



Department of Watershed Management

Scott A. Towler, P.E.

Director

Interim Chief Executive Officer

Lee May

Board of Commissioners

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Stan Watson

Via Electronic Mail and U.S. MAIL

February 1, 2016

Chief, Clean Water Protection Branch
ATTN: Ms. Sara Janovitz
Water Protection Division
United States Environmental Protection Agency,
Region 4
61 Forsyth Street
Atlanta, Georgia 30303-8960

Re: Clean Water Act Consent Decree 1:10cv 4039-WSD
February 1, 2016 Semi-Annual Report #8 Submittal

Dear Ms. Janovitz:

As required by §IX. Reporting Requirements of the Consent Decree associated with the above referenced civil action, we are submitting the following document for your review and comment:

- February 1, 2016 Semi-Annual Report #8

I certify under penalty of law that these documents 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 managed 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 pursuant to CWA Section 309(c)(4).

If you have questions or comments, please contact me at 770-621-7204.

Sincerely,

Scott A. Towler, P.E., Director
Department of Watershed Management

cc: Georgia EPD
O. V. Brantley, County Attorney
Darren Eastall
Margaret Tanner
Matthew Welch
E. Fitzgerald Veira, Troutman Sanders

Semi-Annual Report #8

July 1, 2015, to December 31, 2015

Civil Action No. 1:10cv4039 - WSD

DeKalb County Department of Watershed Management



February 1, 2016

Table of Contents

INTRODUCTION	4
CMOM PROGRAMS' NARRATIVE UPDATE.....	6
1. CONTINGENCY AND EMERGENCY RESPONSE PLAN (CERP) (CD VI.B.i)	6
2. FATS, OILS, AND GREASE (FOG) MANAGEMENT PROGRAM (CD VI.B.ii)	6
3. SEWER MAPPING PROGRAM (CD VI.B.iii)	7
4. MAINTENANCE MANAGEMENT SYSTEM PROGRAM (CD VI.B.iv)	7
5. COLLECTION AND TRANSMISSION SYSTEMS TRAINING PROGRAM (CD VI.B.v)	9
6. SYSTEM-WIDE FLOW AND RAINFALL MONITORING PROGRAM (CD VI.B.vi)	9
7. SYSTEM-WIDE HYDRAULIC MODEL (CD VI.B.vii)	10
8. FINANCIAL ANALYSIS PROGRAM (CD VI.B.viii)	10
9. INFRASTRUCTURE ACQUISITIONS PROGRAM (CD VI.B.ix)	11
10. PRIORITY AREAS SEWER ASSESSMENT AND REHABILITATION PROGRAM (CD VI.B.x)	12
11. ONGOING SEWER ASSESSMENT AND REHABILITATION PROGRAM (CD VI.B.x).....	13
GANTT CHART.....	14

Acronyms

BI	Business Intelligence
CCTV	Closed Circuit Television
CDPMT	Consent Decree Program Management Team
CERP	Contingency and Emergency Response Plan
CIP	Capital Improvement Program
CMOM	Capacity, Management, Operations, and Maintenance
DWM	Department of Watershed Management (DeKalb County)
FOG	Fats, Oils, and Grease
FSE	Food Service Establishments
GAEPD	Georgia Environmental Protection Division
GIS	Geographic Information System
MMS	Maintenance Management System
OSARP	Ongoing Sewer Assessment and Rehabilitation Program
PASARP	Priority Areas Sewer Assessment and Rehabilitation Program
SSDE	Spatial Database Engine
SLUP	Special Land Use Variances
SSO	Sanitary Sewer Overflow
USEPA	U.S. Environmental Protection Agency
WAM	Work and Asset Management

Introduction

The DeKalb County (the “County”) Department of Watershed Management (DWM) submits this eighth Semi-Annual Report in accordance with Section IX, Paragraph 57 of the Consent Decree (Civil Action 1:10cv4039-WSD) to provide:

- a) “A summary description of projects and significant activities completed and deadlines achieved during the previous applicable six (6) month period pursuant to the requirements of this Consent Decree, in Gantt chart or similar format, including a summary of any missed deadline required by this Consent Decree and, if applicable, the reasons for missing such deadline.”
- b) “A summary of projects and significant activities anticipated to be performed, and deadlines anticipated to be achieved, in the successive applicable six (6) month period to comply with the requirements of this Consent Decree, in Gantt chart or similar format. The Parties agree that schedules, dates or deadlines reported pursuant to this subparagraph 57.(b) are not intended to be and shall not become enforceable under this Consent Decree, unless any such schedule, date or deadline is otherwise specifically enforceable pursuant to this Consent Decree.”

A significant number of projects and activities have been implemented during the latter half of 2015 and several projects and activities are projected to be implemented in the first six months of 2016. As the implementation of the Capacity, Management, Operations and Maintenance (CMOM) programs continues to ramp up with the addition of multiple projects and activities, the reporting of those projects and significant activities is more conducive to a Gantt chart format as described in the Consent Decree provision outlined above. Even though the introduction of a Gantt chart was provided in the appendix of the seventh Semi-Annual Report, the format of this submittal has been modified from previous versions of the Semi-Annual Report to place more emphasis on a Gantt chart format. As such, this submittal will include both a narrative and a Gantt chart section.

In addition to completing several projects and significant activities during the reporting period from July 1, 2015 to December 31, 2015, DWM re-submitted various CMOM programs, including the Priority Area Sewer Assessment and Rehabilitation Program (PASARP), the Ongoing Sewer Assessment and Rehabilitation Program (OSARP), and the Maintenance Management System (MMS) to the Environmental Protection Agency (EPA) and the Environmental Protection Division (EPD) for approval. Re-submittals of previously approved CMOM program documents were needed to update the programs based on technological advancements (such as the strategic change from InfoNet™ to InfoMaster™), to provide versatility in the modeling approach and usage, to establish new deadlines/schedule changes for certain projects, to refine the assessment evaluation process, and to updated Key Performance Indicators.

