# **Semi-Annual Report #13**

**January 1, 2018 to June 30, 2018**Civil Action No. 1:10cv4039 - WSD

# DeKalb County Department of Watershed Management





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# **Acronyms**

CCTV Closed Circuit Television

CD Consent Decree

CERP Contingency and Emergency Response Plan

CMOM Capacity, Management, Operations, and Maintenance
DWM Department of Watershed Management (DeKalb County)

EPA United States Environmental Protection Agency
EPD Georgia Environmental Protection Division

FOG Fats, Oils, and Grease
FSE Food Service Establishment
GIS Geographic Information System
MMS Maintenance Management System

NTP Notice to Proceed

OSARP Ongoing Sewer Assessment and Rehabilitation Program
PASARP Priority Areas Sewer Assessment and Rehabilitation Program

SSO Sanitary Sewer Overflow

# Introduction

DeKalb County (the "County") submits this 13<sup>th</sup> Semi-Annual Report in accordance with Section IX, Paragraph 57 of the Consent Decree (CD) (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 number of projects and activities have taken place during the first 6 months of 2018, and several projects and activities are projected to be implemented in the second 6 months of 2018. As the implementation of the Capacity, Management, Operations, and Maintenance (CMOM) programs continues 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 CD provision outlined above.

Table 1 summarizes completed and projected submittals during the reporting period.

Table 1. Consent Decree Submittals – Schedule and Status

Consent Decree #	Title	DWM Submittal for Review
IX. (56)	Quarterly Report	January 30, 2018
IX. (57)	12 <sup>th</sup> Semi Annual Report	January 30, 2018
IX. (57)	6 <sup>th</sup> Annual Report (2017)	March 1, 2018
IX. (56)	Quarterly Report	April 30, 2018
IX. (57)	13 <sup>th</sup> Semi Annual Report	July 30, 2018
IX. (56)	Quarterly Report	July 30, 2018
VI.B (i)	Revised Contingency and Emergency	July 31, 2018
	Response Plan (CERP)	
IX. (56)	Quarterly Report	October 30, 2018

# Capacity, Management, Operations, and Maintenance Programs Update

- 1. Contingency and Emergency Response Plan (CERP) (CD VI.B.i)
  - a) Projects and Activities Accomplished for the Reporting Period 1/1/2018 to 6/30/2018
    - i.) Conducted CERP refresher training for 629 personnel in divisions of Department of Watershed Management (DWM). This represents 93 percent of DWM personnel. New DWM employees are trained in CERP during New Employee Orientation.
    - ii.) Added Sanitary Sewer Overflow (SSO) identification and reporting information to County-wide New Employee Orientation administered by Human Resources. A total of 142 non-DWM employees have received the information in 2018. In the past there have been instances of reports of an overflow going to the incorrect department, delaying the response time to the SSO. Having personnel trained in SSO identification in more departments will allow for better communication and timely reporting.
    - iii.) Continued to update the CERP CMOM document to reflect recent software upgrades and procedural changes. The update defines roles and responsibilities in DWM, identifies how to transition and transfer responsibilities between personnel, and emphasizes conducting root cause analyses.
    - iv.) Increased social media presence for spill reporting. Using Facebook, Nextdoor, the County newsletter, and the County website, messages about spills and spill reporting have been communicated to residents of DeKalb County.
    - v.) Amplified community awareness and education efforts related to Fats, Oils, and Grease (FOG), the leading cause of SSO in the County. More than 12,508 FOG educational flyers were distributed to residents in areas of spills, informing community members about the effects of FOG on the collection system (additional information about this outreach is in the FOG program section).
    - vi.) Continued utilizing stream monitoring to detects SSOs, in addition to relying on routine reporting avenues like citizen reporting. Through this monitoring, three major spills were discovered using County in-stream monitoring. These spills were discovered and stopped using source tracking techniques.
    - vii.) Completed monthly first responder training in CERP and operational policies and procedures. This training is used to emphasize consistency in reporting techniques, quality control of documentation, and completion of follow up activities.
    - viii.) Held CERP training for contractors involved with CD-related projects. A total of 61 contractor personnel working on CD-related projects have taken the training in 2018.
       Contractors are trained as to their responsibilities related to the CERP and how to reduce causing an SSO.
    - ix.) Increased staffing to coordinate SSO responses and follow-up work orders (for example through closed circuit television, pipe cleaning, root control, point repair) related to SSO remediation.

