

Alabama Department of Environmental Management
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NOV 22 2016

Honorable Sandy Stimpson
Mayor, City of Mobile
Post Office Box 1827
Mobile, Alabama 36633

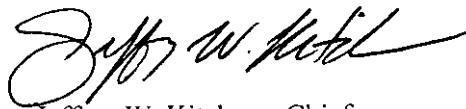
RE: Phase I Municipal Separate Storm Sewer System (MS4) Audit
NPDES Permit No. ALS000007
Mobile County (097)

Dear Mayor Stimpson:

On November 7-November 9, 2016, representatives of the Alabama Department of Environmental Management's Stormwater Management Branch conducted an audit of the City of Mobile's MS4 Phase I Program for compliance with NPDES Permit ALS000007.

The enclosed audit report is being provided for your review and information. Should you have any questions about this audit report, please contact Marla Smith at mssmith@adem.alabama.gov or at (334) 270-5616.

Sincerely,



Jeffery W. Kitchens, Chief
Stormwater Management Branch
Water Division

JWK/gtw

File: CORS/24259

Enclosure

Cc: Mrs. Rosemary Sawyer, PE, CFM, CPMSM/City of Mobile

MS4 Phase I Storm Water Program Audit Report

Date: November 7-November 9, 2016

Permit Number/Permittee: ALS000007/City of Mobile

Attendees: Mrs. Rosemary Sawyer (City of Mobile)
Mrs. Denise Brown (City of Mobile)
Mr. David Ludwig (City of Mobile)
Mr. Dewayne Smith (Municipal Consultant)
Mr. Brian Morgan (Municipal Consultant)
Mrs. Marla Smith (ADEM)
Mr. Taylor Watson (ADEM)

1. Adequacy of best management practices (BMPs) for structural controls

A. Satisfactory B. Unsatisfactory C. Not Applicable

Comments: The City is responsible for maintaining and inspecting sixteen structural controls. The City leases sixteen other structural controls that are operated and maintained by the lessee according to a lease agreement. There are fifty-three other detention ponds (not owned by the City) located in Mobile that the City is not responsible for maintaining or inspecting. The City and/or their representative inspects each structural control using the City's SOP for structural control inspection. The City inspects each structural control on a quarterly basis and logs each inspection in the Collector application which generates a Structural Controls Quarterly Inspection Form. Maintenance requests are generated quarterly and ranked based on the urgency of the problem. The requests are then sent to the Public Works Department (responsible for cleaning out the ponds, pipes and catch basins) or the Parks Department (responsible for removing litter and floatables in the City parks). Maintenance Reports are then generated to document the maintenance activities performed at each structural control.

The Department accompanied the City to Lake Drive Tricentennial Park to observe the inspection of the park's structural control. The perimeter of the structural control was inspected for maintenance concerns and/or the presence of floatables and litter. Floatables, bank erosion, and deck maintenance needs were observed at the time of the inspection and the issues were documented in the Collector application and sent to the appropriate department to correct the issue.

2. Adequacy of BMPs for post-construction storm water management in new development and redevelopment

A. Satisfactory B. Unsatisfactory

Comments: The City has adopted ordinances, regulations, codes, and manuals to address storm water discharges from new development and re-development projects. This includes the City's Storm Water Management and Flood Control Ordinance (Ordinance # 17-025), Zoning

Ordinance, and Subdivision Ordinance which provide regulatory and enforcement mechanisms for the City to enforce a post-construction storm water management program. The City adopted revisions in July 2014 to the Storm Water Management and Flood Control Ordinance to establish requirements for post construction storm water management in qualifying new development and re-development. The ordinance states that prior to a Tier 1 permit (for qualifying sites one acre or greater or part of a common plan development) being issued, a maintenance agreement, including a schedule for routine maintenance checks and annual inspections by a QCI or QCP, must be signed and recorded to ensure that all Post Construction BMPs (Best Management Practices) will perform properly. The City's Planning Department is responsible for planning activities and documents while the Engineering Department is responsible for establishing design standards, plan review, as-built certification, inspection, and maintenance requirements. The City has developed two as-built certification forms which are to be submitted prior to the final inspection. The City requires the developer to submit the as-built certification within 120 days of project completion. The City meets permit requirements by requiring certification that post construction sites mimic pre-development hydrology for 1.2 inches of rainfall over twenty-four hours preceded by a seventy-two hour dry period.

