requesting capacity for a total of 74,750 gpd of peak flow. During this period, seven applications for the basin were reviewed and approved for a total of 37,375 gpd. Since program implementation, 103 requests for connection have been approved to allow an additional peak flow contribution of 1.011 mgd.

### 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.

Installation of approximately 11,780 LF of a new 6-inch and 8-inch diameter force main along Schillinger Road was completed on April 3, 2005 to increase capacity in the Semmes area.

**SECTION II: PERFORMANCE OF CONSENT DECREE WORK**

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Since July 1, 2005, the Board has received two applications for connection requesting capacity for 850 gpd. During this period, one application for the basin was reviewed and approved for a total of 225 gpd in additional peak flow. Since the implementation of the program, 33 requests for connection have been approved adding 304,119 gpd of peak flow.

**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**

The Board smoke tested 65 Mobile County Schools in the summer of 2004. Information regarding defects that were identified was delivered to the School Board for corrective action. The School Board has completed all defects identified for corrective action.

The Board decided to smoke test private sanitary sewer systems at no expense to the customer. Letters were delivered to all Industrial and Non-Industrial Private Sanitary Sewer Collection Systems (PSSCSs) requesting Right of Entry for smoke testing activities. The customers are required to repair any defects found as a result of the smoke tests.

The Board is still working with five PSSCS who have not yet granted MAWSS access for smoke testing. The Mobile Airport Authority will only allow MAWSS forces to conduct the smoke tests at night. This work should be

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completed in November 2005. Two other PSSCS are located at Brookley Field, Mobile Aerospace Engineering and Teledyne, Inc. Additional letters will be sent to these customers requesting access for smoke testing. Kimberly Clark has not granted access to MAWSS; however, the Board has decided not to investigate their PSSCS because their total discharge is metered at a lift station and billed accordingly. The owner of Glenn Valley Apartments has denied the Board's request for Right of Entry. As a result, the Board has installed a flow monitor on their discharge and will take further action if unusually high flows are observed during wet weather.

Six (6) PSSCSs chose to conduct I/I investigations in-house. These customers were required to submit an I/I inspection plan along with a schedule that completes the I/I inspection and provides of a report of the findings by March 31, 2005. All but one has complied with this requirement. Benders Shipyard has completed their investigations and the Board is awaiting the results.

I/I investigations have been completed for 133 Industrial and Non-Industrial PSSCSs. The investigations found seven customers with I/I defects. All repairs have been completed.

### **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.

#### **1.2.2.1 C.C. Williams WWTP**

##### Infiltration 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 323,378 feet of pipe. Inspections 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.

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### **1.2.2.2 Bill Ziebach WWTP**

#### Infiltration and Inflow (I/I) Reduction Program

Work is ongoing to reduce I/I within the Ziebach Basin. During the past quarter, closed circuit television inspection (CCTV) was performed on 52,584 feet of pipe. Inspections 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)

Modifications to the Perch Creek Lift Station include increasing capacity and rerouting the force main to discharge into the Halls Mill/Eslava force main which transmits flow to the Williams WWTP. This work will allow the Ziebach WWTP to be removed from service. The project has experienced lengthy delays due to easement issues with property owners and due to extended delivery times on pipe. The force main has been rerouted. The lift station upgrades, which were anticipated to be completed in September 2005, were delayed due to Hurricane Katrina. The upgrades are substantially complete and flows from the Ziebach Basin are being transmitted to the Williams WWTP.

#### Remove Ziebach WWTP From Service (March 26, 2004)

The Perch Creek Lift Station modifications are complete and the Ziebach WWTP has been removed from service.

### **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 67,358 feet of pipe to determine sources of I/I. Inspections continue to find sources of I/I. The Board has in place annual contracts for

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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. The first joint meeting with Chickasaw and Mobile Sewer Boards was held April 5, 2005 to review the progress of the regional wastewater program.

### 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 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.

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### 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 third quarter of 2005 there were 94 sanitary sewer overflows (SSOs). Of this amount, 75 reached waters of the State or US Waters. The remaining overflows were contained or returned to the collection system.

Appendix B penalties totaling \$116,000 were incurred during the third quarter of 2005. The Board has submitted three claims of Force Majeure to the EPA for 41 SSOs that occurred due to Tropical Storm Cindy (July 5-6, 2005), Hurricane Dennis (July 9-10, 2005), and Hurricane Katrina (August 28-29, 2005). Appendix B penalties resulting from these 41 SSOs account for \$114,000 of the total amount distributed.

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

Seven storm events met the severe natural event criteria described by CD Paragraph 23a, *Contingency Planning Process*.