Exception Reporting: EPD was notified via letter dated October 11, 2016, of an inability to meet the public notice with a 7-day timeframe in the legal organ. (The *Champion Newspaper*, which publishes once per week, requires up to a 10-day pre-notice timeframe). Notwithstanding the inability to meet the 7-day timeframe, the County does provide the public notice.

- i.) Continue first responder training and review of policies and procedures related to SSO mitigation and prevention.
- ii.) Complete CERP CMOM document update to reflect recent software upgrades and procedural changes. An updated program document is to be submitted in July 2018.
- iii.) Coordinate with Engineering to schedule areas for chemical root control or easement clearing.
- iv.) Continue to monitor and coordinate areas for follow up cleaning or rehabilitation measures.
- v.) Finalize and implement revisions to identification and reporting of inflow and infiltration and storm event caused SSOs. This includes training, updating Cityworks, and reporting documentation.
- vi.) Strengthen the focus on proper identification of the root cause, short term, and long term solutions of SSOs.
- vii.) Address long term solutions to maintenance related SSOs by establishing root control and cleaning asset management programs.

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

- i.) In an effort to prevent FOG from entering the collection system, the following education efforts were executed.
  - a. Sponsored 28 public outreach events reaching approximately 2,319 citizens with information about FOG and their effect on sewer systems.
  - b. Conducted 14 school events with 76 presentations reaching approximately 1,937 students with information about FOG and their effect on sewer systems.
  - c. Made several new contacts with organizations aiding refugees and new citizens, and DWM has been able to use them to distribute FOG-related information to their clients. This includes organizations like the Center for Pan Asian Community Service in Doraville and churches that minister to refugees in Clarkston.
  - d. Continued social media campaign related to FOG. DeKalb County has more than 9,000 followers on Twitter and 2,500 followers on Facebook. DeKalb's newsletter reaches more than 32,000 contacts and by posting on Nextdoor, more than 123,000 residents in 746 neighborhoods are able to receive updates and messages about FOG and proper grease disposal.
- ii.) Total inspections: 4,590. Inspections are performed to ensure that Food Service Establishments (FSE) have proper FOG interceptors, are properly maintaining the equipment, and have paid all required fees.
- iii.) Warning citations issued: 526. Facilities are given a warning citation to comply with poor interceptor maintenance. They are given up to 48 hours to comply.

- iv.) Permits issued: 1,474. All FSE proposing to discharge or currently discharging wastewater that contain FOG must obtain a FOG wastewater discharge permit annually or cease ongoing operation.
- v.) Court summons issued: 188
  - a. Eight citation cases did not report for court and bench warrants are pending.
  - b. Twenty nine citation cases were reset by the judge to allow for time to come into compliance.
  - c. The remaining 151 cases were resolved with the FSE paying a fine and coming into compliance with the ordinance.
- vi.) Continued to work with the Board of Commissioners of DeKalb County, along with community stakeholders, for the potential implementation of an expanded FOG ordinance anticipated to focus on multi family residential complexes.

- i.) Expand communication with County residents and customers as part of the Public Education Program through contacts with community groups and organizations aiding new residents to DeKalb County.
- ii.) Continue FOG education programs in DeKalb County schools.
- iii.) Continue to have FOG inspectors participate in FOG investigations as part of trends analysis follow up.
- iv.) Continue aggressive enforcement program aimed at achieving higher compliance with the FOG ordinance.
- v.) Enhance public education efforts to increase awareness and participation in existing FOG Public Outreach Survey.
- vi.) Continue using social media, school presentations, and community meetings to partner with customers on preventing FOG from entering the collection system.
- vii.) Continue to work with the Board of Commissioners of DeKalb County, along with community stakeholders, for the potential implementation of an expanded FOG ordinance anticipated to focus on multi family residential complexes.

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

- i.) Continued to populate a Geographic Information System (GIS) layer for sanitary sewer easements in the County. Maps of easements are used to provide locations of access for maintenance of assets.
- ii.) Procured firm to identify existing sanitary sewer easements in addition to provide easement acquisition services.
- iii.) Continued updates to the Sewer Mapping GIS to reflect new developments, connectivity issues, system improvements, and maintenance revisions. As assets are added to the GIS, they are also added to the Maintenance Management System Program for maintenance and evaluation.

- iv.) Procured a contract for surveying services for GIS or engineering data requests.
- v.) Conducted an update of sanitary sewer GIS data.
- vi.) Used GIS software to create web applications for collecting or displaying GIS data on mobile devices. This software provides real time data for project managers. It allows them to track work as it is performed in the field. It also can be used for customer service requests to determine what field activities are being conducted.
- vii.) Created GIS-based web maps and dashboards that are easily distributed and accessible through the internet. These maps and dashboards assist with hot spot identification and trend analysis of data.