3. Adequacy of BMPs for pollution prevention/good housekeeping for municipal operations

A. Satisfactory B. Unsatisfactory

Comments: The City has developed department specific SOPs for pollution prevention/good housekeeping including: fleet maintenance, street sweeper, mowing and ROW maintenance, trash receptacles, daily activities, pet waste, equipment washing, material storage maintenance, storage and disposal of chemicals and waste, asphalt street repair, concrete and sidewalk repair, and external building maintenance. The City's Parks Department is responsible for the collection of litter along City roadways and parks while the Street Department is responsible for maintenance of City roadways including street sweeping, right of way ditch maintenance, patching of potholes, removal of debris, catch basin repairs, and catch basin cleaning. The Parks Department routinely utilizes inmates and community service volunteers to collect and dispose of litter and a weekly log is maintained to document the man-hours and amount of litter/trash collected. In fiscal year 2016 the Parks Department collected 328 tons of litter in the City's parks. The City utilizes four street sweepers on a weekly, bi-weekly, and yearly schedule including more frequent usage during the Mardi Gras season for cleanup after parades and festivals. Daily logs are kept by the City and are summarized monthly to track the amount of material collected. In the fiscal year 2016 street sweepers collected 11,250 cubic yards of material from the City's streets.

Ditch maintenance is performed by the Storm Drain and Heavy Equipment Crew and the ROW Maintenance Crew and includes the removal of sediment, branches, and other materials along with erosion and hole repairs. Ditch maintenance activities are performed on a routine schedule and as a response to SROs (Service Repair Orders) and are tracked in daily forms. According to the City, it is the Department's understanding that the City is currently behind schedule on cleaning of the Tennessee Ditch. The City plans to clean the ditch by the end of the month and resume with the scheduled cleanings.

Street repairs including patching of potholes, removal of debris, catch basin repairs, and catch basin cleaning are tracked on a monthly basis. The City currently uses two Vector trucks with a third to be added within the year. The City maintains catch basins with five percent being inspected each year. An Engineering Technician accompanies the Public Works Operators while catch basins are inspected/cleaned and logs the inspection in the Collector application. Logging

the inspections in the Collector application allows the City to review the data and determine where SROs are being requested and which catch basins require the most maintenance.

The City has developed a municipal facilities inventory which includes shops and equipment yards with the potential to pollute storm water. The City performs weekly inspections at four facilities where operational activities occur to support City services. The Department accompanied the City on a weekly inspection of the Garage/Public Works building. The Oil Crew Supervisor (under the Equipment Services Department) and Engineering Technician checked for properly stored and labeled containers, litter, spills, daily housekeeping logs, and condition of BMPs. No issues were noted during the inspection.

The City has installed additional litter control measures including catch basin screens. As of October of 2016, the City has installed 139 total screens and 8 litter baskets around Mardi Gras parade routes and Mardi Gras Park. Although catch basin screens must be maintained more frequently due to litter build-up, litter is caught by the screen and does not enter the MS4 system. As part of the 2014 Consent Decree, the City installed (July 2015) a Bandalong litter trap located on Eslava Creek that treats approximately 8.7 square miles of drainage area. The trap is inspected at least three times per week and after every two-year, twenty-four hour rain event. The trap is emptied after large rain events or when the volume of floatables reaches one-quarter cubic yard. Litter trap inspections and cleanings are documented by the City including the amount of floatables removed from the trap. Nearly 500 cubic yards of floatables were removed from the trap in fiscal year 2016. The Department accompanied the City on an inspection of the litter trap. The trap was functioning properly, floatables were observed in the trap, and no further action was required as the amount of floatables did not reach the one-quarter cubic yard threshold for removal.

Based on the 2014 Consent Decree, the City purchased a 23-foot Carolina Skiff in December of 2015 to aid in the removal of litter in Mobile's waterways. City workers on the Carolina Skiff remove litter twice a week from Dog River while a Jon Boat is used to remove litter once a week from One Mile Creek or Three Mile Creek. Nearly 80 cubic yards of floatables and litter were removed by litter boats in fiscal year 2016. The Department accompanied the City on one of the City's litter boats from Dog River to Eslava Creek. The Department observed two City employees removing floatables from Dog Creek using litter grabbers and bagging the litter to be disposed of.