Additionally, other required reports such as the Quarterly Reports and Semi-Annual Report were timely submitted. See Table 1 below for a summary of all submittals and projected submittals during the reporting period.

Table 1. CONSENT DECREE SUBMITTALS – SCHEDULE AND STATUS

Consent Decree #	Title	DWM Submittal for Review	EPA/EPD Comments	DWM Final Submittal	EPA/EPD Approval
IX.(56)	Quarterly Report	-	-	7/22/2015	-
IX.(57)	7 th Semi-Annual Report	-	-	7/30/2015	-
VI.B.(iv)	MMS	4/16/15	6/2/15	8/3/15	8/18/15
VI.B.(viii)	Financial Analysis	4/16/15	6/2/15	2/1/16	
VI.B.(x)	PASARP	4/16/15	6/2/15	8/3/15	8/18/15
VI.B.(x)	OSARP	4/16/15	6/2/15	8/3/15	8/18/15
VI.B.(x)	Quarterly Report	-	-	10/31/15	-
IX.(56)	Quarterly Report	-	-	1/22/16	-
IX.(57)	This 8 th Semi-Annual Report	-	-	2/1/16	-
IX.(58)	Annual Report	-	-	2/29/16	-

CMOM Programs' Narrative Update

1. Contingency and Emergency Response Plan (CERP) (CD VI.B.i)

a) Projects and Activities Accomplished for the Reporting Period 7/1/2015 to 12/31/2015

- i) Responded to and investigated 73 spills, 16 building backups, and 20 overflows.
- ii) Continued and added an engineering study and system improvement projects as a result of investigations.
- iii) Reviewed the CERP and confirmed that programs are up-to-date with current practices and activities.

b) Projects and Activities Anticipated for the Reporting Period 1/1/2016 to 6/30/2016

- i) Properly respond to and investigate spills, building backups, and overflows.
- ii) Continue to review SSO trends and integrate all DWM departments through bi-monthly meetings into the process of ensuring all SSO trends are being analyzed and addressed.
- iii) Conduct the next round of CERP training for field staff.
- iv) Update and edit CERP based on response reviews for improvement.

2. Fats, Oils, and Grease (FOG) Management Program (CD VI.B.ii)

a) Projects and Activities Accomplished for the Reporting Period 7/1/2015 to 12/31/2015

- i) Tested and finalized the construction/renovation tracking software which is now being used to include the FOG reviews, inspections, and fees for incorporated cities review to optimize the City Permitting Processes.
- ii) Improved the FOG permitting process by coordinating meetings to address agreements on plan routing with the Cities of Decatur and Brookhaven, in November and December 2015. Maintained communication with other cities such as Dunwoody, Chamblee, and Doraville to ensure continuation of the FOG review and permitting.
- iii) Communicated with school authorities (Joshua Williams – Chief Operation Officer, John Wright - Deputy Program Director and other directors at the DeKalb County Schools) from August through September 2015 to plan and review the school's grease traps updates.
- iv) Distributed educational materials (344 door hangers and 150 brochures) at multi-family apartment complexes and residential neighborhoods that have been identified to be located near sewer spills and attended Homeowners Association and other group meetings.
- v) Distributed medical waste brochures as needed to medical facilities identified in high spill areas where medical waste is the cause.
- vi) Communicated with County residents and customers on a consistent basis as part of the Public Education Program including radio and newspaper media. Participated in 10 community and school events to provide information regarding Water, Wastewater Treatment, FOG, and Conservation.

- vii) Continued Internet statistical surveys to gauge the effectiveness of public messaging and its impacts on public participation as related to FOG education.

b) Projects and Activities Anticipated for the Reporting Period 1/1/2016 to 6/30/2016

- i) Continue improving the FOG permitting process by coordinating meetings with the larger incorporated city authorities. Continue ongoing communication with contacted cities to ensure continuation of the agreements.
- ii) Continue communicating with school authorities at DeKalb County Schools to plan and review the school's grease traps updates.
- iii) Continue communicating with County residents and customers on a consistent basis as part of the Public Education Program.

3. Sewer Mapping Program (CD VI.B.iii)

a) Projects and Activities Accomplished for the Reporting Period 7/1/2015 to 12/31/2015

- i) Finished the loading of over 141,000 assets (including 35 sewersheds; 247 metersheds; 70,562 manholes; 70,686 gravity mains; 66 lift stations; 67 force mains; and 58 air release valves) into the Oracle WAM production database. *See Gantt Chart lines 278-286.*
- ii) Created and tested the method of linking assets between Oracle WAM and geographic information system (GIS) such that maintenance and rehabilitation being performed in the field, can be tracked in the work order system. *See Gantt Chart line 288.*
- iii) Continued to maintain attributes of existing assets as well as update the GIS with new assets throughout the lifecycle of Consent Decree.
- iv) Continued to assist other tasks such as Hydraulic Modeling and PASARP with field verification requests and quality control of asset data. *See Gantt Chart lines 263-264.*
- v) Continued maintenance (e.g. adding new infrastructure) of GIS databases for connectivity with other software programs.

b) Projects and Activities Anticipated for the Reporting Period 1/1/2016 to 6/30/2016

- i) DWM is formalizing the easement mapping program to provide an outline for creating, populating, and maintaining an easement feature class or layer in the County GIS database system. Engineers will determine the quantity, quality, and location of existing records on site. Verification of easement data will also take place as an ongoing task. *See Gantt Chart lines 289-290.*
- ii) As the PASARP assessment data is processed, the private lateral connection point layer in the GIS database (or InfoMaster™) will be created.

