

Municipal Separate Storm Sewer Systems (MS4)

LDEQ Program Updates

Louisiana Parish Engineers and Supervisors Conference April 24, 2019

Kimberly Corts Water Permits Division Manager – General and Municipal Permits Section

Regulatory Basis for MS4 Permits



- Clean Water Act (CWA) directed EPA to establish storm water permit requirements in two phases:
 - Phase I (1990): Regulated discharges from large and medium MS4s,(> 250,000; > 100,000)- CWA §402(p)(2)
 - New Orleans, Baton Rouge, Shreveport, and Jefferson Parish
 - Phase II (1999): Regulated discharges from small MS4s (everything that isn't a medium or large!) – CWA §402(p)(6)

Regulated MS4s



According to 40 CFR 122.26(b)(8), "*municipal separate storm sewer* means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law)...including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States.
- (ii) Designed or used for collecting or conveying stormwater;
- (iii) Which is not a combined sewer; and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2."

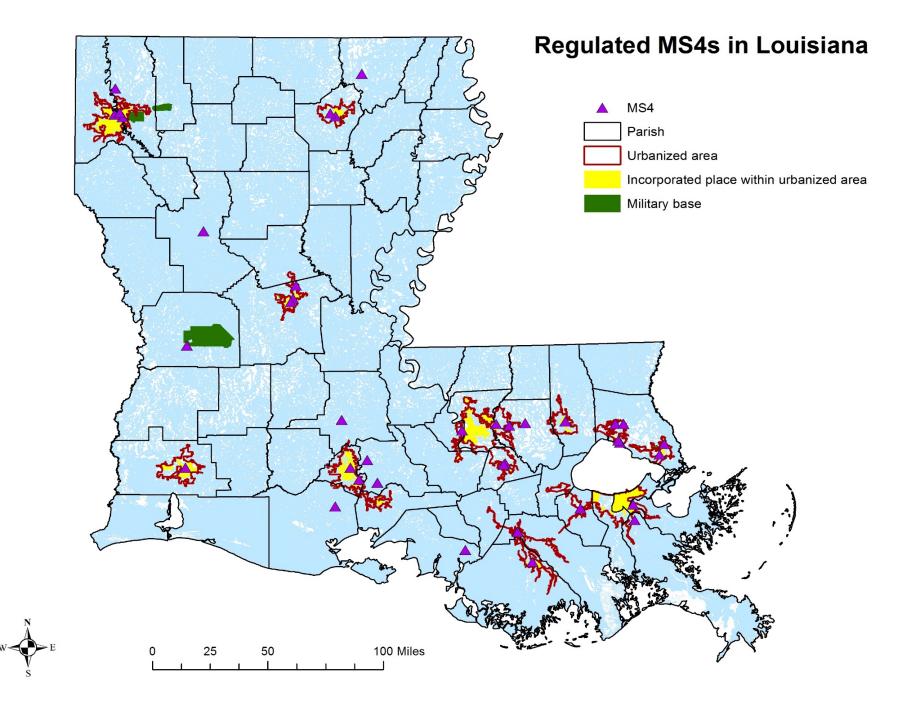
An *urbanized area* (UA) is a densely settled core of census tracts and/or census blocks that have population of at least 50,000, along with adjacent territory containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core. It is a calculation used by the Bureau of the Census to determine the geographic boundaries of the most heavily developed and dense urban areas.

Phase I MS4s are specifically designated in 40 CFR 122, Appendices I and J and LAC 33:IX, Chapter 71, Appendices F, G, and I.

Storm Water Priorities



- Storm water permit compliance is a national priority for EPA.
- LDEQ is delegated by the EPA to implement the National Pollutant Discharge Elimination System (NPDES) permit program in Louisiana (LPDES).
- EPA establishes commitments LDEQ must achieve through the Priority Partnership Grant (PPG).
- MS4 compliance reviews were added to LDEQ's grant commitments in FY2019.
- Although LDEQ issues permits, EPA R6 still conducts audits of both Phase I and Phase II permitted MS4s in Louisiana.