Training is provided to municipal employees and is tailored to each department's facilities and operations. Training is performed annually for all applicable departments. City staff review existing SOPs and any updates to SOPs and a sign-in sheet is used to document staff trained and the training topic. City staff associated with vehicle and equipment maintenance are also trained annually on the proper management and disposal of used motor fluids.

4. Adequacy of flood control projects

A. Satisfactory B. Unsatisfactory C. Not Applicable

Comments: The City has been a member of the National Flood Insurance Program (NFIP) since 1973. The NFIP provides federally backed flood insurance that encourages communities to enact and enforce floodplain regulations. Flood Regulations are set in the City's Storm Water Management and Flood Control Ordinance. The ordinance requires all construction plans to comply with FEMA flood plain regulations. In order to prevent floatables and litter from blocking inlets and causing flood concerns, the City utilizes litter boats, litter trap, minor and

major ditch removal, and catch basin screens to remove litter and dispose of it properly. The City currently has no flood control structures located within the City.

5. Adequacy of BMPs for pesticide, herbicide and fertilizer (PHFs) application

- A. Satisfactory B. Unsatisfactory

Comments: PHFs are primarily used by the Public Works and Parks and Recreation Department which includes the Azalea City Golf Course (ACGC). Application mainly occurs at the ACGC, public parks and sports complexes, green spaces, and right-of-ways. The City has SOPs in place for the storage, application, spill procedures, disposal, and waste management of PHFs. Most of the City's PHFs are stored at the Public Safety Memorial Park building (located away from any water body and includes an eye wash station, safety shower, and climate control) although PHFs are stored at four other facilities.

City staff and contractors involved with the application, storage and disposal of PHFs on City areas maintain current certification and training through the Department of Agriculture and Industries (DAI). The City currently has five staff certified through the DAI. PHF inventory is checked monthly and reported to Engineering and all expired chemicals are properly disposed of on Amnesty Day. The City inspects each facility annually for proper BMPs.

Application forms are used daily to track the chemical information, weather, rate applied, total amount used, and the name of the applicator. Soil testing may be performed at particular facilities to determine optimum fertilizer and application rates and whether a non-phosphorous fertilizer can be used.

6. Program for the detection of illicit discharge detection and elimination (IDDE)

- A. Satisfactory B. Unsatisfactory

Comments: The City's legal authority to inspect and enforce illicit discharges derives from the City's Storm Water Management and Flood Control Ordinance. The City has implemented SOPs for locating illicit discharges, outfall inventory and screening, investigation, and illegal dumpsites. The City continues to update and screen storm water outfalls within the City. Field screening activities are performed after a 72-hour dry period from the previous measurable rain event. The City has developed an outfall screening map that breaks down the MS4 area into five different sections. One section of the MS4 will be screened a year or 20 percent of all major outfalls each year and 100 percent within a five year period as required by the permit. Citizens are able to call, e-mail, or use the 311 reporting system to report a suspected illicit discharge. If an illicit discharge is reported, the Inspections and Engineering Departments are notified and a field assessment occurs. The discharge is traced to the source and if the source is unknown the City will use physical indicators and/or sampling to determine if the source is an illicit discharge. The City has the authority to issue a verbal warning, NOV (Notice of Violation), or MOT (Municipal Offense Ticket).

The Mobile Area Water and Sewer System (MAWSS) is responsible for Sanitary Sewer Overflows (SSOs). The City coordinates on IDDEs that involve sewer issues and MAWSS

notifies the City when a SSO occurs. The City also partners with MAWSS and Keep Mobile Beautiful in a grease recycling program to dispose of used cooking oil. The City provides education on illicit discharges from used cooking, oil, motor fluids, and household hazardous wastes and also how to report these discharges.

The City established a litter ordinance (Chapter 25, Article II) on May 12, 2015. The ordinance prohibits the sweeping or blowing of litter, trash, debris, and yard clipping into storm drains. The ordinance also prohibits illegal dumping and allows the City to use personal documents found on site to initiate enforcement action. The City also implemented a policy requiring all drains from dumpster pads and car washes to be connected to the sanitary sewer system to prevent these discharges from entering the MS4.