#### Tropical Storm Cindy (July 5-6, 2005)

As much as 6.34 inches of rain fell in a 24 hour period as feeder bands from Tropical Storm Cindy moved through the area. Rainfall intensities of 1.92 inches in one hour and 1.11 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. Nine overflows totaling 33,840 gallons were attributed to the tropical storm.

#### Hurricane Dennis (July 9-10, 2005)

During Hurricane Dennis, the largest volume of rainfall recorded was 5.3 inches. Rainfall intensities of 2.21 inches in one hour and 1.07 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a.

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In preparation for the predicted storm surge of 13 to 15 feet, the Ziebach WWTP and the Perch Creek Lift Station were taken out of service. It had been determined that the Ziebach WWTP can be returned to operation quicker if the plant is shut down, when flooded, so that operating equipment does not sustain damage caused by debris from a storm surge.

Prior to the storm, the Perch Creek Lift Station was undergoing renovations to permanently divert flow from the Ziebach WWTP to the Williams WWTP in order to remove the Ziebach WWTP from service. Due to the renovation project, the Perch Creek Lift Station was operating with portable bypass pumps and was not available for normal operation. Since the portable pumps had the same potential for damage due to a storm surge, they were removed.

The two facilities were out of service at 9:30 AM as the storm drew near and were returned to service at 6:30 PM after storm conditions diminished. Ten overflows totaling 947,580 gallons were attributed to the hurricane.

Severe Natural Event (July 12, 2005)

During this event, the largest volume of rainfall recorded was 2.07 inches. Rainfall intensities of 1.24 inches in one hour and 0.59 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. Three overflows totaling 7,950 gallons were attributed to this storm event.

Severe Natural Event (July 14, 2005)

During this event, the largest volume of rainfall recorded was 2.27 inches. Rainfall intensities of 1.97 inches in one hour and 1.01 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. Seven overflows totaling 20,570 gallons were attributed to this storm event.

Severe Natural Event (July 15, 2005)

During this event, the largest volume of rainfall recorded was 2.32 inches. Rainfall intensities of 0.72 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. Six overflows totaling 25,140 gallons were attributed to this storm event.

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Severe Natural Event (July 29, 2005)

During this event, the largest volume of rainfall recorded was 1.56 inches. Rainfall intensities of 1.41 inches in one hour and 0.81 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. Despite the intense rainfall, no overflows were attributed to this storm event.

Severe Natural Event (July 30, 2005)

During this event, the largest volume of rainfall recorded was 1.37 inches. Rainfall intensities of 1.29 inches in one hour and 0.62 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. Despite the intense rainfall, no overflows were attributed to this storm event.

Severe Natural Event (August 1, 2005)

During this event, the largest volume of rainfall recorded was 1.71 inches. Rainfall intensities of 1.53 inches in one hour and 0.62 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. Despite the intense rainfall, no overflows were attributed to this storm event.

Severe Natural Event (August 2, 2005)

During this event, the largest volume of rainfall recorded was 1.73 inches. Rainfall intensities of 0.62 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. Despite the intense rainfall, no overflows were attributed to this storm event.

Severe Natural Event (August 25, 2005)

During this event, the largest volume of rainfall recorded was 1.42 inches. Rainfall intensities of 1.37 inches in one hour and 0.69 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. Five overflows totaling 17,650 gallons were attributed to this storm event.

Hurricane Katrina (August 28-29, 2005)

During Hurricane Katrina, the largest volume of rainfall recorded was 4.16 inches. Rainfall intensities of 0.44 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a.

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While the rainfall amount was not particularly destructive, the power outages and the surge of high water in Mobile Bay presented the greatest problems. The level of Three Mile Creek at the Smith WWTP was three feet higher than during the record 1981 flood caused by rainfall. Three Mile Creek flowed into the Smith WWTP intake station and flooded that part of the facility. The Ziebach WWTP was also taken out of service in anticipation of the predicted storm surge. MAWSS utilized combination cleaning/vacuum trucks and standby pumps to bypass flow from lift stations that were without power. Twenty-three overflows were initially attributed to this event. While the overflow reports estimate the total volume of overflows near five million gallons, individual overflow estimates were difficult to determine due to lack of information and the total overflow volume was likely double this amount.

### Severe Natural Event (September 24-25, 2005)

During this event, the largest volume of rainfall recorded was 5.12 inches. Rainfall intensities of 2.14 inches in one hour and 0.75 inches over 15 minutes exceeded the criteria for severe natural events described in CD Paragraph 23a. Four overflows totaling 14,800 gallons were attributed to this storm event.