- i.) Continue updates to the Sewer Mapping GIS to reflect new developments, connectivity issues, system improvements, and maintenance revisions.
- ii.) Expand use of web applications, web maps, and dashboards to collect and display GIS data across multiple CMOM programs.
- iii.) Identify assets in areas without sufficient or properly recorded easement documents.
- iv.) Continue to produce maps of sewer assets for field operations including linear assets and geographical features like easements.

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

# a) Projects and Activities Accomplished for the Reporting Period 1/1/2018 to 6/30/2018

- i.) Began a review of the existing Training Program.
- ii.) Continued generating monthly training reports for superintendents and managers and quarterly reports for executive management staff. These reports identify personnel who have not completed required training. The reports are used by supervisors to schedule those listed personnel in available training classes.

# b) Projects and Activities Anticipated for the Reporting Period 7/1/2018 to 12/31/2018

i.) Continue evaluating program with intent of fully implementing program as written. Any needed updates will be submitted to the agencies.

Exception Reporting: DWM is not implementing the program as presently written. However, ongoing training is still being provided through available resources in DWM.

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

- i.) Approximately 67 percent complete with installation of flow meters (146 out of 218 meters scheduled to be installed) and 90 percent complete with installation of rain gauges (37 out of 41 rain gauges scheduled to be installed) throughout the County to support development of the dynamic hydraulic model and other CMOM programs.
- ii.) Increased staffing to accommodate level of service and number of monitors installed. The DWM Flow Monitoring division went from 7 to 18 full-time personnel.
  - a. Added four Flow Monitoring Supervisors

- b. Added four Flow Monitoring Technicians, Senior
- c. Added eight Flow Monitoring Technicians
- d. Added Senior Engineer to perform data analysis
- e. Added Engineering Technician to support program with reporting and GIS
- iii.) Upgraded flow monitoring software to latest version. Trained personnel in report generation, data analysis, and configuration of settings in June 2018. Software has also been configured with dashboards of monitors by sewershed for efficiency of quality control and data verification.
- iv.) Installed additional temporary flow monitors as necessary to aid the determination of available capacity associated with requests for new flow contributions.
- v.) Continued calibration and maintenance of flow monitoring and rain gauge network.
- vi.) Performed quality assurance/quality control (QA/QC) tasks regarding flow monitoring and rain gauge data.
- vii.) Placed temporary monitors throughout the system, as needed, to assist in determining available sewer capacity for specific projects.
- viii.) Collected data to support multiple CMOM programs. For example, flow data were used to determine spill volumes, as warranted, as part of the CERP.
- ix.) Evaluated manhole surcharge monitoring systems.
- x.) Purchased additional flow monitors and parts to replace aging equipment and modems.

- i.) Complete installation and calibration of flow monitors and rain gauges to support data collection for creation of dynamic wet weather hydraulic model.
- ii.) Continue calibration and maintenance of flow monitoring and rain gauge network.
- iii.) Continue the use of flow monitors to collect data to support multiple CMOM programs.
- iv.) Continue QA/QC tasks regarding flow monitoring and rain gauge data.
- v.) Select a manhole surcharge monitoring system and begin procurement. These monitors will include high water level alarms and web-based software.

# 6. Infrastructure Acquisitions Program (CD VI.B.ix)

- i.) Evaluated/inspected 23,241 feet of pipe
- ii.) No new lift stations acquired this period
- iii.) Wastewater plan review (buildings): 809
- iv.) Wastewater plan review (land disturbance): 161
- v.) Final plat reviews: 25
- vi.) FOG building reviews: 842
- vii.) Sewer capacity requests received: 364

- viii.) Capacity letters issued: 211
- ix.) Revised and implemented interim protocols per discussions with agencies.
- x.) Added a personnel resource to be point of contact for sewer capacity requests and to coordinate the process.

Exception Reporting: Though the wastewater flows from approved capacity requests were being tracked and incorporated into the preliminary and fully developed model(s), allotment letters were not drafted or sent out to applicants indicating that the applicant's wastewater flows were being allotted for a period within the County's sewer system. Additionally, the testing procedures for infrastructure requests were not fully implemented such that documentation of test results were not always maintained.

# b) Projects and Activities Anticipated for the Reporting Period 7/1/2018 to 12/31/2018

- 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 applicants/citizens requesting assistance.
- v.) Review lift-station acquisitions, as required.
- vi.) Use the revised interim protocols for capacity assurance and certification of capacity connections.
- vii.) Formalize the capacity allotment process and revise sewer capacity letters to reflect the parameters of the process.
- viii.) Integrate capacity allotment process with cities' permitting procedures.