Recent Changes to Phase I MS4 Individual Permits



- Requiring complete applications/SWMPs, in accordance with regulations
- Clarified Storm Water Minimum Control Measures and Schedules for Implementation/Compliance
 - Added language to clarify measures and tasks that must be continued to implement the SWMP to the Maximum Extent Practicable (MEP)
- Incorporated netDMR monitoring
- Green infrastructure: requirements added to identify and remove regulatory impediments to the use of green infrastructure/low-impact development (LID)



- Basis of Rule: Environmental Defense Center, el al. v. EPA US 9th Circuit Court of Appeals partially remanded Phase II Storm Water regulations in 2003. The court found EPA failed to:
 - Require permitting authority review of the Best Management Practices (BMPs) to be used at a particular MS4 to ensure the permittee reduces pollutants in storm water discharges to the Maximum Extent Practicable (MEP)
 - Failed to provide adequate public notice and opportunity to request a hearing
- The court held that under the Phase II rule, because the NOI submitted by the MS4 contains the information describing what the MS4 will do to reduce pollutants to the "maximum extent practicable" (MEP), the NOI is the "functional equivalent" of an individual permit application.

Required Updates to 40 CFR

§ 122.28 General permits (applicable to State NPDES programs, see § 123.25)

(d) Small municipal separate storm sewer systems (MS4s). (Applicable to State programs). For general permits issued under paragraph (b) of this section for small MS4s, the Director must establish the terms and conditions necessary to meet the requirements of § 122.34 using one of the two permitting approaches in paragraph (d)(1) or (d)(2) of this section. The Director must indicate in the permit or fact sheet which approach is being used.

(1) Comprehensive general permit: The Director includes all required permit terms and conditions in the general permit; or

(2) *Two-step general permit*: The Director includes required permit terms and conditions in the general permit applicable to all eligible small MS4s and, during the process of authorizing small MS4s to discharge, establishes additional terms and conditions not included in the general permit to satisfy one or more of the permit requirements in § 122.34 for individual small MS4 operators.

(i) The general permit must require that any small MS4 operator seeking authorization to discharge under the general permit submit a Notice of Intent (NOI) consistent with § 122.33(b)(1)(ii).

(ii) The Director must review the NOI submitted by the small MS4 operator to determine whether the information in the NOI is complete and to establish the additional terms and conditions necessary to meet the requirements of § 122.34. The Director may require the small MS4 operator to submit additional information. If the Director makes a preliminary decision to authorize the small MS4 to discharge under the general permit, the Director must give the public notice of and opportunity to comment and request a public hearing on its proposed authorization and the NOI, the proposed additional terms and conditions, and the basis for these additional requirements. The public notice, the process for submitting public comments and hearing requests, and the hearing process if a request for a hearing is granted, must follow the procedures



§122.34 As an operator of a regulated small MS4, what will my NPDES MS4 storm water permit require? Permit requirements for regulated small MS4s.

(a) General requirements. Your NPDES MS4 permit will require at a minimum that you develop, implement, and enforce a storm water management program designed For any permit issued to a regulated small MS4, the NPDES permitting authority must include permit terms and conditions to reduce the discharge of pollutants from the your MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. Your storm water management program must include the minimum control measures described in paragraph (b) of this section unless you apply for a permit under §122.26(d). Terms and conditions that satisfy the requirements of this section must be expressed in clear, specific, and measurable terms. Such terms and conditions may include narrative, numeric, or other types of requirements (e.g., implementation of specific tasks or best) management practices (BMPs), BMP design requirements, performance requirements, adaptive management requirements, schedules for implementation and maintenance, and frequency of actions). For the purposes of this section, narrative effluent limitations requiring implementation of best management practices (BMPs) are generally the most appropriate form of effluent limitations when designed to satisfy technology requirements (including reductions of pollutants to the maximum extent practicable) and to protect water quality. Implementation of best management practices consistent with the provisions of the storm water management program required pursuant to this section and the provisions of the permit required pursuant to §122.33 constitutes compliance with the standard of reducing pollutants to the "maximum extent practicable." Your NPDES permitting authority will



National Pollutant Discharge Elimination System (NPDES)

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NPDES Stormwater Final MS4 General Permit Remand Rule

Documents associated with the final MS4 general permit remand rule.