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

### **3.1 Grease Control Program**

#### **3.1.1 Program Implementation**

The Board continues to initiate grease control contracts with food service facilities (FSFs). Through September 30, 2005, a total of 1076 contracts have been mailed. Four hundred and eighty-eight (488) 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. Five hundred and eighty-eight (588) FSFs remain in the program and have returned signed contracts.

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### **3.2 Maintenance of Adequate Legal Staff**

The Board continues to retain the Atchison Firm, PC 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.

## **4. Contingency Plan for Sewer Systems and Wastewater Treatment Facilities (CD Paragraph 23)**

### **4.1 Wastewater Collection and Transmission Systems**

#### **4.1.1 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.

#### 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 due to the minimal risk of catastrophic failure.

Coupons taken from the wall of the PCCP force main indicate that it is in good condition. A coating has been applied to the force main where it is exposed above ground. A transient flow study was also completed and the Board is following its recommendations regarding the installation of air release valves and air vacuum valves. Additionally, the *Operations and Maintenance Procedures for the Halls Mill Creek and Eslava Creek Force Main* was submitted to the EPA on January 18, 2005. The Board has also further decreased the risk of lift station failure by installing standby pumps, adding generating capacity, by-pass piping, and other upgrades to the three lift stations.

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

The Halls Mill Creek Lift Station upgrade was completed on October 29, 2004. The Eslava Creek Lift Station upgrades were completed on July 7, 2005.

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

Thirteen (13) auxiliary diesel pumps were installed in 2004. The Board has scheduled the installation backup systems to 13 lift stations in 2005. The project was awarded Hughes Plumbing and Utility Contractors, Inc. During the past quarter, the contractor was awarded a 21 day extension due to delays related to Hurricane Katrina. Currently, all pumps and generators have been installed and the project is substantially complete.

## **5. Corrosion Control Program (CD Paragraph 25)**

### **5.1 Program Implementation**

Tasks identified in the Corrosion Control program are currently being implemented.

#### Chemical Addition

On August 11, 2004, the Board began using US Filter's Bioxide at the Faye Lane, Abilene, Florida Street, Columbus Street, and Ghent Street Lift Stations to address odor and corrosion.

A project to install a biofilter at the Eslava Creek Lift Station to control odors was bid in July 2005, following renovations at the lift station. Award of the project is pending a demonstration of a new odor control technology. The Vapex system utilizes ozone and a water vapor fog to reduce H<sub>2</sub>S gases.

## **6. Grease Control Program (CD Paragraph 26)**

### **6.1 Program Development**

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

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### **6.2 Program Implementation**

During the third quarter of 2005, nine FSFs were visited (initial visit) to review grease trap size requirements and provide training in grease disposal. Since the start of the program, 589 initial visits have been completed.

After the initial visit, FSFs that do not have the required grease trap capacity are required to submit action plans that provide details and a schedule for addressing undersized grease traps. Four action plans were approved this past quarter.

During the quarter, the Pretreatment Department inspected 394 FSFs for compliance. One of these facilities was in violation of the Grease Control Program and received a fine totaling \$100.

Monthly compliance sampling was conducted at 31 FSFs. Fourteen of those sampled had results greater than the 200 mg/l limit. Fines resulting from monthly compliance sampling totaled \$2,800. To date, 53 FSFs have completed 12 months of sampling. This quarter, two FSFs had 12 month averages under the 140 mg/l limit and are now considered to be in compliance and subject to quarterly inspections and random sampling. Two FSFs exceeded the 140 mg/l limit during the past quarter. Letters were sent to these FSFs advising them of the findings and requiring them to submit new action plans.

Inspectors are also performing proper grease disposal training at area schools. Thus far, inspectors have visited 30 schools to perform the training.

The Board continues to inform the public of the adverse impact of grease on collection system performance. Door hangers are being placed in areas where video inspection of the sanitary sewer indicates grease control education is needed. MAWSS continues to explore the possibility of an education program to be presented to elementary students explaining the problems associated with fats, oils, and grease and how to properly dispose of these items. The Board has hired a public affairs manager to develop programs that will educate the public about water and sewer issues. Further, the Board is exploring the possibility of installing several grease collection receptacles within the MAWSS service area. Sites for these collection receptacles and receptacle designs continue to be evaluated.

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### **6.3 Grease Control Compliance Table**

The Grease Control Compliance Table can be found on the MAWSS website at [www.mawss.com/consentdecreedocs.htm](http://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.

## **7. Pump Station Preventative Maintenance Program (CD Paragraph 27)**

### **7.1 Short-Term Pump Station Certification**

Montgomery Watson Harza completed the evaluation of 116 lift stations as required in the CD and presented the findings 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. Ongoing tasks are presented below. Scheduled completion dates are in parentheses.