## 7. System-Wide Hydraulic Model

- i.) Updated steady-state hydraulic routing model to include:
  - a. Field surveys conducted through February 2018
  - b. Lift station updates through February 2018
- ii.) Converted the steady-state hydraulic routing model from InfoWorks CS to InfoWorks ICM.
- iii.) Began data collection for model sanitary flow distribution refinement on latest water billing data, large users/wastewater dischargers, and septic tank services areas.
- iv.) Initiated review of water billing data and established Sanitary Sewer Overflow Analysis and Planning (SSOAP) Toolbox data import procedures.
- v.) Continued use of the steady-state hydraulic routing model for capacity request determinations.
- vi.) Updated PASARP capacity improvement projects to incorporate capacity requests submitted through February 2018 for rehabilitation packages No. 1 through No. 5 in order to confirm proper extent and sizing of capacity improvement projects.

- i.) Complete wet weather dynamic hydraulic routing model set up for all seven models including:
  - a. Data collection for dynamic model development
  - b. Model boundary condition setup
  - c. Subcatchment delineation
- ii.) Begin flow data analysis and model flow loading update for model areas with finished flow monitoring including:
  - a. Preliminary dry weather flow data analysis and model dry weather flow loading update with short-term data collected from unfinished flow monitoring
  - b. Final flow data analysis and model flow loading update based on flow data collected from finished flow monitoring
- iii.) Begin preliminary dry weather flow model calibration for model areas with finished preliminary dry weather flow data analysis and model dry weather flow loading update.
- iv.) Begin model network verification and update based on major system changes through the flow monitoring periods.
- v.) Continue using the steady-state hydraulic routing model for capacity request determinations.
- vi.) Update PASARP capacity improvement projects using the steady-state hydraulic routing model to incorporate capacity requests submitted through February 2018 for rehabilitation packages No. 6 through No. 8 in order to confirm proper extent and sizing of capacity improvement projects.

## 8. Priority Areas Sewer Assessment and Rehabilitation Program (PASARP) (CD VI.B.x)

- i.) Began follow-up maintenance activities including cleaning and CCTV inspections to address maintenance recommendations developed from initial tiered assessments in PASARP areas.
- ii.) For Design Build Package No. 1, final design is ongoing. This design build package is anticipated to include the construction of approximately 40,400 linear feet (LF) of pipe replacement, 1,000 LF of lining, and 31 point repairs to address structural defects identified from assessment activities and improve conveyance capacity.
- iii.) Notice to Proceed (NTP) received for Design Build Package No. 2 and initiated construction activities for early work projects. This design build package is anticipated to include the construction of approximately 33,400 LF of pipe replacement, 7,400 LF of lining, and 39 point repairs to address structural defects identified from assessment activities and improve conveyance capacity.
- iv.) Design Build Package No. 3 was awarded to a Design Builder; awaiting NTP. This design build package is anticipated to include the construction of 29,000 LF of pipe replacement, 1,000 LF of lining, and 102 point repairs to address structural defects identified from assessment activities and improve conveyance capacity.

- v.) Task Order issued to engineering firm for design of Rehabilitation Package No. 5.

  Construction of Rehabilitation Package No. 5 is anticipated to include the construction of approximately 36,600 LF of pipe replacement, 16,700 LF of lining, and 122 point repairs and will be completed using annual construction contracts. This procurement approach is being used in addition to design build packages to accelerate construction activities to the fullest extent possible.
- vi.) Incorporated EPA Priority Escalation Assignments (see Gantt chart lines 1643-1649) into a rehabilitation package for execution of rehabilitation or repair as necessary.

- i.) Issue NTP for Design Build Package No. 3 (see Gantt chart lines 1875-1889).
- ii.) Advertise Design Build Package No. 4. This design build package is anticipated to include construction of approximately 56,420 LF of pipe replacement, 15,000 LF of lining, and 137 point repairs (see Gantt chart lines 1902-1916).
- iii.) Issue task order to engineering firm to complete design of Rehabilitation Package No. 6. This rehabilitation package is anticipated to include approximately 42,800 LF of pipe replacement, 58,300 LF of lining, and 187 point repairs (see Gantt chart lines 1962-1976).
- iv.) Issue task order to engineering firm to complete design of Rehabilitation Package No. 7. This rehabilitation package is anticipated to include approximately 44,500 LF of pipe replacement, 24,600 LF of lining, and 106 point repairs (see Gantt chart lines 1993-2007).
- v.) Ongoing maintenance for assets in PASARP areas based on initial tiered assessments.