• Final MS4 General Permit Remand Rule (PDF) (33 pp, 351 K, About PDF)

You may need a PDF reader to view some of the files on this page. See EPA's <u>About PDF page</u> to learn more.

- Mark-Up Version of MS4 General Permit Remand Rule (PDF) (13 pp, 214 K)
- Final Rule Fact Sheet (PDF) (7 pp, 176 K)



- LDEQ incorporated EPA's Phase II MS4 Remand Rule into the state's regulations
- Public Hearing Date and Comment Deadline:
- May 25, 2017
- No Comments were received
- LDEQ submitted the following items to the Office of the State Register for publication in the July 20, 2017, issue of the Louisiana Register:
 - Final Rule (WQ095ft); effective May 20, 2017: Municipal Separate Storm Sewer Systems General Permit Revisions (LAC 33:IX.2515, 2521, 2523, and 2525)



- Most edits changed "MS4 operator shall..." to "State administrative authority shall..."
- LDEQ included both Option I and Option II under LAC 33:IX.2515 General Permits.
- LDEQ is implementing Option II (2-step permit process).

Master General Permit for Discharges fro Small MS4s (LAR040000)

- Individual and Master General permits are reissued every 5 years.
- LAR040000 Reissued August 17, 2018; Effective September 1, 2018
- Permittees were notified Sept. 18, 2018 to reapply
 - Operators who were permitted more than 5 years prior to the effective date of this reissued general permit are required to have fully developed and implemented a storm water management plan (SWMP).
- No new or expanded operators this cycle (expect new or expanded regulated MS4s after the 2020 Census).



- New rule requires closer review of SWMPs to ensure the Maximum Extent Practicable (MEP) requirement is met by the permittee.
- Renewal applicants must submit an NOI & SWMP.
 - NOI must include intergovernmental cooperative agreements, if applicable.
 - LDEQ may disapprove SWMPs and/or require changes. These additional LPDES permit terms, conditions, requirements, and standards may be included as enforceable permit conditions in the permit authorization letter.



- More specific BMPs, requirements, and goals to improve permit compliance. Must be CLEAR, SPECIFIC, and MEASURABLE! Permittee input into this aspect of the permit is critical.
- Clarification of SWMP modifications i.e. what must be public noticed and what may not.
- Language was added requiring that any interjurisdictional agreements between nontraditional MS4s (universities, DOTD) and municipalities.



- Clarification of requirements for receiving streams on LDEQ's 303(d) List of Impaired Waters – with or without an established TMDL
 - Notes and webpage links were added to assist applicants with accessing TMDL reports, LDEQ's Interactive Mapping Application (LIMA), and Small Business Assistance.
 - The small MS4 must develop clear, specific, and measurable goals and BMPs in their SWMP targeting pollutants of concern within 6 months of assignment of any new WLAs for specific pollutants identified as impairments attributed to discharges from regulated MS4s.



- Former "recommendations" are now requirements, such as:
 - IDDE SCM: Permittees must conduct visual screening of the outfalls during dry weather and conduct field tests of selected pollutants as part of the procedures for locating priority areas;
 - Construction SCM: Development and implementation of storm water BMPs for construction sites that discharge into the storm water system within the MS4's jurisdiction;
 - Post-Construction Storm Water Management SCM: Permittees must adopt a planning process that identifies the MS4's program goals, implementation strategies, operation and maintenance policies, and enforcement procedures; and
 - Assessment of existing ordinances, policies, programs, and studies addressing storm water runoff quality for program development and provision of opportunities for public participation.