#### Clean Lift Stations (July 15, 2002)

MAWSS staff continues to clean lift stations. A combination cleaning truck is permanently assigned to the Lift Station Operations and Maintenance Department. During the past quarter, 68 lift stations were cleaned.

#### Consultant Category 2 Priority Tasks (revised March 31, 2006)

Consultant Category 2 Priority Tasks involves building removal and major lift station renovations to thirteen stations. Five (5) of the thirteen lift stations are complete. The Faye Lane Lift Station was added as a priority and is also complete. On July 18, 2005, the contractor, Hughes Plumbing and Utility Contractors, Inc., was given notice to proceed with renovations to the eight remaining lift stations. The contractor is currently working to install bypass pumping on the Dauphin Island Parkway #54 Lift Station. The building and electrical panels at this site were destroyed by Hurricane Katrina.

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### 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 work. To date, a total of 28 safety hatches have been installed. All safety hatches have been installed with the exception of those that will be installed as part of major lift station renovation projects.

### Consultant Category 1 Priority Tasks (December 31, 2004)

Category 1 Priority tasks are complete. Work to install lift station lighting was completed by the end of 2004.

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

Upgrades to the Virginia Street, Halls Mill, and Eslava Lift Stations are complete.

## **8. 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.

### **8.1 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. There are 26 force mains that have air release valves (ARVs). All ARVs will be inspected annually.

As previously stated, MAWSS is following the recommendations of the transient flow study regarding the installation of ARVs and air vacuum valves along the Halls Mill and Eslava Force Main. Two combination air and vacuum valves have been installed at locations recommended by the study. All 12 ARVs recommended for installation in 2005 have been received and are awaiting installation.

### **8.2 Valve Exercise Program**

The Valve Exercise Program was developed to establish scheduling and procedures for the routine exercise of force main gate valves. Valves have been identified at 183 lift stations. Valves will be exercised annually.

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### 8.3 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 cylinder pipe (PCCP) and has been extensively evaluated to determine its condition. No defects or significant signs of corrosion were found. The Board is following the recommendations of the transient flow study in order to protect the force main from water hammer by installing air release valves and air vacuum valves.

The Pinto Island force main was replaced because a bulkhead on the east side of Mobile River where the force main rises at the river bank had been damaged repeatedly by barges and/or ships. The new force main was directionally drilled HDPE pipe and was aligned to rise far enough away from the river bank to eliminate the need for a bulkhead.

#### Lift Station Force Main Action Plan (December 31, 2004)

In accordance with an action item on page 9 of the above report, the *Lift Station Force Main Action Plan* was submitted to the EPA on January 18, 2005. The report details the means to evaluate the Board's oldest lift station force mains as well as identified maintenance activities for the Board's 4-inch to 16-inch diameter lift station force mains.

## **SECTION II: PERFORMANCE OF CONSENT DECREE WORK**

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During the field investigations that were conducted for the development of the plan, it was determined that the Martin Drive Lift Station force main warranted replacement. Work to replace the force main was completed during the second quarter of 2005. Thus far, coupons have been taken from approximately 50 force mains. The coupons do not indicate that force main replacement is needed at this time.

### **9. Gravity Line Preventative Maintenance Program (CD Paragraph 29)**

#### **9.1 Program Development**

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

#### **9.2 Program Implementation**

During the past quarter, MAWSS cleaned approximately 435,850 feet of gravity sewer and conducted television inspection on approximately 443,300 feet of pipe.

The Board has a total of 10 combination cleaning trucks and one jet rodder unit. Four of the units are dedicated to cleaning sewer lines not previously cleaned, two are dedicated to SSO response and other work order related issues, one unit is dedicated to the Lift Station Department for cleaning of wet wells, one unit is dedicated to cleaning inverted siphons, and the remaining two are dedicated to customer response items.

Additionally, the Board has four video trailers for television inspection of sewer lines. One camera has the ability to video laterals from within the sewer main. Two older units serve as standby units in the event that one of the four newer units goes out of service.

During the first half of 2005, MAWSS contracted the hydraulic cleaning of 19 large diameter inverted siphons. This work removed over 350 tons of debris. Additionally, the Board completed hydraulic cleaning and television inspection of 4,500 LF of the upper portion of the Three Mile Interceptor sewer. In the Ziebach basin, contractors completed cleaning of 5,640 LF of the 30-inch and 36-inch Perch Creek Interceptor sewer, removing approximately 300 tons of debris.

A project to quickly assess the condition of 190,000 LF of gravity sewer using an in-line camera is underway. Once the project is complete, all gravity sewer lines greater than or equal to 12-inches in diameter will have been inspected by video.