4. Maintenance Management System Program (CD VI.B.iv)

a) Projects and Activities Accomplished for the Reporting Period 7/1/2015 to 12/31/2015

- i) Information Management:

- (1) Finished the evaluation, selection, and installation of the Business Intelligence (BI) software. The BI tool will be used to categorize maintenance data such that trends can be identified for use in making maintenance decisions.
 - (2) Continued the process to procure professional services for implementation of the Oracle WAM work order module for gravity system maintenance work.
- ii) Inventory Management:
- (1) Initiated efforts to improve the efficiency of the spare parts re-order process as part of the inventory management strategy implementation to ensure parts are consistently available for corrective and proactive maintenance tasks.
 - (2) Continued warehouse management solutions which resulted in a 100% passing level in the internal parts assessment.
- iii) Gravity System and Force Main Maintenance:
- (1) Procured three new vacuum trucks to provide additional system maintenance.
 - (2) Initialized aspects of the proactive maintenance strategy for tools/equipment such that:
 - (a) a new vendor was contracted to maintain small engines;
 - (b) updated push cameras; and
 - (c) crews conducted field testing/installation of new camera systems.
 - (3) Added new composite locking manhole lids to prevent vandalism and theft.
 - (4) Improved the accuracy of the addresses database used for address-based maintenance work to ensure efficient maintenance planning and work execution.
 - (5) Completed 1,809 creek-crossing external inspections where 38 creek crossing mains underwent additional dye testing; nine crossings were submitted for repair; 42 crossings were classified for additional review; and 196 crossings were noted as having some debris accumulation and will be addressed under the maintenance cleaning program.
 - (6) Expanded the system cleaning program to reduce SSOs by scheduling, evaluating, and increasing the scheduled work of a third cleaning contractor this period.
 - (7) Exceptions Explanation – DWM did not maintain a specific root control contract during the 2015 timeframe but still cleared lines of roots during SSO cleanings.
- iv) Lift Stations Maintenance:
- (1) Purchased an easement clearing machine that was used to clear 8 easements at lift stations as the initial commencement of the easement assessment and maintenance strategy.
 - (2) Completed several lift station rehabilitation or replacement. *See Gantt Chart lines 1561, 1619, 1665, 1699, and 1822.*

b) Projects and Activities Anticipated for the Reporting Period 1/1/2016 to 6/30/2016

- i) Begin the procurement of a root control contract.
- ii) Continue the inspection and evaluation of creek-crossings.
- iii) Continue work to improve the accuracy of addresses used for address-based work.
- iv) Continue work to implement the Oracle WAM work order module for gravity system maintenance work.
- v) Initialize all remaining aspects of the proactive and predictive maintenance programs for gravity lines, lift stations, and force mains.

5. Collection and Transmission Systems Training Program (CD VI.B.v)

a) Projects and Activities Accomplished for the Reporting Period 7/1/2015 to 12/31/2015

- i) Continued 4,366 training of County staff in various areas.
- ii) Continued field equipment training program with vendor supplied course work.
- iii) Initiated procurement process to secure vendor to develop the program implementation.
- iv) Exceptions Explanation – DWM is not currently generating quarterly reports for management and trainers from the Compliance Suite that provides the status of training for each employee, including training refresher due dates. DWM is in the process of formalizing the knowledge retention officer position and supporting staff to address this gap; however, ongoing training is still being provided as noted above.

b) Projects and Activities Anticipated for the Reporting Period 1/1/2016 to 6/30/2016

- i) Continue training of County staff in various areas.
- ii) Complete the bidding and review for the training program vendor.

6. System-Wide Flow and Rainfall Monitoring Program (CD VI.B.vi)

a) Projects and Activities Accomplished for the Reporting Period 7/1/2015 to 12/31/2015

- i) Completed documentation related to the previous installation of flow meters and rain gauges. See Gantt Chart lines 353-361.
- ii) Collected flow data required for the assessment of the capacity of various sewer segments. See Gantt Chart line 369.
- iii) Provided additional and/or backup modeling input data for system flow calibration and projections.

b) Projects and Activities Anticipated for the Reporting Period 1/1/2016 to 6/30/2016

- i) As cleaning or closed circuit television (CCTV) activities occur within the pipes being measured, the monitors will be removed to avoid damage and data corruption.
- ii) Re-evaluate the required number and placement of monitors.

- iii) As capacity questions arise, monitors will be installed at the program lead's direction to measure flow for capacity assurance purposes. See Gantt Chart line 369.
- iv) Install monitors as needed around areas to determine flow depths and peak flows related to sanitary sewer overflows (SSO). See Gantt Chart lines 366-368.
- v) Use flow monitoring to support the predictive and/or preventive maintenance efforts of the MMS Program. See Gantt Chart line 365.