<u>Photo Credit: https://greatlakesecho.org/2011/08/16/leaky-pipes-researchers-finds-sewage-in-most-milwaukee-stormwater-discharges/</u>

A A A



SWMP: Required Ordinances (or other regulatory mechanism)



- Illicit Discharge Detection and Elimination Ordinance: maintained to prohibit non-storm water discharges into the storm sewer system and implement enforcement procedures and actions
 - Note: the SWMP shall be modified within 14 calendar days of knowledge of a release in excess of reportable quantities
- In addition, the SWMP must include the following:
 - How the ordinance is implemented through enforcement procedures and actions;
 - Plan to detect and address discharges from illegal dumping and spills;
 - Mitigation of sewage disposal systems that flow into your storm drainage system;
 - Dry weather field screening for non-storm water flows and field tests of selected chemical parameters as indicators of discharge sources; and
 - How the MS4 will inform public employees, businesses, and the public of hazards associated with illegal discharges and improper disposal of waste.

Additional SWMP Requirements Related to the Construction Site Storm Water Runoff Control Ordinance



- Procedures for receipt and consideration of information submitted by the public;
- Procedures for site inspection and enforcement of control measures;
- Educational and training measures for construction site operators; and
- Storm water BMPs for construction sites within the MS4's jurisdiction that discharge into the system.

LDEQ Review of MS4 Annual Reports



- LDEQ Water Permits staff review all Phase I and II MS4 annual reports and Stormwater Management Plans (SWMPs) to ensure permit compliance to the Maximum Extent Practicable. Reviews began in late 2017 and through 2018.
- LDEQ will send follow-up letters after annual report and SWMP review.
 - If deficiencies noted in annual report, the MS4 permittee will have 60 days to submit a revised MS4 annual report or be referred to Enforcement.
 - Recommendations for SWMP will be included.

Surveillance & Enforcement



- LDEQ Surveillance Division Inspects MS4s at least once every 5 years
 - Surveillance Division generally checks documentation for compliance, does not evaluate entire program
- LDEQ Enforcement Actions Issued in Last 5 years:
 - Expedited Penalty Agreement (XP): 11
 - Compliance Order and Notice of Potential Penalty: 1
 - Other (warning letters, notice of violation, etc.): 20

LDEQ Review of MS4 Annual Reports – Most Common Deficiencies



- BMPs/measurable goals included in the SWMP are not mentioned in the annual report.
 - Annual reports must correspond to the SWMP.
 - If a BMP is replaced, the MS4 shall provide a description of the replacement BMPs and update the SWMP. Are these BMPs ineffective or unfeasible? Identify why the BMP is ineffective or unfeasible, expectations of the effectiveness of the replacement BMP, and an analysis of why the replacement BMP is expected to achieve the goals of the replaced BMP.
 - Changes adding components to the annual report are acceptable; however, these changes must be added to the updated SWMP.

LDEQ Review of MS4 Annual Reports – Most Common Deficiencies



- BMPs are not clear, specific, and measurable. Each BMP is required to have a measurable goal to quantify/confirm success.
- MS4s do not provide results of all actions taken. Results of information collected and analyzed during the reporting period should be included in the annual report to assess the success of the BMP. A summary of the provided results should be included with the corresponding BMP for each MCM (minimum control measure).



ILLICIT DISCHARGE AND ELIMINATION CITY OF BASTROP MEASURABLE GOALS

JANUARY 1-DECEMBER 31, 2013

Revise the storm water ordinance in order to protect the environment and provide more control on enforcement of this ordinance.

JANUARY 1- DECEMBER 31, 2014

Revise the inspection forms and permit for storm water dischargers.

JANUARY 1- DECEMBER 31, 2015

Monitor the system for illicit connections with residences and businesses.

JANUARY 1- DECEMBER 31, 2016

Monitor oil collection sites for their involvement in proper oil disposal. Monitor tire collection sites for their involvement in proper tire disposal.

JANUARY 1- DECEMBER 31, 2017

Revise the storm water map, and continue eliminating point sources into the storm water system.



Attachment III

City of Bastrop---Permit # LAR041005 MS4 Annual Report 2017

Illicit Discharge Detection and Elimination

 A copy of the Ordinance was delivered to car washes and garages to inform them of the stormwater regulations.

2) Local area stores were contacted about the acceptance of vehicle oils and fluids.