**SECTION II: PERFORMANCE OF CONSENT DECREE WORK**

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**10. Maintenance of Rights-of-Way Program (CD Paragraph 30)****10.1 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.

**10.2 Program Implementation**

During the past quarter, the Grounds and Maintenance Department cleared approximately 10,000 feet of sewer line easement. In addition, the department assisted in grass cutting activities at MAWSS facilities when one of the contractors assigned to this work quit.

In December 2005, bids will be opened to contract out sewer easement clearing and herbicide spraying in order to assist MAWSS crews in maintaining sewer easements. There will also be a provision in the contract to have the contractor remove trees that may have fallen across the easement as a result of Hurricane Katrina.

**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. Initially, 2,509 stream crossings were identified in the GIS. This total included sewer line crossings under drainage ditches. MAWSS has determined that there are 37 aerial stream crossings. Initial visual inspection of these crossings was completed in the fourth quarter of 2004. Damaged or deteriorated pilings that were identified have been repaired or replaced. A crew has been assigned to conduct quarterly inspection of aerial sewer lines.

In addition to aerial stream crossings, there are a total of 199 depressed sewers under streams or storm drains. Depressed sewers are routinely cleaned as part of the Gravity Line Maintenance Program.

**SECTION II: PERFORMANCE OF CONSENT DECREE WORK**

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**11. Unscheduled Maintenance Program (CD Paragraph 31)****11.1 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.

**12. Coordination with the City of Mobile and Other Governmental Bodies (CD Paragraph 32)****12.1 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.

**12.2 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

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### 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](http://www.mawss.com/consentdecreedocs.htm) and the Barry Vittor & Associates, Inc. website at [www.bvaenviro.com](http://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 along with measurements regarding Temperature (°C), Dissolved Oxygen (mg/l), Percent Dissolved Oxygen Saturation (%),

### SECTION III: WATER QUALITY MONITORING

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Salinity (ppt), and pH. The data collected to date is presented on both the MAWSS website and BVA's website.

Previously, under the Routine Water Quality Monitoring Program, any coliform datum collected from a station during routine (biweekly) monitoring which exceeds the 75<sup>th</sup> quartile was flagged for further investigative monitoring as set out in the *Water Quality Monitoring Program*. This threshold level for investigative monitoring was arbitrarily set as BVA, initially, did not have data from comparable studies. Experience has determined that the fecal coliform concentration at a given station can vary considerably based upon the time of year, temperature, rainfall, cumulative rainfall, and number of consecutive days without rainfall. As part of a recent review of the program's effectiveness, BVA has proposed to eliminate the previous 75<sup>th</sup> quartile threshold and to use experience to determine whether or not investigative monitoring is warranted for a particular high fecal coliform measurement.

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. The increased fecal coliform concentrations could indicate a natural build-up during dry conditions, which is washed into streams during rain events. Preliminary data indicated that fecal levels in many storm drains can be several times greater than background levels in streams.

BVA surveyed the storm water outfalls of an unnamed tributary to Three Mile Creek in the downtown Mobile area. BVA identified more than 60 storm drains emptying into the tributary, two of which had flow and elevated fecal coliform levels. BVA and MAWSS are currently investigating the storm water system to determine the source(s).

Under contract with MAWSS, in 2005, the US Geological Survey (USGS) published a Scientific Investigations Report 204-5302, Assessment of Water Quality, Benthic Invertebrates, and Periphyton in the Threemile Creek Basin, Mobile, Alabama, 1999-2003. BVA has proposed modifications to the Investigative Water Quality Monitoring portion of the *Water Quality Monitoring Program* as a result of a review of the USGS report and past investigative monitoring activities. These proposed changes are described in the section below.

## SECTION III: WATER QUALITY MONITORING

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### 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 results for trunk lines within the Three Mile, Eslava, and Milk House drainage basins are available on both the MAWSS and BVA web sites.

BVA has proposed to modify the trunk line dye testing plan to provide more useful information on the integrity of the MAWSS collection systems. The initial sampling plan called for dye testing during dry and wet conditions. The rationale for dye testing during wet conditions was to ensure that sewer lines were surcharged when sampling took place. The typical dye test lasts a minimum of three weeks. BVA has found that rain events have occurred during each of the previous dye tests, ensuring that the sewer lines were full during at least a portion of the testing. At the present time, dye test results do not indicate any compromises along the major trunk lines in the Three Mile, Eslava, and Milk House drainage basins.