7. System-Wide Hydraulic Model (CD VI.B.vii)

a) Projects and Activities Accomplished for the Reporting Period 7/1/2015 to 12/31/2015

- i) Completed constructing eight of the nine sewershed models for the Inter-Governmental Basin. See Gantt Chart lines 458-482.
- ii) Completed loading Dry Weather Flow (DWF) into the Snapfinger Basin model. Substantially completed loading DWF to the Inter-Governmental basin sewershed models with ongoing loading of DWF for the remaining North Fork Peachtree Creek and South Fork Peachtree Creek sewersheds. See Gantt Chart lines 376-379.
- iii) Performed DWF calibrations of Snapfinger and Pole Bridge basin models and Inter-Governmental basin sewershed models (except North Fork Peachtree Creek and South Fork Peachtree Creek). See Gantt Chart line 397.
- iv) Completed the Peak Flow Capacity Assessment simulation set up (including getting the conveyance system connectivity, flow balancing, and peak flow calibration coordinated between gravity and pump stations) for the Snapfinger and Pole Bridge Basin models. See Gantt Chart lines 400-452.

b) Projects and Activities Anticipated for the Reporting Period 1/1/2016 to 6/30/2016

- i) Complete the Dry Weather Calibration and Peak Flow Assessment simulation set up for Inter-Governmental basin sewershed models. See Gantt Chart line 397.
- ii) Complete Capacity Assessments (to determine which sewers, pump stations, and force mains are capacity limited) using the Peak Flow models for Snapfinger and Pole Bridge basins, and Inter-Governmental basin sewersheds. See Gantt Chart lines 416, 445.
- iii) Complete Peak Flow Capacity Assurance recommendations for the Snapfinger and Pole Bridge basins and Inter-Governmental basin sewersheds. See Gantt Chart lines 421, 450.
- iv) Initiate the summary report that compiles the overall model principles and will reference pertinent assumptions that will allow future modelers to know what decisions were made to generate the model results.

8. Financial Analysis Program (CD VI.B.viii)

a) Projects and Activities Accomplished for the Reporting Period 7/1/2015 to 12/31/2015

- i) Presented the Revenue Sufficiency and Rate Review Study to the Board of Commissioners Public Works Committee on December 1, 2015. The recommendation included no rate

adjustment in 2016. The Public Works Committee further requested an update to the Study by June 30, 2016.

- ii) Completed and implemented the reporting changes for separate drinking water and wastewater budgets. Monitoring of wastewater budgets versus actual results is ongoing.
- iii) DWM is on track to meet its 2015 revenue target and operating expenditure budget.
- iv) Continued working on the automation of the tracking of maintenance cost as corrective, preventive, and emergency. Until automation is completed, the chart below provides manual cost estimates through the 3rd quarter of 2015.

Cost Category	Total Q3
Corrective	\$435,942
Preventive	\$508,005
Emergency	\$6,179,219
Total	\$7,123,160

b) Projects and Activities Anticipated for the Reporting Period 1/1/2016 to 6/30/2016

- i) As noted in the previous reporting cycle, the automation of tracking of maintenance cost was delayed due to the lack of asset IDs from the Sewer Mapping Program. However, the asset IDs are now defined; therefore, full automation should be accomplished by the close of 2016. Until fully implemented, DWM will continue to use the alternative methodology to approximate maintenance and operating as corrective, preventive, and emergency.
- ii) Continue to monitor and report on DWM’s overall financial operations performance to include water and wastewater budgets.

9. Infrastructure Acquisitions Program (CD VI.B.ix)

a) Projects and Activities Accomplished for the Reporting Period 7/1/2015 to 12/31/2015

- i) Evaluated and acquired 26,730 feet of pipe and one lift station under the new Infrastructure Acquisition program.
- ii) Conducted various reviews as required under the program included one private lift station retrofit review; 11 Sketch Plat reviews; 93 City Land Disturbance Permit Reviews; 68 Unincorporated Land Disturbance Permit Reviews; 9 Peer Reviews; 316 City Reviews; 35 Final Plat Reviews; 16 Easement Reviews; and 11 Septic Conversions.
- iii) Met daily with DWM inspectors to avoid/address any field issues, and to streamline the process for review/approval/acceptance of new infrastructure.
- iv) Review all submittals to incorporated cities for rezoning, special land use variances (SLUP), lot division, other variances, etc., to ensure capacity available for proposed projects.
- v) Exception Explanation – The allotment of sewer capacity portion of the Infrastructure Acquisition is being developed and should be approved by the legal department and upper

management in early 2016. The process for bonding, final inspection, and acceptance is being revised to ensure projects are being acquired via the proper procedure.

b) Projects and Activities Anticipated for the Reporting Period 1/1/2016 to 6/30/2016

- i) Continue to review new and ongoing development projects for sewer line connectivity as submitted during the permitting process.
- ii) Continue to review projects converting from septic to sewer.
- iii) Continue to review final plats, as-builts, and sewer easements for acceptance.
- iv) Continue to offer customer service to all applicants/citizens requesting assistance.
- v) Review lift-station acquisitions, as required.
- vi) Review all submittals to incorporated cities for rezoning, SLUP, lot division, variances, etc.

10. Priority Areas Sewer Assessment and Rehabilitation Program (CD VI.B.x)

a) Projects and Activities Accomplished for the Reporting Period 7/1/2015 to 12/31/2015

- i) Continued and completed the procurement process for the PASARP Assessment Contracts where the bids were opened on July 9, 2015; Notice of Award issued November 27, 2015; and Notice to Proceed issued on December 30, 2015.
- iv) Developed quality assurance tools and protocols for the assessment contractors to use to screen data prior to submitting to DWM. Provided tools to contractor and training on application.
- v) Continued the development and refinement of work flow and decision tools that would be applied to the results of the assessments. This process includes the scoring of the condition assessment inspections, incorporating risk determination with the consequence of failure into the scoring, and formulating a multi-criteria rehabilitation decision logic.

b) Projects and Activities Anticipated for the Reporting Period 1/1/2016 to 6/30/2016

- i) Conduct PASARP contractor kickoff meetings and training sessions in early January.
- ii) Assign sequenced prioritized ranking areas to each Group assessment contractor to perform tiered inspections. Tier 1 inspections, such as manhole, acoustic, zoom camera, and smoke testing will be performed on 100 percent of the public sewers in the PASARP areas. Tier 2, such as CCTV and sonar, will be performed on sewers meeting Tier 1 assessment and risk scoring criteria.
- iii) Initiate development of rehabilitation project “packages” for engineering review and design.
- iv) Integrate hydraulic modeling peak flow capacity assurance results with PASARP assessment results.
- v) Issue a request for proposal for design and construction management services to respond to the structural defects and capacity recommended for corrective action.