 An ongoing watch by the Street Dept, Sewer Dept and Public Works to help prevent and eliminate illicit discharges.

4) Begininng at the outer edges of city limit and working in, will begin testing for fecal Coliform in order to help the water shed of the of subsegments :080401 Bayou Bartholomew and subsegment: 080904 Bayou Lafourche. See attached maps for sample sites.

Staulking Head Creek: 1) End of Tulane ST(beginning of City Limits), 2) End of Gibbs St., 3) Cahoon Ave., 4) Commerce Ave, 5) End of Peck St., 6) Lee Ave. 7) End of Short Talley, 8) Henry Ave(end of City Limits)

Tidsdale Brake: 1) Welch & MLKN, 2) End of Shady Oaks, 3) Intersection of Eden & Kammell St., 4) Kammell between George & Forrest Ave

Horse Bayou: 1) Cooper Lake & Boswell Intersection, 2) Donaldson St.,
3) Guy Ave., 4) CherryRidge Rd & McCreight St., 5) Shelton Rd.,
6) W Carter Ave., 7) Intersection of Country Club & Gladney Dr, 8) Gladney Dr.,
9) Intersection of Orchid & Redbud Dr., 10) Intersectio of Kay Ave. & Riis St.,

5) 6 separate areas located within the City had sewer overflow which were handled by the sewer dept and DEQ were notified. Please see attachment.

6) The updated stormwater ordinance was passed in June 2015

 Scada system monitors the pump stations and sends alarms if high level or powerage which is monitored 24/7.

8) Designated sewer mains are cleaned monthly, along with other mains cleaned during the course of the year. Approximatley 150 miles of sewer mains cleaned in 2017



LDEQ Review of MS4 Annual Reports – Most Common Deficiencies



- The permit requires a summary of storm water activities the MS4 plans to undertake during the next reporting period. The annual report needs to include the city's plans in the next reporting year for each BMP.
- There is a lack of details in reporting the frequency of actions taken by the city. Need dates activities occurred or dates of planned activities.
- Responsible party for each of the BMPs: MS4s shall provide details of the responsible party for each BMP. Either individuals or a department are acceptable. For example, instead of "City of Mamou", LDEQ recommends "City of Mamou Public Works Department".



3.c. BMP: Storm Sewer System Map

Measurable Goal: A GIS database will be utilized to create a map of Fort Polk's MS4 system. Outfall locations and the names and locations of all receiving waters associated with the cantonment area on the installation will be included in the map. In addition, the map will contain overlays of drinking water and sanitary sewer system distribution and collection lines indicating priority areas with a higher likelihood for illicit connections. The GIS map will be created and updated by ENRMD staff based upon database and fiele the formation. Fifty percent of the MS4 GIS database will be developed and documented during year one. The remaining fifty percent will be developed and documented during year two. The GIS database will be reviewed and updated during years three through five of the permit.

3.d. BMP: Dry Weather Field Surveys

Measureable Goal: Dry weather field surveys will begin in year one and continue through each year of the permit. The core Storm Water Team will conduct and track surveys of the MS4 using a geographical zoning system during dry weather to look for illicit discharges. The team will visually inspect major outfalls for the presence of pollutants, record any information that will be useful in determining the illicit discharge, trace the source of the dry weather flow, and address the problem to eliminate the discharge. A database will be maintained for all illicit discharges that are identified and corrective actions taken to eliminate them.



3.c. BMP: Storm Sewer System Map

2017 Results: A GIS database was utilized to create a map of Fort Polk's MS4 system. Outfall locations and the names and locations of all receiving waters associated with the cantonment area on the installation are included in the map. In addition, the map contains overlays of drinking water and sanitary sewer system distribution and collection lines indicating priority areas with a higher likelihood for the MS4 GIS database has been developed and documented.

2018 Goals: Fort Polk's Environmental and Natural Resource Management Division does not have a GIS database position available. The core stormwater team will continue to monitor outfall locations, names of receiving waters and higher likelihood for illicit connections associated within the cantonment area of the installation.