However, routine water quality monitoring indicates high fecal coliform concentrations in specific regions of these systems. BVA has proposed to shift the focus of dye testing away from wet weather testing of major trunk lines to the testing of smaller sewer lines (less than 18 inches in diameter) in targeted areas of the collection systems where potential problems have been identified. The dye testing activities would be coupled with studies of storm drains to investigate the source of high fecal coliform concentrations that are consistently found in specific areas of the collection systems.

### SECTION III: WATER QUALITY MONITORING

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#### 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.

##### 4.2 Program Implementation

Water quality monitoring for spill impact began on February 1, 2004. Spill assessment data collected during the past quarter can be found on the MAWSS website and BVA's website.

BVA has proposed to modify the spill impact water quality monitoring procedures as part of a recent review of the program's effectiveness. The majority of overflows that BVA responds to are the result of I/I from major storm events. Often, a brief spike in fecal coliform levels occurs; however, this increase is transitory in nature and concentrations quickly return to background. These observations are based on over two years of biweekly monitoring data and spill response data. It is determined that these spills are not typically due to compromises in the collection system but are the result of capacity overloads. BVA has proposed to use experience to determine whether the monitoring of a spill is warranted. Additionally, BVA will use experience to determine the extent of the monitoring. It has been found that monitoring results vary significantly with the size of the spill in relation to the size of the receiving stream.

Should the overflow be significant enough to warrant water quality monitoring, BVA and MAWSS 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. 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.

**APPENDIX A-1: SSO AND UNPERMITTED DISCHARGE TABLES  
(CD PARAGRAPH 98)**



**APPENDIX A-1: SSO AND UNPERMITTED DISCHARGE TABLES**

Table 2: Unpermitted Discharges **Reaching** Waters of the State or United States (July 1, 2005 through September 30, 2005)