11. Ongoing Sewer Assessment and Rehabilitation Program (CD VI.B.x)

a) Projects and Activities Accomplished for the Reporting Period 7/1/2015 to 12/31/2015

- i) Implemented, tracked assessment and rehabilitation projects including 402 manhole assessments, 158,600 linear feet of CCTV, force main replacement, sewer line upsizing and sewer line relocation. See Gantt Chart lines 1134 – 1184.
- ii) Exception Explanation – Caladium Drive was scheduled for rehabilitation by 12/31/15; however, due to procurement delays, the rehabilitation is now rescheduled for completion by the end of 2016.
- ii) Continued the procurement process for assessment, rehabilitation, and engineering.

b) Projects and Activities Anticipated for the Reporting Period 1/1/2016 to 6/30/2016

- i) Continue implementation of the manhole assessment, CCTV, cleaning activities, and rehabilitation. Additional details are more fully described in the Gantt Chart. See Gantt Chart lines 1129 – 1482.
- ii) Issue a request for proposal for design and construction management services to respond to the structural defects recommended for corrective action.

Gantt Chart

As explained in the Introduction Section of this report, the Gantt chart is to be used as the primary method for presenting a summary of projects and significant activities achieved or anticipated to be achieved during the reporting period. A description of the layout of the Gantt chart is provided below:

Dekalb County Department of Watershed Management							CDPMT Master Schedule								
							Semi-Annual Report								
ID	Task Name	Start	Finish	CD/CMOM Date	Duration	% Complete	2014	2015	2016	2017	2018	2019			
198	Sewer Mapping Program	12/31/13	6/19/20	NA	1634 d	71%									
226	Update GIS Inventory	6/16/14	6/19/20	NA	1519 d	68%									

ID - Number assigned to each task listed within the scheduling software. This field is used to sequence the order of tasks and to group like tasks under defined headings. The Gantt chart included in this Semi-Annual report is a collapsed version of a larger project management scheduling chart. As required under the Consent Decree, only specific projects and significant activities are outlined in this report; therefore, the ID numbering is not sequential and the attached chart does not represent the entirety of all 3614 tasks currently being undertaken by DWM in the Master Schedule. The number of activities will continue to grow and will be reported on in successive Semi-Annual reports.

Dekalb County Department of Watershed Management							CDPMT Master Schedule								
							Semi-Annual Report								
ID	Task Name	Start	Finish	CD/CMOM Date	Duration	% Complete	2014	2015	2016	2017	2018	2019			
198	Sewer Mapping Program	12/31/13	6/19/20	NA	1634 d	71%									
226	Update GIS Inventory	6/16/14	6/19/20	NA	1519 d	68%									

Task Name - Name of the task.

Dekalb County Department of Watershed Management							CDPMT Master Schedule								
							Semi-Annual Report								
ID	Task Name	Start	Finish	CD/CMOM Date	Duration	% Complete	2014	2015	2016	2017	2018	2019			
198	Sewer Mapping Program	12/31/13	6/19/20	NA	1634 d	71%									
226	Update GIS Inventory	6/16/14	6/19/20	NA	1519 d	68%									

Start - Date when a task is scheduled to begin is calculated based on task constraints, task dependencies and resource calendars.

Finish - Date when a task is scheduled to end is calculated based on the start date, duration, task constraints, task dependencies and resource calendars.

Dekalb County Department of Watershed Management							CDPMT Master Schedule								
							Semi-Annual Report								
ID	Task Name	Start	Finish	CD/CMOM Date	Duration	% Complete	2014	2015	2016	2017	2018	2019			
198	Sewer Mapping Program	12/31/13	6/19/20	NA	1634 d	71%									
226	Update GIS Inventory	6/16/14	6/19/20	NA	1519 d	68%									

CD/CMOM Date - Finish date for a milestone based on the Consent Decree and CMOM documents. Dates are assigned to milestone type tasks only; all other tasks reflect a value of not applicable (NA).

Dekalb County Department of Watershed Management		CDPMT Master Schedule Semi-Annual Report													
ID	Task Name	Start	Finish	CD/CMOM Date	Duration	% Complete	2014			2015			201		
							2	3	4	1	2	3	4	1	2
198	Sewer Mapping Program	12/31/13	6/19/20	NA	1634 d	71%									
226	Update GIS Inventory	6/16/14	6/19/20	NA	1519 d	68%									

Duration - Total span of active working time for a task is calculated as the amount of active working time between the scheduled start and end of a task.

Dekalb County Department of Watershed Management		CDPMT Master Schedule Semi-Annual Report													
ID	Task Name	Start	Finish	CD/CMOM Date	Duration	% Complete	2014			2015			201		
							2	3	4	1	2	3	4	1	2
198	Sewer Mapping Program	12/31/13	6/19/20	NA	1634 d	71%									
226	Update GIS Inventory	6/16/14	6/19/20	NA	1519 d	68%									

% Complete - Current status of a task is expressed as a percentage of the task's work (time wise) that has been completed.