# 9. Ongoing Sewer Assessment and Rehabilitation Program (OASARP) (CD X 38.)

# a) Projects and Activities Accomplished for the Reporting Period 1/1/2018 to 6/30/2018

- i.) Performed ongoing tiered assessment in OSARP areas. Completed approximately 431,136 LF of smoke testing, 234,942 LF of acoustic inspections, and 247 manhole condition assessments.
- ii.) Completed approximately 54.8 miles of Totally Integrated Sonar and Camera Inspection Technique (TISCIT) assessments of large diameter trunk sewers in OSARP areas.

# b) Projects and Activities Anticipated for the Reporting Period 7/1/2018 to 12/31/2018

- i.) Continue tiered assessment in OSARP areas.
- ii.) Continue assessment of large-diameter trunks in OSARP areas.
- iii.) Continue procurement process for tiered assessment contract.

# 10. Maintenance Management System (MMS) Program (CD VI.B.iv)

- i.) In an effort to address maintenance related SSO (grease, roots, debris, or any combination) the following maintenance activities were executed.
  - a. Performed 400 miles of small-diameter (15 inch or smaller) sewer cleaning. This represents 15 percent of the system. The County maintains a list (referred to as the CARL'S list) that tracks routine high frequency cleaning of sewer lines that are

- known to accumulate FOG. That list accounts for 2.49 percent of the sanitary sewer system. The routine cleaning is tracked separately from the other sewer cleaning.
- b. Procured a contract for chemical root control application in the system. Performed a "hot spot" analysis of system to prioritize areas for application. Clusters of SSOs that have a common cause related to roots are identified as hot spots and are targeted first for treatment.
- c. Procured an easement clearing contract. Clearing of easements is essential to provide access to appurtenances and curtail root growth that could damage pipes.
- ii.) Procured an annual sewer creek crossing contract for inspections. The County has transitioned creek crossing inspection from an inventory and initial evaluation to an ongoing scheduled inspection as part of a creek crossing maintenance program. This contract will be for multiple years of inspections to support the program.
- iii.) Performed 571 sewer creek crossing inspections for pipes previously identified as needing revisit within a year. The 571 inspected crossings were the full list of pipes identified.
- iv.) Performed 1,755 sewer creek crossing inspections to re-evaluate scores from initial inventory and scoring. Deficiencies requiring immediate remediation were repaired using DWM personnel or contractors. This completed the 2017–2018 re-inspection effort.
- v.) Performed 17.4 miles of inspection of sewer infrastructure parallel to waterways. The inspections are ongoing throughout the County. After initial inspection, the results and assets will be entered into a preventive maintenance program for future inspections.
- vi.) Added a dedicated Information Technology System Administrator to CD software application support. This staff member will support Flow and Rainfall Monitoring, Sewer Mapping GIS, Hydraulic Modeling, Computerized Maintenance Management System (MMS), and FOG Program.
- vii.) Added a Staff Engineer, Senior, to manage MMS contracts.

- i.) Begin process of procuring contracts for lift station maintenance as identified by DWM personnel.
- ii.) By using PASARP data, partner with building owners to eliminate inflow and infiltration into system by repairing private laterals.
- iii.) Procure small diameter (15 inch and smaller) cleaning contract.
- iv.) Utilize Chemical Root Control contract to treat areas of known root problems.
- v.) Utilize Easement Clearing contract to clear easements of vegetation to provide access for maintenance and for root control.
- vi.) Complete creek crossing inspections for those crossings identified as needing yearly inspections.
- vii.) Perform stream walks and infrastructure inspections of sewersheds.

# **Gantt Chart**

As detailed in the Introduction, 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:

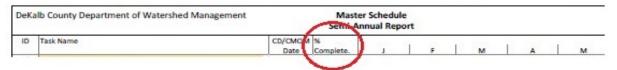


**Identification (ID)** - Number assigned to each task listed within the scheduling software. This field is used to sequence the order of tasks and to group like tasks under defined headings. The Gantt chart included in this Semi-Annual Report is a collapsed version of a larger project management scheduling chart. As required under the CD, 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 the tasks currently being undertaken by DWM in the Master Schedule. The number of activities will continue to grow and will be reported in successive Semi-Annual reports.





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



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



**Legend** - The tasks, milestones, summary, and progress are shown on the chart using the above symbols and line styles.