OCCURRENCE ID	COLLECTION SYSTEM	DISCHARGE DATE	CAUSE OF DISCHARGE	DURATION (HOURS)	ESTIMATED VOLUME (GAL.)	DISCHARGE SOURCE	DISCHARGE LOCATION	FLOW DESTINATION (STREAM)	CORRECTIVE ACTION
182	WILLIAMS	7/1/2005	BREAK	12	1440	MAIN LINE	1453 SPRINGHILL AVE	THREE MILE CREEK	POINT REPAIR
183	ZIEBACH	7/2/2005	BLOCKAGE (GREASE)	1	180	MANHOLE	1753 WINSTON RD	PERCH CREEK	PLACE ON CLEANING CYCLE 1
184	SMITH	7/6/2005	TROPICAL STORM CHINDY - INFILINFLOW	1	300	MANHOLE	CONTI/DEMOUY (INTERSECTION)	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
185	SMITH	7/6/2005	TROPICAL STORM CHINDY - INFILINFLOW	1	300	MANHOLE	LAUREL & DAVITT (INTERSECTION)	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
186	WILLIAMS	7/6/2005	TROPICAL STORM CHINDY - INFILINFLOW	2	1200	MANHOLE	768 JOHNSTON AVE	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
187	WILLIAMS	7/6/2005	TROPICAL STORM CHINDY - INFILINFLOW	7	12600	MANHOLE	1400 NAVCO RD @ MCVAY	BOLTON BRANCH	CONDUCT I/I REHAB IN AREA
188	WILLIAMS	7/6/2005	TROPICAL STORM CHINDY - INFILINFLOW	8	14400	MANHOLE	1100 GIMON CIR	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
189	SMITH	7/6/2005	TROPICAL STORM CHINDY - INFILINFLOW	6.25	3750	MANHOLE	462 RIDGE RD	THREE MILE CREEK	CONDUCT I/I REHAB IN AREA
190	SMITH	7/6/2005	TROPICAL STORM CHINDY - INFILINFLOW	2.75	800	MANHOLE	RIDGE RD S/RIDGE RD W	THREE MILE CREEK	CONDUCT I/I REHAB IN AREA
191	SMITH	7/6/2005	TROPICAL STORM CHINDY - INFILINFLOW	2	240	MANHOLE	316 SIENA VISTA (DEAD END)	THREE MILE CREEK	CONDUCT I/I REHAB IN AREA
192	WILLIAMS	7/6/2005	TROPICAL STORM CHINDY - LIFT STATION FAILURE	0.25	250	MANHOLE	1330 BURNT TREE DR	MILLER CREEK	RESTORE POWER AND REVIEW CONTINGENCY PLAN REGARDING THE USE OF EMERGENCY
193	SMITH	7/9/2005	HURRICANE DENNIS - INFILINFLOW	2	1200	MANHOLE	LAUREL & DAVITT	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
194	SMITH	7/9/2005	HURRICANE DENNIS - INFILINFLOW	1.5	900	MANHOLE	CONTI & DEMOUY	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
195	WILLIAMS	7/9/2005	HURRICANE DENNIS - INFILINFLOW	1.75	2100	MANHOLE	1100 GIMON CIRCLE	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
196	WILLIAMS	7/9/2005	HURRICANE DENNIS - INFILINFLOW	1.5	180	MANHOLE	CATHERINE ST/FARMER ST	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
197	WILLIAMS	7/10/2005	HURRICANE DENNIS - INFILINFLOW	8.25	500	MANHOLE	DEMOUY & MURRAY	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
198	WILLIAMS	7/10/2005	HURRICANE DENNIS - INFILINFLOW	1.75	550	MANHOLE	WESTWOOD & HOMEWOOD ST	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
199	WILLIAMS	7/10/2005	HURRICANE DENNIS - INFILINFLOW	1.75	2200	MANHOLE	MOHAWK & ELIZABETH	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
200	WILLIAMS	7/10/2005	HURRICANE DENNIS - INFILINFLOW	2	2400	MANHOLE	NAVCO & MCVAY	BOLTON BRANCH	CONDUCT I/I REHAB IN AREA
201	ZIEBACH	7/10/2005	HURRICANE DENNIS - PREDICTED STORM SURGE	9	937500	MANHOLE	4218 DAUPHIN ISLAND PKWY	PERCH CREEK	RESTORE SERVICE AT ZIEBACH WWTP AND PERCH CREEK LIFT STATION
202	ZIEBACH	7/10/2005	HURRICANE DENNIS - LIFT STATION FAILURE	0.25	50	MANHOLE	SCENIC DRIVE	PERCH CREEK	RESTORE POWER AND REVIEW CONTINGENCY PLAN REGARDING THE USE OF EMERGENCY
203	WILLIAMS	7/11/2005	BLOCKAGE (ROOTS)	2	120	MANHOLE	354 REGINA AVE	ESLAVA CREEK	POINT REPAIR
205	SMITH	7/12/2005	INFILINFLOW	3.75	2400	MANHOLE	1660 LAUREL AV @ DAVITT	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
206	SMITH	7/12/2005	INFILINFLOW	5	3000	MANHOLE	462 RIDGE RD N	THREE MILE CREEK	CONDUCT I/I REHAB IN AREA
207	SMITH	7/12/2005	INFILINFLOW	4.25	2550	MANHOLE	63 DEMOUY AVE	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
208	SMITH	7/14/2005	INFILINFLOW	4.5	5400	MANHOLE	CONTI & DEMOUY	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
209	SMITH	7/14/2005	INFILINFLOW	4	4800	MANHOLE	LAUREL ST & DAVITT AVE	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
210	WILLIAMS	7/14/2005	INFILINFLOW	3.5	4200	MANHOLE	MURRAY ST & DEMOUY	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
211	WILLIAMS	7/14/2005	INFILINFLOW	1	60	MANHOLE	15 MOHAWK ST & HOMEWOOD	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
212	WILLIAMS	7/14/2005	INFILINFLOW	1	60	MANHOLE	50 WESTWOOD ST & HOMEWOOD	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA

**APPENDIX A-1: SSO AND UNPERMITTED DISCHARGE TABLES**

Table 2 Continued: Unpermitted Discharges Reaching Waters of the State or United States (July 1, 2005 through September 30, 2005)