City staff and/or their representatives receive initial training on outfall reconnaissance inventory, monitoring procedures, field procedures, and illicit discharge tracking procedures. Refresher training is performed on an as needed basis

7. Adequacy of BMPs for spill prevention and response

A. Satisfactory B. Unsatisfactory

Comments: The City of Mobile's Fire and Rescue Hazardous Material Team (HazMat) responds to hazardous material spills, accidents with large commercial vehicles, and large accidents around the entire county. All Fire and Rescue personnel are trained to the HazMat Awareness and Operations level while half are trained to the HazMat Technician level. The HazMat team responds to hazardous materials spills, contains and prevents the spill from entering the MS4, and documents all pertinent data related to the spill. If the spill enters the MS4, the Fire and Rescue Department and/or EMA notify the City Engineer and appropriate corrective measures are taken to abate the spill. The City has enforcement capabilities to ensure that the responsible party remediates and cleans the spill.

Municipal facilities are required to have spill prevention controls and procedures in place to minimize the occurrence of spills on site. All municipal fueling facilities require a spill kit containing oil-dry, oil boom, and spills pads. The City's Spill Response SOP was revised in April of 2016 and is displayed at municipal facilities along with a summary in municipal vehicles. Any spills associated with City equipment and/or municipal facilities are handled by the City's Oil Spill Crew within the Equipment Services Department. Spills are tracked using the Spill Prevention and Response Summary Form which includes the time, date, and location of the spill. The City maps the locations of all spills contained within the City's MS4 area using the 311 database along with spills reported by the Fire Department.

Training is provided to municipal employees and is tailored to each department's facilities and operations. Training is performed annually for all applicable departments. City staff review existing SOPs and any updates to SOPs and a sign-in sheet is used to document staff trained and the training topic.

8. Adequacy of storm water runoff management of industrial sites and other high risk runoff areas

A. Satisfactory B. Unsatisfactory C. Concerns Noted

Comments: The City's Storm Water Management and Flood Control Ordinance provides authority for the City to inspect, sample, and issue enforcement to industrial and commercial sites with a high risk of runoff. The City has developed an inventory of industrial facilities that have either obtained a General or Individual NPDES permit for industrial activities, and the inventory is updated yearly. The City also developed an inventory of municipal facilities including shops and equipment yards and facilities for PHF storage. The City's Engineering Department reviews data collected by the facility and will inspect facilities based on non-compliance with their NPDES permit. SARA Title III facilities are inspected once per year by the Fire and Rescue Department. City staff may inspect NPDES facilities if they are non-compliant with their NPDES permit while Tier II facilities without a NPDES permit are inspected once per permit term. City staff also inspect municipal facilities annually and commercial facilities based on storm water complaints.

City staff who perform industrial site inspections receive yearly refresher training along with initial training for any new staff incorporated into the program.

9. Adequacy of BMPs for construction storm water management

A. Satisfactory B. Unsatisfactory

Comments: The City's Storm Water Management and Flood Control Ordinance (Chapter 17, Article I) established requirements for permitting, BMPs, and enforcement for qualifying construction sites. The City's Engineering Department is responsible for the development and implementation of the construction storm water management program. Sites over one acre or under one acre and part of a larger plan (Tier 1) and sites under one acre (Tier 2) are required to submit a permit application and obtain a land disturbance permit before any land disturbance can begin. A CBMP plan must be submitted with the permit application along with a letter of credit, a surety bond, or cash bond to ensure that construction will be completed. The City has developed a permit checklist, permit application review checklist, and permit certification for both Tier 1 and Tier 2 construction sites. The City has implemented an online permitting system which allows the reviewer to document their review comments online in order for the applicant to view the status of the permit in real time. Plan review starts with the Planning Commission where the plat is approved. Once approved by the Planning Commission, Business Services Plans are submitted to Permitting and a permit number is assigned. The plans then go to technical review and the plans are approved or sent back to the developer for re-submittal.

The City must be notified before construction can commence and may require an initial inspection on development projects. One of the City's QCI or QCP certified employees inspects Tier 1 and Tier 2 sites at least monthly. Priority construction sites are also inspected at a minimum monthly frequency as required by the permit. All inspections are documented using the Collector application which generates a spreadsheet and report form for all inspected sites. If the permittee is not meeting the requirements of the ordinance, enforcement can be issued including: verbal warnings, NOVs, stop work orders, and MOTs. Once construction is complete the City Engineer or agent performs a final inspection on each site to ensure that all storm water management facilities on site were built to plan specifications. If the site passes final inspection the results are documented and the permit is closed.