Dekalb County Department of Watershed Management							CDPMT Master Schedule Semi-Annual Report																							
ID	Task Name	Start	Finish	CD/CMOM Date	Duration	% Complete	2014		2015		2016		2017		2018		2019		2020											
							1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
198	Sewer Mapping Program	12/31/13	6/19/20	NA	1634 d	71%																								
226	Update GIS Inventory	6/16/14	6/19/20	NA	1519 d	68%																								
262	Update GIS Inventory incorporating System Wide Flow and Rainfall Monitoring	6/1/15	8/31/15	NA	66 d	100%																								
263	Update SDE with feature classes containing confirmed monitor locations and information for monitors installed in 2014	6/1/15	8/31/15	NA	66 d	100%																								
264	Update SDE with feature classes containing confirmed monitor locations and information for new monitors installed thru 2015	6/1/15	8/31/15	NA	66 d	100%																								
265	Update GIS Inventory incorporating Hydraulic Modeling related to missing sewer connectivity and elevation data	3/26/15	4/29/16	NA	279 d	79%																								
266	Snapfinger Basin	3/26/15	2/29/16	NA	235 d	96%																								
270	Polebridge Basin	5/14/15	2/29/16	NA	200 d	98%																								
272	InterGovernmental Basin	4/21/15	4/29/16	NA	261 d	68%																								
278	Assignment of Asset ID	6/16/14	12/23/15	NA	386 d	100%																								
282	Assignment of Asset ID	12/22/14	8/31/15	NA	176 d	100%																								
285	Import of asset ID's into Oracle WAM Database	9/2/14	12/23/15	NA	332 d	100%																								
286	Complete importing asset IDs into Oracle WAM Database	12/23/15	12/23/15	12/31/15	0 d	100%																								
287	Review Final Deliverables against Compiled GIS to date and maintain assets throughout lifecycle of CD.	9/1/15	12/23/15	12/31/15	79 d	100%																								
288	Create 2 Way script to upload & Maintain GIS Assets into CMMS and Push Asset ID's from CMMS to GIS (purchased GeoWorx Synch)	7/1/15	12/10/15	12/31/15	114 d	100%																								
289	Easement Mapping	11/16/15	6/19/20	NA	1159 d	0%																								
290	Easement Mapping	11/16/15	6/19/20	NA	1159 d	0%																								
291	System Wide Flow and Rainfall Monitoring	5/7/14	6/19/20	NA	1546 d	34%																								
292	Existing Data Collection & Assessment	5/7/14	1/8/15	NA	170 d	100%																								
310	Additional Flow Monitors & Rain Gauges	7/1/14	8/31/15	NA	296 d	100%																								
349	Flow Meter and Rain Gauge Information QA for monitors installed in 2014	1/2/15	8/31/15	NA	169 d	100%																								
352	Update DWM GIS database feature classes with confirmed monitor locations and information, and send to DWM GIS for SDE updates	1/2/15	8/31/15	NA	169 d	100%																								
353	Data Hosting Contract Flow Meters and Rain Gauges Installation and relocation to support Hydraulic Modeling; and webserver setup	3/2/15	8/31/15	NA	130 d	100%																								
357	Periodical Data Download and QA	10/6/14	7/31/15	NA	208 d	100%																								
358	Monthly maintenance summary report data download and perform preliminary QA	10/6/14	7/31/15	NA	208 d	100%																								
361	Rain gauge event analysis	4/6/15	7/31/15	NA	84 d	100%																								
364	Support other CMOM Programs	9/1/15	6/19/20	NA	1212 d	0%																								