3.d. BMP: Dry Weather Field Surveys

2017 Results: The core Storm Water Team conducted quarterly dry weather field screening surveys of the MS4 using a geographical zoning system during dry weather to look for illicit discharges. The team visually inspects major outfalls for the presence of pollutants, records any information that will be useful in determining the illicit discharge, trace the source of the dry weather flow, and address the problem to eliminate the discharge. A database has been created for all illicit discharges that are identified and corrective actions taken to eliminate them.

Dry Weather Field Screening:	er Field Screening: 1st Qtr	Feb 13, 2017
	2nd Qtr	May 18, 2017
	3rd Qtr	Aug, 21, 2017
	4th Qtr	Nov 16, 2017

LDEQ Review of SWMPs



- Your SWMP is required to include clear, specific and measurable goals detailing when BMPs will be met.
- Develop map showing the location of all outfalls and the names and location of all receiving waters.
 - Maps should show LDEQ-designated water basin subsegment boundaries.
- Identify target audiences, including ever-expanding audiences for the educational programs. Also provide an explanation of the plan to inform the target audience on how to become involved.

LDEQ Review of SWMPs – Common Findings



- Identify any categories of non-storm water discharges that are significant contributors of pollutants within the MS4.
- MS4 is required to track and identify contributors to the MS4 that will not be addressed as illicit discharges such as charity carwashes.
- Provide more information on which volunteer groups you target and who will participate. Indicate how the public is involved in the implementation of the BMPs and provide on-going clear, specific and measurable goals.

LDEQ Review of SWMPs – Common Findings



- Lack of information regarding storm water ordinances and enforcement processes.
- Ordinances for the for:
 - prevention and eliminate illicit discharges.
 - prevention and control storm water runoff from construction activities and post-construction developments
 - Supply ordinances or links to ordinances in your SWMP.
 Also, MS4s shall provide an explanation of how ordinances are enforced.

Small MS4s with Notable SWMPs



- City of Bossier City MS4 (AI# 107095; LAR040001):
 - Implements an Illicit Discharge Detection and Elimination Ordinance
 - Work orders and phone logs are kept for every complaint with follow-up inspections
 - On-going Project: Develop hotline for public complaints to locate and identify illicit discharges needing inspection
- Calcasieu Parish Police Jury MS4 (AI# 108405; LAR041019):
 - Implements an outstanding public education and outreach program

Small MS4s with Notable SWMPs



- Lafayette Consolidated Government MS4 (AI# 108519; LAR041025):
 - Multiple Co-Permittees; very detailed BMPs and goals;
 Inter-governmental Vermilion River sampling team
- St. Charles Parish MS4 (AI# 115009; LAR041032):
 - Detailed SWMP; maintains Facebook page to convey MS4 Topic/Environmental Concerns to citizens; Parish Ordinance includes Illicit Discharge Detection and Elimination, construction (including post-construction) program requirements and inspection procedures

ALL Documents Available Online



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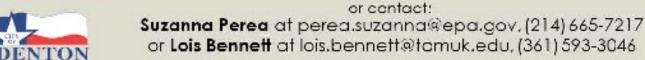
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July 28 - August 1, 2019

Responding To Change: Dynamic Stormwater Management in Economic, Political, and Climatic Transitions



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- Municipal Stormwater Management Programs
- Construction & Industrial Stormwater Management
- Resiliency, Sustainability, Creen Infrastructure & Low Impact Development
- Watershed Protection & Total Maximum Daily Loads (IMDLs)
- Best Management Practices (BMPs) Case Studies
- Advanced Research Topics & Innovative Technologies
- Public & Private Fartnerships

Stay tuned for project requests for the EPA Region & Outstanding Green Intrastructure & Low Impact Development Project Competition

Save the Date! LDEQ MS4 Conference



October 23-24, 2019 LDEQ Conference Center 602 North 5th Street, Baton Rouge, LA

It will be FREE to attend!

Agenda Under Development!

Questions? Call Your MS4 Team





Madeline Richard, Alicia Walsh, Melissa Reboul (General Permits Supervisor), Lina Saale

225-219-5337