Related to Force Majeure Events  
 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	FLOW DESTINATION (STREAM)	CORRECTIVE ACTION
213	WILLIAMS	7/14/2005	INFILINFLOW	3	3600	MANHOLE	ELIZABETH & MOHAWK	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
214	SMITH	7/14/2005	INFILINFLOW	2.5	2450	MANHOLE	462 RIDGE RD S	THREE MILE CREEK	CONDUCT I/I REHAB IN AREA
215	SMITH	7/15/2005	INFILINFLOW	9	8100	MANHOLE	462 RIDGE RD S	THREE MILE CREEK	CONDUCT I/I REHAB IN AREA
216	WILLIAMS	7/15/2005	INFILINFLOW	3	1800	MANHOLE	MURRAY & DEMOUY	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
217	WILLIAMS	7/15/2005	INFILINFLOW	4.5	5400	MANHOLE	MOHAWK & ELIZABETH ST	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
218	SMITH	7/15/2005	INFILINFLOW	4	4800	MANHOLE	CONTI ST & DEMOUY AVENUE	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
219	SMITH	7/15/2005	INFILINFLOW	4	4800	MANHOLE	LAUREL ST & DAVITT ST	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
220	SMITH	7/15/2005	INFILINFLOW	2	240	MANHOLE	93 SIDNEY PHILLIPS DR	THREE MILE CREEK	CONDUCT I/I REHAB IN AREA
222	WILLIAMS	7/18/2005	3RD PARTY-BLOCKAGE (DEBRIS)	0.5	60	MANHOLE	902 MAGNOLIA RD & PLEASANT VALLEY RD	BOLTON BRANCH	PLACE ON CLEANING CYCLE
226	SMITH	8/8/2005	3RD PARTY-BREAK	0.25	200	FORCE MAIN	WOLFRIDGE RD & BEAU TERRA DR S	EIGHTMILE CREEK	NO FURTHER ACTION
227	WILLIAMS	8/8/2005	BREAK	0.5	150	MANHOLE	7171 SMITHFIELD DR	MILKHOUSE CREEK	NO FURTHER ACTION
230	WILLIAMS	8/16/2005	3RD PARTY-BLOCKAGE (GREASE)	1	600	MANHOLE	551 VILLAGE GREEN DR	BOLTON BRANCH CREEK	NO FURTHER ACTION
232	WILLIAMS	8/18/2005	BLOCKAGE (GREASE)	0.25	50	STORM DRAIN	23 AUDUBON PL	ESLAVA CREEK	PLACE ON CLEANING CYCLE
233	WILLIAMS	8/18/2005	BLOCKAGE (GREASE)	1	300	MANHOLE	3105 EMELYE DR	SPRING CREEK	PLACE ON CLEANING CYCLE
234	DECENTRALIZED	8/19/2005	BREAK	0.15	20	FORCE MAIN	4930 MYRICK CT	MILLERS CREEK	POINT REPAIR
235	SMITH	8/20/2005	BLOCKAGE (GREASE)	1.25	200	MANHOLE	328 VANDERBILT	TWELVE MILE CREEK	PLACE ON CLEANING CYCLE
236	SMITH	8/25/2005	INFILINFLOW	2	12000	MANHOLE	CONTI & DEMOUY	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
237	SMITH	8/25/2005	INFILINFLOW	0.75	2500	MANHOLE	LAUREL & DAVITT	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
238	SMITH	8/25/2005	INFILINFLOW	1	2400	MANHOLE	LAUREL & DAVITT	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
239	SMITH	8/25/2005	INFILINFLOW	0.75	250	MANHOLE	LAUREL & DAVITT	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
240	WILLIAMS	8/25/2005	INFILINFLOW	1	500	MANHOLE	1565 LULING	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA
242	WILLIAMS	8/27/2005	BLOCKAGE (DEBRIS)	1.5	66	MANHOLE	959 TANGLEWOOD DR E	ESLAVA CREEK	PLACE ON CLEANING CYCLE
243	WILLIAMS	8/30/2005	HURRICANE KATRINA - LIFT STATION FAILURE	4.75	1450	MANHOLE	3112 RIVERIE DU CHIEN LOOP W	MOORE CREEK	LIFT STATION REPAIR AND MAINTENANCE
244	ZIEBACH	8/30/2005	HURRICANE KATRINA - LIFT STATION FAILURE	0.5	300	MANHOLE	2156 GROVE CT	PAYNE'S CREEK	LIFT STATION REPAIR AND MAINTENANCE
246	SMITH	8/30/2005	HURRICANE KATRINA - LIFT STATION FAILURE	0.5	600	LIFT STATION	1801 PRINCETON WOODS DR W @ LS	EIGHTMILE CREEK	LIFT STATION REPAIR AND MAINTENANCE
248	WILLIAMS	8/30/2005	HURRICANE KATRINA - LIFT STATION FAILURE	1.5	840	MANHOLE	SEVEN HILLS CURVE/BURNT DR E	MILLER CREEK	LIFT STATION REPAIR AND MAINTENANCE
249	WILLIAMS	8/30/2005	HURRICANE KATRINA - LIFT STATION FAILURE	25	15000	MANHOLE	HOUSTON ST/DUVAL ST	ESLAVA CREEK	LIFT STATION REPAIR AND MAINTENANCE
250	SMITH	8/30/2005	HURRICANE KATRINA - LIFT STATION FAILURE	25.5	45900	MANHOLE	7100 CODY RD N/QMS LS	CLEAR CREEK	LIFT STATION REPAIR AND MAINTENANCE
252	SMITH	8/31/2005	HURRICANE KATRINA - INFILINFLOW	4	1800	MANHOLE	462 RIDGE ROAD	THREE MILE CREEK	CONDUCT I/I REHAB IN AREA
253	SMITH	8/31/2005	HURRICANE KATRINA - INFILINFLOW	1	600	MANHOLE	CONTI & DEMOUY	ESLAVA CREEK	CONDUCT I/I REHAB IN AREA