Stated through 1/29/16

Page 1

Printed 1/26/16 1:45 PM

Dekalb County Department of Watershed Management							CDPMT Master Schedule Semi-Annual Report																									
ID	Task Name	Start	Finish	CD/CMOM Date	Duration	% Complete	2014		2015		2016		2017		2018		2019		2020													
							2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4							
365	MMS support I/I	9/1/15	6/19/20	NA	1212 d	0%																										
366	CERP support - SSO trend & root cause analyses	9/1/15	6/19/20	NA	1212 d	0%																										
367	PASARP support - assessment tool	9/1/15	6/19/20	NA	1212 d	0%																										
368	OSARP support - assessment tool	9/1/15	6/19/20	NA	1212 d	0%																										
369	Infrastructure acquisition for capacity determination	9/1/15	6/19/20	NA	1212 d	0%																										
370	Hydraulic Modeling Approach	4/7/14	6/19/20	NA	1568 d	65%	[Gantt bar spanning from 4/7/14 to 6/19/20]																									
376	Dry Weather Flow Data Analysis	7/13/15	12/31/15	NA	120 d	100%	[Gantt bar spanning from 7/13/15 to 12/31/15]																									
377	Dry Weather Flow Data Analysis	7/13/15	7/24/15	NA	10 d	100%																										
378	RDI/I Flow Data Analysis	7/27/15	12/31/15	NA	110 d	100%																										
379	R Flow Data Analysis	7/27/15	12/31/15	NA	110 d	100%																										
380	Peaking Factor Flow Rate Data Analysis	7/27/15	12/31/15	NA	110 d	100%																										
392	Milestones Common to all Basin Models	5/30/14	6/19/20	NA	1529 d	0%	[Gantt bar spanning from 5/30/14 to 6/19/20]																									
396	Complete key surveying and key data collection (collect infrastructure data for system-wide hydraulic model) [this is not CD Milestone].	4/29/16	4/29/16	NA	0 d	0%																										
397	Complete Calibrated Dry Weather Flow Models for 3 Basins	2/29/16	2/29/16	12/31/16	0 d	0%																										
400	Snappinger Basin Peak Flow Model	6/12/14	8/31/16	NA	562 d	58%	[Gantt bar spanning from 6/12/14 to 8/31/16]																									
401	Peak Flow Model Data Collection	6/12/14	5/29/15	NA	243 d	100%																										
405	Peak Flow Model & Rainfall Data Analysis	11/3/14	7/1/15	NA	166 d	100%																										
408	Peak Flow Modeling	1/15/15	9/30/15	NA	181 d	100%																										
416	Peak Flow Model Simulation - Capacity Assessment	6/1/15	1/29/16	NA	169 d	99%																										
421	Peak Flow Model Simulation - Capacity Assurance	2/1/16	4/29/16	NA	64 d	0%																										
423	Peak Flow Model Development Documentation	2/1/16	8/31/16	NA	150 d	0%																										
429	Polebridge Basin Peak Flow Model	7/17/14	7/29/16	NA	515 d	60%	[Gantt bar spanning from 7/17/14 to 7/29/16]																									
430	Peak Flow Model Data Collection	7/17/14	5/29/15	NA	219 d	100%																										
434	Peak Flow Model & Rainfall Data Analysis	11/17/14	7/1/15	NA	156 d	100%																										
437	Peak Flow Modeling	2/2/15	9/30/15	NA	170 d	100%																										
445	Peak Flow Model Simulation - Capacity Assessment	7/1/15	1/29/16	NA	147 d	97%																										
450	Peak Flow Peak Flow Model Simulation - Capacity Assurance	2/1/16	4/29/16	NA	64 d	0%																										
452	Peak Flow Model Development Documentation	2/1/16	7/29/16	NA	127 d	0%																										
458	Intergovernmental Basin Peak Flow Model	7/17/14	8/17/16	NA	528 d	64%	[Gantt bar spanning from 7/17/14 to 8/17/16]																									
459	Nancy Creek Sewershed	7/17/14	6/30/16	NA	495 d	67%																										
482	Peak Flow Model Development Documentation	2/1/16	6/30/16	NA	107 d	0%																										
488	South Fork Peachtree Ck / Pevine Ck Sewersheds	7/17/14	7/29/16	NA	515 d	56%																										
509	Peak Flow Model Simulation - Capacity Assurance	4/1/16	5/31/16	NA	42 d	0%																										
517	North Fork Peachtree Creek Sewershed	7/17/14	5/31/16	NA	473 d	68%																										
540	Peak Flow Model Development Documentation	2/1/16	5/31/16	NA	85 d	0%																										
546	Misc Sewersheds Intergovernmental Basin	7/17/14	8/17/16	NA	528 d	68%																										
562	Peak Flow Model Simulation - Capacity Assessment	10/19/15	6/17/16	NA	168 d	31%																										
578	Priority Areas Sewer Assessment & Rehab (PASARP)	5/1/14	6/11/21	NA	1801 d	5%	[Gantt bar spanning from 5/1/14 to 6/11/21]																									

Dekalb County Department of Watershed Management							CDPMT Master Schedule Semi-Annual Report																											
ID	Task Name	Start	Finish	CD/CMOM Date	Duration	% Complete	2014				2015				2016				2017				2018				2019				2020			
							2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1
579	Common for all PASARP Projects	5/1/14	6/11/21	NA	1801 d	75%																												
646	Design & CM Procurements (Annual Engineers)	10/15/15	5/31/16	NA	157 d	15%																												
661	PASARP - Sewer Group 1	2/13/15	12/15/20	NA	1476 d	2%																												
662	PASARP Assessments Procurement - Sewer Group 1	2/13/15	12/30/15	NA	223 d	100%																												
663	ITB Issued to Procurement and Contracting	2/13/15	2/20/15	NA	5 d	100%																												
667	P&C Receive Bids	7/9/15	7/9/15	NA	0 d	100%																												
676	Procurement and Contracting Issuance NTP	10/28/15	12/30/15	NA	43 d	100%																												
677	Assessments - Sewer Group 1	12/30/15	12/29/17	NA	506 d	0%																												
678	Tiered Assessment Activities	12/30/15	12/29/17	NA	506 d	0%																												
684	Development of Rehab Recommendations for Design	1/19/16	12/29/17	NA	495 d	0%																												
685	Rehab Recommendations SG1 Package 1	1/19/16	3/23/16	NA	46 d	0%																												
686	Structural Based Segments	1/19/16	3/23/16	NA	46 d	0%																												
687	ID of Capacity Limited Segments using PFA	1/27/16	3/23/16	NA	40 d	0%																												
688	Prioritize and Package Structural Rehabilitation for Design	1/27/16	3/23/16	NA	40 d	0%																												
689	Prioritize Capacity Projects and Package for Design	1/27/16	3/23/16	NA	40 d	0%																												
690	Rehab Recommendations SG1 Package 2	3/24/16	6/20/16	NA	62 d	0%																												
710	Design - Sewer Group 1	6/1/16	10/24/18	NA	608 d	0%																												
711	Design - SG 1 Package 1	6/1/16	8/26/16	NA	62 d	0%																												
1129	General Area & SSO Escalation Projects (OSARP)	11/1/14	11/18/20	NA	1528 d	3%																												
1130	Common for General Area & SSO Escalation Projects (OSARP)	12/11/15	5/31/16	NA	118 d	0%																												
1133	Assessments	11/1/14	11/5/19	NA	1265 d	8%																												
1134	General Area Manhole Condition Assessments	11/1/14	3/1/17	NA	587 d	24%																												
1152	Field Assessment	8/31/15	3/1/17	NA	378 d	4%																												
1158	Development of Rehab Recommendations for Design	9/4/15	1/31/17	NA	355 d	0%																												
1160	General Area CCTV Assessments	11/1/14	1/26/17	NA	564 d	22%																												
1178	Field Assessment	7/28/15	1/26/17	NA	379 d	19%																												
1184	Development of Rehab Recommendations for Design	8/25/15	12/30/16	NA	342 d	0%																												
1187	SSO Escalation Assessments by Work Order	9/4/15	11/5/19	NA	1053 d	0%																												
1188	Assessment Assignments	9/4/15	6/28/19	NA	963 d	0%																												
1190	Development of Rehab Recommendations for Design	12/2/15	11/5/19	NA	993 d	0%																												
1194	Structural Rehabilitations & Capacity Assurance Projects	6/1/16	11/18/20	NA	1131 d	0%																												
1195	Structural Rehabs & Capacity Assurance - Area A	6/1/16	11/18/20	NA	1131 d	0%																												
1196	Design & Rehabilitation - Area A Package 1	6/1/16	3/26/19	NA	711 d	0%																												
1462	Capacity Restoration Projects (Large Diameter Cleaning)	1/17/15	9/1/17	NA	666 d	14%																												
1465	Large Diameter Cleaning Contract by Project	8/24/15	9/1/17	NA	514 d	9%																												
1466	Area A	8/24/15	9/1/17	NA	514 d	9%																												
1467	Procurement - Area A	8/24/15	3/3/16	NA	132 d	59%																												
1482	Cleaning - Area A	3/4/16	9/1/17	NA	382 d	0%																												
1523	CIP Rehab/Construction Projects	12/20/11	2/23/19	NA	1829 d	12%																												