The Department accompanied the City to a construction site (CarMax) that was an active Tier 1 site. The City inspector inspected the site and all BMPs including entry/exit pads, perimeter BMPs, storm water inlets, detention pond, adjoining MS4, and concrete wash area. Inside one inlet a sheen was observed and the issue was documented and a test sample was taken (sample contained no sign of illicit discharge). The City inspector documented other issues with the site

including inadequate placement of silt fencing around the site and mud in the adjoining MS4. The contractor was notified of all observed issues and asked to take the appropriate corrective measures.

All City staff responsible for construction site inspections maintain (Qualified Credentialed Inspector) QCI certification while other staff involved in the MS4 program may maintain certification. Inspection staff receive annual refresher training to maintain QCI certification.

Citizens can also use the City's 311 system to report storm water concerns. Each report generates a Service Request Order that is redirected to the appropriate City department so that the issue can be inspected and closed out following corrective action.

10. Adequacy of public education and public outreach program

A. Satisfactory B. Unsatisfactory

Comments: The City's Engineering Department and Keep Mobile Beautiful are typically responsible for the City's Public Education and Involvement program. The Engineering Department Provides assistance and coordination with other departments to facilitate education and involvement activities while Keep Mobile Beautiful (KMB) helps coordinate clean-up events, furnishes supplies, runs the recycling center, and provides outreach to schools. KMB has established a recycling center that operates seven days a week. The center accepts various materials including: mixed paper products, cardboard, plastics, glass, steel, aluminum, used cooking oil, and other materials. During specific times of the year the recycling center also accepts Christmas Trees, Christmas tree lights, Mardi-Gras beads, and used motor fluids. Household hazardous waste is also accepted when funding is available for a collection day.

Other Public Education and Involvement mechanisms the City currently utilizes include: local partnerships (Keep Mobile Beautiful, Mobile Bay National Estuary Program, Mobile Baykeeper, Clean Water Future, Alabama Coastal Foundation, Alabama Clean Water Partnership, Dog River Clearwater Revival, ALDOT, EPA, ADEM, DCNR, and MAWSS), City website, brochures, Mardi Gras services, MS4 workshops and presentations, clean-up events, construction BMPs Lunch and Learn, high school student forums, Public Service Announcements, Litterbug Hotline, and ACF Water Festival.

The City maintains two websites including one dedicated to storm water-related issues with links to relevant storm water documents including the City's SWMP Plan and Annual Reports. The City's main website includes information about the City and includes links to the City's regulations, ordinances, and permitting requirements.

The City of Mobile hosts and assists with multiple clean-up events per year through the Engineering Department or KMB. The City works with schools, civic groups, community groups, environmental partners, private companies, and residents to remove litter and debris from the City of Mobile. The City provides clean-up materials, and the Public Works Department assists with disposal of material collected. Clean-up events are tracked monthly and the number of volunteers and amount trash collected is documented.

Citizens can also use the City's 311 system to report storm water concerns. Each report generates a Service Request Order that is redirected to the appropriate City department so that the issue can be inspected and closed out following corrective action.

11. Adequacy of the monitoring program

- A. Satisfactory B. Unsatisfactory C. Not Applicable

Comments: The City of Mobile performs wet weather monitoring in Rabbit Creek, Eslava Creek (East), and Eightmile Creek using data --sondes at each location. The City also collects grab samples semi-annually during storm events from each monitoring station. Further grab samples are taken at monitoring stations located on impaired streams within the City including Three Mile Creek, Toulmins Spring Branch, UT to Three Mile Creek, Bolton Branch (East), Bolton Branch (West), Moore Creek, Halls Mill Creek #1, and Halls Mill Creek #2. These samples are taken from June through September as water quality criteria is more restrictive for pathogens and/or organic enrichment during this time. No less than five grab samples will be taken over a thirty day period in order to evaluate single sample and geometric mean water quality criteria.

12. Storm Water Management Program (SWMP) Plan

- A. Satisfactory B. Unsatisfactory C. Not Applicable

Comments: The City posted its draft SWMP Plan on the City's website from June 20, 2016 until July 21, 2016. Comments were received from Mobile Baykeeper, Dog River Clearwater Revival, and private citizens. The City submitted the final SWMP Plan to ADEM on July 29, 2016. The final SWMP Plan and latest Annual Report are both on the City website.