Statused through 1/29/16

Page 3

Printed 1/26/16 1:45 PM

Dekalb County Department of Watershed Management							CDPMT Master Schedule Semi-Annual Report																										
ID	Task Name	Start	Finish	CD/CMOM Date	Duration	% Complete	2014		2015				2016				2017				2018				2019				2020				
							2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1525	Superior Ave SS PH II	3/19/15	1/31/16	NA	219 d	84%																											
1559	Construction	8/14/15	1/31/16	NA	171 d	80%																											
1561	Substantial Completion	12/28/15	12/28/15	12/31/14	0 d	100%																											
1563	Final Completion	1/31/16	1/31/16	NA	0 d	0%																											
1569	Caladium Drive	2/13/15	11/29/17	NA	707.88 d	16%																											
1572	Field Assessment	12/7/15	12/24/15	NA	14 d	100%																											
1574	Design & CM Procurement - (Shown under PASARP)	12/11/15	5/31/16	NA	118 d	0%																											
1576	Design	6/1/16	8/26/16	NA	62 d	0%																											
1619	Fairington LS	10/10/14	10/23/15	NA	262.88 d	100%																											
1649	Construction	8/25/15	10/23/15	NA	60 d	100%																											
1651	Substantial Completion	10/9/15	10/9/15	12/31/15	0 d	100%																											
1653	Final Completion	10/23/15	10/23/15	NA	0 d	100%																											
1665	Perimeter Park LS	3/27/15	1/31/16	NA	214 d	90%																											
1690	Construction	7/1/15	1/31/16	NA	215 d	92%																											
1692	Substantial Completion	11/4/15	11/4/15	12/31/15	0 d	100%																											
1694	Final Completion	1/31/16	1/31/16	NA	0 d	0%																											
1699	Royal Atlanta I LS	3/27/15	1/31/16	NA	214 d	87%																											
1724	Construction	7/1/15	1/31/16	NA	215 d	83%																											
1726	Substantial Completion	10/2/15	10/2/15	12/31/15	0 d	100%																											
1728	Final Completion	1/31/16	1/31/16	NA	0 d	0%																											
1733	Pepperwood LS	3/27/15	2/29/16	NA	233.88 d	79%																											
1758	Construction	7/1/15	2/29/16	NA	244 d	70%																											
1760	Substantial Completion	12/14/15	12/14/15	12/31/15	0 d	100%																											
1762	Final Completion	2/29/16	2/29/16	NA	0 d	0%																											
1767	Mountain Industrial	2/1/15	8/13/15	NA	137 d	100%																											
1768	Construction	2/1/15	8/13/15	NA	194 d	100%																											
1770	Substantial Completion	6/4/15	6/4/15	12/31/15	0 d	100%																											
1772	Final Completion	8/13/15	8/13/15	NA	0 d	100%																											
1777	Scarborough LS	4/22/15	3/28/16	NA	234.88 d	77%																											
1807	Construction	9/29/15	3/28/16	NA	182 d	52%																											
1809	Substantial Completion	12/31/15	12/31/15	12/31/15	0 d	100%																											
1811	Final Completion	3/28/16	3/28/16	NA	0 d	0%																											
1822	Hammer Mill III LS	1/6/15	11/19/16	NA	476 d	61%																											
1823	Design	1/6/15	8/3/15	NA	147 d	100%																											
1842	Construction (by DWM Operations)	9/1/15	11/19/16	NA	446 d	31%																											
1844	Substantial Completion	12/30/15	12/30/15	12/31/15	0 d	100%																											
1861	Columbia Drive LS	4/3/15	12/26/16	NA	438.88 d	17%																											
1862	Procurement	4/3/15	3/22/16	NA	245 d	45%																											
1886	Construction	6/1/16	12/26/16	NA	209 d	0%																											
1895	Stone Crest Basin: Honey Creek LS **	12/11/15	4/22/18	NA	596 d	0%																											

Statused through 1/29/16

Page 4

Printed 1/26/16 1:45 PM

